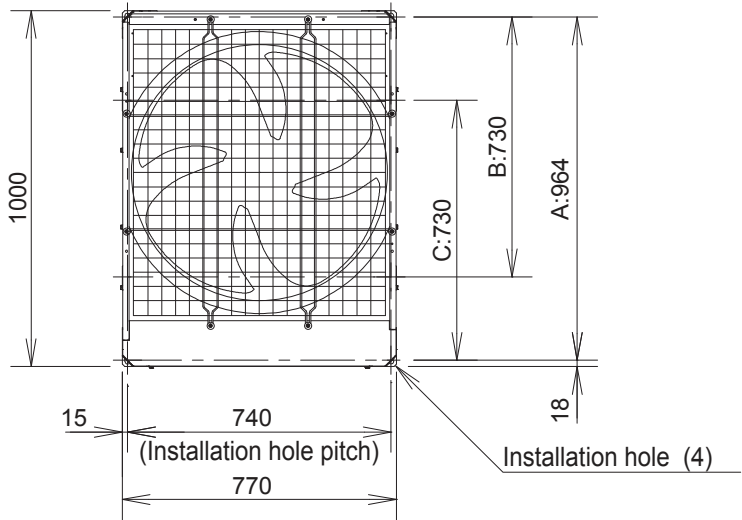


1. Line-up

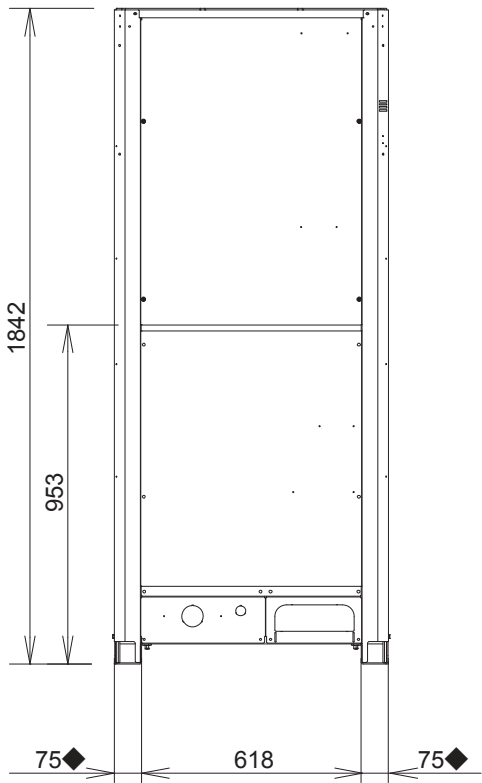
Outdoor units

Model	U-8ME2E8	U-10ME2E8
Capacity: kW Cooling / Heating	22.4 / 25.0	28.0 / 31.5

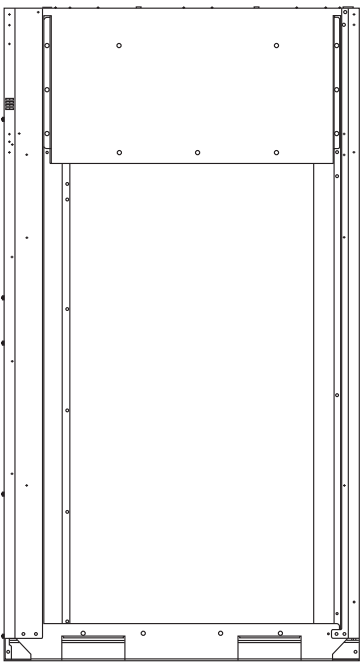


unit: mm

Top view



Front view



Side view

1

◆ Installation fixing bracket
Installation side

According to the installation site, you may choose the setting position in the depth direction of the anchor bolt from "A", "B" or "C".

- A : 964 (Installation hole pitch) * The tubing is routed out from the front.
- B : 730 (Installation hole pitch) * The tubing is routed out from the bottom.
- C : 730 (Installation hole pitch)

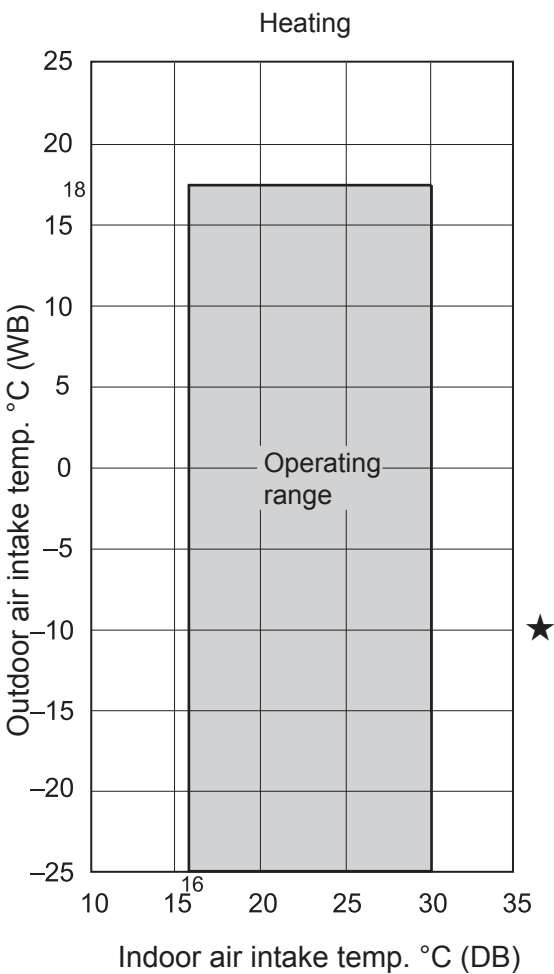
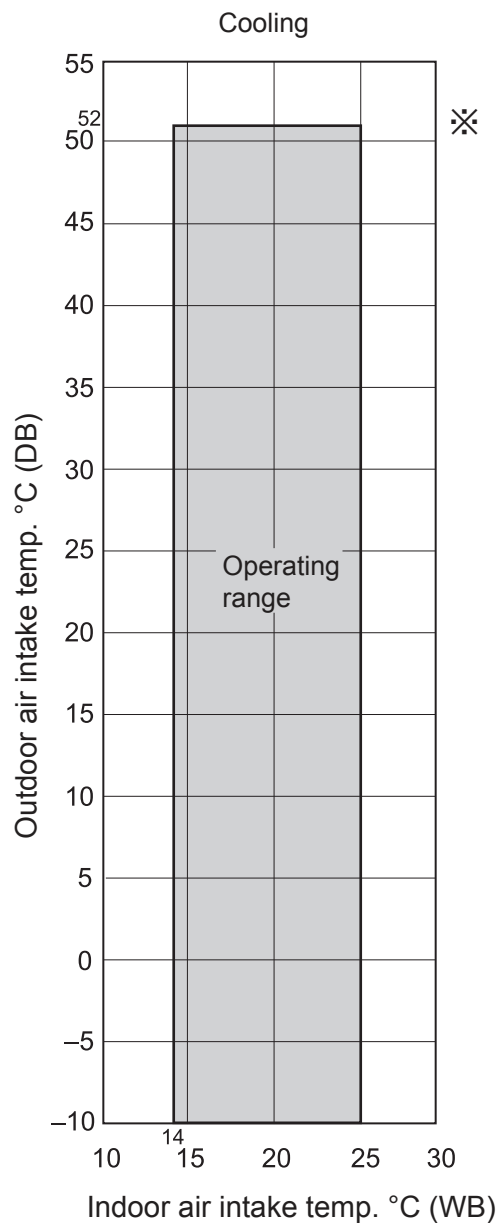
2. Features of 2WAY SYSTEM

■ Combination of outdoor units

Total horse power Type (HP)	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58	60	62	64
8	1					1																							
10		1				1	2	1		1				1		1		1				1		1		1			
12			1					1	2		1			2	3	1	2		1			2	3	1	2		1		
14				1								1								1								1	
16					1					1	1	1	2			1	1	2	2	2	3	1	1	2	2	3	3	3	4

1. Model Selection and Capacity Calculator

1-1. Operating Range



※ : When the outdoor air temperature is between 50 to 52°C in cooling mode, the unit Intermittent operation happens.

★ : When the outdoor and indoor unit capacity ratio is above 130 % and below 200 %, the lower limit of operating range for heating outdoor temperature is limited to -10°CWB (standard -25°CWB).

