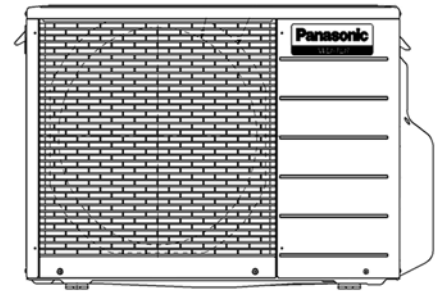
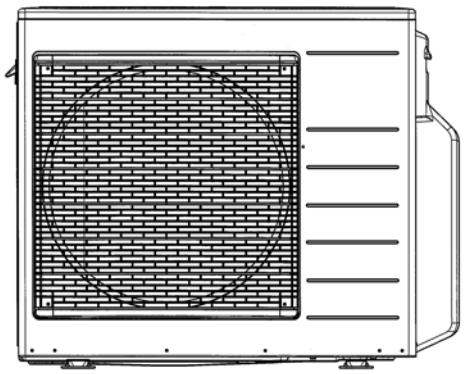
Order No. PHAAM1003090C3

Service Manual

Air Conditioner





Outdoor Unit

CU-2E15LBE
CU-2E18LBE
CU-3E18LBE
CU-4E23LBE

Please file and use this manual together with the service manual for Model No. CS-E7LKEW CU-E7LKE CS-E7LKEW CU-E7LKE-3 CS-E9LKEW CU-E9LKE CS-E9LKEW CU-E9LKE-3 CS-E12LKEW CU-E12LKE CS-E12LKEW CU-E12LKE-3 CS-E15LKEW CU-E15LKE CS-E18LKEW CU-E18LKE CS-E21LKEW CU-E21LKE CS-XE7LKEW CU-E7LKE CS-XE7LKEW CU-E7LKE-3 CS-XE9LKEW CU-E9LKE CS-XE9LKEW CU-E9LKE-3 CS-XE12LKEW CU-E12LKE CS-XE12LKEW CU-E12LKE-3 CS-XE15LKEW CU-E15LKE CS-XE18LKEW CU-E18LKE CS-XE21LKEW CU-E21LKE, CS-E10KB4EA CU-E10HBEA CS-E10KD3EA CU-E10HBEA, Order No. PHAAM1001023C2 PHAAM1003091C2 PHAAM1003092C2

⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

⚠ PRECAUTION OF LOW TEMPERATURE

In order to avoid frostbite, be assured of no refrigerant leakage during the installation or repairing of refrigeration circuit.

TABLE OF CONTENTS

Panasonic®

1 Safety Precautions

- Read the following “SAFETY PRECAUTIONS” carefully before perform any servicing.
- Electrical work must be installed or serviced by a licensed electrician. Be sure to use the correct rating of the power plug and main circuit for the model installed.
- The caution items stated here must be followed because these important contents are related to safety. The meaning of each indication used is as below. Incorrect installation or servicing due to ignoring of the instruction will cause harm or damage, and the seriousness is classified by the following indications.

⚠ **WARNING**	This indication shows the possibility of causing death or serious injury.

⚠ **CAUTION**	This indication shows the possibility of causing injury or damage to properties.

- The items to be followed are classified by the symbols:

⃠	This symbol denotes item that is PROHIBITTED from doing.

- Carry out test run to confirm that no abnormality occurs after the servicing. Then, explain to user the operation, care and maintenance as stated in instructions. Please remind the customer to keep the operating instructions for future reference.

⚠ **WARNING**	
1. Do not modify the machine, part, material during repairing service.	
2. If wiring unit is supplied as repairing part, do not repair or connect the wire even only partial wire break. Exchange the whole wiring unit.	
3. Do not wrench the fasten terminal. Pull it out or insert it straightly.	
4. Engage dealer or specialist for installation and servicing. If installation or servicing done by the user is defective, it will cause water leakage, electrical shock or fire.	
5. Install according to this installation instructions strictly. If installation is defective, it will cause water leakage, electrical shock or fire.	
6. Use the attached accessories parts and specified parts for installation and servicing. Otherwise, it will cause the set to fall, water leakage, fire or electrical shock.	
7. Install at a strong and firm location which is able to withstand the set's weight. If the strength is not enough or installation is not properly done, the set will drop and cause injury.	
8. For electrical work, follow the local national wiring standard, regulation and the installation instruction. An independent circuit and single outlet must be used. If electrical circuit capacity is not enough or defect found in electrical work, it will cause electrical shock or fire.	
9. This equipment is strongly recommended to install with Earth Leakage Circuit Breaker (ELCB) or Residual Current Device (RCD). Otherwise, it may cause electrical shock and fire in case equipment breakdown or insulation breakdown.	
10. Do not use joint cable for indoor/outdoor connection cable. Use the specified indoor/outdoor connection cable, refer to installation instruction CONNECT THE CABLE TO THE INDOOR UNIT and connect tightly for indoor/outdoor connection. Clamp the cable so that no external force will be acted on the terminal. If connecting or fixing is not perfect, it will cause heat up or fire at the connection.	
11. Wire routing must be properly arranged so that control board cover is fixed properly. If control board cover is not fixed perfectly, it will cause heat-up or fire at connection point of terminal, fire or electrical shock.	
12. When install or relocate air conditioner, do not let any substance other than the specified refrigerant, eg. air etc. mix into refrigeration cycle (piping). (Mixing of air etc. will cause abnormal high pressure in refrigeration cycle and result in explosion, injury etc.).	
13. Do not install outdoor unit near handrail of veranda. When installing air-conditioner unit at veranda of high rise building, child may climb up to outdoor unit and cross over the handrail and causing accident.	
14. This equipment must be properly earthed. Earth line must not be connected to gas pipe, water pipe, earth of lightning rod and telephone. Otherwise, it may cause electric shock in case equipment breakdown or insulation breakdown.	⃠
15. Keep away from small children, the thin film may cling to nose and mouth and prevent breathing.	⃠
16. Do not use unspecified cord, modified cord, joint cord or extension cord for power supply cord. Do not share the single outlet with other electrical appliances. Poor contact, poor insulation or over current will cause electrical shock or fire.	⃠
17. Tighten the flare nut with torque wrench according to specified method. If the flare nut is over-tightened, after a long period, the flare may break and cause refrigerant gas leakage.	⃠

18. For R410A models, when connecting the piping, do not use any existing (R22) pipes and flare nuts. Using such same may cause abnormally high pressure in the refrigeration cycle (piping), and possibly result in explosion and injury. Use only R410A materials.
    Thickness of copper pipes used with R410A must be more than 0.8mm. Never use copper pipes thinner than 0.8mm.
    It is desirable that the amount of residual oil is less than 40 mg/10m.
19. During installation, install the refrigerant piping properly before run the compressor. (Operation of compressor without fixing refrigeration piping and valves at opened condition will cause suck-in of air, abnormal high pressure in refrigeration cycle and result in explosion, injury etc.).
20. During pump down operation, stop the compressor before remove the refrigeration piping. (Removal of refrigeration piping while compressor is operating and valves are opened condition will cause suck-in of air, abnormal high pressure in refrigeration cycle and result in explosion, injury etc.).
21. After completion of installation or service, confirm there is no leakage or refrigerant gas. It may generate toxic gas when the refrigerant contacts with fire.
22. Ventilate if there is refrigerant gas leakage during operation. It may cause toxic gas when refrigerant contacts with fire.
23. Do not insert your fingers or other objects into the unit, high speed rotating fan may cause injury.
24. Must not use other parts except original parts describe in catalog and manual.

⚠ CAUTION

1. Do not install the unit at place where leakage of flammable gas may occur. In case gas leaks and accumulates at surrounding of the unit, it may cause fire.
2. Carry out drainage piping as mentioned in installation instructions. If drainage is not perfect, water may enter the room and damage the furniture.
3. Tighten the flare nut with torque wrench according to specified method. If the flare nut is over-tightened, after a long period, the flare may break and cause refrigerant gas leakage.
4. Do not touch outdoor unit air inlet and aluminium fin. It may cause injury.
5. Select an installation location which is easy for maintenance.
6. Pb free solder has a higher melting point than standard solder; typically the melting point is 50°F - 70°F (30°C - 40°C) higher. Please use a high temperature solder iron. In case of the soldering iron with temperature control, please set it to 700 ± 20°F (370 ± 10°C). Pb free solder will tend to splash when heated too high (about 1100°F / 600°C).
7. Power supply connection to the air conditioner. Connect the power supply cord (3 x 2.5mm^2) of the air conditioner to the mains using one of the following methods.
    Power supply point shall be the place where there is ease for access for the power disconnection in case of emergency. In some countries, permanent connection of this room air conditioner to the power supply is prohibited.
    i. Power supply connection to the receptacle using a power plug. Use an approved 16A (CU-3E18LBE), 20A (CU-4E23LBE) power plug with earth pin for the connection to the socket.
    ii. Power supply connection to a circuit breaker for the permanent connection. Use an approved 16A (CU-3E18LBE), 20A (CU-4E23LBE) circuit breaker for the permanent connection. It must be a double pole switch with a minimum 3.0 mm contact gap.
8. Do not release refrigerant during piping work for installation, servicing, reinstallation and during repairing a refrigerant parts.
    Take care of the liquid refrigerant, it may cause frostbite.
9. Installation or servicing work: It may need two people to carry out the installation or servicing work.
10. Do not install this appliance in a laundry room or other location where water may drip from the ceiling, etc.
11. Do not sit or step on the unit, you may fall down accidentally.
12. Do not touch the sharp aluminium fin, sharp parts may cause injury.

2 Specifications

2.1. CU-2E15LBE

Item			Unit	OUTDOOR UNIT
Indoor Unit Combination				2.0kW + 2.0kW
Power Source				1 Phase, 230V, 50Hz (Power supply from outdoor unit)
Cooling Operation	Capacity		kW	4.5 (1.5 ~ 5.2)
			BTU/h	15300 (5120 ~ 17700)
	Electrical Data	Running Current	A	5.75
		Power Input	kW	1.23 (0.25 ~ 1.52)
		EER	W/W	3.66 (6.00 ~ 3.42)
	Noise	Sound Pressure Level	dB-A (H/L)	47 / -
		Sound Power Level	dB (H/L)	62 / -
Heating Operation	Capacity		kW	5.4 (1.1 ~ 7.0)
			BTU/h	18400 (3750 ~ 23900)
	Electrical Data	Running Current	A	5.20
		Power Input	kW	1.17 (0.21 ~ 1.67)
		COP	W/W	4.62 (5.24 ~ 4.19)
	Noise	Sound Pressure Level	dB-A (H/L)	49 / -
		Sound Power Level	dB (H/L)	64 / -
Maximum Current			A	12.0
Starting Current			A	5.75
Circuit Breaker Capacity			A	15
Dimension	Height		mm	540
	Width		mm	780 (+70)
	Depth		mm	289
Net Weight			kg	38
Connection Cable				3 + 1 (Earth) ø1.5 mm^2
Pipe Length Range (1 room)			m	3 ~ 20
Maximum Pipe Length (Total Room)			m	30
Refrigerant Pipe Diameter	Liquid Side		mm (inch)	6.35 (1/4)
	Gas Side		mm (inch)	9.52 (3/8)
Compressor	Type			Hermetic Motor
	Motor Type			Brushless (4-poles)
	Rated Output		W	1.20k
Air Circulation	Type			Propeller Fan
	Motor Type			DC Motor (8-poles)
	Rated Output		W	40
Fan Speed	High (Cooling / Heating)		RPM	860 / 860
Heat Exchanger	Type			Plate fin configuration forced draft type
	Tube Material			Copper
	Fin Material			Aluminum (Pre Coat)
	Row / Stage			2 / 20
	FPI			19
Air Volume	High (Cooling / Heating)		m^3/min	33.3 / 28.5
Refrigerant Control Device				Expansion Valve
Refrigerant Oil				RB68A / Freol Alpha68M
Refrigerant (R410A)			g	1.45k

Item			Unit	OUTDOOR UNIT	
				Dry Bulb	Wet Bulb
Indoor Operation Range	Cooling	Maximum		32	23
		Minimum		16	11
	Heating	Maximum		30	—
		Minimum		16	—
Outdoor Operation Range	Cooling	Maximum		43	26
		Minimum		16	11
	Heating	Maximum		24	18
		Minimum		-10	-11

Note

• Specifications are subject to change without notice for further improvement.

2.2. CU-2E18LBE

Item			Unit	OUTDOOR UNIT	
Indoor Unit Combination				3.2kW + 3.2kW	
Power Source				1 Phase, 230V, 50Hz (Power supply from outdoor unit)	
Cooling Operation	Capacity		kW	5.2 (1.5 ~ 5.4)	
			BTU/h	17700 (5120 ~ 18400)	
	Electrical Data	Running Current	A	7.10	
		Power Input	kW	1.52 (0.25 ~ 1.58)	
		EER	W/W	3.42 (6.00 ~ 3.42)	
	Noise	Sound Pressure Level	dB-A (H/L)	49 / -	
		Sound Power Level	dB (H/L)	64 / -	
Heating Operation	Capacity		kW	5.6 (1.1 ~ 7.2)	
			BTU/h	19100 (3750 ~ 24600)	
	Electrical Data	Running Current	A	5.35	
		Power Input	kW	1.21 (0.21 ~ 1.70)	
		COP	W/W	4.63 (5.24 ~ 4.24)	
	Noise	Sound Pressure Level	dB-A (H/L)	51 / -	
		Sound Power Level	dB (H/L)	66 / -	
Maximum Current			A	12.0	
Starting Current			A	7.1	
Circuit Breaker Capacity			A	15	
Dimension	Height		mm	540	
	Width		mm	780 (+70)	
	Depth		mm	289	
Net Weight			kg	38	
Connection Cable				3 + 1 (Earth) ø1.5 mm^2	
Pipe Length Range (1 room)			m	3 ~ 20	
Maximum Pipe Length (Total Room)			m	30	
Refrigerant Pipe Diameter	Liquid Side		mm (inch)	6.35 (1/4)	
	Gas Side		mm (inch)	9.52 (3/8)	
Compressor	Type			Hermetic Motor	
	Motor Type			Brushless (4-poles)	
	Rated Output		W	1.50k	
Air Circulation	Type			Propeller Fan	
	Motor Type			DC Motor (8-poles)	
	Rated Output		W	40	
Fan Speed	High (Cooling / Heating)		RPM	890 / 890	
Heat Exchanger	Type			Plate fin configuration forced draft type	
	Tube Material			Copper	
	Fin Material			Aluminum (Pre Coat)	
	Row / Stage			2 / 20	
	FPI			19	
Air Volume	High (Cooling / Heating)		m^3/min	34.5 / 31.0	
Refrigerant Control Device				Expansion Valve	
Refrigerant Oil				RB68A / Freol Alpha68M	
Refrigerant (R410A)			g	1.45k	
				Dry Bulb	Wet Bulb
Indoor Operation Range	Cooling	Maximum		32	23
		Minimum		16	11
	Heating	Maximum		30	—
		Minimum		16	—
Outdoor Operation Range	Cooling	Maximum		43	26
		Minimum		16	11
	Heating	Maximum		24	18
		Minimum		-10	-11

Note

- Specifications are subject to change without notice for further improvement.

2.3. CU-3E18LBE

Item			Unit	OUTDOOR UNIT	
Indoor Unit Combination				2.0kW + 2.0kW + 5.0kW	
Power Source				1 Phase, 230V, 50Hz (Power supply from outdoor unit)	
Cooling Operation	Capacity		kW	5.2 (1.8 ~ 7.3)	
			BTU/h	17700 (6140 ~ 24900)	
	Electrical Data	Running Current	A	5.3	
		Power Input	kW	1.20 (0.36 ~ 2.18)	
		EER	W/W	4.33 (5.00 ~ 3.35)	
	Noise	Sound Pressure Level	dB-A (H/L)	46 / -	
		Sound Power Level	dB (H/L)	60 / -	
Heating Operation	Capacity		kW	6.8 (1.6 ~ 8.3)	
			BTU/h	23200 (5460 ~ 28300)	
	Electrical Data	Running Current	A	6.5	
		Power Input	kW	1.40 (0.32 ~ 2.11)	
		COP	W/W	4.86 (5.00 ~ 3.93)	
	Noise	Sound Pressure Level	dB-A (H/L)	47 / -	
		Sound Power Level	dB (H/L)	61 / -	
Maximum Current			A	15.2	
Starting Current			A	6.5	
Circuit Breaker Capacity			A	16	
Dimension	Height		mm	795	
	Width		mm	875 (+95)	
	Depth		mm	320	
Net Weight			kg	71	
Connection Cable				3 + 1 (Earth) ø1.5 mm^2	
Pipe Length Range (1 room)			m	3 ~ 25	
Maximum Pipe Length (Total Room)			m	50	
Refrigerant Pipe Diameter	Liquid Side		mm (inch)	6.35 (1/4)	
	Gas Side		mm (inch)	9.52 (3/8)	
Compressor	Type			Hermetic Motor	
	Motor Type			Brushless (4-poles)	
	Rated Output		W	1.30k	
Air Circulation	Type			Propeller Fan	
	Motor Type			DC Motor (8-poles)	
	Rated Output		W	60	
Fan Speed	High (Cooling / Heating)		RPM	580 / 580	
Heat Exchanger	Type			Plate fin configuration forced draft type	
	Tube Material			Copper	
	Fin Material			Aluminum (Pre Coat)	
	Row / Stage			2 / 36	
	FPI			19	
Air Volume	High		m^3/min	41.7	
Refrigerant Control Device				Expansion Valve	
Refrigerant Oil				FV50S	
Refrigerant (R410A)			g	2.64k	
				Dry Bulb	Wet Bulb
Indoor Operation Range	Cooling	Maximum		32	23
		Minimum		16	11
	Heating	Maximum		30	—
		Minimum		16	—
Outdoor Operation Range	Cooling	Maximum		46	26
		Minimum		-10	—
	Heating	Maximum		24	18
		Minimum		-15	-16

Note

- Specifications are subject to change without notice for further improvement.

2.4. CU-4E23LBE

Item			Unit	OUTDOOR UNIT	
Indoor Unit Combination				2.0kW + 2.0kW + 2.0kW + 5.0kW	
Power Source				1 Phase, 230V, 50Hz (Power supply from outdoor unit)	
Cooling Operation	Capacity		kW	6.8 (1.9 ~ 8.8)	
			BTU/h	23200 (6480 ~ 30000)	
	Electrical Data	Running Current	A	7.5	
		Power Input	kW	1.68 (0.34 ~ 2.47)	
		EER	W/W	4.05 (5.59 ~ 3.56)	
	Noise	Sound Pressure Level	dB-A (H/L)	48 / -	
		Sound Power Level	dB (H/L)	62 / -	
Heating Operation	Capacity		kW	8.6 (3.0 ~ 10.6)	
			BTU/h	29300 (10200 ~ 36100)	
	Electrical Data	Running Current	A	8.6	
		Power Input	kW	1.85 (0.58 ~ 2.60)	
		COP	W/W	4.65 (5.17 ~ 4.08)	
	Noise	Sound Pressure Level	dB-A (H/L)	49 / -	
		Sound Power Level	dB (H/L)	63 / -	
Maximum Current			A	15.6	
Starting Current			A	8.6	
Circuit Breaker Capacity			A	20	
Dimension	Height		mm	795	
	Width		mm	875 (+95)	
	Depth		mm	320	
Net Weight			kg	72	
Connection Cable				3 + 1 (Earth) ø1.5 mm^2	
Pipe Length Range (1 room)			m	3 ~ 25	
Maximum Pipe Length (Total Room)			m	60	
Refrigerant Pipe Diameter	Liquid Side		mm (inch)	6.35 (1/4)	
	Gas Side		mm (inch)	9.52 (3/8)	
Compressor	Type			Hermetic Motor	
	Motor Type			Brushless (4-poles)	
	Rated Output		W	1.30k	
Air Circulation	Type			Propeller Fan	
	Motor Type			DC Motor (8-poles)	
	Rated Output		W	60	
Fan Speed	High (Cooling / Heating)		RPM	600 / 620	
Heat Exchanger	Type			Plate fin configuration forced draft type	
	Tube Material			Copper	
	Fin Material			Aluminum (Pre Coat)	
	Row /S tage			2 / 36	
	FPI			19	
Air Volume	High (Cooling / Heating)		m^3/min	42.5 / 44.1	
Refrigerant Control Device				Expansion Valve	
Refrigerant Oil				FV50S	
Refrigerant (R410A)			g	2.46k	
				Dry Bulb	Wet Bulb
Indoor Operation Range	Cooling	Maximum		32	23
		Minimum		16	11
	Heating	Maximum		30	—
		Minimum		16	—
Outdoor Operation Range	Cooling	Maximum		46	26
		Minimum		-10	—
	Heating	Maximum		24	18
		Minimum		-15	-16

Note

- Specifications are subject to change without notice for further improvement.