1. Outdoor Unit

1-1. Specifications

Unit specifications (1)

Unit specifications (1)			High efficiency combination			High efficiency combination			High efficiency combination		
Outdoor Unit		MODEL	U-8ME2E8			U-10ME2E8			U-12ME2E8		
Performance test condition			EN14511			EN14511			EN14511		
Power supply		ø,Hz	3ø, 50Hz			3ø, 50Hz			3ø, 50Hz		
		V	380	400	415	380	400	415	380	400	415
C O O L I N G	Capacity	kW	22.4	22.4	22.4	28.0	28.0	28.0	33.5	33.5	33.5
		BTU/h	76500	76500	76500	95600	95600	95600	114300	114300	114300
	Current	A	7.79	7.40	7.14	10.7	10.2	9.80	13.7	13.0	12.5
	Input power	W	4.77k	4.77k	4.77k	6.41k	6.41k	6.41k	8.47k	8.47k	8.47k
	EER	(W/W)	4.70	4.70	4.70	4.37	4.37	4.37	3.96	3.96	3.96
	Power factor	%	93	93	93	91	91	91	94	94	94
	Noise outdoor	dB-A (Normal)	54.0			56.0			59.0		
Power Level dB (Normal)		75.0			77.0			80.0			
dB-A (Silent)		51.0			53.0			56.0			
H E A T I N G	Capacity	kW	25.0	25.0	25.0	31.5	31.5	31.5	37.5	37.5	37.5
		BTU/h	85300	85300	85300	107500	107500	107500	128000	128000	128000
	Current	A	7.96	7.56	7.29	11.1	10.5	10.1	12.9	12.3	11.8
	Input power	W	4.87k	4.87k	4.87k	6.62k	6.62k	6.62k	7.92k	7.92k	7.92k
	COP	(W / W)	5.13	5.13	5.13	4.76	4.76	4.76	4.73	4.73	4.73
	Power factor	%	93	93	93	91	91	91	93	93	93
	Max Current (A) / Max Input power (W)		10.2 / 6.24k	10.2 / 6.57k	10.2 / 6.82k	14.5 / 8.68k	14.5 / 9.14k	14.5 / 9.48k	18.2 / 11.3k	18.2 / 11.9k	18.2 / 12.3k
Starting current (A)		1	1	1	1	1	1	1	1	1	
Time Delay fuse max size (A)		20			25			30			
Fan motor output		W / Pole number			750 / 8			750 / 8			
External static pressure		Pa			0 ~ 80			0 ~ 80			
Air flow		m³/ min			224			232			
Refrigerant type / amount g		R410A / 5.6k			R410A / 5.6k			R410A / 8.3k			
Product dimension	Height	mm	1842			1842			1842		
	Width	mm	770			770			1180		
	Depth	mm	1000			1000			1000		
Packing dimension	Height	mm	1977			1977			1977		
	Width	mm	870			870			1280		
	Depth	mm	1100			1100			1100		
Weight	(NET) kg	210			210			270			
	(GROSS) kg	225			225			285			
Layers limit		1			1			1			
Operation condition (Outdoor)	Cool (DBT)	-10℃ ~ 52℃			-10℃ ~ 52℃			-10℃ ~ 52℃			
	Heat (WBT)	-25℃ ~ 18℃			-25℃ ~ 18℃			-25℃ ~ 18℃			
MAX. WORKING PRESSURE	High side bar (MPa)	38.0 (3.80)			38.0 (3.80)			38.0 (3.80)			
	Low side bar (MPa)	31.1 (3.11)			31.1 (3.11)			31.1 (3.11)			
P I P I N G	Pipe diameter mm (inch) (Under 90m for ultimate Indoor unit.)		(Liquid) 9.52(3/8) (Gas) 19.05(3/4)			(Liquid) 9.52(3/8) (Gas) 22.22(7/8)			(Liquid) 12.7(1/2) (Gas) 25.4(1)		
	Pipe diameter mm (inch) *1 (Over 90m for ultimate Indoor unit.)		(Liquid) 12.7(1/2) (Gas) 22.22(7/8)			(Liquid) 12.7(1/2) (Gas) 25.4(1)			(Liquid) 15.88(5/8) (Gas) 28.58(1-1/8)		
	Balance pipe mm (inch)		6.35(1/4)			6.35(1/4)			6.35(1/4)		
	Connecting method		flared(Liquid), brazing(Gas) flared(Balance)			flared(Liquid), brazing(Gas) flared(Balance)			flared(Liquid), brazing(Gas) flared(Balance)		
	Max tubing length m		7.5	~	200	7.5	~	200	7.5	~	200
	Total Max tubing length m		7.5	~	1000	7.5	~	1000	7.5	~	1000
	Indoor unit & Outdoor unit height difference (Outdoor unit upper / Outdoor unit Lower) m		50 / 40			50 / 40			50 / 40		
Max connectable indoor units pcs.		13			16			19			
Max allowable indoor/outdoor capacity ratio %		50 ~ 130 *2			50 ~ 130 *2			50 ~ 130 *2			

*1: If the longest tubing equivalent length exceeds 90m, increase the sizes of the main tubes by 1 rank for gas tubes and liquid tubes.

*2: If the following conditions are satisfied, the effective range is above 130 % and below 200 %.

i) Obey the limited number of connectable indoor units.

ii) The lower limit of operating range for heating outdoor temperature is limited to -10°CWB (standard -25°CWB).

iii) Simultaneous operation is limited to less than 130 % of connectable indoor units.

The number of max connectable outdoor units are 4.

Necessary amount of additional refrigerant charge per outdoor unit for 8HP or 10HP is 5.5kg, for 12HP or 14HP or 16HP is 7.0kg.

Max total refrigerant amount of 1 outdoor unit is 50kg, for 2 outdoor units is 80kg, for 3 or 4 outdoor units is 100kg.

1. Outdoor Unit

1-1. Specifications

Unit specifications (2)

Unit specifications (2)			High efficiency combination			High efficiency combination		
Outdoor Unit		MODEL	U-14ME2E8			U-16ME2E8		
Performance test condition			EN14511			EN14511		
Power supply		ø,Hz	3ø, 50Hz			3ø, 50Hz		
		V	380	400	415	380	400	415
C O O L I N G	Capacity	kW	40.0	40.0	40.0	45.0	45.0	45.0
		BTU/h	136500	136500	136500	153600	153600	153600
	Current	A	17.4	16.5	15.9	21.1	20.1	19.4
	Input power	W	10.3k	10.3k	10.3k	12.8k	12.8k	12.8k
	EER	(W/W)	3.88	3.88	3.88	3.52	3.52	3.52
	Power factor	%	90	90	90	92	92	92
	Noise outdoor	dB-A (Normal)	60.0			61.0		
Power Level dB (Normal)		81.0			82.0			
dB-A (Silent)		57.0			58.0			
H E A T I N G	Capacity	kW	45.0	45.0	45.0	50.0	50.0	50.0
		BTU/h	153600	153600	153600	170600	170600	170600
	Current	A	16.6	15.8	15.2	18.9	17.9	17.3
	Input power	W	9.86k	9.86k	9.86k	11.3k	11.3k	11.3k
	COP	(W / W)	4.56	4.56	4.56	4.42	4.42	4.42
	Power factor	%	90	90	90	91	91	91
	Max Current (A) / Max Input power (W)		23.4 / 13.9k	23.4 / 14.6k	23.4 / 15.1k	28.5 / 17.3k	28.5 / 18.2k	28.5 / 18.8k
Starting current (A)		2	2	2	2	2	2	
Time Delay fuse max size (A)		35			40			
Fan motor output		W / Pole number	750 / 8			750 / 8		
External static pressure		Pa	0 ~ 80			0 ~ 80		
Air flow		m³ / min	232			232		
Refrigerant type / amount g		R410A / 8.3k			R410A / 8.3k			
Product dimension	Height	mm	1842			1842		
	Width	mm	1180			1180		
	Depth	mm	1000			1000		
Packing dimension	Height	mm	1977			1977		
	Width	mm	1280			1280		
	Depth	mm	1100			1100		
Weight	(NET) kg	315			315			
	(GROSS) kg	330			330			
Layers limit		1			1			
Operation condition (Outdoor)	Cool (DBT)	-10°C ~ 52°C			-10°C ~ 52°C			
	Heat (WBT)	-25°C ~ 18°C			-25°C ~ 18°C			
MAX. WORKING PRESSURE	High side bar (MPa)	38.0 (3.80)			38.0 (3.80)			
	Low side bar (MPa)	31.1 (3.11)			31.1 (3.11)			
P I P I N G	Pipe diameter mm (inch) (Under 90m for ultimate Indoor unit.)		(Liquid) 12.7(1/2) (Gas) 25.4(1)			(Liquid) 12.7(1/2) (Gas) 28.58(1-1/8)		
	Pipe diameter mm (inch) *1 (Over 90m for ultimate Indoor unit.)		(Liquid) 15.88(5/8) (Gas) 28.58(1-1/8)			(Liquid) 15.88(5/8) (Gas) 31.75(1-1/4)		
	Balance pipe mm (inch)		6.35(1/4)			6.35(1/4)		
	Connecting method		flared(Liquid), (brazing)(Gas) flared(Balance)			flared(Liquid), (brazing)(Gas) flared(Balance)		
	Max tubing length m		7.5	~	200	7.5	~	200
	Total Max tubing length m		7.5	~	1000	7.5	~	1000
	Indoor unit & Outdoor unit height difference (Outdoor unit upper / Outdoor unit Lower) m		50 / 40			50 / 40		
Max connectable indoor units pcs.		23			26			
Max allowable indoor/outdoor capacity ratio %		50 ~ 130 *2			50 ~ 130 *2			

*1: If the longest tubing equivalent length exceeds 90m, increase the sizes of the main tubes by 1 rank for gas tubes and liquid tubes.

*2: If the following conditions are satisfied, the effective range is above 130 % and below 200 %.

i) Obey the limited number of connectable indoor units.

ii) The lower limit of operating range for heating outdoor temperature is limited to -10°CWB (standard -25°CWB).

iii) Simultaneous operation is limited to less than 130 % of connectable indoor units.

The number of max connectable outdoor units are 4.

Necessary amount of additional refrigerant charge per outdoor unit for 8HP or 10HP is 5.5kg, for 12HP or 14HP or 16HP is 7.0kg.

Max total refrigerant amount of 1 outdoor unit is 50kg, for 2 outdoor units is 80kg, for 3 or 4 outdoor units is 100kg.

1. Outdoor Unit

1-1. Specifications

Unit specifications (3)

Unit specifications (3)			High efficiency combination			High efficiency combination			High efficiency combination		
Outdoor Unit		MODEL	U-8ME2E8 U-10ME2E8			U-10ME2E8 U-10ME2E8			U-10ME2E8 U-12ME2E8		
Performance test condition			EN14511			EN14511			EN14511		
Power supply		ø,Hz	3ø, 50Hz			3ø, 50Hz			3ø, 50Hz		
		V	380	400	415	380	400	415	380	400	415
C O O L I N G	Capacity	kW	50.0	50.0	50.0	56.0	56.0	56.0	61.5	61.5	61.5
		BTU/h	170600	170600	170600	191100	191100	191100	209900	209900	209900
	Current	A	18.2	17.3	16.6	21.4	20.3	19.6	24.3	23.1	22.3
	Input power	W	11.0k	11.0k	11.0k	12.8k	12.8k	12.8k	14.9k	14.9k	14.9k
	EER	(W/W)	4.55	4.55	4.55	4.38	4.38	4.38	4.13	4.13	4.13
	Power factor	%	92	92	92	91	91	91	93	93	93
	Noise outdoor	dB-A (Normal)	58.5			59.0			61.0		
		Power Level dB (Normal)	79.5			80.0			82.0		
dB-A (Silent)		55.5			56.0			58.0			
H E A T I N G	Capacity	kW	56.0	56.0	56.0	63.0	63.0	63.0	69.0	69.0	69.0
		BTU/h	191100	191100	191100	215000	215000	215000	235500	235500	235500
	Current	A	18.7	17.7	17.1	22.0	20.9	20.2	23.9	22.7	21.9
	Input power	W	11.3k	11.3k	11.3k	13.2k	13.2k	13.2k	14.5k	14.5k	14.5k
	COP	(W / W)	4.96	4.96	4.96	4.77	4.77	4.77	4.76	4.76	4.76
	Power factor	%	92	92	92	91	91	91	92	92	92
Max Current (A) / Max Input power (W)			24.7 / 14.9k	24.7 / 15.7k	24.7 / 16.3k	29.0 / 17.4k	29.0 / 18.3k	29.0 / 19.0k	32.7 / 19.9k	32.7 / 21.0k	32.7 / 21.8k
Starting current (A)			1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1
Time Delay fuse max size (A)			20+25			25+25			25+30		
Fan motor output	W / Pole number		750+750 / 8			750+750 / 8			750+750 / 8		
External static pressure	Pa		0 ~80			0 ~80			0 ~80		
Air flow	m³/ min		224+224			224+224			224+232		
Refrigerant type / amount g			R410A / 11.2k			R410A / 11.2k			R410A / 13.9k		
Product dimension	Height	mm	1842			1842			1842		
	Width	mm	(770)+(770)+60			(770)+(770)+60			(770)+(1180)+60		
	Depth	mm	1000			1000			1000		
Packing dimension	Height	mm	-			-			-		
	Width	mm	-			-			-		
	Depth	mm	-			-			-		
Weight	(NET) kg		(210)+(210)			(210)+(210)			(210)+(270)		
	(GROSS) kg		-			-			-		
Layers limit			-			-			-		
Operation condition (Outdoor)	Cool (DBT)		-10°C ~ 52°C			-10°C ~ 52°C			-10°C ~ 52°C		
	Heat (WBT)		-25°C ~ 18°C			-25°C ~ 18°C			-25°C ~ 18°C		
MAX. WORKING PRESSURE	High side bar (MPa)		38.0 (3.80)			38.0 (3.80)			38.0 (3.80)		
	Low side bar (MPa)		31.1 (3.11)			31.1 (3.11)			31.1 (3.11)		
P I P I N G	Pipe diameter mm (inch) (Under 90m for ultimate Indoor unit.)		(Liquid) 15.88(5/8) (Gas) 28.58(1-1/8)			(Liquid) 15.88(5/8) (Gas) 28.58(1-1/8)			(Liquid) 15.88(5/8) (Gas) 28.58(1-1/8)		
	Pipe diameter mm (inch) *1 (Over 90m for ultimate Indoor unit.)		(Liquid) 19.05(3/4) (Gas) 31.75(1-1/4)			(Liquid) 19.05(3/4) (Gas) 31.75(1-1/4)			(Liquid) 19.05(3/4) (Gas) 31.75(1-1/4)		
	Balance pipe mm (inch)		6.35(1/4)			6.35(1/4)			6.35(1/4)		
	Connecting method		-			-			-		
	Max tubing length m		7.5	~	200	7.5	~	200	7.5	~	200
	Total Max tubing length m		7.5	~	1000	7.5	~	1000	7.5	~	1000
	Indoor unit & Outdoor unit height difference (Outdoor unit upper / Outdoor unit Lower) m		50 / 40			50 / 40			50 / 40		
Max connectable indoor units pcs.			29			33			36		
Max allowable indoor/outdoor capacity ratio %			50 ~ 130 *2			50 ~ 130 *2			50 ~ 130 *2		

*1: If the longest tubing equivalent length exceeds 90m, increase the sizes of the main tubes by 1 rank for gas tubes and liquid tubes.

*2: If the following conditions are satisfied, the effective range is above 130 % and below 200 %.

i) Obey the limited number of connectable indoor units.

ii) The lower limit of operating range for heating outdoor temperature is limited to -10°CWB (standard -25°CWB).

iii) Simultaneous operation is limited to less than 130 % of connectable indoor units.

The number of max connectable outdoor units are 4.

Necessary amount of additional refrigerant charge per outdoor unit for 8HP or 10HP is 5.5kg, for 12HP or 14HP or 16HP is 7.0kg.

Max total refrigerant amount of 1 outdoor unit is 50kg, for 2 outdoor units is 80kg, for 3 or 4 outdoor units is 100kg.

1. Outdoor Unit

1-1. Specifications

Unit specifications (4)

Unit specifications (4)			High efficiency combination			High efficiency combination			High efficiency combination		
Outdoor Unit		MODEL	U-12ME2E8 U-12ME2E8			U-10ME2E8 U-16ME2E8			U-12ME2E8 U-16ME2E8		
Performance test condition			EN14511			EN14511			EN14511		
Power supply		ø,Hz	3ø, 50Hz			3ø, 50Hz			3ø, 50Hz		
		V	380	400	415	380	400	415	380	400	415
C O O L I N G	Capacity	kW	68.0	68.0	68.0	73.0	73.0	73.0	78.5	78.5	78.5
		BTU/h	232100	232100	232100	249100	249100	249100	267900	267900	267900
	Current	A	28.0	26.6	25.6	31.7	30.1	29.0	34.8	33.1	31.9
	Input power	W	17.3k	17.3k	17.3k	19.2k	19.2k	19.2k	21.3k	21.3k	21.3k
	EER	(W/W)	3.93	3.93	3.93	3.80	3.80	3.80	3.69	3.69	3.69
	Power factor	%	94	94	94	92	92	92	93	93	93
	Noise outdoor	dB-A (Normal)	62.0			62.5			63.5		
Power Level dB (Normal)		83.0			83.5			84.5			
dB-A (Silent)		59.0			59.5			60.5			
H E A T I N G	Capacity	kW	76.5	76.5	76.5	81.5	81.5	81.5	87.5	87.5	87.5
		BTU/h	261100	261100	261100	278200	278200	278200	298600	298600	298600
	Current	A	26.6	25.3	24.4	29.9	28.4	27.4	31.7	30.1	29.0
	Input power	W	16.3k	16.3k	16.3k	17.9k	17.9k	17.9k	19.2k	19.2k	19.2k
	COP	(W / W)	4.69	4.69	4.69	4.55	4.55	4.55	4.56	4.56	4.56
Power factor	%	93	93	93	91	91	91	92	92	92	
Max Current (A) / Max Input power (W)			36.4 / 22.5k	36.4 / 23.7k	36.4 / 24.6k	43.0 / 25.9k	43.0 / 27.3k	43.0 / 28.3k	46.7 / 28.5k	46.7 / 30.0k	46.7 / 31.1k
Starting current (A)			1+1	1+1	1+1	1+2	1+2	1+2	1+2	1+2	1+2
Time Delay fuse max size (A)			30+30			25+40			30+40		
Fan motor output		W / Pole number	750+750 / 8			750+750 / 8			750+750 / 8		
External static pressure		Pa	0 ~ 80			0 ~ 80			0 ~ 80		
Air flow		m³/ min	232+232			224+232			232+232		
Refrigerant type / amount g			R410A / 16.6k			R410A / 13.9k			R410A / 16.6k		
Product dimension	Height	mm	1842			1842			1842		
	Width	mm	(1180)+(1180)+60			(770)+(1180)+60			(1180)+(1180)+60		
	Depth	mm	1000			1000			1000		
Packing dimension	Height	mm	-			-			-		
	Width	mm	-			-			-		
	Depth	mm	-			-			-		
Weight	(NET) kg		(270)+(270)			(210)+(315)			(270)+(315)		
	(GROSS) kg		-			-			-		
Layers limit			-			-			-		
Operation condition (Outdoor)	Cool (DBT)	-10°C ~ 52°C			-10°C ~ 52°C			-10°C ~ 52°C			
	Heat (WBT)	-25°C ~ 18°C			-25°C ~ 18°C			-25°C ~ 18°C			
MAX. WORKING PRESSURE	High side bar (MPa)		38.0 (3.80)			38.0 (3.80)			38.0 (3.80)		
	Low side bar (MPa)		31.1 (3.11)			31.1 (3.11)			31.1 (3.11)		
P I P I N G	Pipe diameter mm (inch) (Under 90m for ultimate Indoor unit.)		(Liquid) 15.88(5/8) (Gas) 28.58(1-1/8)			(Liquid) 19.05(3/4) (Gas) 31.75(1-1/4)			(Liquid) 19.05(3/4) (Gas) 31.75(1-1/4)		
	Pipe diameter mm (inch) *1 (Over 90m for ultimate Indoor unit.)		(Liquid) 19.05(3/4) (Gas) 31.75(1-1/4)			(Liquid) 22.22(7/8) (Gas) 38.1(1-1/2)			(Liquid) 22.22(7/8) (Gas) 38.1(1-1/2)		
	Balance pipe mm (inch)		6.35(1/4)			6.35(1/4)			6.35(1/4)		
	Connecting method		-			-			-		
	Max tubing length m		7.5	~	200	7.5	~	200	7.5	~	200
	Total Max tubing length m		7.5	~	1000	7.5	~	1000	7.5	~	1000
	Indoor unit & Outdoor unit height difference (Outdoor unit upper / Outdoor unit Lower) m		50 / 40			50 / 40			50 / 40		
Max connectable indoor units pcs.			40			43			46		
Max allowable indoor/outdoor capacity ratio %			50 ~ 130 *2			50 ~ 130 *2			50 ~ 130 *2		

*1: If the longest tubing equivalent length exceeds 90m, increase the sizes of the main tubes by 1 rank for gas tubes and liquid tubes.