• **Multi Split Combination Possibility:**

- A single outdoor unit enables air conditioning of up to two separate rooms for CU-2E15LBE, CU-2E18LBE.
- A single outdoor unit enables air conditioning of up to three separate rooms for CU-3E18LBE.
- A single outdoor unit enables air conditioning of up to four separate rooms for CU-4E23LBE, CU-4E27CBPG.

CONNECTABLE INDOOR UNIT			OUTDOOR UNIT													
			CU-2E15LBE		CU-2E18LBE		CU-3E18LBE			CU-4E23LBE				CU-4E27CBPG			
Type		ROOM	A	B	A	B	A	B	C	A	B	C	D	A	B	C	D
Wall	2.0kW	CS-E7LKEW CS-XE7LKEW	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	2.5kW	CS-E9LKEW CS-XE9LKEW CS-E10KB4EA CS-E10KD3EA	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	3.2kW	CS-E12LKEW CS-XE12LKEW	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	4.0kW	CS-E15LKEW CS-XE15LKEW	–	–	–	–	●	●	●	●	●	●	●	●	●	●	●
	5.0kW	CS-E18LKEW CS-XE18LKEW	–	–	–	–	●	●	●	●	●	●	●	●	●	●	●
	6.0kW	CS-E21LKEW CS-XE21LKEW	–	–	–	–	–	–	–	●	●	●	●	–	–	–	–

Capacity range of connectable indoor units		From 4.0kW to 5.6kW	From 4.0kW to 6.4kW	From 4.5kW to 9.0kW	From 4.5kW to 11.0kW	From 4.5kW to 13.6kW
Pipe length	1-room maximum pipe length (m)	20	20	25	25	25
	Allowable elevation (m)	10	10	15	15	15
	Total allowable pipe length (m)	30	30	50	60	70
	Total pipe length for maximum chargeless length (m)	20	20	30	30	40
	Additional gas amount over chargeless length (g/m)	20	20	20	20	20

Note: " ● " : Available

Remarks for CU-2E15LBE / CU-2E18LBE

1. At least two indoor units must be connected.
2. The total nominal cooling capacity of indoor units that will be connected to outdoor unit must be within connectable capacity range of indoor unit. (as shown in the table above)
   Example: The indoor units' combination below is possible to connect to CU-2E15LBE. (Total nominal capacity of indoor units is between 4.0kW to 5.6kW)
   1) Two CS-E7LKEW only (Total nominal cooling capacity is 4.0kW)
   2) One CS-E7LKEW and one CS-E9LKEW. (Total nominal cooling capacity is 4.5kW)

Remarks for CU-3E18LBE / CU-4E23LBE / CU-4E27CBPG

1. At least two indoor units must be connected.
2. The total nominal cooling capacity of indoor units that will be connected to outdoor unit must be within connectable capacity range of indoor unit. (as shown in the table above)
   Example: The indoor units' combination below is possible to connect to CU-3E18LBE. (Total nominal capacity of indoor units is between 4.5kW to 9.0kW)
   1) Two CS-E9LKEW only (Total nominal cooling capacity is 5.0kW)
   2) Three CS-E12LKEW. (Total nominal cooling capacity is 9.6kW)

• Outdoor Unit : CU-2E15LBE

Indoor unit capacity Cooling		Total	Cooling Capacity(kW)						Input Power (W)				EER		ANNUAL ENERGY CONSUMPTION (kWh)	Current, 230V (A)	MOISTURE REMOVAL VOLUME l/h
			Room A	Room B			Total	min ~ max	Rating	min ~ max			W/W	CLASS			
1 Room	20	20	2.00				2.00	1.1 ~ 2.9	520	220 ~ 750			3.85	A	260	2.45	1.3
	25	25	2.50				2.50	1.1 ~ 3.5	670	220 ~ 1000			3.73	A	335	3.15	1.5
	28	28	2.80				2.80	1.1 ~ 3.5	750	220 ~ 1000			3.73	A	375	3.50	1.6
	32	32	3.20				3.20	1.1 ~ 4.0	920	220 ~ 1220			3.48	A	460	4.30	1.8
2 Room	20 + 20	40	2.00	2.00			4.00	1.5 ~ 5.0	1090	250 ~ 1350			3.66	A	545	5.10	1.3 + 1.3
	20 + 25	45	2.00	2.50			4.50	1.5 ~ 5.2	1230	250 ~ 1520			3.66	A	615	5.75	1.3 + 1.5
	20 + 28	48	1.85	2.65			4.50	1.5 ~ 5.2	1230	250 ~ 1520			3.66	A	615	5.75	1.2 + 1.6
	20 + 32	52	1.75	2.75			4.50	1.5 ~ 5.2	1230	250 ~ 1520			3.66	A	615	5.75	1.1 + 1.6
	25 + 25	50	2.25	2.25			4.50	1.5 ~ 5.2	1230	250 ~ 1520			3.66	A	615	5.75	1.5 + 1.5
	25 + 28	53	2.10	2.40			4.50	1.5 ~ 5.2	1230	250 ~ 1520			3.66	A	615	5.75	1.4 + 1.5
	28 + 28	56	2.25	2.25			4.50	1.5 ~ 5.2	1230	250 ~ 1520			3.66	A	615	5.75	1.5 + 1.5

Indoor unit capacity Heating		Total	Heating Capacity(kW)						Input Power (W)				COP		ANNUAL ENERGY CONSUMPTION (kWh)	Current, 230V (A)	MOISTURE REMOVAL VOLUME l/h
			Room A	Room B			Total	min ~ max	Rating	min ~ max			W/W	CLASS			
1 Room	20	20	3.20				3.20	0.7 ~ 4.8	850	170 ~ 1410			3.76	A	425	3.75	
	25	25	3.60				3.60	0.7 ~ 5.5	1030	170 ~ 1700			3.50	B	515	4.55	
	28	28	4.00				4.00	0.7 ~ 5.5	1150	170 ~ 1700			3.48	B	575	5.10	
	32	32	4.50				4.50	0.7 ~ 6.2	1250	170 ~ 1810			3.60	B	625	5.55	
2 Room	20 + 20	40	2.70	2.70			5.40	1.1 ~ 7.0	1170	210 ~ 1670			4.62	A	585	5.20	
	20 + 25	45	2.40	3.00			5.40	1.1 ~ 7.0	1170	210 ~ 1670			4.62	A	585	5.20	
	20 + 28	48	2.25	3.15			5.40	1.1 ~ 7.0	1170	210 ~ 1670			4.62	A	585	5.20	
	20 + 32	52	2.10	3.30			5.40	1.1 ~ 7.0	1170	210 ~ 1670			4.62	A	585	5.20	
	25 + 25	50	2.70	2.70			5.40	1.1 ~ 7.0	1170	210 ~ 1670			4.62	A	585	5.20	
	25 + 28	53	2.55	2.85			5.40	1.1 ~ 7.0	1170	210 ~ 1670			4.62	A	585	5.20	
	28 + 28	56	2.70	2.70			5.40	1.1 ~ 7.0	1170	210 ~ 1670			4.62	A	585	5.20	

• Outdoor Unit : CU-2E18LBE

Indoor unit capacity Cooling		Total	Cooling Capacity(kW)						Input Power (W)				EER		ANNUAL ENERGY CONSUMPTION (kWh)	Current, 230V (A)	MOISTURE REMOVAL VOLUME l/h
			Room A	Room B			Total	min ~ max	Rating	min ~ max			W/W	CLASS			
1 Room	20	20	2.00				2.00	1.1 ~ 2.9	520	220 ~ 750			3.85	A	260	2.45	1.3
	25	25	2.50				2.50	1.1 ~ 3.5	670	220 ~ 1000			3.73	A	335	3.15	1.5
	28	28	2.80				2.80	1.1 ~ 3.5	750	220 ~ 1000			3.73	A	375	3.50	1.6
	32	32	3.20				3.20	1.1 ~ 4.0	920	220 ~ 1220			3.48	A	460	4.30	1.8
2 Room	20 + 20	40	2.00	2.00			4.00	1.5 ~ 5.0	1090	250 ~ 1350			3.66	A	545	5.10	1.3 + 1.3
	20 + 25	45	2.00	2.50			4.50	1.5 ~ 5.2	1230	250 ~ 1520			3.66	A	615	5.75	1.3 + 1.5
	20 + 28	48	1.85	2.65			4.50	1.5 ~ 5.2	1230	250 ~ 1520			3.66	A	615	5.75	1.2 + 1.6
	20 + 32	52	1.85	2.95			4.80	1.5 ~ 5.3	1310	250 ~ 1540			3.66	A	655	6.10	1.2 + 1.7
	25 + 25	50	2.40	2.40			4.80	1.5 ~ 5.2	1310	250 ~ 1520			3.66	A	655	6.10	1.5 + 1.5
	25 + 28	53	2.25	2.55			4.80	1.5 ~ 5.2	1310	250 ~ 1520			3.66	A	655	6.10	1.5 + 1.6
	25 + 32	57	2.20	2.80			5.00	1.5 ~ 5.3	1490	250 ~ 1540			3.36	A	745	6.95	1.4 + 1.6
	28 + 28	56	2.40	2.40			4.80	1.5 ~ 5.2	1310	250 ~ 1520			3.66	A	655	6.10	1.5 + 1.5
	28 + 32	60	2.35	2.65			5.00	1.5 ~ 5.3	1490	250 ~ 1540			3.36	A	745	6.95	1.5 + 1.6
	32 + 32	64	2.60	2.60			5.20	1.5 ~ 5.4	1520	250 ~ 1580			3.42	A	760	7.10	1.6 + 1.6

Indoor unit capacity Heating		Total	Heating Capacity(kW)						Input Power (W)				COP		ANNUAL ENERGY CONSUMPTION (kWh)	Current, 230V (A)	MOISTURE REMOVAL VOLUME l/h
			Room A	Room B			Total	min ~ max	Rating	min ~ max			W/W	CLASS			
1 Room	20	20	3.20				3.20	0.7 ~ 4.8	850	170 ~ 1410			3.76	A	425	3.75	
	25	25	3.60				3.60	0.7 ~ 5.5	1030	170 ~ 1700			3.50	B	515	4.55	
	28	28	4.00				4.00	0.7 ~ 5.5	1150	170 ~ 1700			3.48	B	575	5.10	
	32	32	4.50				4.50	0.7 ~ 6.2	1250	170 ~ 1810			3.60	B	625	5.55	
2 Room	20 + 20	40	2.70	2.70			5.40	1.1 ~ 7.0	1170	210 ~ 1670			4.62	A	585	5.20	
	20 + 25	45	2.40	3.00			5.40	1.1 ~ 7.0	1170	210 ~ 1670			4.62	A	585	5.20	
	20 + 28	48	2.25	3.15			5.40	1.1 ~ 7.0	1170	210 ~ 1670			4.62	A	585	5.20	
	20 + 32	52	2.15	3.45			5.60	1.1 ~ 7.2	1230	210 ~ 1720			4.55	A	615	5.45	
	25 + 25	50	2.80	2.80			5.60	1.1 ~ 7.2	1250	210 ~ 1740			4.48	A	625	5.55	
	25 + 28	53	2.65	2.95			5.60	1.1 ~ 7.2	1250	210 ~ 1740			4.48	A	625	5.55	
	25 + 32	57	2.45	3.15			5.60	1.1 ~ 7.2	1230	210 ~ 1720			4.55	A	615	5.45	
	28 + 28	56	2.80	2.80			5.60	1.1 ~ 7.2	1250	210 ~ 1740			4.48	A	625	5.55	
	28 + 32	60	2.60	3.00			5.60	1.1 ~ 7.2	1230	210 ~ 1720			4.55	A	615	5.45	
	32 + 32	64	2.80	2.80			5.60	1.1 ~ 7.2	1210	210 ~ 1700			4.63	A	605	5.35	

• Outdoor Unit : CU-3E18LBE

	Indoor unit capacity Cooling	Total	Cooling Capacity(kW)						Input Power (W)				EER		ANNUAL ENERGY CONSUMPTION (kWh)	Current, 230V (A)	MOISTURE REMOVAL VOLUME l/h
			Room A	Room B	Room C	Total	min ~ max		Rating	min ~ max			W/W	CLASS			
1 Room	20	20	2.00			2.00	1.8 ~ 2.9		500	340 ~ 810			4.00	A	250	2.5	1.3
	25	25	2.50			2.50	1.8 ~ 2.9		630	340 ~ 810			4.00	A	315	3.0	1.5
	28	28	2.80			2.80	1.8 ~ 2.9		700	340 ~ 810			4.00	A	350	3.3	1.6
	32	32	3.20			3.20	1.8 ~ 3.8		800	340 ~ 1360			4.00	A	400	3.7	1.8
	40	40	4.00			4.00	1.8 ~ 4.3		1240	340 ~ 1990			3.23	A	620	5.6	2.3
	50	50	5.00			5.00	1.9 ~ 5.7		1550	340 ~ 2130			3.23	A	775	6.8	2.7
2 Room	20 + 20	40	2.00	2.00		4.00	1.9 ~ 6.2		1010	350 ~ 2100			3.96	A	505	4.5	1.3 + 1.3
	20 + 25	45	2.00	2.50		4.50	1.9 ~ 6.2		1270	350 ~ 2100			3.55	A	635	5.6	1.3 + 1.5
	20 + 28	48	2.00	2.80		4.80	1.9 ~ 6.2		1350	350 ~ 2100			3.55	A	675	6.0	1.3 + 1.6
	20 + 32	52	2.00	3.20		5.20	1.9 ~ 6.3		1490	350 ~ 2110			3.49	A	745	6.6	1.3 + 1.8
	20 + 40	60	1.73	3.47		5.20	1.9 ~ 6.4		1450	350 ~ 2110			3.59	A	725	6.4	1.1 + 2.0
	20 + 50	70	1.49	3.71		5.20	1.9 ~ 6.8		1290	360 ~ 2150			4.03	A	645	5.7	0.9 + 2.2
	25 + 25	50	2.50	2.50		5.00	1.9 ~ 6.2		1540	350 ~ 2100			3.25	A	770	6.8	1.5 + 1.5
	25 + 28	53	2.45	2.75		5.20	1.9 ~ 6.2		1540	350 ~ 2100			3.38	A	770	6.8	1.5 + 1.6
	25 + 32	57	2.28	2.92		5.20	1.9 ~ 6.3		1480	350 ~ 2110			3.51	A	740	6.5	1.5 + 1.7
	25 + 40	65	2.00	3.20		5.20	1.9 ~ 6.4		1440	350 ~ 2110			3.61	A	720	6.4	1.3 + 1.8
	25 + 50	75	1.73	3.47		5.20	1.9 ~ 6.8		1290	360 ~ 2150			4.03	A	645	5.7	1.1 + 2.0
	28 + 28	56	2.60	2.60		5.20	1.9 ~ 6.2		1540	350 ~ 2100			3.38	A	770	6.8	1.6 + 1.6
	28 + 32	60	2.43	2.77		5.20	1.9 ~ 6.3		1480	350 ~ 2110			3.51	A	740	6.5	1.5 + 1.6
	28 + 40	68	2.14	3.06		5.20	1.9 ~ 6.4		1440	350 ~ 2110			3.61	A	720	6.4	1.4 + 1.7
	28 + 50	78	1.87	3.33		5.20	1.9 ~ 6.8		1290	360 ~ 2150			4.03	A	645	5.7	1.2 + 1.9
	32 + 32	64	2.60	2.60		5.20	1.9 ~ 6.4		1450	350 ~ 2120			3.59	A	725	6.4	1.6 + 1.6
	32 + 40	72	2.31	2.89		5.20	1.9 ~ 6.5		1410	350 ~ 2120			3.69	A	705	6.3	1.5 + 1.7
	32 + 50	82	2.03	3.17		5.20	1.9 ~ 6.9		1250	360 ~ 2150			4.16	A	625	5.5	1.3 + 1.8
	40 + 40	80	2.60	2.60		5.20	1.9 ~ 6.5		1410	350 ~ 2120			3.69	A	705	6.2	1.6 + 1.6
	40 + 50	90	2.31	2.89		5.20	1.9 ~ 6.9		1250	360 ~ 2160			4.16	A	625	5.5	1.5 + 1.7
3 Room	20 + 20 + 20	60	1.73	1.73	1.73	5.19	1.9 ~ 7.2		1220	360 ~ 2170			4.25	A	610	5.3	1.1 + 1.1 + 1.1
	20 + 20 + 25	65	1.60	1.60	2.00	5.20	1.9 ~ 7.2		1220	360 ~ 2170			4.26	A	610	5.3	1.0 + 1.0 + 1.3
	20 + 20 + 28	68	1.53	1.53	2.14	5.20	1.9 ~ 7.2		1220	360 ~ 2170			4.26	A	610	5.3	1.0 + 1.0 + 1.4
	20 + 20 + 32	72	1.44	1.44	2.32	5.20	1.9 ~ 7.2		1210	360 ~ 2180			4.30	A	605	5.3	0.9 + 0.9 + 1.5
	20 + 20 + 40	80	1.30	1.30	2.60	5.20	1.8 ~ 7.3		1210	360 ~ 2180			4.30	A	605	5.3	0.8 + 0.8 + 1.6
	20 + 20 + 50	90	1.16	1.16	2.88	5.20	1.8 ~ 7.3		1200	360 ~ 2180			4.33	A	600	5.3	0.7 + 0.7 + 1.7
	20 + 25 + 25	70	1.48	1.86	1.86	5.20	1.9 ~ 7.2		1220	360 ~ 2170			4.26	A	610	5.3	0.9 + 1.2 + 1.2
	20 + 25 + 28	73	1.42	1.78	2.00	5.20	1.9 ~ 7.2		1220	360 ~ 2170			4.26	A	610	5.3	0.9 + 1.1 + 1.3
	20 + 25 + 32	77	1.35	1.69	2.16	5.20	1.9 ~ 7.2		1210	360 ~ 2180			4.30	A	605	5.3	0.9 + 1.1 + 1.4
	20 + 25 + 40	85	1.22	1.53	2.45	5.20	1.8 ~ 7.3		1200	360 ~ 2180			4.33	A	600	5.3	0.8 + 1.0 + 1.5
	20 + 28 + 28	76	1.36	1.92	1.92	5.20	1.9 ~ 7.2		1220	360 ~ 2170			4.26	A	610	5.3	0.9 + 1.2 + 1.2
	20 + 28 + 32	80	1.30	1.82	2.08	5.20	1.9 ~ 7.2		1210	360 ~ 2180			4.30	A	605	5.3	0.8 + 1.2 + 1.3
	20 + 28 + 40	88	1.18	1.65	2.37	5.20	1.8 ~ 7.3		1200	360 ~ 2180			4.33	A	600	5.3	0.7 + 1.1 + 1.5
	20 + 32 + 32	84	1.24	1.98	1.98	5.20	1.8 ~ 7.3		1200	360 ~ 2180			4.33	A	600	5.3	0.8 + 1.3 + 1.3
	25 + 25 + 25	75	1.73	1.73	1.73	5.19	1.9 ~ 7.2		1220	360 ~ 2170			4.25	A	610	5.3	1.1 + 1.1 + 1.1
	25 + 25 + 28	78	1.67	1.67	1.86	5.20	1.9 ~ 7.2		1220	360 ~ 2170			4.26	A	610	5.3	1.1 + 1.1 + 1.2
	25 + 25 + 32	82	1.59	1.59	2.02	5.20	1.9 ~ 7.2		1210	360 ~ 2180			4.30	A	605	5.3	1.0 + 1.0 + 1.3
	25 + 25 + 40	90	1.44	1.44	2.32	5.20	1.8 ~ 7.3		1200	360 ~ 2180			4.33	A	600	5.3	0.9 + 0.9 + 1.5
	25 + 28 + 28	81	1.60	1.80	1.80	5.20	1.9 ~ 7.2		1220	360 ~ 2170			4.26	A	610	5.3	1.0 + 1.2 + 1.2
	25 + 28 + 32	85	1.53	1.71	1.96	5.20	1.9 ~ 7.2		1210	360 ~ 2180			4.30	A	605	5.3	1.0 + 1.1 + 1.3
	25 + 32 + 32	89	1.46	1.87	1.87	5.20	1.8 ~ 7.3		1200	360 ~ 2180			4.33	A	600	5.3	0.9 + 1.2 + 1.2
	28 + 28 + 28	84	1.73	1.73	1.73	5.19	1.9 ~ 7.2		1220	360 ~ 2170			4.25	A	610	5.3	1.1 + 1.1 + 1.1
	28 + 28 + 32	88	1.65	1.65	1.90	5.20	1.9 ~ 7.2		1210	360 ~ 2180			4.30	A	605	5.3	1.1 + 1.1 + 1.2