*2: If the following conditions are satisfied, the effective range is above 130 % and below 200 %.

i) Obey the limited number of connectable indoor units.

ii) The lower limit of operating range for heating outdoor temperature is limited to -10°C CWB (standard -25°C CWB).

iii) Simultaneous operation is limited to less than 130 % of connectable indoor units.

The number of max connectable outdoor units are 4.

Necessary amount of additional refrigerant charge per outdoor unit for 8HP or 10HP is 5.5kg, for 12HP or 14HP or 16HP is 7.0kg.

Max total refrigerant amount of 1 outdoor unit is 50kg, for 2 outdoor units is 80kg, for 3 or 4 outdoor units is 100kg.

1. Outdoor Unit

1-1. Specifications

Unit specifications (5)

Unit specifications (5)			High efficiency combination			High efficiency combination		
Outdoor Unit		MODEL	U-14ME2E8 U-16ME2E8			U-16ME2E8 U-16ME2E8		
Performance test condition			EN14511			EN14511		
Power supply		ø,Hz	3ø, 50Hz			3ø, 50Hz		
		V	380	400	415	380	400	415
C O O L I N G	Capacity	kW	85.0	85.0	85.0	90.0	90.0	90.0
		BTU/h	290100	290100	290100	307200	307200	307200
	Current	A	38.6	36.6	35.3	42.3	40.2	38.7
	Input power	W	23.1k	23.1k	23.1k	25.6k	25.6k	25.6k
	EER	(W/W)	3.68	3.68	3.68	3.52	3.52	3.52
	Power factor	%	91	91	91	92	92	92
	Noise outdoor	dB-A (Normal)	63.5			64.0		
Power Level dB (Normal)		84.5			85.0			
dB-A (Silent)		60.5			61.0			
H E A T I N G	Capacity	kW	95.0	95.0	95.0	100	100	100
		BTU/h	324200	324200	324200	341300	341300	341300
	Current	A	35.4	33.6	32.4	37.7	35.8	34.6
	Input power	W	21.2k	21.2k	21.2k	22.6k	22.6k	22.6k
	COP	(W / W)	4.48	4.48	4.48	4.42	4.42	4.42
	Power factor	%	91	91	91	91	91	91
Max Current (A) / Max Input power (W)			51.9 / 31.1k	51.9 / 32.8k	51.9 / 34.0k	57.0 / 34.5k	57.0 / 36.3k	57.0 / 37.7k
Starting current (A)			2+2	2+2	2+2	2+2	2+2	2+2
Time Delay fuse max size (A)			35+40			40+40		
Fan motor output		W / Pole number	750+750 / 8			750+750 / 8		
External static pressure		Pa	0 ~ 80			0 ~ 80		
Air flow		m³/ min	232+232			232+232		
Refrigerant type / amount g			R410A / 16.6k			R410A / 16.6k		
Product dimension	Height	mm	1842			1842		
	Width	mm	(1180)+(1180)+60			(1180)+(1180)+60		
	Depth	mm	1000			1000		
Packing dimension	Height	mm	-			-		
	Width	mm	-			-		
	Depth	mm	-			-		
Weight	(NET) kg		(315)+(315)			(315)+(315)		
	(GROSS) kg		-			-		
Layers limit			-			-		
Operation condition (Outdoor)	Cool (DBT)	-10°C ~ 52°C			-10°C ~ 52°C			
	Heat (WBT)	-25°C ~ 18°C			-25°C ~ 18°C			
MAX. WORKING PRESSURE	High side bar (MPa)		38.0 (3.80)			38.0 (3.80)		
	Low side bar (MPa)		31.1 (3.11)			31.1 (3.11)		
P I P I N G	Pipe diameter mm (inch) (Under 90m for ultimate Indoor unit.)		(Liquid) 19.05(3/4) (Gas) 31.75(1-1/4)			(Liquid) 19.05(3/4) (Gas) 31.75(1-1/4)		
	Pipe diameter mm (inch) *1 (Over 90m for ultimate Indoor unit.)		(Liquid) 22.22(7/8) (Gas) 38.1(1-1/2)			(Liquid) 22.22(7/8) (Gas) 38.1(1-1/2)		
	Balance pipe mm (inch)		6.35(1/4)			6.35(1/4)		
	Connecting method		-			-		
	Max tubing length m		7.5	~	200	7.5	~	200
	Total Max tubing length m		7.5	~	1000	7.5	~	1000
	Indoor unit & Outdoor unit height difference (Outdoor unit upper / Outdoor unit Lower) m		50 / 40			50 / 40		
Max connectable indoor units pcs.			50			53		
Max allowable indoor/outdoor capacity ratio %			50 ~ 130 *2			50 ~ 130 *2		

*1: If the longest tubing equivalent length exceeds 90m, increase the sizes of the main tubes by 1 rank for gas tubes and liquid tubes.

*2: If the following conditions are satisfied, the effective range is above 130 % and below 200 %.

i) Obey the limited number of connectable indoor units.

ii) The lower limit of operating range for heating outdoor temperature is limited to -10°CWB (standard -25°CWB).

iii) Simultaneous operation is limited to less than 130 % of connectable indoor units.

The number of max connectable outdoor units are 4.

Necessary amount of additional refrigerant charge per outdoor unit for 8HP or 10HP is 5.5kg, for 12HP or 14HP or 16HP is 7.0kg.

Max total refrigerant amount of 1 outdoor unit is 50kg, for 2 outdoor units is 80kg, for 3 or 4 outdoor units is 100kg.

1. Outdoor Unit

1-1. Specifications

Unit specifications (6)

Unit specifications (6)			High efficiency combination			High efficiency combination			High efficiency combination		
Outdoor Unit		MODEL	U-10ME2E8 U-12ME2E8 U-12ME2E8			U-12ME2E8 U-12ME2E8 U-12ME2E8			U-10ME2E8 U-12ME2E8 U-16ME2E8		
Performance test condition			EN14511			EN14511			EN14511		
Power supply		ø,Hz	3ø, 50Hz			3ø, 50Hz			3ø, 50Hz		
		V	380	400	415	380	400	415	380	400	415
C O O L I N G	Capacity	kW	96.0	96.0	96.0	101	101	101	107	107	107
		BTU/h	327600	327600	327600	344700	344700	344700	365200	365200	365200
	Current	A	38.7	36.8	35.5	41.4	39.3	37.9	46.1	43.8	42.2
	Input power	W	23.7k	23.7k	23.7k	25.6k	25.6k	25.6k	27.9k	27.9k	27.9k
	EER	(W/W)	4.05	4.05	4.05	3.95	3.95	3.95	3.84	3.84	3.84
	Power factor	%	93	93	93	94	94	94	92	92	92
	Noise outdoor	dB-A (Normal)	63.0			64.0			64.0		
Power Level dB (Normal)		84.0			85.0			85.0			
dB-A (Silent)		60.0			61.0			61.0			
H E A T I N G	Capacity	kW	108	108	108	113	113	113	119	119	119
		BTU/h	368600	368600	368600	385700	385700	385700	406100	406100	406100
	Current	A	37.8	35.9	34.6	39.0	37.1	35.8	42.6	40.5	39.0
	Input power	W	22.9k	22.9k	22.9k	23.9k	23.9k	23.9k	25.8k	25.8k	25.8k
	COP	(W / W)	4.72	4.72	4.72	4.73	4.73	4.73	4.61	4.61	4.61
Power factor	%	92	92	92	93	93	93	92	92	92	
Max Current (A) / Max Input power (W)			50.9 / 31.2k	50.9 / 32.8k	50.9 / 34.1k	54.6 / 33.8k	54.6 / 35.6k	54.6 / 36.9k	61.2 / 37.2k	61.2 / 39.2k	61.2 / 40.6k
Starting current (A)			1+1+1	1+1+1	1+1+1	1+1+1	1+1+1	1+1+1	1+1+2	1+1+2	1+1+2
Time Delay fuse max size (A)			25+30+30			30+30+30			25+30+40		
Fan motor output		W / Pole number	750+750+750 / 8			750+750+750 / 8			750+750+750 / 8		
External static pressure		Pa	0 ~ 80			0 ~ 80			0 ~ 80		
Air flow		m³/ min	224+232+232			232+232+232			224+232+232		
Refrigerant type / amount g			R410A / 22.2k			R410A / 24.9k			R410A / 22.2k		
Product dimension	Height	mm	1842			1842			1842		
	Width	mm	(770)+(1180)+(1180)+120			(1180)+(1180)+(1180)+120			(770)+(1180)+(1180)+120		
	Depth	mm	1000			1000			1000		
Packing dimension	Height	mm	-			-			-		
	Width	mm	-			-			-		
	Depth	mm	-			-			-		
Weight	(NET) kg		(210)+(270)+(270)			(270)+(270)+(270)			(210)+(270)+(315)		
	(GROSS) kg		-			-			-		
Layers limit			-			-			-		
Operation condition (Outdoor)	Cool (DBT)		-10°C ~ 52°C			-10°C ~ 52°C			-10°C ~ 52°C		
	Heat (WBT)		-25°C ~ 18°C			-25°C ~ 18°C			-25°C ~ 18°C		
MAX. WORKING PRESSURE	High side bar (MPa)		38.0 (3.80)			38.0 (3.80)			38.0 (3.80)		
	Low side bar (MPa)		31.1 (3.11)			31.1 (3.11)			31.1 (3.11)		
P I P I N G	Pipe diameter mm (inch) (Under 90m for ultimate Indoor unit.)		(Liquid) 19.05(3/4) (Gas) 31.75(1-1/4)			(Liquid) 19.05(3/4) (Gas) 38.1(1-1/2)			(Liquid) 19.05(3/4) (Gas) 38.1(1-1/2)		
	Pipe diameter mm (inch) *1 (Over 90m for ultimate Indoor unit.)		(Liquid) 22.22(7/8) (Gas) 38.1(1-1/2)			(Liquid) 22.22(7/8) (Gas) 41.28(1-5/8)			(Liquid) 22.22(7/8) (Gas) 41.28(1-5/8)		
	Balance pipe mm (inch)		6.35(1/4)			6.35(1/4)			6.35(1/4)		
	Connecting method		-			-			-		
	Max tubing length m		7.5	~	200	7.5	~	200	7.5	~	200
	Total Max tubing length m		7.5	~	1000	7.5	~	1000	7.5	~	1000
	Indoor unit & Outdoor unit height difference (Outdoor unit upper / Outdoor unit Lower) m		50 / 40			50 / 40			50 / 40		
Max connectable indoor units pcs.			56			59			63		
Max allowable indoor/outdoor capacity ratio %			50 ~ 130 *2			50 ~ 130 *2			50 ~ 130 *2		

*1: If the longest tubing equivalent length exceeds 90m, increase the sizes of the main tubes by 1 rank for gas tubes and liquid tubes.

*2: If the following conditions are satisfied, the effective range is above 130 % and below 200 %.

i) Obey the limited number of connectable indoor units.

ii) The lower limit of operating range for heating outdoor temperature is limited to -10°CWB (standard -25°CWB).

iii) Simultaneous operation is limited to less than 130 % of connectable indoor units.

The number of max connectable outdoor units are 4.

Necessary amount of additional refrigerant charge per outdoor unit for 8HP or 10HP is 5.5kg, for 12HP or 14HP or 16HP is 7.0kg.

Max total refrigerant amount of 1 outdoor unit is 50kg, for 2 outdoor units is 80kg, for 3 or 4 outdoor units is 100kg.

1. Outdoor Unit

1-1. Specifications

Unit specifications (7)

Unit specifications (7)			High efficiency combination			High efficiency combination			High efficiency combination		
Outdoor Unit		MODEL	U-12ME2E8 U-12ME2E8 U-16ME2E8			U-10ME2E8 U-16ME2E8 U-16ME2E8			U-12ME2E8 U-16ME2E8 U-16ME2E8		
Performance test condition			EN14511			EN14511			EN14511		
Power supply		ø,Hz	3ø, 50Hz			3ø, 50Hz			3ø, 50Hz		
		V	380	400	415	380	400	415	380	400	415
C O O L I N G	Capacity	kW	113	113	113	118	118	118	124	124	124
		BTU/h	385700	385700	385700	402700	402700	402700	423200	423200	423200
	Current	A	49.2	46.7	45.0	52.8	50.2	48.4	56.0	53.2	51.3
	Input power	W	30.1k	30.1k	30.1k	32.0k	32.0k	32.0k	34.3k	34.3k	34.3k
	EER	(W/W)	3.75	3.75	3.75	3.69	3.69	3.69	3.62	3.62	3.62
	Power factor	%	93	93	93	92	92	92	93	93	93
	Noise outdoor	dB-A (Normal)	64.5			65.0			65.5		
Power Level dB (Normal)		85.5			86.0			86.5			
dB-A (Silent)		61.5			62.0			62.5			
H E A T I N G	Capacity	kW	127	127	127	132	132	132	138	138	138
		BTU/h	433400	433400	433400	450500	450500	450500	471000	471000	471000
	Current	A	45.9	43.6	42.0	49.1	46.6	44.9	50.7	48.2	46.4
	Input power	W	27.8k	27.8k	27.8k	29.4k	29.4k	29.4k	30.7k	30.7k	30.7k
	COP	(W / W)	4.57	4.57	4.57	4.49	4.49	4.49	4.50	4.50	4.50
Power factor	%	92	92	92	91	91	91	92	92	92	
Max Current (A) / Max Input power (W)			64.9 / 39.8k	64.9 / 41.9k	64.9 / 43.4k	71.5 / 43.2k	71.5 / 45.5k	71.5 / 47.2k	75.2 / 45.8k	75.2 / 48.2k	75.2 / 50.0k
Starting current (A)			1+1+2	1+1+2	1+1+2	1+2+2	1+2+2	1+2+2	1+2+2	1+2+2	1+2+2
Time Delay fuse max size (A)			30+30+40			25+40+40			30+40+40		
Fan motor output		W / Pole number	750+750+750 / 8			750+750+750 / 8			750+750+750 / 8		
External static pressure		Pa	0 ~ 80			0 ~ 80			0 ~ 80		
Air flow		m³/ min	232+232+232			224+232+232			232+232+232		
Refrigerant type / amount g			R410A / 24.9k			R410A / 22.2k			R410A / 24.9k		
Product dimension	Height	mm	1842			1842			1842		
	Width	mm	(1180)+(1180)+(1180)+120			(770)+(1180)+(1180)+120			(1180)+(1180)+(1180)+120		
	Depth	mm	1000			1000			1000		
Packing dimension	Height	mm	-			-			-		
	Width	mm	-			-			-		
	Depth	mm	-			-			-		
Weight	(NET) kg	(270)+(270)+(315)			(210)+(315)+(315)			(270)+(315)+(315)			
	(GROSS) kg	-			-			-			
Layers limit			-			-			-		
Operation condition (Outdoor)	Cool (DBT)	-10°C ~ 52°C			-10°C ~ 52°C			-10°C ~ 52°C			
	Heat (WBT)	-25°C ~ 18°C			-25°C ~ 18°C			-25°C ~ 18°C			
MAX. WORKING PRESSURE	High side bar (MPa)	38.0 (3.80)			38.0 (3.80)			38.0 (3.80)			
	Low side bar (MPa)	31.1 (3.11)			31.1 (3.11)			31.1 (3.11)			
P I P I N G	Pipe diameter mm (inch) (Under 90m for ultimate Indoor unit.)		(Liquid) 19.05(3/4) (Gas) 38.1(1-1/2)			(Liquid) 19.05(3/4) (Gas) 38.1(1-1/2)			(Liquid) 19.05(3/4) (Gas) 38.1(1-1/2)		
	Pipe diameter mm (inch) *1 (Over 90m for ultimate Indoor unit.)		(Liquid) 22.22(7/8) (Gas) 41.28(1-5/8)			(Liquid) 22.22(7/8) (Gas) 41.28(1-5/8)			(Liquid) 22.22(7/8) (Gas) 41.28(1-5/8)		
	Balance pipe mm (inch)		6.35(1/4)			6.35(1/4)			6.35(1/4)		
	Connecting method		-			-			-		
	Max tubing length m		7.5	~	200	7.5	~	200	7.5	~	200
	Total Max tubing length m		7.5	~	1000	7.5	~	1000	7.5	~	1000
	Indoor unit & Outdoor unit height difference (Outdoor unit upper / Outdoor unit Lower) m		50 / 40			50 / 40			50 / 40		
Max connectable indoor units pcs.			64			64			64		
Max allowable indoor/outdoor capacity ratio %			50 ~ 130 *2			50 ~ 130 *2			50 ~ 130 *2		

*1: If the longest tubing equivalent length exceeds 90m, increase the sizes of the main tubes by 1 rank for gas tubes and liquid tubes.

*2: If the following conditions are satisfied, the effective range is above 130 % and below 200 %.

i) Obey the limited number of connectable indoor units.

ii) The lower limit of operating range for heating outdoor temperature is limited to -10°CWB (standard -25°CWB).

iii) Simultaneous operation is limited to less than 130 % of connectable indoor units.

The number of max connectable outdoor units are 4.

Necessary amount of additional refrigerant charge per outdoor unit for 8HP or 10HP is 5.5kg, for 12HP or 14HP or 16HP is 7.0kg.

Max total refrigerant amount of 1 outdoor unit is 50kg, for 2 outdoor units is 80kg, for 3 or 4 outdoor units is 100kg.