	Indoor unit capacity Heating	Total	Heating Capacity(kW)						Input Power (W)				COP		ANNUAL ENERGY CONSUMPTION (kWh)	Current, 230V (A)	MOISTURE REMOVAL VOLUME l/h
			Room A	Room B	Room C	Total	min ~ max		Rating	min ~ max			W/W	CLASS			
1 Room	20	20	3.20			3.20	1.2 ~ 4.1		740	300 ~ 1230			4.32	A	370	3.7	
	25	25	3.60			3.60	1.2 ~ 4.3		940	300 ~ 1230			3.83	A	470	4.5	
	28	28	4.00			4.00	1.2 ~ 4.3		1050	300 ~ 1230			3.81	A	525	5.0	
	32	32	4.50			4.50	1.2 ~ 5.8		1230	300 ~ 2100			3.66	A	615	5.8	
	40	40	5.60			5.60	1.2 ~ 6.8		1720	300 ~ 2930			3.26	C	860	7.7	
	50	50	6.80			6.80	1.2 ~ 6.9		2100	300 ~ 2520			3.24	C	1050	9.2	
2 Room	20 + 20	40	2.90	2.90		5.80	1.4 ~ 7.0		1450	310 ~ 2550			4.00	A	725	6.4	
	20 + 25	45	2.84	3.56		6.40	1.4 ~ 7.0		1720	310 ~ 2550			3.72	A	860	7.6	
	20 + 28	48	2.67	3.73		6.40	1.4 ~ 7.0		1720	310 ~ 2550			3.72	A	860	7.6	
	20 + 32	52	2.62	4.18		6.80	1.4 ~ 7.3		1840	310 ~ 2520			3.70	A	920	8.2	
	20 + 40	60	2.27	4.53		6.80	1.4 ~ 7.3		1800	310 ~ 2510			3.78	A	900	7.9	
	20 + 50	70	1.94	4.86		6.80	1.4 ~ 8.0		1520	310 ~ 2200			4.47	A	760	6.7	
	25 + 25	50	3.40	3.40		6.80	1.4 ~ 7.0		1930	310 ~ 2550			3.52	B	965	8.5	
	25 + 28	53	3.21	3.59		6.80	1.4 ~ 7.0		1930	310 ~ 2550			3.52	B	965	8.5	
	25 + 32	57	2.98	3.82		6.80	1.4 ~ 7.3		1840	310 ~ 2520			3.70	A	920	8.1	
	25 + 40	65	2.62	4.18		6.80	1.4 ~ 7.3		1800	310 ~ 2510			3.78	A	900	8.0	
	25 + 50	75	2.27	4.53		6.80	1.4 ~ 8.0		1520	310 ~ 2200			4.47	A	760	6.7	
	28 + 28	56	3.40	3.40		6.80	1.4 ~ 7.0		1930	310 ~ 2550			3.52	B	965	8.5	
	28 + 32	60	3.17	3.63		6.80	1.4 ~ 7.3		1840	310 ~ 2520			3.70	A	920	8.1	
	28 + 40	68	2.80	4.00		6.80	1.4 ~ 7.3		1800	310 ~ 2510			3.78	A	900	8.0	
	28 + 50	78	2.44	4.36		6.80	1.4 ~ 8.0		1520	310 ~ 2200			4.47	A	760	6.7	
	32 + 32	64	3.40	3.40		6.80	1.4 ~ 7.5		1750	310 ~ 2490			3.89	A	875	7.7	
	32 + 40	72	3.02	3.78		6.80	1.4 ~ 7.5		1750	310 ~ 2470			3.89	A	875	7.8	
	32 + 50	82	2.65	4.15		6.80	1.4 ~ 8.0		1500	310 ~ 2180			4.53	A	750	6.6	
	40 + 40	80	3.40	3.40		6.80	1.4 ~ 7.6		1710	310 ~ 2470			3.98	A	855	7.5	
	40 + 50	90	3.02	3.78		6.80	1.4 ~ 8.0		1500	310 ~ 2170			4.53	A	750	6.6	
3 Room	20 + 20 + 20	60	2.26	2.26	2.26	6.78	1.5 ~ 8.1		1510	320 ~ 2120			4.49	A	755	6.7	
	20 + 20 + 25	65	2.09	2.09	2.62	6.80	1.5 ~ 8.1		1510	320 ~ 2120			4.50	A	755	6.7	
	20 + 20 + 28	68	2.00	2.00	2.80	6.80	1.5 ~ 8.1		1510	320 ~ 2120			4.50	A	755	6.7	
	20 + 20 + 32	72	1.89	1.89	3.02	6.80	1.4 ~ 8.3		1470	320 ~ 2110			4.63	A	735	6.5	
	20 + 20 + 40	80	1.70	1.70	3.40	6.80	1.6 ~ 8.3		1440	320 ~ 2110			4.72	A	720	6.4	
	20 + 20 + 50	90	1.51	1.51	3.78	6.80	1.6 ~ 8.3		1400	320 ~ 2110			4.86	A	700	6.5	
	20 + 25 + 25	70	1.94	2.43	2.43	6.80	1.5 ~ 8.1		1510	320 ~ 2120			4.50	A	755	6.7	
	20 + 25 + 28	73	1.86	2.33	2.61	6.80	1.5 ~ 8.1		1510	320 ~ 2120			4.50	A	755	6.7	
	20 + 25 + 32	77	1.76	2.21	2.83	6.80	1.4 ~ 8.3		1470	320 ~ 2110			4.63	A	735	6.5	
	20 + 25 + 40	85	1.60	2.00	3.20	6.80	1.6 ~ 8.3		1400	320 ~ 2110			4.86	A	700	6.5	
	20 + 28 + 28	76	1.78	2.51	2.51	6.80	1.5 ~ 8.1		1510	320 ~ 2120			4.50	A	755	6.7	
	20 + 28 + 32	80	1.70	2.38	2.72	6.80	1.4 ~ 8.3		1470	320 ~ 2110			4.63	A	735	6.5	
	20 + 28 + 40	88	1.55	2.16	3.09	6.80	1.6 ~ 8.3		1400	320 ~ 2110			4.86	A	700	6.5	
	20 + 32 + 32	84	1.62	2.59	2.59	6.80	1.6 ~ 8.3		1410	320 ~ 2100			4.82	A	705	6.3	
	25 + 25 + 25	75	2.26	2.26	2.26	6.78	1.5 ~ 8.1		1510	320 ~ 2120			4.49	A	755	6.7	
	25 + 25 + 28	78	2.18	2.18	2.44	6.80	1.5 ~ 8.1		1510	320 ~ 2120			4.50	A	755	6.7	
	25 + 25 + 32	82	2.07	2.07	2.66	6.80	1.4 ~ 8.3		1470	320 ~ 2110			4.63	A	735	6.5	
	25 + 25 + 40	90	1.89	1.89	3.02	6.80	1.6 ~ 8.3		1400	320 ~ 2110			4.86	A	700	6.5	
	25 + 28 + 28	81	2.10	2.35	2.35	6.80	1.5 ~ 8.1		1510	320 ~ 2120			4.50	A	755	6.7	
	25 + 28 + 32	85	2.00	2.24	2.56	6.80	1.4 ~ 8.3		1470	320 ~ 2110			4.63	A	735	6.5	
	25 + 32 + 32	89	1.92	2.44	2.44	6.80	1.6 ~ 8.3		1410	320 ~ 2100			4.82	A	705	6.3	
	28 + 28 + 28	84	2.26	2.26	2.26	6.78	1.5 ~ 8.1		1510	320 ~ 2120			4.49	A	755	6.7	
	28 + 28 + 32	88	2.16	2.16	2.48	6.80	1.4 ~ 8.3		1470	320 ~ 2110			4.63	A	735	6.5	

• Outdoor Unit : CU-4E23LBE

	Indoor unit capacity Cooling	Total	Cooling Capacity(kW)							Input Power (W)				EER		ANNUAL ENERGY CONSUMPTION (kWh)	Current, 230V (A)	MOISTURE REMOVAL VOLUME l/h
			Room A	Room B	Room C	Room D	Total	min ~ max		Rating	min ~ max			W/W	CLASS			
1 Room	20	20	2.00				2.00	1.8 ~ 2.9		500	340 ~ 810			4.00	A	250	2.5	1.3
	25	25	2.50				2.50	1.8 ~ 2.9		630	340 ~ 810			4.00	A	315	3.2	1.5
	28	28	2.80				2.80	1.8 ~ 2.9		700	340 ~ 810			4.00	A	350	3.5	1.6
	32	32	3.20				3.20	1.8 ~ 3.8		800	340 ~ 1360			4.00	A	400	3.9	1.8
	40	40	4.00				4.00	1.8 ~ 4.3		1240	340 ~ 1990			3.23	A	620	5.8	2.3
	50	50	5.00				5.00	1.9 ~ 5.7		1550	340 ~ 2130			3.23	A	775	7.2	2.7
	60	60	6.00				6.00	1.9 ~ 6.2		2030	340 ~ 2330			2.96	C	1015	9.2	3.3
2 Room	20 + 20	40	2.00	2.00			4.00	1.9 ~ 6.4		1010	340 ~ 2150			3.96	A	505	4.5	1.3 + 1.3
	20 + 25	45	2.00	2.50			4.50	1.9 ~ 6.4		1270	340 ~ 2150			3.55	A	635	5.7	1.3 + 1.5
	20 + 28	48	2.00	2.80			4.80	1.9 ~ 6.4		1350	340 ~ 2150			3.55	A	675	6.1	1.3 + 1.6
	20 + 32	52	2.00	3.20			5.20	1.9 ~ 6.9		1510	340 ~ 2410			3.44	A	755	6.8	1.3 + 1.8
	20 + 40	60	2.00	4.00			6.00	1.9 ~ 6.9		1810	330 ~ 2410			3.32	A	905	8.1	1.3 + 2.3
	20 + 50	70	1.94	4.86			6.80	2.0 ~ 7.5		1800	320 ~ 2440			3.78	A	900	8.1	1.3 + 2.6
	20 + 60	80	1.70	5.10			6.80	2.0 ~ 7.5		1800	320 ~ 2440			3.78	A	900	8.1	1.1 + 2.8
	25 + 25	50	2.50	2.50			5.00	1.9 ~ 6.8		1380	340 ~ 2400			3.61	A	690	6.2	1.5 + 1.5
	25 + 28	53	2.50	2.80			5.30	1.9 ~ 6.8		1470	340 ~ 2400			3.61	A	735	6.6	1.5 + 1.6
	25 + 32	57	2.50	3.20			5.70	1.9 ~ 6.9		1660	340 ~ 2410			3.43	A	830	7.4	1.5 + 1.8
	25 + 40	65	2.50	4.00			6.50	1.9 ~ 6.9		2070	330 ~ 2410			3.13	B	1035	9.2	1.5 + 2.3
	25 + 50	75	2.27	4.53			6.80	1.9 ~ 7.5		1970	320 ~ 2440			3.45	A	985	8.8	1.5 + 2.5
	25 + 60	85	2.00	4.80			6.80	1.9 ~ 7.5		1970	320 ~ 2440			3.45	A	985	8.8	1.3 + 2.6
	28 + 28	56	2.80	2.80			5.60	1.9 ~ 6.8		1550	340 ~ 2400			3.61	A	775	6.9	1.6 + 1.6
	28 + 32	60	2.80	3.20			6.00	1.9 ~ 6.9		1750	340 ~ 2410			3.43	A	875	7.8	1.6 + 1.8
	28 + 40	68	2.80	4.00			6.80	1.9 ~ 6.9		2170	330 ~ 2410			3.13	B	1085	9.7	1.6 + 2.3
	28 + 50	78	2.44	4.36			6.80	1.9 ~ 7.5		1970	320 ~ 2440			3.45	A	985	8.8	1.5 + 2.4
	28 + 60	88	2.16	4.64			6.80	1.9 ~ 7.5		1970	320 ~ 2440			3.45	A	985	8.8	1.4 + 2.5
	32 + 32	64	3.20	3.20			6.40	1.9 ~ 7.0		1960	330 ~ 2420			3.27	A	980	8.8	1.8 + 1.8
	32 + 40	72	3.02	3.78			6.80	1.9 ~ 7.1		2070	330 ~ 2420			3.29	A	1035	9.3	1.7 + 2.2
	32 + 50	82	2.65	4.15			6.80	2.0 ~ 7.6		1890	320 ~ 2450			3.60	A	945	8.5	1.6 + 2.4
	32 + 60	92	2.37	4.43			6.80	2.0 ~ 7.6		1890	320 ~ 2450			3.60	A	945	8.5	1.5 + 2.5
	40 + 40	80	3.40	3.40			6.80	1.9 ~ 7.1		2270	330 ~ 2420			3.00	C	1135	10.2	1.9 + 1.9
	40 + 50	90	3.02	3.78			6.80	2.0 ~ 7.6		1890	320 ~ 2450			3.60	A	945	8.5	1.7 + 2.2
	40 + 60	100	2.72	4.08			6.80	2.0 ~ 7.6		1890	320 ~ 2450			3.60	A	945	8.5	1.6 + 2.3
	50 + 50	100	3.40	3.40			6.80	2.1 ~ 8.1		1780	310 ~ 2460			3.82	A	890	8.0	1.9 + 1.9
	50 + 60	110	3.09	3.71			6.80	2.1 ~ 8.1		1780	310 ~ 2460			3.82	A	890	8.0	1.7 + 2.2
3 Room	20 + 20 + 20	60	2.00	2.00	2.00		6.00	1.9 ~ 8.0		1650	340 ~ 2460			3.63	A	825	7.4	1.3 + 1.3 + 1.3
	20 + 20 + 25	65	2.00	2.00	2.50		6.50	1.9 ~ 8.0		1830	340 ~ 2460			3.56	A	915	8.2	1.3 + 1.3 + 1.5
	20 + 20 + 28	68	2.00	2.00	2.80		6.80	1.9 ~ 8.0		1910	340 ~ 2460			3.56	A	955	8.6	1.3 + 1.3 + 1.6
	20 + 20 + 32	72	1.89	1.89	3.02		6.80	1.9 ~ 8.0		1910	340 ~ 2460			3.56	A	955	8.6	1.2 + 1.2 + 1.7
	20 + 20 + 40	80	1.70	1.70	3.40		6.80	1.9 ~ 8.1		1860	340 ~ 2460			3.66	A	930	8.3	1.1 + 1.1 + 1.9
	20 + 20 + 50	90	1.51	1.51	3.78		6.80	2.0 ~ 8.5		1730	340 ~ 2460			3.93	A	865	7.8	1.0 + 1.0 + 2.2
	20 + 20 + 60	100	1.36	1.36	4.08		6.80	2.0 ~ 8.5		1730	340 ~ 2460			3.93	A	865	7.8	0.9 + 0.9 + 2.3
	20 + 25 + 25	70	1.94	2.43	2.43		6.80	1.9 ~ 8.0		1910	340 ~ 2460			3.56	A	955	8.6	1.3 + 1.5 + 1.5
	20 + 25 + 28	73	1.86	2.33	2.61		6.80	1.9 ~ 8.0		1910	340 ~ 2460			3.56	A	955	8.6	1.2 + 1.5 + 1.6
	20 + 25 + 32	77	1.76	2.21	2.83		6.80	1.9 ~ 8.0		1910	340 ~ 2460			3.56	A	955	8.6	1.1 + 1.4 + 1.7
	20 + 25 + 40	85	1.60	2.00	3.20		6.80	1.9 ~ 8.1		1860	340 ~ 2460			3.66	A	930	8.3	1.0 + 1.3 + 1.8
	20 + 25 + 50	95	1.43	1.79	3.58		6.80	2.0 ~ 8.5		1730	340 ~ 2460			3.93	A	865	7.8	0.9 + 1.2 + 2.1
	20 + 25 + 60	105	1.29	1.62	3.89		6.80	2.0 ~ 8.5		1730	340 ~ 2460			3.93	A	865	7.8	0.8 + 1.0 + 2.3
	20 + 28 + 28	76	1.78	2.51	2.51		6.80	1.9 ~ 8.0		1910	340 ~ 2460			3.56	A	955	8.6	1.1 + 1.5 + 1.5
	20 + 28 + 32	80	1.70	2.38	2.72		6.80	1.9 ~ 8.0		1910	340 ~ 2460			3.56	A	955	8.6	1.1 + 1.5 + 1.6
	20 + 28 + 40	88	1.55	2.16	3.09		6.80	1.9 ~ 8.1		1860	340 ~ 2460			3.66	A	930	8.3	1.0 + 1.4 + 1.7
	20 + 28 + 50	98	1.39	1.94	3.47		6.80	2.0 ~ 8.5		1730	340 ~ 2460			3.93	A	865	7.8	0.9 + 1.3 + 2.0
	20 + 28 + 60	108	1.26	1.76	3.78		6.80	2.0 ~ 8.5		1730	340 ~ 2460			3.93	A	865	7.8	0.8 + 1.1 + 2.2
	20 + 32 + 32	84	1.62	2.59	2.59		6.80	1.9 ~ 8.1		1860	340 ~ 2460			3.66	A	930	8.3	1.0 + 1.6 + 1.6
	20 + 32 + 40	92	1.47	2.37	2.96		6.80	1.9 ~ 8.2		1860	340 ~ 2460			3.66	A	930	8.3	0.9 + 1.5 + 1.7
	20 + 32 + 50	102	1.33	2.13	3.34		6.80	2.0 ~ 8.5		1730	340 ~ 2460			3.93	A	865	7.8	0.8 + 1.4 + 1.9
	20 + 40 + 40	100	1.36	2.72	2.72		6.80	1.9 ~ 8.2		1820	340 ~ 2460			3.74	A	910	8.2	0.9 + 1.6 + 1.6
	20 + 40 + 50	110	1.24	2.47	3.09		6.80	2.0 ~ 8.5		1730	340 ~ 2460			3.93	A	865	7.8	0.8 + 1.5 + 1.7
	25 + 25 + 25	75	2.26	2.26	2.26		6.78	1.9 ~ 8.0		1910	340 ~ 2460			3.55	A	955	8.6	1.5 + 1.5 + 1.5
	25 + 25 + 28	78	2.18	2.18	2.44		6.80	1.9 ~ 8.0		1910	340 ~ 2460			3.56	A	955	8.6	1.4 + 1.4 + 1.5
	25 + 25 + 32	82	2.07	2.07	2.66		6.80	1.9 ~ 8.0		1910	340 ~ 2460			3.56	A	955	8.6	1.3 + 1.5 + 1.6
	25 + 25 + 40	90	1.89	1.89	3.02		6.80	1.9 ~ 8.1		1860	340 ~ 2460			3.66	A	930	8.3	1.2 + 1.2 + 1.7
	25 + 25 + 50	100	1.70	1.70	3.40		6.80	2.0 ~ 8.5		1730	340 ~ 2460			3.93	A	865	7.8	1.1 + 1.1 + 1.9
	25 + 25 + 60	110	1.55	1.55	3.70		6.80	2.0 ~ 8.5		1730	340 ~ 2460			3.93	A	865	7.8	1.0 + 1.0 + 2.2
	25 + 28 + 28	81	2.10	2.35	2.35		6.80	1.9 ~ 8.0		1910	340 ~ 2460			3.56	A	955	8.6	1.4 + 1.5 + 1.5
	25 + 28 + 32	85	2.00	2.24	2.56		6.80	1.9 ~ 8.0		1910	340 ~ 2460			3.56	A	955	8.6	1.3 + 1.5 + 1.6
	25 + 28 + 40	93	1.83	2.05	2.92		6.80	1.9 ~ 8.1		1860	340 ~ 2460			3.66	A	930	8.3	1.2 + 1.3 + 1.7
	25 + 28 + 50	103	1.65	1.85	3.30		6.80	2.0 ~ 8.5		1730	340 ~ 2460			3.93	A	865	7.8	1.1 + 1.2 + 1.9
	25 + 32 + 32	89	1.92	2.44	2.44		6.80	1.9 ~ 8.1		1860	340 ~ 2460			3.66	A	930	8.3	1.2 + 1.5 + 1.5
	25 + 32 + 40	97	1.75	2.24	2.81		6.80	1.9 ~ 8.2		1860	340 ~ 2460			3.66	A	930	8.3	1.1 + 1.5 + 1.6
	25 + 32 + 50	107	1.59	2.03	3.18		6.80	2.0 ~ 8.5		1730	340 ~ 2460			3.93	A	865	7.8	1.0 + 1.3 + 1.8
	25 + 40 + 40	105	1.62	2.59	2.59		6.80	1.9 ~ 8.2		1820	340 ~ 2460			3.74	A	910	8.2	1.0 + 1.6 + 1.6
	28 + 28 + 28	84	2.26	2.26	2.26		6.78	1.9 ~ 8.0		1910	340 ~ 2460			3.55	A	955	8.6	1.5 + 1.5 + 1.5
	28 + 28 + 32	88	2.16	2.16	2.48		6.80	1.9 ~ 8.0		1910	340 ~ 2460			3.56	A	955	8.6	1.4 + 1.4 + 1.5
	28 + 28 + 40	96	1.98	1.98	2.84		6.80	1.9 ~ 8.1		1860	340 ~ 2460			3.66	A	930	8.3	1.3 + 1.3 + 1.7
	28 + 28 + 50	106	1.80	1.80	3.20		6.80	2.0 ~ 8.5		1730	340 ~ 2460			3.93	A	865	7.8	1.2 + 1.2 + 1.8
	28 + 32 + 32	92	2.06	2.37	2.37		6.80	1.9 ~ 8.1		1860	340 ~ 2460			3.66	A	930	8.3	1.3 + 1.5 + 1.5
	28 + 32 + 40	100	1.90	2.18	2.72		6.80	1.9 ~ 8.2		1860	340 ~ 2460			3.66	A	930	8.3	1.2 + 1.4 + 1.6
	28 + 32 + 50	110	1.73	1.98	3.09		6.80	2.0 ~ 8.5		1730	340 ~ 2460			3.93	A	865	7.8	1.1 + 1.3 + 1.7
	28 + 40 + 40	108	1.76	2.52	2.52		6.80	1.9 ~ 8.2		1820	340 ~ 2460			3.74	A	910	8.2	1.1 + 1.5 + 1.5
	32 + 32 + 32	96	2.26	2.26	2.26		6.78	1.9 ~ 8.2		1820	340 ~ 2460			3.73	A	910	8.2	1.5 + 1.5 + 1.5
	32 + 32 + 40	104	2.09	2.09	2.62		6.80	1.9 ~ 8.2		1820	340 ~ 2460			3.74	A	910	8.2	1.4 + 1.4 + 1.6
4 Room	20 + 20 + 20 + 20	80	1.70	1.70	1.70	1.70	6.80	1.9 ~ 8.7		1690	340 ~ 2460			4.02	A	845	7.6	1.1 + 1.1 + 1.1 + 1.1
	20 + 20 + 20 + 25	85	1.60	1.60	1.60	2.00	6.80	1.9 ~ 8.7		1690	340 ~ 2460			4.02	A	845	7.6	1.0 + 1.0 + 1.0 + 1.3
	20 + 20 + 20 + 28	88	1.55	1.55	1.55	2.15	6.80	1.9 ~ 8.7		1690	340 ~ 2460			4.02	A	845	7.6	1.0 + 1.0 + 1.0 + 1.4
	20 + 20 + 20 + 32	92	1.48	1.48	1.48	2.36	6.80	1.9 ~ 8.8		1650	340 ~ 2470			4.12	A	825	7.4	0.9 + 0.9 + 0.9 + 1.5
	20 + 20 + 20 + 40	100	1.36	1.36	1.36	2.72	6.80	1.9 ~ 8.8		1650	340 ~ 2470			4.12	A	825	7.4	0.9 + 0.9 + 0.9 + 1.6
	20 + 20 + 20 + 50	110	1.24	1.24	1.24	3.08	6.80	1.9 ~ 8.8		1680	340 ~ 2470			4.05	A	840	7.5	0.8 + 0.8 + 0.8 + 1.7
	20 + 20 + 25 + 25	90	1.51	1.51	1.89	1.89	6.80	1.9 ~ 8.7		1690	340 ~ 2460			4.02	A	845	7.6	1.0 + 1.0 + 1.2 + 1.2
	20 + 20 + 25 + 28	93	1.46	1.46	1.83	2.05	6.80	1.9 ~ 8.7		1690	340 ~ 2460			4.02	A	845	7.6	0.9 + 0.9 + 1.2 + 1.3
	20 + 20 + 25 + 32	97	1.40	1.40	1.75	2.25	6.80	1.9 ~ 8.8		1650	340 ~ 2470			4.12	A	825	7.4	0.9 + 0.9 + 1.1 + 1.5
	20 + 20 + 25 + 40	105	1.30	1.30	1.61	2.59	6.80	1.9 ~ 8.8		1650	340 ~ 2470			4.12	A	825	7.4	0.8 + 0.8 + 1.0 + 1.6
	20 + 20 + 28 + 28	96	1.42	1.42	1.98	1.98	6.80	1.9 ~ 8.7		1690	340 ~ 2460			4.02	A	845	7.6	0.9 + 0.9 + 1.3 + 1.3
	20 + 20 + 28 + 32	100	1.36	1.36	1.90	2.18	6.80	1.9 ~ 8.8		1650	340 ~ 2470			4.12	A	825	7.4	0.9 + 0.9 + 1.2 + 1.4
	20 + 20 + 28 + 40	108	1.26	1.26	1.76	2.52	6.80	1.9 ~ 8.8		1650	340 ~ 2470			4.12	A	825	7.4	0.8 + 0.8 + 1.1 + 1.5
	20 + 20 + 32 + 32	104	1.31	1.31	2.09	2.09	6.80	1.9 ~ 8.8		1650	340 ~ 2430			4.12	A	825	7.4	0.8 + 0.8 + 1.4 + 1.4
	20 + 25 + 25 + 25	95	1.43	1.79	1.79	1.79	6.80	1.9 ~ 8.7		1690	340 ~ 2460			4.02	A	845	7.6	0.9 + 1.2 + 1.2 + 1.2
	20 + 25 + 25 + 28	98	1.39	1.73	1.73	1.95	6.80	1.9 ~ 8.7		1690	340 ~ 2460			4.02	A	845	7.6	0.9 + 1.1 + 1.1 + 1.3
	20 + 25 + 25 + 32	102	1.33	1.67	1.67	2.13	6.80	1.9 ~ 8.8		1650	340 ~ 2470			4.12	A	825	7.4	0.8 + 1.1 + 1.1 + 1.4
	20 + 25 + 25 + 40	110	1.23	1.55	1.55	2.47	6.80	1.9 ~ 8.8		1680	340 ~ 2470			4.05	A	840	7.5	0.8 + 1.0 + 1.0 + 1.5
	20 + 25 + 28 + 28	101	1.34	1.68	1.89	1.89	6.80	1.9 ~ 8.7		1690	340 ~ 2460			4.02	A	845	7.6	0.8 + 1.1 + 1.2 + 1.2
	20 + 25 + 28 + 32	105	1.30	1.62	1.81	2.07	6.80	1.9 ~ 8.8		1650	340 ~ 2470			4.12	A	825	7.4	0.8 + 1.0 + 1.2 + 1.3
	20 + 25 + 32 + 32	109	1.24	1.56	2.00	2.00	6.80	1.9 ~ 8.8		1650	340 ~ 2430			4.12	A	825	7.4	0.8 + 1.0 + 1.3 + 1.3
	20 + 28 + 28 + 28	104	1.31	1.83	1.83	1.83	6.80	1.9 ~ 8.7		1690	340 ~ 2460			4.02	A	845	7.6	0.8 + 1.2 + 1.2 + 1.2
	20 + 28 + 28 + 32	108	1.26	1.76	1.76	2.02	6.80	1.9 ~ 8.8		1680	340 ~ 2470			4.05	A	840	7.5	0.8 + 1.1 + 1.1 + 1.3