1. Outdoor Unit

1-1. Specifications

Unit specifications (8)

Unit specifications (8)			High efficiency combination			High efficiency combination		
Outdoor Unit		MODEL	U-14ME2E8 U-16ME2E8 U-16ME2E8			U-16ME2E8 U-16ME2E8 U-16ME2E8		
Performance test condition			EN14511			EN14511		
Power supply		ø,Hz	3ø, 50Hz			3ø, 50Hz		
		V	380	400	415	380	400	415
C O O L I N G	Capacity	kW	130	130	130	135	135	135
		BTU/h	443700	443700	443700	460800	460800	460800
	Current	A	59.9	56.9	54.9	63.4	60.2	58.1
	Input power	W	35.9k	35.9k	35.9k	38.4k	38.4k	38.4k
	EER	(W/W)	3.62	3.62	3.62	3.52	3.52	3.52
	Power factor	%	91	91	91	92	92	92
	Noise outdoor	dB-A (Normal)	65.5			66.0		
Power Level dB (Normal)		86.5			87.0			
dB-A (Silent)		62.5			63.0			
H E A T I N G	Capacity	kW	145	145	145	150	150	150
		BTU/h	494900	494900	494900	511900	511900	511900
	Current	A	54.3	51.5	49.7	56.6	53.8	51.8
	Input power	W	32.5k	32.5k	32.5k	33.9k	33.9k	33.9k
	COP	(W / W)	4.46	4.46	4.46	4.42	4.42	4.42
Power factor	%	91	91	91	91	91	91	
Max Current (A) / Max Input power (W)			80.4 / 48.4k	80.4 / 50.9k	80.4 / 52.8k	85.5 / 51.8k	85.5 / 54.5k	85.5 / 56.5k
Starting current (A)			2+2+2	2+2+2	2+2+2	2+2+2	2+2+2	2+2+2
Time Delay fuse max size (A)			35+40+40			40+40+40		
Fan motor output		W / Pole number	750+750+750 / 8			750+750+750 / 8		
External static pressure		Pa	0 ~ 80			0 ~ 80		
Air flow		m³ / min	232+232+232			232+232+232		
Refrigerant type / amount g			R410A / 24.9k			R410A / 24.9k		
Product dimension	Height	mm	1842			1842		
	Width	mm	(1180)+(1180)+(1180)+120			(1180)+(1180)+(1180)+120		
	Depth	mm	1000			1000		
Packing dimension	Height	mm	-			-		
	Width	mm	-			-		
	Depth	mm	-			-		
Weight	(NET) kg		(315)+(315)+(315)			(315)+(315)+(315)		
	(GROSS) kg		-			-		
Layers limit			-			-		
Operation condition (Outdoor)	Cool (DBT)		-10°C ~ 52°C			-10°C ~ 52°C		
	Heat (WBT)		-25°C ~ 18°C			-25°C ~ 18°C		
MAX. WORKING PRESSURE	High side bar (MPa)		38.0 (3.80)			38.0 (3.80)		
	Low side bar (MPa)		31.1 (3.11)			31.1 (3.11)		
P I P I N G	Pipe diameter mm (inch) (Under 90m for ultimate Indoor unit.)		(Liquid) 19.05(3/4) (Gas) 38.1(1-1/2)			(Liquid) 19.05(3/4) (Gas) 38.1(1-1/2)		
	Pipe diameter mm (inch) *1 (Over 90m for ultimate Indoor unit.)		(Liquid) 22.22(7/8) (Gas) 41.28(1-5/8)			(Liquid) 22.22(7/8) (Gas) 41.28(1-5/8)		
	Balance pipe mm (inch)		6.35(1/4)			6.35(1/4)		
	Connecting method		-			-		
	Max tubing length m		7.5	~	200	7.5	~	200
	Total Max tubing length m		7.5	~	1000	7.5	~	1000
	Indoor unit & Outdoor unit height difference (Outdoor unit upper / Outdoor unit Lower) m		50 / 40			50 / 40		
Max connectable indoor units pcs.			64			64		
Max allowable indoor/outdoor capacity ratio %			50 ~ 130 *2			50 ~ 130 *2		

*1: If the longest tubing equivalent length exceeds 90m, increase the sizes of the main tubes by 1 rank for gas tubes and liquid tubes.

*2: If the following conditions are satisfied, the effective range is above 130 % and below 200 %.

i) Obey the limited number of connectable indoor units.

ii) The lower limit of operating range for heating outdoor temperature is limited to -10°CWB (standard -25°CWB).

iii) Simultaneous operation is limited to less than 130 % of connectable indoor units.

The number of max connectable outdoor units are 4.

Necessary amount of additional refrigerant charge per outdoor unit for 8HP or 10HP is 5.5kg, for 12HP or 14HP or 16HP is 7.0kg.

Max total refrigerant amount of 1 outdoor unit is 50kg, for 2 outdoor units is 80kg, for 3 or 4 outdoor units is 100kg.

1. Outdoor Unit

1-1. Specifications

Unit specifications (9)

Unit specifications (9)			High efficiency combination			High efficiency combination			High efficiency combination		
Outdoor Unit		MODEL	U-10ME2E8 U-12ME2E8 U-12ME2E8 U-16ME2E8			U-12ME2E8 U-12ME2E8 U-12ME2E8 U-16ME2E8			U-10ME2E8 U-12ME2E8 U-16ME2E8 U-16ME2E8		
Performance test condition			EN14511			EN14511			EN14511		
Power supply		ø,Hz	3ø, 50Hz			3ø, 50Hz			3ø, 50Hz		
		V	380	400	415	380	400	415	380	400	415
C O O L I N G	Capacity	kW	140	140	140	145	145	145	151	151	151
		BTU/h	477800	477800	477800	494900	494900	494900	515400	515400	515400
	Current	A	59.1	56.2	54.2	62.1	59.0	56.8	66.6	63.2	60.9
	Input power	W	36.2k	36.2k	36.2k	38.0k	38.0k	38.0k	40.3k	40.3k	40.3k
	EER	(W/W)	3.87	3.87	3.87	3.82	3.82	3.82	3.75	3.75	3.75
	Power factor	%	93	93	93	93	93	93	92	92	92
	Noise outdoor	dB-A (Normal)	65.5			66.0			66.0		
		Power Level dB (Normal)	86.5			87.0			87.0		
dB-A (Silent)		62.5			63.0			63.0			
H E A T I N G	Capacity	kW	155	155	155	160	160	160	169	169	169
		BTU/h	529000	529000	529000	546100	546100	546100	576800	576800	576800
	Current	A	55.0	52.2	50.4	56.6	53.8	51.9	61.9	58.8	56.7
	Input power	W	33.3k	33.3k	33.3k	34.3k	34.3k	34.3k	37.1k	37.1k	37.1k
	COP	(W / W)	4.65	4.65	4.65	4.66	4.66	4.66	4.56	4.56	4.56
	Power factor	%	92	92	92	92	92	92	91	91	91
Max Current (A) / Max Input power (W)		79.4 / 48.5k	79.4 / 51.0k	79.4 / 52.9k	83.1 / 51.0k	83.1 / 53.7k	83.1 / 55.7k	89.7 / 54.5k	89.7 / 57.3k	89.7 / 59.5k	
Starting current (A)		1+1+1+2	1+1+1+2	1+1+1+2	1+1+1+2	1+1+1+2	1+1+1+2	1+1+2+2	1+1+2+2	1+1+2+2	
Time Delay fuse max size (A)		25+30+30+40			30+30+30+40			25+30+40+40			
Fan motor output		W / Pole number	750+750+750+750 / 8			750+750+750+750 / 8			750+750+750+750 / 8		
External static pressure		Pa	0 ~ 80			0 ~ 80			0 ~ 80		
Air flow		m³/ min	224+232+232+232			232+232+232+232			224+232+232+232		
Refrigerant type / amount g		R410A / 30.5k			R410A / 33.2k			R410A / 30.5k			
Product dimension	Height	mm	1842			1842			1842		
	Width	mm	(770)+(1180)+(1180)+(1180)+180			(1180)+(1180)+(1180)+(1180)+180			(770)+(1180)+(1180)+(1180)+180		
	Depth	mm	1000			1000			1000		
Packing dimension	Height	mm	-			-			-		
	Width	mm	-			-			-		
	Depth	mm	-			-			-		
Weight	(NET) kg	(210)+(270)+(270)+(315)			(270)+(270)+(270)+(315)			(210)+(270)+(315)+(315)			
	(GROSS) kg	-			-			-			
Layers limit		-			-			-			
Operation condition (Outdoor)	Cool (DBT)	-10°C ~ 52°C			-10°C ~ 52°C			-10°C ~ 52°C			
	Heat (WBT)	-25°C ~ 18°C			-25°C ~ 18°C			-25°C ~ 18°C			
MAX. WORKING PRESSURE	High side bar (MPa)	38.0 (3.80)			38.0 (3.80)			38.0 (3.80)			
	Low side bar (MPa)	31.1 (3.11)			31.1 (3.11)			31.1 (3.11)			
P I P E I N G	Pipe diameter mm (inch) (Under 90m for ultimate Indoor unit.)		(Liquid) 19.05(3/4) (Gas) 38.1(1-1/2)			(Liquid) 19.05(3/4) (Gas) 38.1(1-1/2)			(Liquid) 19.05(3/4) (Gas) 38.1(1-1/2)		
	Pipe diameter mm (inch) *1 (Over 90m for ultimate Indoor unit.)		(Liquid) 22.22(7/8) (Gas) 41.28(1-5/8)			(Liquid) 22.22(7/8) (Gas) 41.28(1-5/8)			(Liquid) 22.22(7/8) (Gas) 41.28(1-5/8)		
	Balance pipe mm (inch)		6.35(1/4)			6.35(1/4)			6.35(1/4)		
	Connecting method		-			-			-		
	Max tubing length m		7.5	~	200	7.5	~	200	7.5	~	200
	Total Max tubing length m		7.5	~	1000	7.5	~	1000	7.5	~	1000
	Indoor unit & Outdoor unit height difference (Outdoor unit upper / Outdoor unit Lower) m		50 / 40			50 / 40			50 / 40		
	Max connectable indoor units pcs.		64			64			64		
Max allowable indoor/outdoor capacity ratio %		50 ~ 130 *2			50 ~ 130 *2			50 ~ 130 *2			

*1: If the longest tubing equivalent length exceeds 90m, increase the sizes of the main tubes by 1 rank for gas tubes and liquid tubes.