	25 + 25 + 25 + 25	100	1.70	1.70	1.70	1.70	6.80	1.9 ~ 8.7		1690	340 ~ 2460			4.02	A	845	7.6	1.1 + 1.1 + 1.1 + 1.1
	25 + 25 + 25 + 28	103	1.65	1.65	1.65	1.86	6.80	1.9 ~ 8.7		1690	340 ~ 2460			4.02	A	845	7.6	1.1 + 1.1 + 1.1 + 1.2
	25 + 25 + 25 + 32	107	1.59	1.59	1.59	2.03	6.80	1.9 ~ 8.8		1650	340 ~ 2470			4.12	A	825	7.4	1.0 + 1.0 + 1.0 + 1.3
	25 + 25 + 28 + 28	106	1.60	1.60	1.80	1.80	6.80	1.9 ~ 8.7		1690	340 ~ 2460			4.02	A	845	7.6	1.0 + 1.0 + 1.2 + 1.2
	25 + 25 + 28 + 32	110	1.55	1.55	1.72	1.98	6.80	1.9 ~ 8.8		1680	340 ~ 2470			4.05	A	840	7.5	1.0 + 1.0 + 1.1 + 1.3
	25 + 28 + 28 + 28	109	1.55	1.75	1.75	1.75	6.80	1.9 ~ 8.7		1690	340 ~ 2460			4.02	A	845	7.6	1.0 + 1.1 + 1.1 + 1.1

	Indoor unit capacity Heating	Total	Heating Capacity(kW)							Input Power (W)				COP		ANNUAL ENERGY CONSUMPTION (kWh)	Current, 230V (A)	MOISTURE REMOVAL VOLUME l/h
			Room A	Room B	Room C	Room D	Total	min ~ max		Rating	min ~ max			W/W	CLASS			
1 Room	20	20	3.20				3.20	1.2 ~ 4.1		740	300 ~ 1230			4.32	A	370	3.7	
	25	25	3.60				3.60	1.2 ~ 4.3		940	300 ~ 1230			3.83	A	470	4.7	
	28	28	4.00				4.00	1.2 ~ 4.3		1050	300 ~ 1230			3.81	A	525	5.2	
	32	32	4.50				4.50	1.2 ~ 5.8		1230	300 ~ 2100			3.66	A	615	6.0	
	40	40	5.60				5.60	1.2 ~ 6.8		1720	300 ~ 2930			3.26	C	860	8.0	
	50	50	6.80				6.80	1.2 ~ 6.9		2100	300 ~ 2520			3.24	C	1050	9.7	
	60	60	8.50				8.50	1.3 ~ 9.0		2400	620 ~ 2530			3.54	B	1200	11.1	
2 Room	20 + 20	40	2.90	2.90			5.80	2.7 ~ 9.8		1450	610 ~ 2800			4.00	A	725	6.7	
	20 + 25	45	2.71	3.39			6.10	2.7 ~ 9.8		1640	610 ~ 2800			3.72	A	820	7.6	
	20 + 28	48	2.67	3.73			6.40	2.7 ~ 9.8		1720	610 ~ 2800			3.72	A	860	8.0	
	20 + 32	52	2.69	4.31			7.00	2.7 ~ 9.9		1840	590 ~ 2800			3.80	A	920	8.5	
	20 + 40	60	2.73	5.47			8.20	2.7 ~ 9.9		2210	590 ~ 2800			3.71	A	1105	10.2	
	20 + 50	70	2.46	6.14			8.60	2.8 ~ 10.2		2140	530 ~ 2760			4.02	A	1070	9.9	
	20 + 60	80	2.15	6.45			8.60	2.8 ~ 10.2		2290	530 ~ 2760			3.76	A	1145	10.6	
	25 + 25	50	3.20	3.20			6.40	2.7 ~ 9.8		1700	610 ~ 2800			3.77	A	850	7.8	
	25 + 28	53	3.30	3.70			7.00	2.7 ~ 9.8		1860	610 ~ 2800			3.77	A	930	8.6	
	25 + 32	57	3.55	4.55			8.10	2.7 ~ 9.9		2170	590 ~ 2800			3.73	A	1085	10.0	
	25 + 40	65	3.31	5.29			8.60	2.7 ~ 9.9		2320	590 ~ 2800			3.71	A	1160	10.7	
	25 + 50	75	2.87	5.73			8.60	2.8 ~ 10.2		2140	530 ~ 2760			4.02	A	1070	9.9	
	25 + 60	85	2.53	6.07			8.60	2.8 ~ 10.2		2140	530 ~ 2760			4.02	A	1070	9.9	
	28 + 28	56	4.00	4.00			8.00	2.7 ~ 9.8		2120	610 ~ 2800			3.77	A	1060	9.8	
	28 + 32	60	3.97	4.53			8.50	2.7 ~ 9.9		2280	590 ~ 2800			3.73	A	1140	10.5	
	28 + 40	68	3.54	5.06			8.60	2.7 ~ 9.9		2320	590 ~ 2800			3.71	A	1160	10.7	
	28 + 50	78	3.09	5.51			8.60	2.8 ~ 10.2		2140	530 ~ 2760			4.02	A	1070	9.9	
	28 + 60	88	2.74	5.86			8.60	2.8 ~ 10.2		2140	530 ~ 2760			4.02	A	1070	9.9	
	32 + 32	64	4.30	4.30			8.60	2.8 ~ 10.0		2270	580 ~ 2800			3.79	A	1135	10.5	
	32 + 40	72	3.82	4.78			8.60	2.8 ~ 10.0		2270	570 ~ 2800			3.79	A	1135	10.5	
	32 + 50	82	3.36	5.24			8.60	2.8 ~ 10.3		2090	520 ~ 2740			4.11	A	1045	9.7	
	32 + 60	92	2.99	5.61			8.60	2.8 ~ 10.3		2090	520 ~ 2740			4.11	A	1045	9.7	
	40 + 40	80	4.30	4.30			8.60	2.8 ~ 10.0		2260	560 ~ 2800			3.81	A	1130	10.5	
	40 + 50	90	3.82	4.78			8.60	2.8 ~ 10.3		2080	510 ~ 2740			4.13	A	1040	9.6	
	40 + 60	100	3.44	5.16			8.60	2.8 ~ 10.3		2080	510 ~ 2740			4.13	A	1040	9.6	
	50 + 50	100	4.30	4.30			8.60	2.8 ~ 10.5		1960	480 ~ 2650			4.39	A	980	9.1	
	50 + 60	110	3.91	4.69			8.60	2.8 ~ 10.5		1960	480 ~ 2650			4.39	A	980	9.1	
3 Room	20 + 20 + 20	60	2.86	2.86	2.86		8.58	3.3 ~ 10.4		2090	600 ~ 2840			4.11	A	1045	9.7	
	20 + 20 + 25	65	2.65	2.65	3.30		8.60	3.3 ~ 10.4		2090	600 ~ 2840			4.11	A	1045	9.7	
	20 + 20 + 28	68	2.53	2.53	3.54		8.60	3.3 ~ 10.4		2090	600 ~ 2840			4.11	A	1045	9.7	
	20 + 20 + 32	72	2.39	2.39	3.82		8.60	3.3 ~ 10.4		2070	590 ~ 2820			4.15	A	1035	9.6	
	20 + 20 + 40	80	2.15	2.15	4.30		8.60	3.3 ~ 10.5		2060	590 ~ 2810			4.17	A	1030	9.5	
	20 + 20 + 50	90	1.91	1.91	4.78		8.60	3.2 ~ 10.6		1930	570 ~ 2710			4.46	A	965	8.9	
	20 + 20 + 60	100	1.72	1.72	5.16		8.60	3.2 ~ 10.6		1930	570 ~ 2710			4.46	A	965	8.9	
	20 + 25 + 25	70	2.46	3.07	3.07		8.60	3.3 ~ 10.4		2090	600 ~ 2840			4.11	A	1045	9.7	
	20 + 25 + 28	73	2.35	2.95	3.30		8.60	3.3 ~ 10.4		2090	600 ~ 2840			4.11	A	1045	9.7	
	20 + 25 + 32	77	2.23	2.79	3.58		8.60	3.3 ~ 10.4		2070	590 ~ 2820			4.15	A	1035	9.6	
	20 + 25 + 40	85	2.02	2.53	4.05		8.60	3.3 ~ 10.5		2060	590 ~ 2810			4.17	A	1030	9.5	
	20 + 25 + 50	95	1.81	2.26	4.53		8.60	3.2 ~ 10.6		1930	570 ~ 2710			4.46	A	965	8.9	
	20 + 25 + 60	105	1.64	2.05	4.91		8.60	3.2 ~ 10.6		1930	570 ~ 2710			4.46	A	965	8.9	
	20 + 28 + 28	76	2.26	3.17	3.17		8.60	3.3 ~ 10.4		2090	600 ~ 2840			4.11	A	1045	9.7	
	20 + 28 + 32	80	2.15	3.01	3.44		8.60	3.3 ~ 10.4		2070	590 ~ 2820			4.15	A	1035	9.6	
	20 + 28 + 40	88	1.95	2.74	3.91		8.60	3.3 ~ 10.5		2060	590 ~ 2810			4.17	A	1030	9.5	
	20 + 28 + 50	98	1.75	2.46	4.39		8.60	3.2 ~ 10.6		1930	570 ~ 2710			4.46	A	965	8.9	
	20 + 28 + 60	108	1.59	2.23	4.78		8.60	3.2 ~ 10.6		1930	570 ~ 2710			4.46	A	965	8.9	
	20 + 32 + 32	84	2.04	3.28	3.28		8.60	3.3 ~ 10.5		2050	590 ~ 2800			4.20	A	1025	9.5	
	20 + 32 + 40	92	1.87	2.99	3.74		8.60	3.3 ~ 10.5		2040	580 ~ 2790			4.22	A	1020	9.4	
	20 + 32 + 50	102	1.68	2.70	4.22		8.60	3.2 ~ 10.6		1910	570 ~ 2680			4.50	A	955	8.8	
	20 + 40 + 40	100	1.72	3.44	3.44		8.60	3.3 ~ 10.5		2030	580 ~ 2780			4.24	A	1015	9.4	
	20 + 40 + 50	110	1.56	3.13	3.91		8.60	3.2 ~ 10.6		1910	570 ~ 2680			4.50	A	955	8.8	
	25 + 25 + 25	75	2.86	2.86	2.86		8.58	3.3 ~ 10.4		2090	600 ~ 2840			4.11	A	1045	9.7	
	25 + 25 + 28	78	2.76	2.76	3.08		8.60	3.3 ~ 10.4		2090	600 ~ 2840			4.11	A	1045	9.7	
	25 + 25 + 32	82	2.62	2.62	3.36		8.60	3.3 ~ 10.4		2070	590 ~ 2820			4.15	A	1035	9.6	
	25 + 25 + 40	90	2.39	2.39	3.82		8.60	3.3 ~ 10.5		2060	590 ~ 2810			4.17	A	1030	9.5	
	25 + 25 + 50	100	2.15	2.15	4.30		8.60	3.2 ~ 10.6		1930	570 ~ 2710			4.46	A	965	8.9	
	25 + 25 + 60	110	1.95	1.95	4.70		8.60	3.2 ~ 10.6		1930	570 ~ 2710			4.46	A	965	8.9	
	25 + 28 + 28	81	2.66	2.97	2.97		8.60	3.3 ~ 10.4		2090	600 ~ 2840			4.11	A	1045	9.7	
	25 + 28 + 32	85	2.53	2.83	3.24		8.60	3.3 ~ 10.4		2070	590 ~ 2820			4.15	A	1035	9.6	
	25 + 28 + 40	93	2.31	2.59	3.70		8.60	3.3 ~ 10.5		2060	590 ~ 2810			4.17	A	1030	9.5	
	25 + 28 + 50	103	2.09	2.34	4.17		8.60	3.2 ~ 10.6		1930	570 ~ 2710			4.46	A	965	8.9	
	25 + 32 + 32	89	2.42	3.09	3.09		8.60	3.3 ~ 10.5		2050	590 ~ 2800			4.20	A	1025	9.5	
	25 + 32 + 40	97	2.21	2.84	3.55		8.60	3.3 ~ 10.5		2040	580 ~ 2790			4.22	A	1020	9.4	
	25 + 32 + 50	107	2.01	2.57	4.02		8.60	3.2 ~ 10.6		1910	570 ~ 2680			4.50	A	955	8.8	
	25 + 40 + 40	105	2.04	3.28	3.28		8.60	3.3 ~ 10.5		2030	580 ~ 2780			4.24	A	1015	9.4	
	28 + 28 + 28	84	2.86	2.86	2.86		8.58	3.3 ~ 10.4		2090	600 ~ 2840			4.11	A	1045	9.7	
	28 + 28 + 32	88	2.74	2.74	3.12		8.60	3.3 ~ 10.4		2070	590 ~ 2820			4.15	A	1035	9.6	
	28 + 28 + 40	96	2.51	2.51	3.58		8.60	3.3 ~ 10.5		2060	590 ~ 2810			4.17	A	1030	9.5	
	28 + 28 + 50	106	2.27	2.27	4.06		8.60	3.2 ~ 10.6		1930	570 ~ 2710			4.46	A	965	8.9	
	28 + 32 + 32	92	2.62	2.99	2.99		8.60	3.3 ~ 10.5		2050	590 ~ 2800			4.20	A	1025	9.5	
	28 + 32 + 40	100	2.41	2.75	3.44		8.60	3.3 ~ 10.5		2040	580 ~ 2790			4.22	A	1020	9.4	
	28 + 32 + 50	110	2.19	2.50	3.91		8.60	3.2 ~ 10.6		1910	570 ~ 2680			4.50	A	955	8.8	
	28 + 40 + 40	108	2.22	3.19	3.19		8.60	3.3 ~ 10.5		2030	580 ~ 2780			4.24	A	1015	9.4	
	32 + 32 + 32	96	2.86	2.86	2.86		8.58	3.3 ~ 10.5		1990	580 ~ 2770			4.31	A	995	9.2	
	32 + 32 + 40	104	2.65	2.65	3.30		8.60	3.3 ~ 10.5		1980	580 ~ 2760			4.34	A	990	9.2	
4 Room	20 + 20 + 20 + 20	80	2.15	2.15	2.15	2.15	8.60	3.1 ~ 10.6		1870	580 ~ 2620			4.60	A	935	8.6	
	20 + 20 + 20 + 25	85	2.02	2.02	2.02	2.54	8.60	3.1 ~ 10.6		1870	580 ~ 2620			4.60	A	935	8.6	
	20 + 20 + 20 + 28	88	1.95	1.95	1.95	2.75	8.60	3.1 ~ 10.6		1870	580 ~ 2620			4.60	A	935	8.6	
	20 + 20 + 20 + 32	92	1.87	1.87	1.87	2.99	8.60	3.0 ~ 10.6		1850	580 ~ 2600			4.65	A	925	8.6	
	20 + 20 + 20 + 40	100	1.72	1.72	1.72	3.44	8.60	3.0 ~ 10.6		1840	590 ~ 2590			4.67	A	920	8.5	
	20 + 20 + 20 + 50	110	1.56	1.56	1.56	3.92	8.60	3.0 ~ 10.6		1850	580 ~ 2600			4.65	A	925	8.6	
	20 + 20 + 25 + 25	90	1.91	1.91	2.39	2.39	8.60	3.1 ~ 10.6		1870	580 ~ 2620			4.60	A	935	8.6	
	20 + 20 + 25 + 28	93	1.85	1.85	2.31	2.59	8.60	3.1 ~ 10.6		1870	580 ~ 2620			4.60	A	935	8.6	
	20 + 20 + 25 + 32	97	1.77	1.77	2.22	2.84	8.60	3.0 ~ 10.6		1850	580 ~ 2600			4.65	A	925	8.6	
	20 + 20 + 25 + 40	105	1.64	1.64	2.04	3.28	8.60	3.0 ~ 10.6		1840	590 ~ 2590			4.67	A	920	8.5	
	20 + 20 + 28 + 28	96	1.79	1.79	2.51	2.51	8.60	3.1 ~ 10.6		1870	580 ~ 2620			4.60	A	935	8.6	
	20 + 20 + 28 + 32	100	1.72	1.72	2.41	2.75	8.60	3.0 ~ 10.6		1850	580 ~ 2600			4.65	A	925	8.6	
	20 + 20 + 28 + 40	108	1.59	1.59	2.23	3.19	8.60	3.0 ~ 10.6		1840	590 ~ 2590			4.67	A	920	8.5	
	20 + 20 + 32 + 32	104	1.65	1.65	2.65	2.65	8.60	3.0 ~ 10.6		1830	590 ~ 2570			4.70	A	915	8.5	
	20 + 25 + 25 + 25	95	1.82	2.26	2.26	2.26	8.60	3.1 ~ 10.6		1870	580 ~ 2620			4.60	A	935	8.6	
	20 + 25 + 25 + 28	98	1.76	2.19	2.19	2.46	8.60	3.1 ~ 10.6		1870	580 ~ 2620			4.60	A	935	8.6	
	20 + 25 + 25 + 32	102	1.68	2.11	2.11	2.70	8.60	3.0 ~ 10.6		1850	580 ~ 2600			4.65	A	925	8.6	
	20 + 25 + 25 + 40	110	1.56	1.95	1.95	3.14	8.60	3.0 ~ 10.6		1850	590 ~ 2600			4.65	A	925	8.6	
	20 + 25 + 28 + 28	101	1.70	2.14	2.38	2.38	8.60	3.1 ~ 10.6		1870	580 ~ 2620			4.60	A	935	8.6	
	20 + 25 + 28 + 32	105	1.64	2.05	2.29	2.62	8.60	3.0 ~ 10.6		1850	580 ~ 2600			4.65	A	925	8.6	
	20 + 25 + 32 + 32	109	1.58	1.98	2.52	2.52	8.60	3.0 ~ 10.6		1830	590 ~ 2570			4.70	A	915	8.5	
	20 + 28 + 28 + 28	104	1.64	2.32	2.32	2.32	8.60	3.1 ~ 10.6		1870	580 ~ 2620			4.60	A	935	8.6	
	20 + 28 + 28 + 32	108	1.59	2.23	2.23	2.55	8.60	3.0 ~ 10.6		1850	580 ~ 2600			4.65	A	925	8.6	
	25 + 25 + 25 + 25	100	2.15	2.15	2.15	2.15	8.60	3.1 ~ 10.6		1870	580 ~ 2620			4.60	A	935	8.6	
	25 + 25 + 25 + 28	103	2.09	2.09	2.09	2.33	8.60	3.1 ~ 10.6		1870	580 ~ 2620			4.60	A	935	8.6	
	25 + 25 + 25 + 32	107	2.01	2.01	2.01	2.57	8.60	3.0 ~ 10.6		1850	580 ~ 2600			4.65	A	925	8.6	
	25 + 25 + 28 + 28	106	2.03	2.03	2.27	2.27	8.60	3.1 ~ 10.6		1870	580 ~ 2620			4.60	A	935	8.6	
	25 + 25 + 28 + 32	110	1.95	1.95	2.19	2.51	8.60	3.0 ~ 10.6		1850	580 ~ 2600			4.65	A	925	8.6	
	25 + 28 + 28 + 28	109	1.97	2.21	2.21	2.21	8.60	3.1 ~ 10.6		1870	580 ~ 2620			4.60	A	935	8.6	

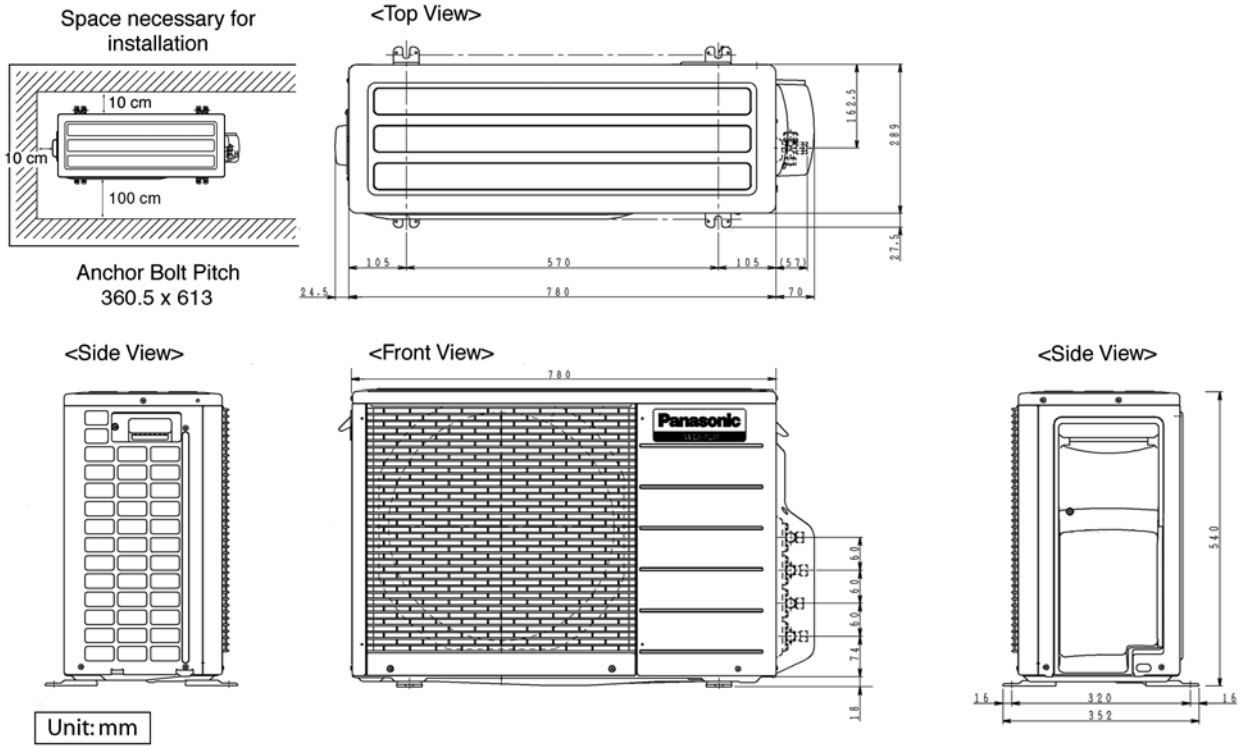
• Outdoor Unit : CU-4E27CBPG

Rooms	Indoor unit capacity Cooling	Total	Cooling Capacity (kW) Room A	Room B	Room C	Room D	Total	min	max	Input Power (W) Rating	min	max	EER W/W	EER CLASS	ANNUAL ENERGY CONSUMPTION (kWh)	Current, 230V (A)	MOISTURE REMOVAL VOLUME l/h
1 Room	20	20	2.00				2.00	1.9	2.7	440	380	620	4.52	A	220	2.10	1.3
	25	25	2.50				2.50	2.0	3.4	550	380	900	4.52	A	275	2.60	1.5
	28	28	2.80				2.80	2.0	3.4	620	380	900	4.52	A	310	2.95	1.6
	32	32	3.20				3.20	2.0	3.9	720	380	1090	4.44	A	360	3.40	1.8
	40	40	4.00				4.00	2.0	4.4	1030	380	1390	3.88	A	515	4.60	2.3
	50	50	5.00				5.00	2.1	5.2	1610	400	1800	3.11	B	805	7.15	2.7
2 Room	20 + 20	40	2.00	2.00			4.00	2.1	5.0	890	400	1260	4.49	A	445	3.95	1.3 + 1.3
	20 + 25	45	2.00	2.50			4.50	2.1	6.1	1110	400	1880	4.07	A	555	4.90	1.3 + 1.5
	20 + 28	48	2.00	2.80			4.80	2.1	6.1	1180	400	1880	4.07	A	590	5.20	1.3 + 1.6
	20 + 32	52	2.00	3.20			5.20	2.2	7.0	1320	400	2790	3.94	A	660	5.80	1.3 + 1.8
	20 + 40	60	2.00	4.00			6.00	2.2	7.1	1760	400	2790	3.41	A	880	7.75	1.3 + 2.3
	20 + 50	70	2.00	5.00			7.00	2.5	7.2	2500	460	2800	2.80	D	1250	11.00	1.3 + 2.7
	25 + 25	50	2.50	2.50			5.00	2.2	6.9	1380	400	2780	3.61	A	690	6.10	1.5 + 1.5
	25 + 28	53	2.50	2.80			5.30	2.2	6.9	1470	400	2780	3.61	A	735	6.50	1.5 + 1.6
	25 + 32	57	2.50	3.20			5.70	2.2	7.0	1620	400	2790	3.53	A	810	7.15	1.5 + 1.8
	25 + 40	65	2.50	4.00			6.50	2.2	7.1	2180	400	2790	2.98	C	1090	9.60	1.5 + 2.3
	25 + 50	75	2.35	4.75			7.10	2.5	7.2	2610	460	2800	2.72	D	1305	11.50	1.5 + 2.6
	28 + 28	56	2.80	2.80			5.60	2.2	6.9	1550	400	2780	3.61	A	775	6.85	1.6 + 1.6
	28 + 32	60	2.80	3.20			6.00	2.2	7.0	1700	400	2790	3.53	A	850	7.55	1.6 + 1.8
	28 + 40	68	2.80	4.00			6.80	2.2	7.1	2280	400	2790	2.98	C	1140	10.00	1.6 + 2.3
	28 + 50	78	2.55	4.55			7.10	2.5	7.2	2610	460	2800	2.72	D	1305	11.50	1.6 + 2.5
	32 + 32	64	3.20	3.20			6.40	2.2	7.3	1860	400	2810	3.44	A	930	8.15	1.8 + 1.8
	32 + 40	72	3.10	3.90			7.00	2.5	7.3	2410	460	2810	2.90	C	1205	10.60	1.7 + 2.3
	32 + 50	82	2.90	4.50			7.40	2.6	7.4	2820	460	2880	2.62	D	1410	12.30	1.7 + 2.5
	40 + 40	80	3.60	3.60			7.20	2.5	7.3	2620	460	2810	2.75	D	1310	11.50	2.1 + 2.1
	40 + 50	90	3.25	4.05			7.30	2.7	7.4	2670	480	2820	2.73	D	1335	11.70	1.8 + 2.3
	50 + 50	100	3.75	3.75			7.50	2.8	7.6	2860	480	2870	2.62	D	1430	12.50	2.2 + 2.2
3 Room	20 + 20 + 20	60	2.00	2.00	2.00		6.00	2.2	7.8	1510	410	2490	3.98	A	755	6.65	1.3 + 1.3 + 1.3
	20 + 20 + 25	65	2.00	2.00	2.50		6.50	2.5	8.1	1760	460	2850	3.70	A	880	7.75	1.3 + 1.3 + 1.5
	20 + 20 + 28	68	2.00	2.00	2.80		6.80	2.5	8.1	1840	460	2850	3.70	A	920	8.10	1.3 + 1.3 + 1.6
	20 + 20 + 32	72	2.05	2.05	3.20		7.30	2.5	8.2	1980	460	2790	3.69	A	990	8.70	1.3 + 1.3 + 1.8
	20 + 20 + 40	80	1.95	1.95	3.90		7.80	2.6	8.2	2330	460	2830	3.35	A	1165	10.30	1.3 + 1.3 + 2.3
	20 + 20 + 50	90	1.80	1.80	4.40		8.00	2.8	8.3	2460	490	2820	3.25	A	1230	10.80	1.2 + 1.2 + 2.4
	20 + 25 + 25	70	2.10	2.65	2.65		7.40	2.5	8.1	2140	460	2790	3.46	A	1070	9.40	1.4 + 1.6 + 1.6
	20 + 25 + 28	73	2.00	2.55	2.85		7.40	2.5	8.1	2140	460	2790	3.46	A	1070	9.40	1.3 + 1.6 + 1.7
	20 + 25 + 32	77	1.95	2.45	3.20		7.60	2.6	8.2	2240	460	2840	3.39	A	1120	9.85	1.3 + 1.5 + 1.8
	20 + 25 + 40	85	1.90	2.35	3.75		8.00	2.7	8.2	2510	490	2800	3.19	B	1255	11.00	1.2 + 1.5 + 2.2
	20 + 25 + 50	95	1.70	2.10	4.20		8.00	2.8	8.3	2460	490	2800	3.25	A	1230	10.80	1.1 + 1.4 + 2.4
	20 + 28 + 28	76	1.90	2.75	2.75		7.40	2.5	8.1	2140	460	2790	3.46	A	1070	9.40	1.2 + 1.6 + 1.6
	20 + 28 + 32	80	1.90	2.65	3.05		7.60	2.6	8.2	2240	460	2840	3.39	A	1120	9.85	1.2 + 1.6 + 1.7
	20 + 28 + 40	88	1.80	2.55	3.65		8.00	2.7	8.2	2510	490	2800	3.19	B	1255	11.00	1.2 + 1.6 + 2.1
	20 + 28 + 50	98	1.60	2.30	4.10		8.00	2.8	8.3	2460	490	2800	3.25	A	1230	10.80	1.0 + 1.5 + 2.3
	20 + 32 + 32	84	1.90	3.00	3.00		7.90	2.7	8.3	2290	460	2810	3.45	A	1145	10.10	1.2 + 1.7 + 1.7
	20 + 32 + 40	92	1.70	2.80	3.50		8.00	2.8	8.4	2380	490	2840	3.36	A	1190	10.40	1.1 + 1.6 + 2.0
	20 + 32 + 50	102	1.55	2.50	3.95		8.00	2.8	8.3	2470	490	2840	3.24	A	1235	10.90	1.0 + 1.5 + 2.3
	20 + 40 + 40	100	1.60	3.20	3.20		8.00	2.8	8.4	2380	490	2810	3.36	A	1190	10.40	1.0 + 1.8 + 1.8
	20 + 40 + 50	110	1.45	2.90	3.65		8.00	2.8	8.3	2470	490	2810	3.24	A	1235	10.90	0.9 + 1.7 + 2.1
	20 + 50 + 50	120	1.30	3.35	3.35		8.00	2.9	8.4	2430	490	2830	3.29	A	1215	10.70	0.8 + 1.9 + 1.9
	25 + 25 + 25	75	2.60	2.60	2.60		7.80	2.6	8.1	2450	460	2820	3.18	B	1225	10.80	1.6 + 1.6 + 1.6
	25 + 25 + 28	78	2.50	2.50	2.80		7.80	2.6	8.1	2450	460	2820	3.18	B	1225	10.80	1.5 + 1.5 + 1.6
	25 + 25 + 32	82	2.45	2.45	3.10		8.00	2.7	8.2	2510	490	2810	3.19	B	1255	11.00	1.5 + 1.5 + 1.7
	25 + 25 + 40	90	2.20	2.20	3.60		8.00	2.8	8.2	2510	490	2790	3.19	B	1255	11.00	1.4 + 1.4 + 2.1
	25 + 25 + 50	100	2.00	2.00	4.00		8.00	2.8	8.3	2460	490	2790	3.25	A	1230	10.80	1.3 + 1.3 + 2.3
	25 + 28 + 28	81	2.40	2.70	2.70		7.80	2.6	8.1	2450	460	2820	3.18	B	1225	10.80	1.5 + 1.6 + 1.6
	25 + 28 + 32	85	2.35	2.65	3.00		8.00	2.7	8.2	2510	490	2810	3.19	B	1255	11.00	1.5 + 1.6 + 1.7
	25 + 28 + 40	93	2.15	2.40	3.45		8.00	2.8	8.2	2510	490	2790	3.19	B	1255	11.00	1.4 + 1.5 + 2.0
	25 + 28 + 50	103	1.95	2.15	3.90		8.00	2.8	8.3	2460	490	2790	3.25	A	1230	10.80	1.3 + 1.4 + 2.3
	25 + 32 + 32	89	2.20	2.90	2.90		8.00	2.7	8.4	2380	490	2850	3.36	A	1190	10.40	1.4 + 1.7 + 1.7
	25 + 32 + 40	97	2.05	2.65	3.30		8.00	2.8	8.4	2380	490	2820	3.36	A	1190	10.40	1.3 + 1.6 + 1.9
	25 + 32 + 50	107	1.85	2.40	3.75		8.00	2.8	8.4	2340	490	2830	3.42	A	1170	10.30	1.2 + 1.5 + 2.2
	25 + 40 + 40	105	1.90	3.05	3.05		8.00	2.8	8.4	2380	490	2800	3.36	A	1190	10.40	1.2 + 1.7 + 1.7
	25 + 40 + 50	115	1.70	2.80	3.50		8.00	2.8	8.4	2340	490	2800	3.42	A	1170	10.30	1.1 + 1.6 + 2.0
	25 + 50 + 50	125	1.60	3.20	3.20		8.00	2.9	8.5	2340	520	2800	3.42	A	1170	10.30	1.0 + 1.8 + 1.8
	28 + 28 + 28	84	2.60	2.60	2.60		7.80	2.6	8.1	2450	460	2820	3.18	B	1225	10.80	1.6 + 1.6 + 1.6
	28 + 28 + 32	88	2.55	2.55	2.90		8.00	2.7	8.2	2510	490	2810	3.19	B	1255	11.00	1.6 + 1.6 + 1.7
	28 + 28 + 40	96	2.35	2.35	3.30		8.00	2.8	8.2	2510	490	2790	3.19	B	1255	11.00	1.5 + 1.5 + 1.9
	28 + 28 + 50	106	2.10	2.10	3.80		8.00	2.8	8.3	2460	490	2790	3.25	A	1230	10.80	1.4 + 1.4 + 2.2
	28 + 32 + 32	92	2.40	2.80	2.80		8.00	2.7	8.4	2380	490	2850	3.36	A	1190	10.40	1.5 + 1.6 + 1.6
	28 + 32 + 40	100	2.25	2.55	3.20		8.00	2.8	8.4	2380	490	2820	3.36	A	1190	10.40	1.5 + 1.6 + 1.8
	28 + 32 + 50	110	2.00	2.35	3.65		8.00	2.8	8.4	2340	490	2830	3.42	A	1170	10.30	1.3 + 1.5 + 2.1
	28 + 40 + 40	108	2.10	2.95	2.95		8.00	2.8	8.4	2380	490	2800	3.36	A	1190	10.40	1.4 + 1.7 + 1.7
	28 + 40 + 50	118	1.90	2.70	3.40		8.00	2.8	8.4	2340	490	2800	3.42	A	1170	10.30	1.2 + 1.6 + 1.9
	28 + 50 + 50	128	1.70	3.15	3.15		8.00	2.9	8.5	2340	520	2800	3.42	A	1170	10.30	1.1 + 1.8 + 1.8
	32 + 32 + 32	96	2.66	2.66	2.66		7.98	2.8	8.5	2300	490	2830	3.47	A	1150	10.10	1.6 + 1.6 + 1.6
	32 + 32 + 40	104	2.45	2.45	3.10		8.00	2.8	8.4	2390	490	2800	3.35	A	1195	10.50	1.5 + 1.5 + 1.7
	32 + 32 + 50	114	2.25	2.25	3.50		8.00	2.8	8.4	2390	490	2830	3.35	A	1195	10.50	1.5 + 1.5 + 2.0
	32 + 40 + 40	112	2.30	2.85	2.85		8.00	2.8	8.4	2390	490	2820	3.35	A	1195	10.50	1.5 + 1.7 + 1.7
	32 + 40 + 50	122	2.10	2.60	3.30		8.00	2.9	8.4	2350	490	2820	3.40	A	1175	10.30	1.4 + 1.6 + 1.9
	32 + 50 + 50	132	1.90	3.05	3.05		8.00	2.9	8.5	2350	520	2810	3.40	A	1175	10.30	1.2 + 1.7 + 1.7
	40 + 40 + 40	120	2.66	2.66	2.66		7.98	2.9	8.4	2390	490	2840	3.34	A	1195	10.50	1.6 + 1.6 + 1.6
	40 + 40 + 50	130	2.45	2.45	3.10		8.00	2.9	8.4	2390	520	2810	3.35	A	1195	10.50	1.5 + 1.5 + 1.7
4 Room	20 + 20 + 20 + 20	80	2.00	2.00	2.00	2.00	8.00	2.7	8.8	2150	490	2840	3.72	A	1075	9.50	1.3 + 1.3 + 1.3 + 1.3
	20 + 20 + 20 + 25	85	1.90	1.90	1.90	2.30	8.00	2.8	8.8	2140	490	2880	3.74	A	1070	9.40	1.2 + 1.2 + 1.2 + 1.5
	20 + 20 + 20 + 28	88	1.80	1.80	1.80	2.60	8.00	2.8	8.8	2140	490	2880	3.74	A	1070	9.40	1.2 + 1.2 + 1.2 + 1.6
	20 + 20 + 20 + 32	92	1.75	1.75	1.75	2.75	8.00	2.8	8.9	2130	490	2880	3.76	A	1065	9.40	1.1 + 1.1 + 1.1 + 1.6
	20 + 20 + 20 + 40	100	1.60	1.60	1.60	3.20	8.00	2.8	8.9	2110	490	2870	3.79	A	1055	9.30	1.0 + 1.0 + 1.0 + 1.8
	20 + 20 + 20 + 50	110	1.45	1.45	1.45	3.65	8.00	2.8	8.9	2110	490	2840	3.79	A	1055	9.30	0.9 + 0.9 + 0.9 + 2.1
	20 + 20 + 25 + 25	90	1.80	1.80	2.20	2.20	8.00	2.8	8.8	2130	490	2870	3.76	A	1065	9.40	1.2 + 1.2 + 1.4 + 1.4
	20 + 20 + 25 + 28	93	1.70	1.70	2.15	2.45	8.00	2.8	8.8	2130	490	2870	3.76	A	1065	9.40	1.1 + 1.1 + 1.4 + 1.5
	20 + 20 + 25 + 32	97	1.65	1.65	2.05	2.65	8.00	2.8	8.9	2120	490	2870	3.77	A	1060	9.30	1.1 + 1.1 + 1.3 + 1.6
	20 + 20 + 25 + 40	105	1.50	1.50	1.90	3.10	8.00	2.8	8.9	2090	490	2840	3.83	A	1045	9.20	1.0 + 1.0 + 1.2 + 1.7
	20 + 20 + 25 + 50	115	1.40	1.40	1.70	3.50	8.00	2.9	8.9	2110	520	2880	3.79	A	1055	9.30	0.9 + 0.9 + 1.1 + 2.0
	20 + 20 + 28 + 28	96	1.65	1.65	2.35	2.35	8.00	2.8	8.8	2130	490	2870	3.76	A	1065	9.40	1.1 + 1.1 + 1.5 + 1.5
	20 + 20 + 28 + 32	100	1.60	1.60	2.25	2.55	8.00	2.8	8.9	2120	490	2870	3.77	A	1060	9.30	1.0 + 1.0 + 1.5 + 1.6
	20 + 20 + 28 + 40	108	1.50	1.50	2.05	2.95	8.00	2.8	8.9	2090	490	2840	3.83	A	1045	9.20	1.0 + 1.0 + 1.3 + 1.7
	20 + 20 + 28 + 50	118	1.35	1.35	1.90	3.40	8.00	2.9	8.9	2110	520	2880	3.79	A	1055	9.30	0.9 + 0.9 + 1.2 + 1.9
	20 + 20 + 32 + 32	104	1.55	1.55	2.45	2.45	8.00	2.8	8.9	2090	500	2870	3.83	A	1045	9.20	1.0 + 1.0 + 1.5 + 1.5
	20 + 20 + 32 + 40	112	1.45	1.45	2.25	2.85	8.00	2.8	8.9	2080	500	2840	3.85	A	1040	9.15	0.9 + 0.9 + 1.5 + 1.7
	20 + 20 + 32 + 50	122	1.30	1.30	2.10	3.30	8.00	2.9	9.0	2040	520	2860	3.92	A	1020	8.95	0.8 + 0.8 + 1.4 + 1.9
	20 + 20 + 40 + 40	120	1.35	1.35	2.65	2.65	8.00	2.9	9.0	2060	520	2850	3.88	A	1030	9.05	0.9 + 0.9 + 1.6 + 1.6
	20 + 20 + 40 + 50	130	1.25	1.25	2.40	3.10	8.00	2.9	9.0	2020	520	2880	3.96	A	1010	8.85	0.8 + 0.8 + 1.5 + 1.7
	20 + 25 + 25 + 25	95	1.70	2.10	2.10	2.10	8.00	2.8	8.8	2120	490	2850	3.77	A	1060	9.30	1.1 + 1.4 + 1.4 + 1.4
	20 + 25 + 25 + 28	98	1.60	2.05	2.05	2.30	8.00	2.8	8.8	2120	490	2850	3.77	A	1060	9.30	1.0 + 1.3 + 1.3 + 1.5
	20 + 25 + 25 + 32	102	1.55	1.95	1.95	2.55	8.00	2.8	8.9	2100	490	2850	3.81	A	1050	9.20	1.0 + 1.3 + 1.3 + 1.6
	20 + 25 + 25 + 40	110	1.45	1.80	1.80	2.95	8.00	2.8	8.9	2130	490	2860	3.76	A	1065	9.40	0.9 + 1.2 + 1.2 + 1.7
	20 + 25 + 25 + 50	120	1.35	1.65	1.65	3.35	8.00	2.9	8.9	2110	520	2860	3.79	A	1055	9.30	0.9 + 1.1 + 1.1 + 1.9
	20 + 25 + 28 + 28	101	1.60	2.00	2.20	2.20	8.00	2.8	8.8	2120	490	2850	3.77	A	1060	9.30	1.0 + 1.3 + 1.4 + 1.4
	20 + 25 + 28 + 32	105	1.50	1.90	2.15	2.45	8.00	2.8	8.9	2100	490	2850	3.81	A	1050	9.20	1.0 + 1.2 + 1.4 + 1.5
	20 + 25 + 28 + 40	113	1.40	1.75	2.00	2.85	8.00	2.8	8.9	2130	490	2860	3.76	A	1065	9.40	0.9 + 1.1 + 1.3 + 1.7
	20 + 25 + 28 + 50	123	1.30	1.65	1.80	3.25	8.00	2.9	8.9	2110	520	2860	3.79	A	1055	9.30	0.8 + 1.1 + 1.2 + 1.8
	20 + 25 + 32 + 32	109	1.45	1.85	2.35	2.35	8.00	2.8	8.9	2130	500	2850	3.76	A	1065	9.40	0.9 + 1.2 + 1.5 + 1.5
	20 + 25 + 32 + 40	117	1.35	1.70	2.20	2.75	8.00	2.9	9.0	2070	520	2860	3.86	A	1035	9.15	0.9 + 1.1 + 1.4 + 1.6
	20 + 25 + 32 + 50	127	1.25	1.55	2.00	3.20	8.00	2.9	9.0	2030	520	2840	3.94	A	1015	8.95	0.8 + 1.0 + 1.3 + 1.8
	20 + 25 + 40 + 40	125	1.30	1.60	2.55	2.55	8.00	2.9	9.0	2040	520	2870	3.92	A	1020	8.95	0.8 + 1.0 + 1.6 + 1.6
	20 + 25 + 40 + 50	135	1.20	1.50	2.35	2.95	8.00	2.9	9.0	2020	520	2880	3.96	A	1010	8.85	0.7 + 1.0 + 1.5 + 1.7
	20 + 28 + 28 + 28	104	1.55	2.15	2.15	2.15	8.00	2.8	8.8	2120	490	2850	3.77	A	1060	9.30	1.0 + 1.4 + 1.4 + 1.4
	20 + 28 + 28 + 32	108	1.50	2.05	2.05	2.40	8.00	2.8	8.9	2100	490	2850	3.81	A	1050	9.20	1.0 + 1.3 + 1.3 + 1.5
	20 + 28 + 28 + 40	116	1.35	1.95	1.95	2.75	8.00	2.8	8.9	2130	490	2860	3.76	A	1065	9.40	0.9 + 1.3 + 1.3 + 1.6
	20 + 28 + 28 + 50	126	1.25	1.80	1.80	3.15	8.00	2.9	8.9	2110	520	2860	3.79	A	1055	9.30	0.8 + 1.2 + 1.2 + 1.8
	20 + 28 + 32 + 32	112	1.40	2.00	2.30	2.30	8.00	2.8	8.9	2130	500	2850	3.76	A	1065	9.40	0.9 + 1.3 + 1.5 + 1.5
	20 + 28 + 32 + 40	120	1.35	1.85	2.15	2.65	8.00	2.9	9.0	2070	520	2860	3.86	A	1035	9.15	0.9 + 1.2 + 1.4 + 1.6
	20 + 28 + 32 + 50	130	1.25	1.70	1.95	3.10	8.00	2.9	9.0	2030	520	2840	3.94	A	1015	8.95	0.8 + 1.1 + 1.3 + 1.7
	20 + 28 + 40 + 40	128	1.25	1.75	2.50	2.50	8.00	2.9	9.0	2040	520	2870	3.92	A	1020	8.95	0.8 + 1.1 + 1.5 + 1.5
	20 + 32 + 32 + 32	116	1.40	2.20	2.20	2.20	8.00	2.8	9.1	2040	500	2870	3.92	A	1020	8.95	0.9 + 1.4 + 1.4 + 1.4
	20 + 32 + 32 + 40	124	1.30	2.05	2.05	2.60	8.00	2.9	9.1	2020	520	2840	3.96	A	1010	8.85	0.8 + 1.3 + 1.3 + 1.6
	20 + 32 + 32 + 50	134	1.20	1.90	1.90	3.00	8.00	3.0	9.2	2000	530	2870	4.00	A	1000	8.80	0.7 + 1.2 + 1.2 + 1.7
	20 + 32 + 40 + 40	132	1.20	2.00	2.40	2.40	8.00	2.9	9.1	2090	520	2860	3.83	A	1045	9.20	0.7 + 1.3 + 1.5 + 1.5
	25 + 25 + 25 + 25	100	2.00	2.00	2.00	2.00	8.00	2.8	8.8	2110	490	2840	3.79	A	1055	9.30	1.3 + 1.3 + 1.3 + 1.3
	25 + 25 + 25 + 28	103	1.95	1.95	1.95	2.15	8.00	2.8	8.8	2110	490	2840	3.79	A	1055	9.30	1.3 + 1.3 + 1.3 + 1.4
	25 + 25 + 25 + 32	107	1.85	1.85	1.85	2.45	8.00	2.8	8.9	2090	490	2870	3.83	A	1045	9.20	1.2 + 1.2 + 1.2 + 1.5
	25 + 25 + 25 + 40	115	1.75	1.75	1.75	2.75	8.00	2.9	8.9	2120	520	2850	3.77	A	1060	9.30	1.1 + 1.1 + 1.1 + 1.6
	25 + 25 + 25 + 50	125	1.60	1.60	1.60	3.20	8.00	2.9	8.9	2110	520	2850	3.79	A	1055	9.30	1.0 + 1.0 + 1.0 + 1.8
	25 + 25 + 28 + 28	106	1.90	1.90	2.10	2.10	8.00	2.8	8.8	2110	490	2840	3.79	A	1055	9.30	1.2 + 1.2 + 1.4 + 1.4
	25 + 25 + 28 + 32	110	1.80	1.80	2.05	2.35	8.00	2.8	8.9	2090	490	2870	3.83	A	1045	9.20	1.2 + 1.2 + 1.3 + 1.5
	25 + 25 + 28 + 40	118	1.70	1.70	1.90	2.70	8.00	2.9	8.9	2120	520	2850	3.77	A	1060	9.30	1.1 + 1.1 + 1.2 + 1.6
	25 + 25 + 28 + 50	128	1.55	1.55	1.75	3.15	8.00	2.9	8.9	2110	520	2850	3.79	A	1055	9.30	1.0 + 1.0 + 1.1 + 1.8
	25 + 25 + 32 + 32	114	1.75	1.75	2.25	2.25	8.00	2.9	9.0	2080	500	2870	3.85	A	1040	9.15	1.1 + 1.1 + 1.5 + 1.5
	25 + 25 + 32 + 40	122	1.65	1.65	2.10	2.60	8.00	2.9	9.0	2050	520	2880	3.90	A	1025	9.05	1.1 + 1.1 + 1.4 + 1.6
	25 + 25 + 32 + 50	132	1.50	1.50	1.95	3.05	8.00	2.9	9.0	2030	520	2840	3.94	A	1015	8.95	1.0 + 1.0 + 1.3 + 1.7
	25 + 25 + 40 + 40	130	1.55	1.55	2.45	2.45	8.00	3.0	9.0	2040	520	2860	3.92	A	1020	8.95	1.0 + 1.0 + 1.5 + 1.5
	25 + 28 + 28 + 28	109	1.85	2.05	2.05	2.05	8.00	2.8	8.8	2110	490	2840	3.79	A	1055	9.30	1.2 + 1.3 + 1.3 + 1.3
	25 + 28 + 28 + 32	113	1.75	2.00	2.00	2.25	8.00	2.8	8.9	2090	490	2870	3.83	A	1045	9.20	1.1 + 1.3 + 1.3 + 1.5
	25 + 28 + 28 + 40	121	1.65	1.85	1.85	2.65	8.00	2.9	8.9	2120	520	2850	3.77	A	1060	9.30	1.1 + 1.2 + 1.2 + 1.6
	25 + 28 + 28 + 50	131	1.55	1.70	1.70	3.05	8.00	2.9	8.9	2110	520	2850	3.79	A	1055	9.30	1.0 + 1.1 + 1.1 + 1.7
	25 + 28 + 32 + 32	117	1.70	1.90	2.20	2.20	8.00	2.8	8.9	2130	500	2850	3.76	A	1065	9.40	1.1 + 1.2 + 1.4 + 1.4
	25 + 28 + 32 + 40	125	1.60	1.80	2.05	2.55	8.00	2.9	9.0	2070	520	2860	3.86	A	1035	9.15	1.0 + 1.2 + 1.3 + 1.6
	25 + 28 + 32 + 50	135	1.50	1.65	1.90	2.95	8.00	2.9	9.0	2030	520	2840	3.94	A	1015	8.95	1.0 + 1.1 + 1.2 + 1.7
	25 + 28 + 40 + 40	133	1.50	1.70	2.40	2.40	8.00	2.9	9.0	2040	520	2870	3.92	A	1020	8.95	1.0 + 1.1 + 1.5 + 1.5
	25 + 32 + 32 + 32	121	1.70	2.10	2.10	2.10	8.00	2.9	9.1	2030	520	2860	3.94	A	1015	8.95	1.1 + 1.4 + 1.4 + 1.4
	25 + 32 + 32 + 40	129	1.50	2.00	2.00	2.50	8.00	2.9	9.1	2020	520	2840	3.96	A	1010	8.85	1.0 + 1.3 + 1.3 + 1.5
	28 + 28 + 28 + 28	112	2.00	2.00	2.00	2.00	8.00	2.8	8.8	2110	490	2840	3.79	A	1055	9.30	1.3 + 1.3 + 1.3 + 1.3
	28 + 28 + 28 + 32	116	1.95	1.95	1.95	2.15	8.00	2.8	8.9	2090	490	2870	3.83	A	1045	9.20	1.3 + 1.3 + 1.3 + 1.4
	28 + 28 + 28 + 40	124	1.80	1.80	1.80	2.60	8.00	2.9	8.9	2120	520	2850	3.77	A	1060	9.30	1.2 + 1.2 + 1.2 + 1.6
	28 + 28 + 28 + 50	134	1.65	1.65	1.65	3.05	8.00	2.9	8.9	2110	520	2850	3.79	A	1055	9.30	1.1 + 1.1 + 1.1 + 1.7
	28 + 28 + 32 + 32	120	1.85	1.85	2.15	2.15	8.00	2.9	9.0	2080	500	2870	3.85	A	1040	9.15	1.2 + 1.2 + 1.4 + 1.4
	28 + 28 + 32 + 40	128	1.75	1.75	2.00	2.50	8.00	2.9	9.0	2050	520	2880	3.90	A	1025	9.05	1.1 + 1.1 + 1.3 + 1.5
	28 + 28 + 40 + 40	136	1.65	1.65	2.35	2.35	8.00	3.0	9.0	2040	520	2860	3.92	A	1020	8.95	1.1 + 1.1 + 1.5 + 1.5
	28 + 32 + 32 + 32	124	1.85	2.05	2.05	2.05	8.00	2.9	9.1	2030	520	2860	3.94	A	1015	8.95	1.2 + 1.3 + 1.3 + 1.3
	28 + 32 + 32 + 40	132	1.70	1.95	1.95	2.40	8.00	2.9	9.1	2010	520	2880	3.98	A	1005	8.85	1.1 + 1.3 + 1.3 + 1.5
	32 + 32 + 32 + 32	128	2.00	2.00	2.00	2.00	8.00	2.9	9.2	2000	530	2850	4.00	A	1000	8.80	1.3 + 1.3 + 1.3 + 1.3
	32 + 32 + 32 + 40	136	1.90	1.90	1.90	2.30	8.00	3.0	9.2	1980	530	2870	4.04	A	990	8.70	1.2 + 1.2 + 1.2 + 1.5