*2: If the following conditions are satisfied, the effective range is above 130 % and below 200 %.

- Obeys the limited number of connectable indoor units.
- The lower limit of operating range for heating outdoor temperature is limited to -10°C CWB (standard -25°C CWB).
- Simultaneous operation is limited to less than 130 % of connectable indoor units.

The number of max connectable outdoor units are 4.

Necessary amount of additional refrigerant charge per outdoor unit for 8HP or 10HP is 5.5kg, for 12HP or 14HP or 16HP is 7.0kg.

Max total refrigerant amount of 1 outdoor unit is 50kg, for 2 outdoor units is 80kg, for 3 or 4 outdoor units is 100kg.

1. Outdoor Unit

1-1. Specifications

Unit specifications (10)

Outdoor Unit		MODEL	High efficiency combination			High efficiency combination			High efficiency combination		
			U-12ME2E8 U-12ME2E8 U-16ME2E8 U-16ME2E8			U-10ME2E8 U-16ME2E8 U-16ME2E8 U-16ME2E8			U-12ME2E8 U-16ME2E8 U-16ME2E8 U-16ME2E8		
Performance test condition			EN14511			EN14511			EN14511		
Power supply	ϕ , Hz		3 ϕ , 50Hz			3 ϕ , 50Hz			3 ϕ , 50Hz		
	V		380	400	415	380	400	415	380	400	415
C O O L I N G	Capacity	kW	156	156	156	162	162	162	168	168	168
		BTU/h	532400	532400	532400	552900	552900	552900	573400	573400	573400
	Current	A	68.8	65.3	63.0	73.3	69.7	67.1	77.1	73.3	70.6
	Input power	W	42.1k	42.1k	42.1k	44.4k	44.4k	44.4k	46.7k	46.7k	46.7k
	EER	(W/W)	3.71	3.71	3.71	3.65	3.65	3.65	3.60	3.60	3.60
	Power factor	%	93	93	93	92	92	92	92	92	92
N o i s e	Noise outdoor	dB-A (Normal)	66.5			66.5			67.0		
		Power Level dB (Normal)	87.5			87.5			88.0		
		dB-A (Silent)	63.5			63.5			64.0		
H E A T I N G	Capacity	kW	175	175	175	182	182	182	189	189	189
		BTU/h	597300	597300	597300	621200	621200	621200	645100	645100	645100
	Current	A	63.4	60.2	58.1	68.0	64.6	62.2	70.6	67.1	64.7
	Input power	W	38.4k	38.4k	38.4k	40.7k	40.7k	40.7k	42.3k	42.3k	42.3k
	COP	(W / W)	4.56	4.56	4.56	4.47	4.47	4.47	4.47	4.47	4.47
Power factor		%	92	92	92	91	91	91	91	91	91
Max Current (A) / Max Input power (W)			93.4 / 57.0k	93.4 / 60.0k	93.4 / 62.3k	100.0 / 60.5k	100.0 / 63.6k	100.0 / 66.0k	103.7 / 63.0k	103.7 / 66.3k	103.7 / 68.8k
Starting current (A)			1+1+2+2	1+1+2+2	1+1+2+2	1+2+2+2	1+2+2+2	1+2+2+2	1+2+2+2	1+2+2+2	1+2+2+2
Time Delay fuse max size (A)			30+30+40+40			25+40+40+40			30+40+40+40		
Fan motor output		W / Pole number	750+750+750+750 / 8			750+750+750+750 / 8			750+750+750+750 / 8		
External static pressure		Pa	0 ~ 80			0 ~ 80			0 ~ 80		
Air flow		m ³ / min	232+232+232+232			224+232+232+232			232+232+232+232		
Refrigerant type / amount g			R410A / 33.2k			R410A / 30.5k			R410A / 33.2k		
Product dimension	Height	mm	1842			1842			1842		
	Width	mm	(1180)+(1180)+(1180)+(1180)+180			(770)+(1180)+(1180)+(1180)+180			(1180)+(1180)+(1180)+(1180)+180		
	Depth	mm	1000			1000			1000		
Packing dimension	Height	mm	-			-			-		
	Width	mm	-			-			-		
	Depth	mm	-			-			-		
Weight	(NET) kg		(270)+(270)+(315)+(315)			(210)+(315)+(315)+(315)			(270)+(315)+(315)+(315)		
	(GROSS) kg		-			-			-		
Layers limit			-			-			-		
Operation condition	Cool (DBT)		-10°C ~ 52°C			-10°C ~ 52°C			-10°C ~ 52°C		
	Heat (WBT)		-25°C ~ 18°C			-25°C ~ 18°C			-25°C ~ 18°C		
MAX. WORKING PRESSURE	High side bar (MPa)		38.0 (3.80)			38.0 (3.80)			38.0 (3.80)		
	Low side bar (MPa)		31.1 (3.11)			31.1 (3.11)			31.1 (3.11)		
P I P I N G	Pipe diameter mm (inch) (Under 90m for ultimate Indoor unit.)		(Liquid) 19.05(3/4) (Gas) 38.1(1-1/2)			(Liquid) 19.05(3/4) (Gas) 38.1(1-1/2)			(Liquid) 19.05(3/4) (Gas) 38.1(1-1/2)		
	Pipe diameter mm (inch) *1 (Over 90m for ultimate Indoor unit.)		(Liquid) 22.22(7/8) (Gas) 41.28(1-5/8)			(Liquid) 22.22(7/8) (Gas) 41.28(1-5/8)			(Liquid) 22.22(7/8) (Gas) 41.28(1-5/8)		
	Balance pipe mm (inch)		6.35(1/4)			6.35(1/4)			6.35(1/4)		
	Connecting method		-			-			-		
	Max tubing length m		7.5	~	200	7.5	~	200	7.5	~	200
	Total Max tubing length m		7.5	~	1000	7.5	~	1000	7.5	~	1000
	Indoor unit & Outdoor unit height difference (Outdoor unit upper / Outdoor unit Lower) m		50 / 40			50 / 40			50 / 40		
	Max connectable indoor units pcs.		64			64			64		
Max allowable indoor/outdoor capacity ratio %			50 ~ 130 *2			50 ~ 130 *2			50 ~ 130 *2		

*1: If the longest tubing equivalent length exceeds 90m, increase the sizes of the main tubes by 1 rank for gas tubes and liquid tubes.

*2: If the following conditions are satisfied, the effective range is above 130 % and below 200 %.

- i) Obey the limited number of connectable indoor units.
- ii) The lower limit of operating range for heating outdoor temperature is limited to -10°CWB (standard -25°CWB).
- iii) Simultaneous operation is limited to less than 130 % of connectable indoor units.

The number of max connectable outdoor units are 4.

Necessary amount of additional refrigerant charge per outdoor unit for 8HP or 10HP is 5.5kg, for 12HP or 14HP or 16HP is 7.0kg.

Max total refrigerant amount of 1 outdoor unit is 50kg, for 2 outdoor units is 80kg, for 3 or 4 outdoor units is 100kg.

1. Outdoor Unit

1-1. Specifications

Unit specifications (11)

Unit specifications (11)			High efficiency combination			High efficiency combination		
Outdoor Unit		MODEL	U-14ME2E8 U-16ME2E8 U-16ME2E8 U-16ME2E8			U-16ME2E8 U-16ME2E8 U-16ME2E8 U-16ME2E8		
Performance test condition			EN14511			EN14511		
Power supply		ø,Hz	3ø, 50Hz			3ø, 50Hz		
		V	380	400	415	380	400	415
C O O L I N G	Capacity	kW	174	174	174	180	180	180
		BTU/h	593900	593900	593900	614300	614300	614300
	Current	A	79.8	75.8	73.0	84.6	80.3	77.4
	Input power	W	48.3k	48.3k	48.3k	51.2k	51.2k	51.2k
	EER	(W/W)	3.60	3.60	3.60	3.52	3.52	3.52
	Power factor	%	92	92	92	92	92	92
	Noise outdoor	dB-A (Normal)	67.0			67.0		
Power Level dB (Normal)		88.0			88.0			
dB-A (Silent)		64.0			64.0			
H E A T I N G	Capacity	kW	195	195	195	201	201	201
		BTU/h	665500	665500	665500	686000	686000	686000
	Current	A	73.1	69.5	67.0	76.0	72.2	69.6
	Input power	W	43.8k	43.8k	43.8k	45.5k	45.5k	45.5k
	COP	(W / W)	4.45	4.45	4.45	4.42	4.42	4.42
	Power factor	%	91	91	91	91	91	91
Max Current (A) / Max Input power (W)			108.9 / 65.6k	108.9 / 69.1k	108.9 / 71.7k	114.0 / 69.0k	114.0 / 72.7k	114.0 / 75.4k
Starting current (A)			2+2+2+2		2+2+2+2	2+2+2+2		2+2+2+2
Time Delay fuse max size (A)			35+40+40+40			40+40+40+40		
Fan motor output		W / Pole number	750+750+750+750 / 8			750+750+750+750 / 8		
External static pressure		Pa	0 ~ 80			0 ~ 80		
Air flow		m³ / min	232+232+232+232			232+232+232+232		
Refrigerant type / amount g			R410A / 33.2k			R410A / 33.2k		
Product dimension	Height	mm	1842			1842		
	Width	mm	(1180)+(1180)+(1180)+(1180)+180			(1180)+(1180)+(1180)+(1180)+180		
	Depth	mm	1000			1000		
Packing dimension	Height	mm	-			-		
	Width	mm	-			-		
	Depth	mm	-			-		
Weight	(NET) kg		(315)+(315)+(315)+(315)			(315)+(315)+(315)+(315)		
	(GROSS) kg		-			-		
Layers limit			-			-		
Operation condition (Outdoor)	Cool (DBT)		-10°C ~ 52°C			-10°C ~ 52°C		
	Heat (WBT)		-25°C ~ 18°C			-25°C ~ 18°C		
MAX. WORKING PRESSURE	High side bar (MPa)		38.0 (3.80)			38.0 (3.80)		
	Low side bar (MPa)		31.1 (3.11)			31.1 (3.11)		
P I P I N G	Pipe diameter mm (inch) (Under 90m for ultimate Indoor unit.)		(Liquid) 19.05(3/4) (Gas) 41.28(1-5/8)			(Liquid) 19.05(3/4) (Gas) 41.28(1-5/8)		
	Pipe diameter mm (inch) *1 (Over 90m for ultimate Indoor unit.)		(Liquid) 22.22(7/8) (Gas) 44.45(1-3/4)			(Liquid) 22.22(7/8) (Gas) 44.45(1-3/4)		
	Balance pipe mm (inch)		6.35(1/4)			6.35(1/4)		
	Connecting method		-			-		
	Max tubing length m		7.5	~	200	7.5	~	200
	Total Max tubing length m		7.5	~	1000	7.5	~	1000
	Indoor unit & Outdoor unit height difference (Outdoor unit upper / Outdoor unit Lower) m		50 / 40			50 / 40		
Max connectable indoor units pcs.			64			64		
Max allowable indoor/outdoor capacity ratio %			50 ~ 130 *2			50 ~ 130 *2		