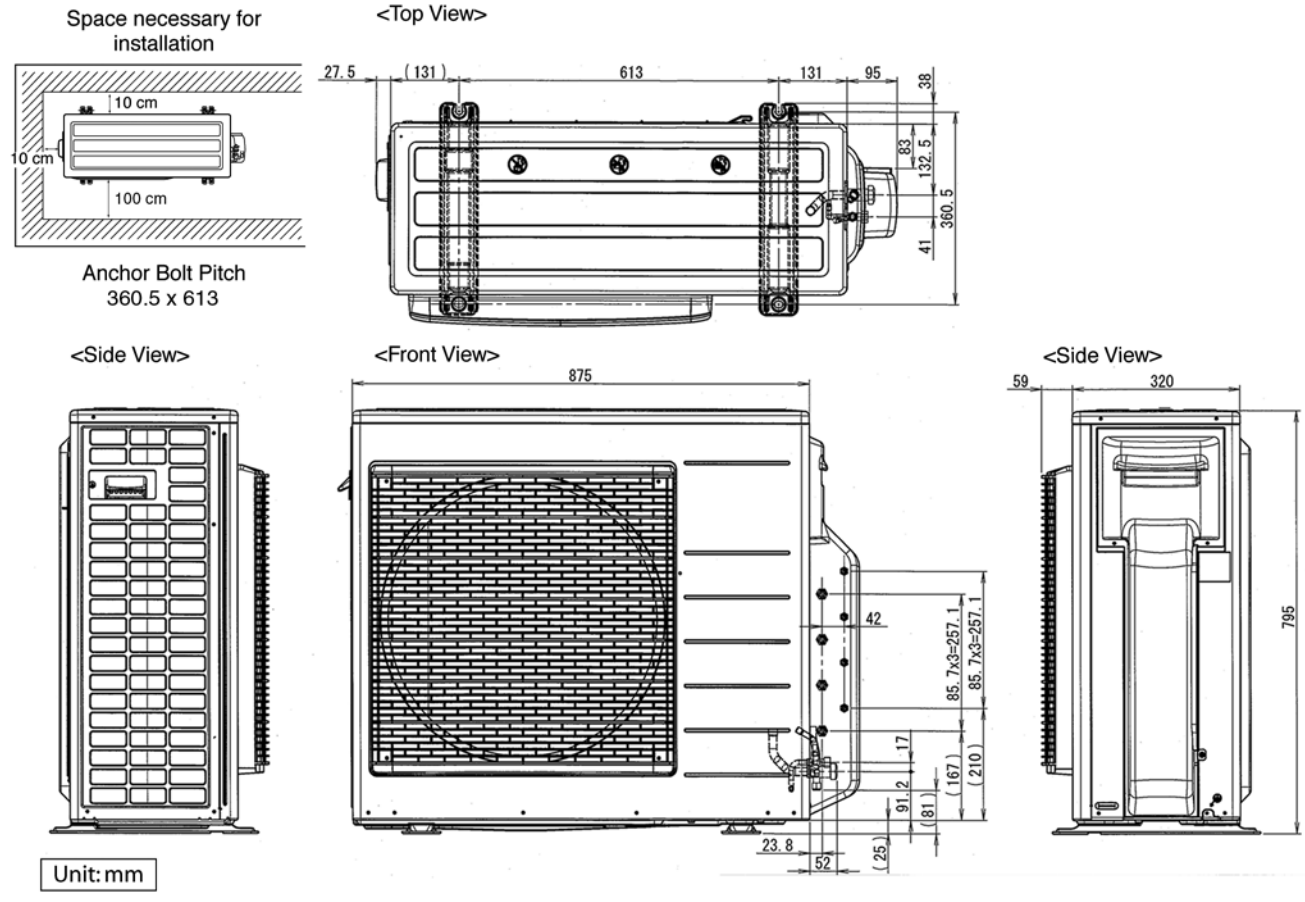
Room	Indoor unit capacity Heating	Total	Heating Capacity (kW) Room A	Room B	Room C	Room D	Total	min	~	max	Input Power (W) Rating	min	~	max	COP W/W	COP CLASS	ANNUAL ENERGY CONSUMPTION (kWh)	Current, 230V (A)	MOISTURE REMOVAL VOLUME l/h
1 Room	20	20	3.20				3.20	1.7	~	4.7	840	370	~	1830	3.81	A	420	3.85	
	25	25	3.60				3.60	1.7	~	4.8	1090	370	~	1900	3.31	C	545	4.85	
	28	28	4.00				4.00	1.7	~	4.8	1210	370	~	1900	3.31	C	605	5.40	
	32	32	4.50				4.50	1.7	~	5.8	1310	370	~	2290	3.44	B	655	5.85	
	40	40	5.60				5.60	1.8	~	7.2	1900	370	~	3560	2.95	D	950	8.35	
	50	50	7.10				7.10	2.1	~	7.3	2840	430	~	3560	2.50	F	1420	12.40	
2 Room	20 + 20	40	3.20	3.20			6.40	1.8	~	9.4	1480	400	~	3550	4.32	A	740	6.50	
	20 + 25	45	3.15	3.95			7.10	2.1	~	9.4	1700	420	~	3510	4.18	A	850	7.55	
	20 + 28	48	2.95	4.15			7.10	2.1	~	9.4	1700	420	~	3510	4.18	A	850	7.55	
	20 + 32	52	2.90	4.60			7.50	2.2	~	9.8	1740	420	~	3490	4.31	A	870	7.65	
	20 + 40	60	2.75	5.55			8.30	2.4	~	9.8	2060	440	~	3440	4.03	A	1030	9.05	
	20 + 50	70	2.50	6.30			8.80	3.2	~	9.9	2260	530	~	3400	3.89	A	1130	9.90	
	25 + 25	50	3.55	3.55			7.10	2.3	~	9.4	1860	440	~	3480	3.81	A	930	8.15	
	25 + 28	53	3.55	3.95			7.50	2.3	~	9.4	1970	440	~	3480	3.81	A	985	8.65	
	25 + 32	57	3.55	4.55			8.10	2.4	~	9.8	1980	440	~	3460	4.09	A	990	8.70	
	25 + 40	65	3.30	5.30			8.60	2.1	~	9.8	2175	530	~	3390	3.95	A	1088	9.65	
	25 + 50	75	3.00	6.00			9.00	3.2	~	9.9	2390	530	~	3370	3.77	A	1195	10.50	
	28 + 28	56	3.85	3.85			7.70	2.3	~	9.4	2020	440	~	3480	3.81	A	1010	8.85	
	28 + 32	60	3.80	4.30			8.10	2.4	~	9.8	1980	440	~	3460	4.09	A	990	8.70	
	28 + 40	68	3.55	5.05			8.60	2.1	~	9.8	2175	530	~	3390	3.95	A	1088	9.65	
	28 + 50	78	3.25	5.75			9.00	3.2	~	9.9	2390	530	~	3370	3.77	A	1195	10.50	
	32 + 32	64	4.25	4.25			8.50	2.5	~	10.1	2110	470	~	3390	4.03	A	1055	9.30	
	32 + 40	72	3.90	4.90			8.80	3.2	~	10.1	2230	530	~	3340	3.95	A	1115	9.85	
	32 + 50	82	3.60	5.60			9.20	3.2	~	10.1	2390	530	~	3300	3.85	A	1195	10.50	
	40 + 40	80	4.55	4.55			9.10	3.2	~	10.1	2360	530	~	3320	3.86	A	1180	10.30	
	40 + 50	90	4.20	5.20			9.40	3.2	~	10.2	2480	530	~	3300	3.79	A	1240	10.90	
	50 + 50	100	4.70	4.70			9.40	3.5	~	10.2	2470	590	~	3290	3.81	A	1235	10.90	
3 Room	20 + 20 + 20	60	2.87	2.87	2.87		8.61	3.1	~	10.4	1990	500	~	3250	4.33	A	995	8.80	
	20 + 20 + 25	65	2.70	2.70	3.40		8.80	3.2	~	10.4	2010	510	~	3220	4.38	A	1005	8.85	
	20 + 20 + 28	68	2.60	2.60	3.60		8.80	3.2	~	10.4	2010	510	~	3220	4.38	A	1005	8.85	
	20 + 20 + 32	72	2.45	2.45	4.00		8.90	3.2	~	10.4	2030	510	~	3220	4.38	A	1015	8.95	
	20 + 20 + 40	80	2.30	2.30	4.60		9.20	3.2	~	10.4	2150	510	~	3180	4.28	A	1075	9.50	
	20 + 20 + 50	90	2.10	2.10	5.20		9.40	3.2	~	10.4	2120	510	~	3180	4.43	A	1060	9.30	
	20 + 25 + 25	70	2.60	3.20	3.20		9.00	3.2	~	10.4	2090	510	~	3190	4.31	A	1045	9.20	
	20 + 25 + 28	73	2.45	3.10	3.45		9.00	3.2	~	10.4	2090	510	~	3190	4.31	A	1045	9.20	
	20 + 25 + 32	77	2.40	3.00	3.80		9.20	3.2	~	10.4	2110	510	~	3180	4.36	A	1055	9.30	
	20 + 25 + 40	85	2.20	2.75	4.45		9.40	3.2	~	10.4	2160	510	~	3140	4.35	A	1080	9.50	
	20 + 25 + 50	95	2.00	2.45	4.95		9.40	3.5	~	10.4	2080	560	~	3150	4.52	A	1040	9.15	
	20 + 28 + 28	76	2.40	3.30	3.30		9.00	3.2	~	10.4	2090	510	~	3190	4.31	A	1045	9.20	
	20 + 28 + 32	80	2.30	3.20	3.70		9.20	3.2	~	10.4	2110	510	~	3180	4.36	A	1055	9.30	
	20 + 28 + 40	88	2.15	3.00	4.25		9.40	3.2	~	10.4	2160	510	~	3140	4.35	A	1080	9.50	
	20 + 28 + 50	98	1.90	2.70	4.80		9.40	3.5	~	10.4	2080	560	~	3150	4.52	A	1040	9.15	
	20 + 32 + 32	84	2.20	3.55	3.55		9.30	3.2	~	10.5	2130	500	~	3180	4.37	A	1065	9.40	
	20 + 32 + 40	92	2.05	3.25	4.10		9.40	3.2	~	10.5	2150	500	~	3140	4.37	A	1075	9.50	
	20 + 32 + 50	102	1.85	2.95	4.60		9.40	3.7	~	10.5	2170	620	~	3140	4.33	A	1085	9.55	
	20 + 40 + 40	100	1.90	3.75	3.75		9.40	3.6	~	10.5	2110	620	~	3110	4.45	A	1055	9.30	
	20 + 40 + 50	110	1.70	3.40	4.30		9.40	3.9	~	10.5	2120	660	~	3110	4.43	A	1060	9.30	
	20 + 50 + 50	120	1.60	3.90	3.90		9.40	4.1	~	10.5	2170	700	~	3120	4.33	A	1085	9.55	
	25 + 25 + 25	75	3.08	3.08	3.08		9.24	3.2	~	10.4	2170	510	~	3160	4.26	A	1085	9.55	
	25 + 25 + 28	78	2.96	2.96	3.32		9.24	3.2	~	10.4	2170	510	~	3160	4.26	A	1085	9.55	
	25 + 25 + 32	82	2.85	2.85	3.70		9.40	3.2	~	10.4	2190	510	~	3150	4.29	A	1095	9.65	
	25 + 25 + 40	90	2.60	2.60	4.20		9.40	3.3	~	10.4	2140	530	~	3130	4.39	A	1070	9.40	
	25 + 25 + 50	100	2.35	2.35	4.70		9.40	3.8	~	10.4	2100	640	~	3120	4.48	A	1050	9.20	
	25 + 28 + 28	81	2.84	3.20	3.20		9.24	3.2	~	10.4	2170	510	~	3160	4.26	A	1085	9.55	
	25 + 28 + 32	85	2.75	3.10	3.55		9.40	3.2	~	10.4	2190	510	~	3150	4.29	A	1095	9.65	
	25 + 28 + 40	93	2.50	2.85	4.05		9.40	3.3	~	10.4	2140	530	~	3130	4.39	A	1070	9.40	
	25 + 28 + 50	103	2.30	2.55	4.55		9.40	3.8	~	10.4	2100	640	~	3120	4.48	A	1050	9.20	
	25 + 32 + 32	89	2.60	3.40	3.40		9.40	3.2	~	10.5	2170	500	~	3150	4.33	A	1085	9.55	
	25 + 32 + 40	97	2.40	3.10	3.90		9.40	3.5	~	10.5	2130	560	~	3120	4.41	A	1065	9.40	
	25 + 32 + 50	107	2.20	2.80	4.40		9.40	3.9	~	10.5	2150	660	~	3120	4.37	A	1075	9.50	
	25 + 40 + 40	105	2.20	3.60	3.60		9.40	3.8	~	10.5	2060	640	~	3080	4.56	A	1030	9.05	
	25 + 40 + 50	115	2.05	3.25	4.10		9.40	4.0	~	10.5	2100	680	~	3080	4.48	A	1050	9.20	
	25 + 50 + 50	125	1.90	3.75	3.75		9.40	4.2	~	10.5	2140	700	~	3080	4.39	A	1070	9.40	
	28 + 28 + 28	84	3.08	3.08	3.08		9.24	3.2	~	10.4	2170	510	~	3160	4.26	A	1085	9.55	
	28 + 28 + 32	88	3.00	3.00	3.40		9.40	3.2	~	10.4	2190	510	~	3150	4.29	A	1095	9.65	
	28 + 28 + 40	96	2.75	2.75	3.90		9.40	3.3	~	10.4	2140	530	~	3130	4.39	A	1070	9.40	
	28 + 28 + 50	106	2.50	2.50	4.40		9.40	3.8	~	10.4	2100	640	~	3120	4.48	A	1050	9.20	
	28 + 32 + 32	92	2.90	3.25	3.25		9.40	3.2	~	10.5	2170	500	~	3150	4.33	A	1085	9.55	
	28 + 32 + 40	100	2.65	3.00	3.75		9.40	3.5	~	10.5	2130	560	~	3120	4.41	A	1065	9.40	
	28 + 32 + 50	110	2.40	2.75	4.25		9.40	3.9	~	10.5	2150	660	~	3120	4.37	A	1075	9.50	
	28 + 40 + 40	108	2.40	3.50	3.50		9.40	3.8	~	10.5	2060	640	~	3080	4.56	A	1030	9.05	
	28 + 40 + 50	118	2.20	3.20	4.00		9.40	4.0	~	10.5	2100	680	~	3080	4.48	A	1050	9.20	
	28 + 50 + 50	128	2.10	3.65	3.65		9.40	4.2	~	10.5	2140	700	~	3080	4.39	A	1070	9.40	
	32 + 32 + 32	96	3.13	3.13	3.13		9.39	3.3	~	10.5	2160	520	~	3180	4.35	A	1080	9.50	
	32 + 32 + 40	104	2.90	2.90	3.60		9.40	3.7	~	10.5	2140	620	~	3150	4.39	A	1070	9.40	
	32 + 32 + 50	114	2.65	2.65	4.10		9.40	4.0	~	10.5	2130	680	~	3120	4.41	A	1065	9.40	
	32 + 40 + 40	112	2.70	3.35	3.35		9.40	3.9	~	10.5	2120	660	~	3120	4.43	A	1060	9.30	
	32 + 40 + 50	122	2.45	3.10	3.85		9.40	4.1	~	10.5	2100	700	~	3100	4.48	A	1050	9.20	
	32 + 50 + 50	132	2.30	3.55	3.55		9.40	4.2	~	10.5	2060	700	~	3080	4.56	A	1030	9.05	
	40 + 40 + 40	120	3.13	3.13	3.13		9.39	4.0	~	10.5	2100	680	~	3080	4.47	A	1050	9.20	
	40 + 40 + 50	130	2.90	2.90	3.60		9.40	4.2	~	10.5	2080	700	~	3080	4.52	A	1040	9.15	
4 Room	20 + 20 + 20 + 20	80	2.35	2.35	2.35	2.35	9.40	3.2	~	10.5	2080	550	~	3140	4.52	A	1040	9.15	
	20 + 20 + 20 + 25	85	2.20	2.20	2.20	2.80	9.40	3.2	~	10.5	2060	550	~	3120	4.56	A	1030	9.05	
	20 + 20 + 20 + 28	88	2.15	2.15	2.15	2.95	9.40	3.2	~	10.5	2060	550	~	3120	4.56	A	1030	9.05	
	20 + 20 + 20 + 32	92	2.05	2.05	2.05	3.25	9.40	3.4	~	10.5	2120	590	~	3180	4.43	A	1060	9.30	
	20 + 20 + 20 + 40	100	1.90	1.90	1.90	3.70	9.40	3.8	~	10.5	2090	640	~	3140	4.50	A	1045	9.20	
	20 + 20 + 20 + 50	110	1.70	1.70	1.70	4.30	9.40	4.0	~	10.5	2120	680	~	3110	4.43	A	1060	9.30	
	20 + 20 + 25 + 25	90	2.10	2.10	2.60	2.60	9.40	3.5	~	10.5	2050	610	~	3110	4.59	A	1025	9.05	
	20 + 20 + 25 + 28	93	2.00	2.00	2.55	2.85	9.40	3.5	~	10.5	2050	610	~	3110	4.59	A	1025	9.05	
	20 + 20 + 25 + 32	97	1.95	1.95	2.40	3.10	9.40	3.7	~	10.5	2100	620	~	3160	4.48	A	1050	9.20	
	20 + 20 + 25 + 40	105	1.80	1.80	2.20	3.60	9.40	3.9	~	10.5	2070	660	~	3110	4.54	A	1035	9.10	
	20 + 20 + 25 + 50	115	1.65	1.65	2.00	4.10	9.40	4.1	~	10.5	2090	700	~	3100	4.50	A	1045	9.20	
	20 + 20 + 28 + 28	96	1.95	1.95	2.75	2.75	9.40	3.5	~	10.5	2050	610	~	3110	4.59	A	1025	9.05	
	20 + 20 + 28 + 32	100	1.90	1.90	2.60	3.00	9.40	3.7	~	10.5	2100	620	~	3160	4.48	A	1050	9.20	
	20 + 20 + 28 + 40	108	1.75	1.75	2.40	3.50	9.40	3.9	~	10.5	2070	660	~	3110	4.54	A	1035	9.10	
	20 + 20 + 28 + 50	118	1.60	1.60	2.20	4.00	9.40	4.1	~	10.5	2090	700	~	3100	4.50	A	1045	9.20	
	20 + 20 + 32 + 32	104	1.80	1.80	2.90	2.90	9.40	3.8	~	10.5	2110	640	~	3190	4.45	A	1055	9.30	
	20 + 20 + 32 + 40	112	1.70	1.70	2.65	3.35	9.40	4.0	~	10.5	2080	680	~	3150	4.52	A	1040	9.15	
	20 + 20 + 32 + 50	122	1.55	1.55	2.45	3.85	9.40	4.1	~	10.5	2110	700	~	3080	4.45	A	1055	9.30	
	20 + 20 + 40 + 40	120	1.55	1.55	3.15	3.15	9.40	4.1	~	10.5	2050	700	~	3110	4.59	A	1025	9.05	
	20 + 20 + 40 + 50	130	1.45	1.45	2.90	3.60	9.40	4.2	~	10.5	2080	700	~	3060	4.52	A	1040	9.15	
	20 + 25 + 25 + 25	95	2.05	2.45	2.45	2.45	9.40	3.8	~	10.5	2040	640	~	3080	4.61	A	1020	8.95	
	20 + 25 + 25 + 28	98	1.90	2.40	2.40	2.70	9.40	3.8	~	10.5	2040	640	~	3080	4.61	A	1020	8.95	
	20 + 25 + 25 + 32	102	1.85	2.30	2.30	2.95	9.40	3.9	~	10.5	2080	660	~	3130	4.52	A	1040	9.15	
	20 + 25 + 25 + 40	110	1.70	2.15	2.15	3.40	9.40	4.0	~	10.5	2050	680	~	3080	4.59	A	1025	9.05	
	20 + 25 + 25 + 50	120	1.55	1.95	1.95	3.95	9.40	4.2	~	10.5	2080	700	~	3080	4.52	A	1040	9.15	
	20 + 25 + 28 + 28	101	1.85	2.35	2.60	2.60	9.40	3.8	~	10.5	2040	640	~	3080	4.61	A	1020	8.95	
	20 + 25 + 28 + 32	105	1.80	2.25	2.50	2.85	9.40	3.9	~	10.5	2080	660	~	3130	4.52	A	1040	9.15	
	20 + 25 + 28 + 40	113	1.60	2.10	2.35	3.35	9.40	4.0	~	10.5	2050	680	~	3080	4.59	A	1025	9.05	
	20 + 25 + 28 + 50	123	1.55	1.90	2.15	3.80	9.40	4.2	~	10.5	2080	700	~	3080	4.52	A	1040	9.15	
	20 + 25 + 32 + 32	109	1.70	2.20	2.75	2.75	9.40	4.0	~	10.5	2090	680	~	3180	4.50	A	1045	9.20	
	20 + 25 + 32 + 40	117	1.60	2.00	2.55	3.25	9.40	4.1	~	10.5	2060	700	~	3120	4.56	A	1030	9.05	
	20 + 25 + 32 + 50	127	1.50	1.85	2.35	3.70	9.40	4.2	~	10.5	2090	700	~	3080	4.50	A	1045	9.20	
	20 + 25 + 40 + 40	125	1.50	1.90	3.00	3.00	9.40	4.2	~	10.5	2030	700	~	3080	4.63	A	1015	8.95	
	20 + 25 + 40 + 50	135	1.35	1.75	2.80	3.50	9.40	4.2	~	10.5	2080	700	~	3060	4.52	A	1040	9.15	
	20 + 28 + 28 + 28	104	1.75	2.55	2.55	2.55	9.40	3.8	~	10.5	2040	640	~	3080	4.61	A	1020	8.95	
	20 + 28 + 28 + 32	108	1.70	2.45	2.45	2.80	9.40	3.9	~	10.5	2080	660	~	3130	4.52	A	1040	9.15	
	20 + 28 + 28 + 40	116	1.60	2.25	2.25	3.30	9.40	4.0	~	10.5	2050	680	~	3080	4.59	A	1025	9.05	
	20 + 28 + 28 + 50	126	1.45	2.10	2.10	3.75	9.40	4.2	~	10.5	2080	700	~	3080	4.52	A	1040	9.15	
	20 + 28 + 32 + 32	112	1.65	2.35	2.70	2.70	9.40	4.0	~	10.5	2090	680	~	3180	4.50	A	1045	9.20	
	20 + 28 + 32 + 40	120	1.55	2.20	2.50	3.15	9.40	4.1	~	10.5	2060	700	~	3120	4.56	A	1030	9.05	
	20 + 28 + 32 + 50	130	1.45	2.00	2.30	3.65	9.40	4.2	~	10.5	2090	700	~	3080	4.50	A	1045	9.20	
	20 + 28 + 40 + 40	128	1.45	2.05	2.95	2.95	9.40	4.2	~	10.5	2030	700	~	3080	4.63	A	1015	8.95	
	20 + 32 + 32 + 32	116	1.60	2.60	2.60	2.60	9.40	4.0	~	10.6	2110	680	~	3120	4.45	A	1055	9.30	
	20 + 32 + 32 + 40	124	1.45	2.45	2.45	3.05	9.40	4.1	~	10.6	2080	700	~	3080	4.52	A	1040	9.15	
	20 + 32 + 32 + 50	134	1.40	2.25	2.25	3.50	9.40	4.2	~	10.6	2110	700	~	3060	4.45	A	1055	9.30	
	20 + 32 + 40 + 40	132	1.40	2.30	2.85	2.85	9.40	4.2	~	10.6	2060	700	~	3060	4.56	A	1030	9.05	
	25 + 25 + 25 + 25	100	2.35	2.35	2.35	2.35	9.40	3.9	~	10.5	2030	660	~	3080	4.63	A	1015	8.95	
	25 + 25 + 25 + 28	103	2.30	2.30	2.30	2.50	9.40	3.9	~	10.5	2030	660	~	3080	4.63	A	1015	8.95	
	25 + 25 + 25 + 32	107	2.20	2.20	2.20	2.80	9.40	4.0	~	10.5	2060	680	~	3100	4.56	A	1030	9.05	
	25 + 25 + 25 + 40	115	2.05	2.05	2.05	3.25	9.40	4.1	~	10.5	2040	700	~	3070	4.61	A	1020	8.95	
	25 + 25 + 25 + 50	125	1.90	1.90	1.90	3.70	9.40	4.2	~	10.5	2070	700	~	3070	4.54	A	1035	9.15	
	25 + 25 + 28 + 28	106	2.20	2.20	2.50	2.50	9.40	3.9	~	10.5	2030	660	~	3080	4.63	A	1015	8.95	
	25 + 25 + 28 + 32	110	2.15	2.15	2.35	2.75	9.40	4.0	~	10.5	2060	680	~	3100	4.56	A	1030	9.05	
	25 + 25 + 28 + 40	118	2.00	2.00	2.20	3.20	9.40	4.1	~	10.5	2040	700	~	3070	4.61	A	1020	8.95	
	25 + 25 + 28 + 50	128	1.85	1.85	2.05	3.65	9.40	4.2	~	10.5	2070	700	~	3070	4.54	A	1035	9.15	
	25 + 25 + 32 + 32	114	2.05	2.05	2.65	2.65	9.40	4.0	~	10.5	2070	680	~	3140	4.54	A	1035	9.15	
	25 + 25 + 32 + 40	122	1.95	1.95	2.40	3.10	9.40	4.2	~	10.5	2040	700	~	3080	4.61	A	1020	8.95	
	25 + 25 + 32 + 50	132	1.80	1.80	2.25	3.55	9.40	4.2	~	10.5	2090	700	~	3080	4.50	A	1045	9.20	
	25 + 25 + 40 + 40	130	1.80	1.80	2.90	2.90	9.40	4.2	~	10.5	2020	700	~	3070	4.65	A	1010	8.85	
	25 + 28 + 28 + 28	109	2.20	2.40	2.40	2.40	9.40	3.9	~	10.5	2030	660	~	3080	4.63	A	1015	8.95	
	25 + 28 + 28 + 32	113	2.05	2.35	2.35	2.65	9.40	4.0	~	10.5	2060	680	~	3100	4.56	A	1030	9.05	
	25 + 28 + 28 + 40	121	1.90	2.20	2.20	3.10	9.40	4.1	~	10.5	2040	700	~	3070	4.61	A	1020	8.95	
	25 + 28 + 28 + 50	131	1.80	2.00	2.00	3.60	9.40	4.2	~	10.5	2070	700	~	3070	4.54	A	1035	9.15	
	25 + 28 + 32 + 32	117	2.00	2.30	2.55	2.55	9.40	4.0	~	10.5	2090	680	~	3180	4.50	A	1045	9.20	
	25 + 28 + 32 + 40	125	1.90	2.10	2.40	3.00	9.40	4.1	~	10.5	2060	700	~	3120	4.56	A	1030	9.05	
	25 + 28 + 32 + 50	135	1.70	1.95	2.25	3.50	9.40	4.2	~	10.5	2090	700	~	3080	4.50	A	1045	9.20	
	25 + 28 + 40 + 40	133	1.70	2.00	2.85	2.85	9.40	4.2	~	10.5	2030	700	~	3080	4.63	A	1015	8.95	
	25 + 32 + 32 + 32	121	1.90	2.50	2.50	2.50	9.40	4.1	~	10.6	2090	700	~	3100	4.50	A	1045	9.20	
	25 + 32 + 32 + 40	129	1.80	2.35	2.35	2.90	9.40	4.1	~	10.6	2080	700	~	3080	4.52	A	1040	9.15	
	28 + 28 + 28 + 28	112	2.35	2.35	2.35	2.35	9.40	3.9	~	10.5	2030	660	~	3080	4.63	A	1015	8.95	
	28 + 28 + 28 + 32	116	2.25	2.25	2.25	2.65	9.40	4.0	~	10.5	2060	680	~	3100	4.56	A	1030	9.05	
	28 + 28 + 28 + 40	124	2.10	2.10	2.10	3.10	9.40	4.1	~	10.5	2040	700	~	3070	4.61	A	1020	8.95	
	28 + 28 + 28 + 50	134	1.95	1.95	1.95	3.55	9.40	4.2	~	10.5	2070	700	~	3070	4.54	A	1035	9.15	
	28 + 28 + 32 + 32	120	2.20	2.20	2.50	2.50	9.40	4.0	~	10.5	2070	680	~	3140	4.54	A	1035	9.15	
	28 + 28 + 32 + 40	128	2.05	2.05	2.35	2.95	9.40	4.2	~	10.5	2040	700	~	3080	4.61	A	1020	8.95	
	28 + 28 + 40 + 40	136	1.95	1.95	2.75	2.75	9.40	4.2	~	10.5	2020	700	~	3070	4.65	A	1010	8.85	
	28 + 32 + 32 + 32	124	2.05	2.45	2.45	2.45	9.40	4.1	~	10.6	2090	700	~	3100	4.50	A	1045	9.20	
	28 + 32 + 32 + 40	132	1.95	2.30	2.30	2.85	9.40	4.2	~	10.6	2070	700	~	3080	4.54	A	1035	9.15	
	32 + 32 + 32 + 32	128	2.35	2.35	2.35	2.35	9.40	4.2	~	10.6	2110	700	~	3080	4.45	A	1055	9.30	
	32 + 32 + 32 + 40	136	2.20	2.20	2.20	2.80	9.40	4.2	~	10.6	2080	700	~	3060	4.52	A	1040	9.10	