*1: If the longest tubing equivalent length exceeds 90m, increase the sizes of the main tubes by 1 rank for gas tubes and liquid tubes.

*2: If the following conditions are satisfied, the effective range is above 130 % and below 200 %.

- i) Obey the limited number of connectable indoor units.
- ii) The lower limit of operating range for heating outdoor temperature is limited to -10°CWB (standard -25°CWB).
- iii) Simultaneous operation is limited to less than 130 % of connectable indoor units.

The number of max connectable outdoor units are 4.

Necessary amount of additional refrigerant charge per outdoor unit for 8HP or 10HP is 5.5kg, for 12HP or 14HP or 16HP is 7.0kg.

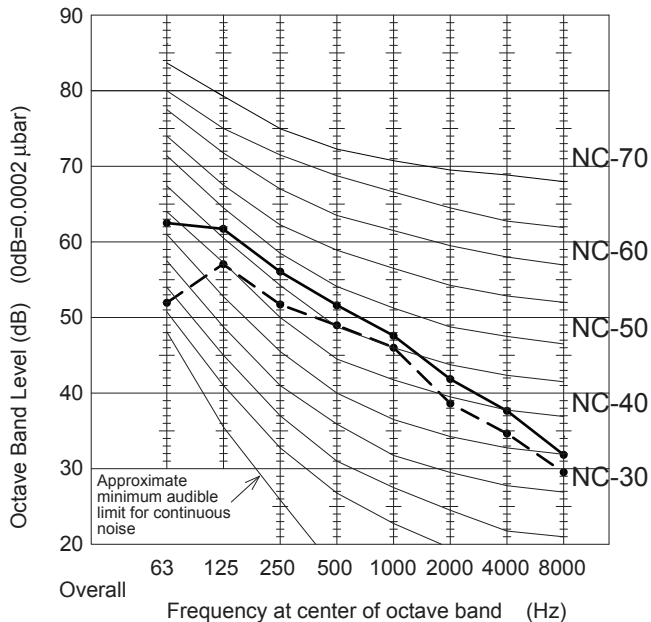
Max total refrigerant amount of 1 outdoor unit is 50kg, for 2 outdoor units is 80kg, for 3 or 4 outdoor units is 100kg.

1. Outdoor Unit

1-5. Noise Criterion Curves

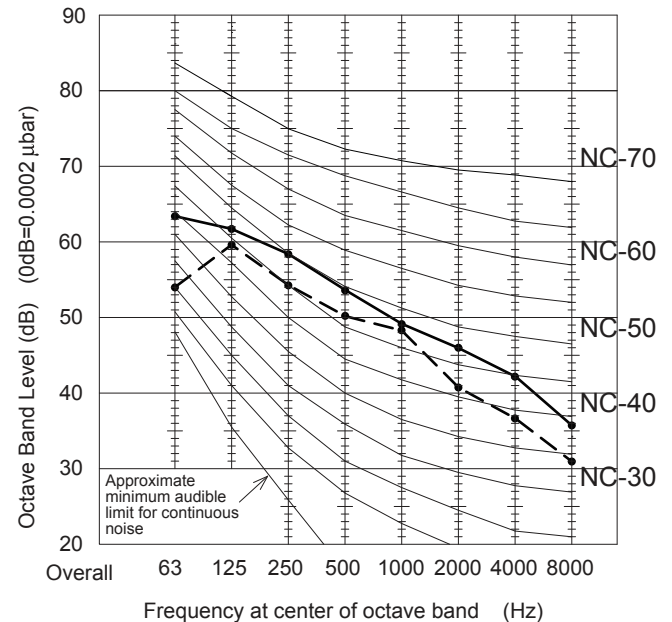
MODEL	U-8ME2E8
SOUND LEVEL dB(A) (Cooling/Heating)	54.0 (Quiet mode 51.0)
CONDITION	1 m in front at height of 1.5 m

50Hz
 ● Standard mode
 ● Quiet mode



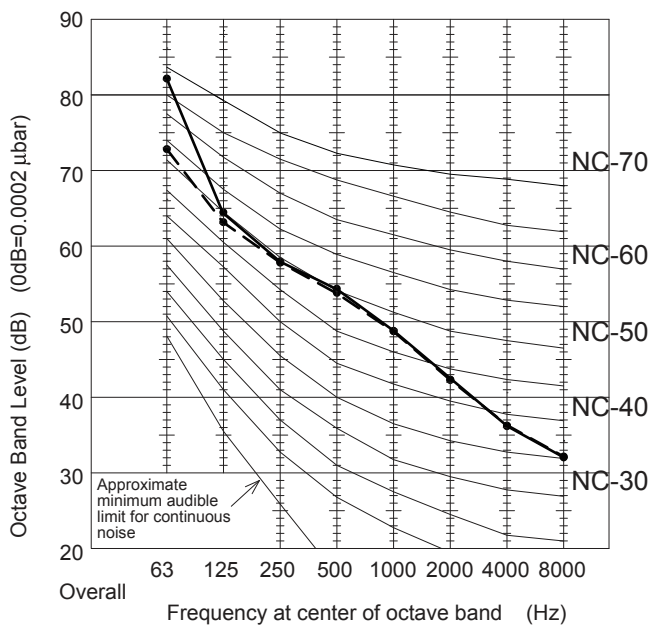
MODEL	U-10ME2E8
SOUND LEVEL dB(A) (Cooling/Heating)	56.0 (Quiet mode 53.0)
CONDITION	1 m in front at height of 1.5 m

50Hz
 ● Standard mode
 ● Quiet mode



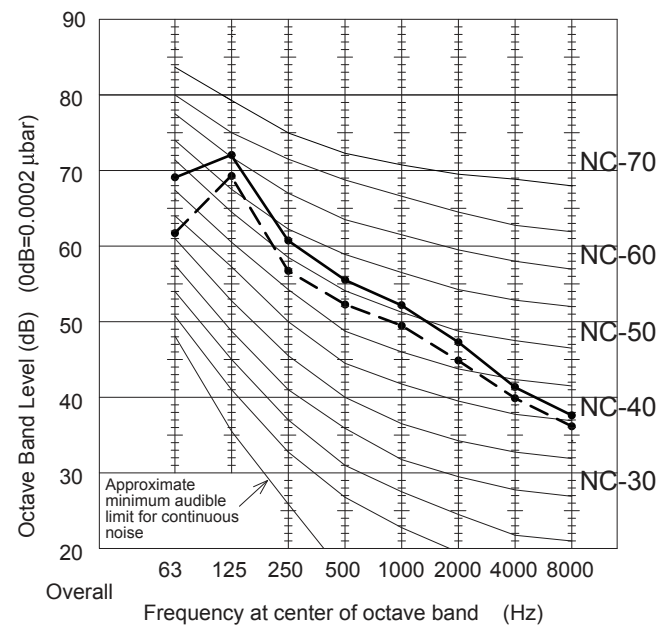
MODEL	U-12ME2E8
SOUND LEVEL dB(A) (Cooling/Heating)	59.0 (Quiet mode 56.0)
CONDITION	1 m in front at height of 1.5 m

50Hz
 ● Standard mode
 ● Quiet mode



MODEL	U-14ME2E8
SOUND LEVEL dB(A) (Cooling/Heating)	60.0 (Quiet mode 57.0)
CONDITION	1 m in front at height of 1.5 m

50Hz
 ● Standard mode
 ● Quiet mode



1. Outdoor Unit

1-5. Noise Criterion Curves (continued)

MODEL	U-16ME2E8
SOUND LEVEL dB(A) (Cooling/Heating)	61.0 (Quiet mode 58.0)
CONDITION	1 m in front at height of 1.5 m

50Hz

—●— Standard mode
-●- Quiet mode