3 Dimensions

3.1. CU-2E15LBE CU-2E18LBE

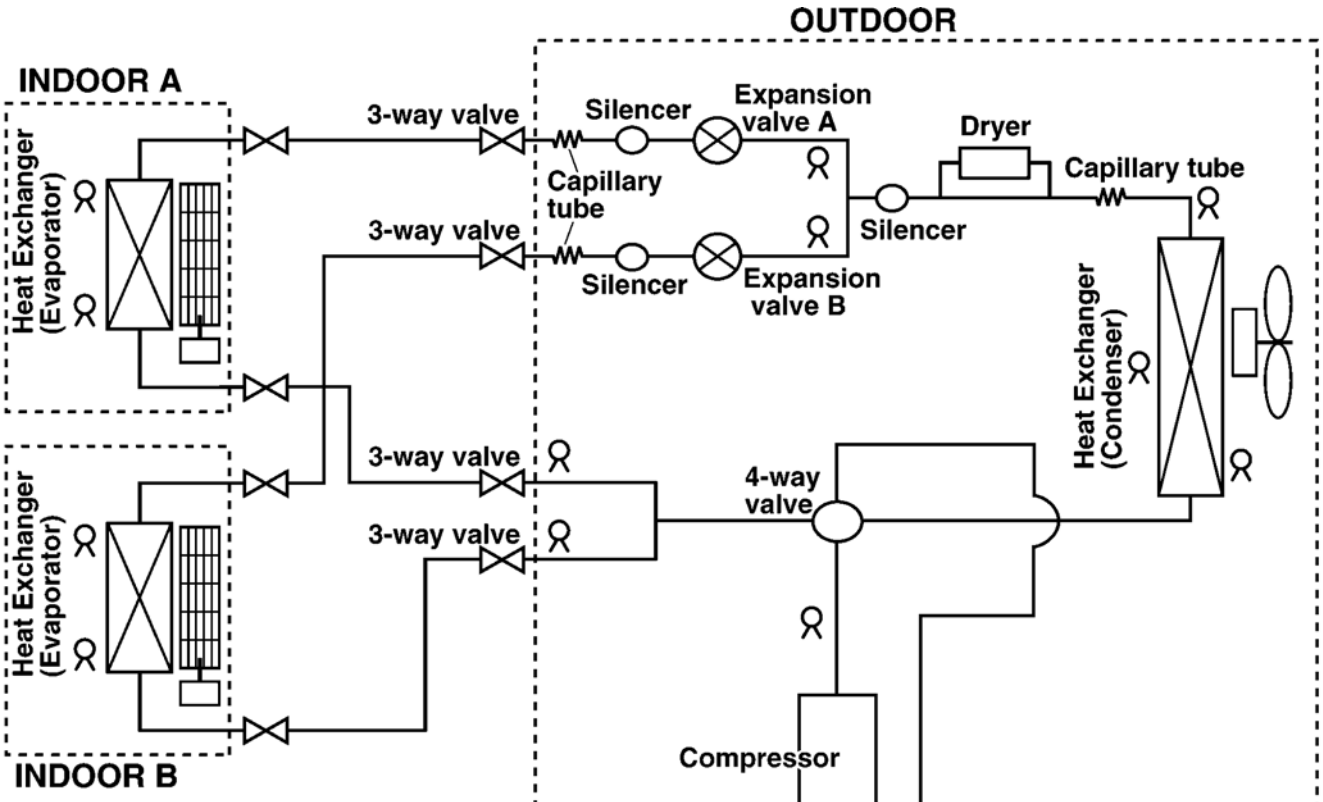


3.2. CU-3E18LBE CU-4E23LBE



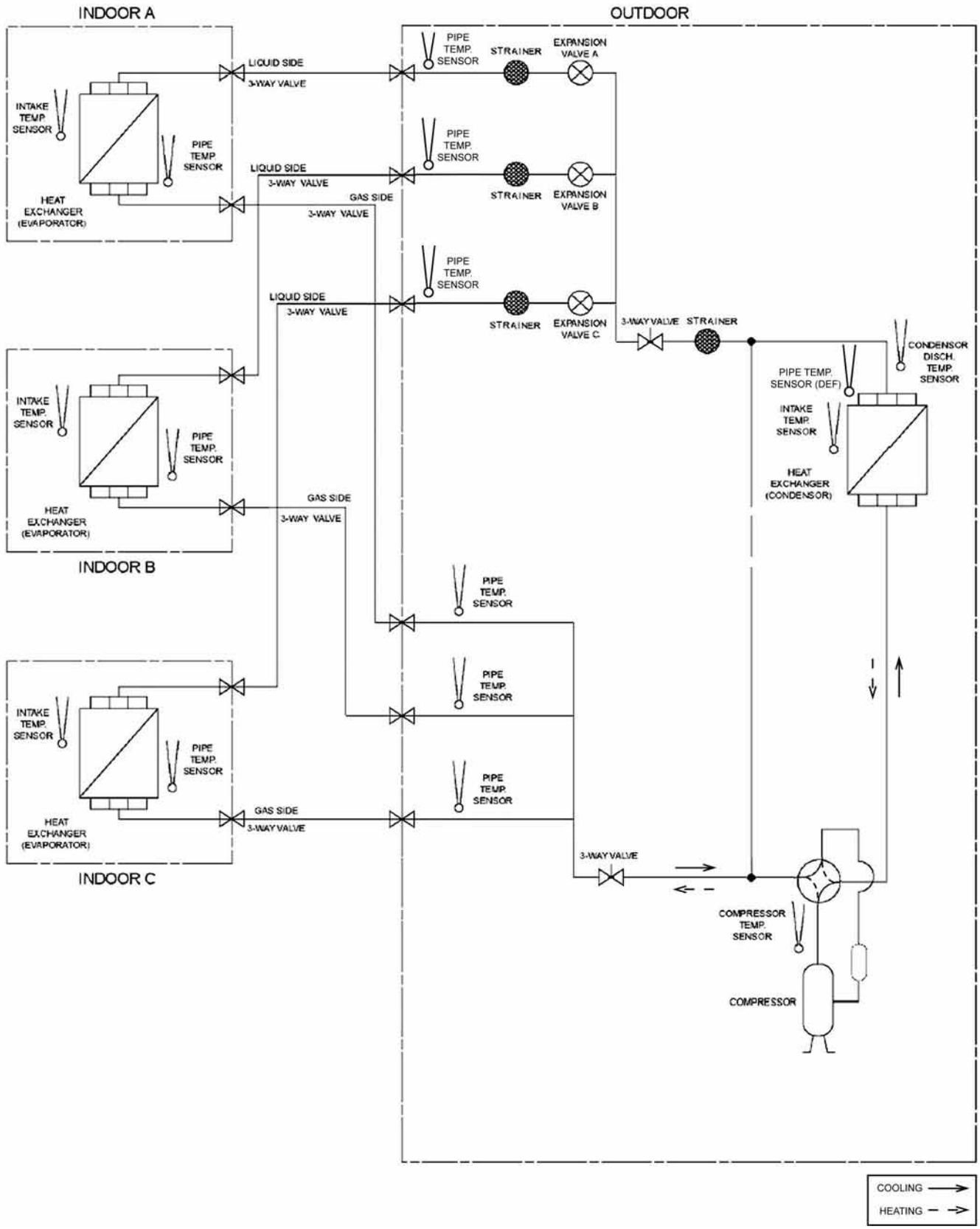
4 Refrigeration Cycle Diagram

4.1. CU-2E15LBE CU-2E18LBE

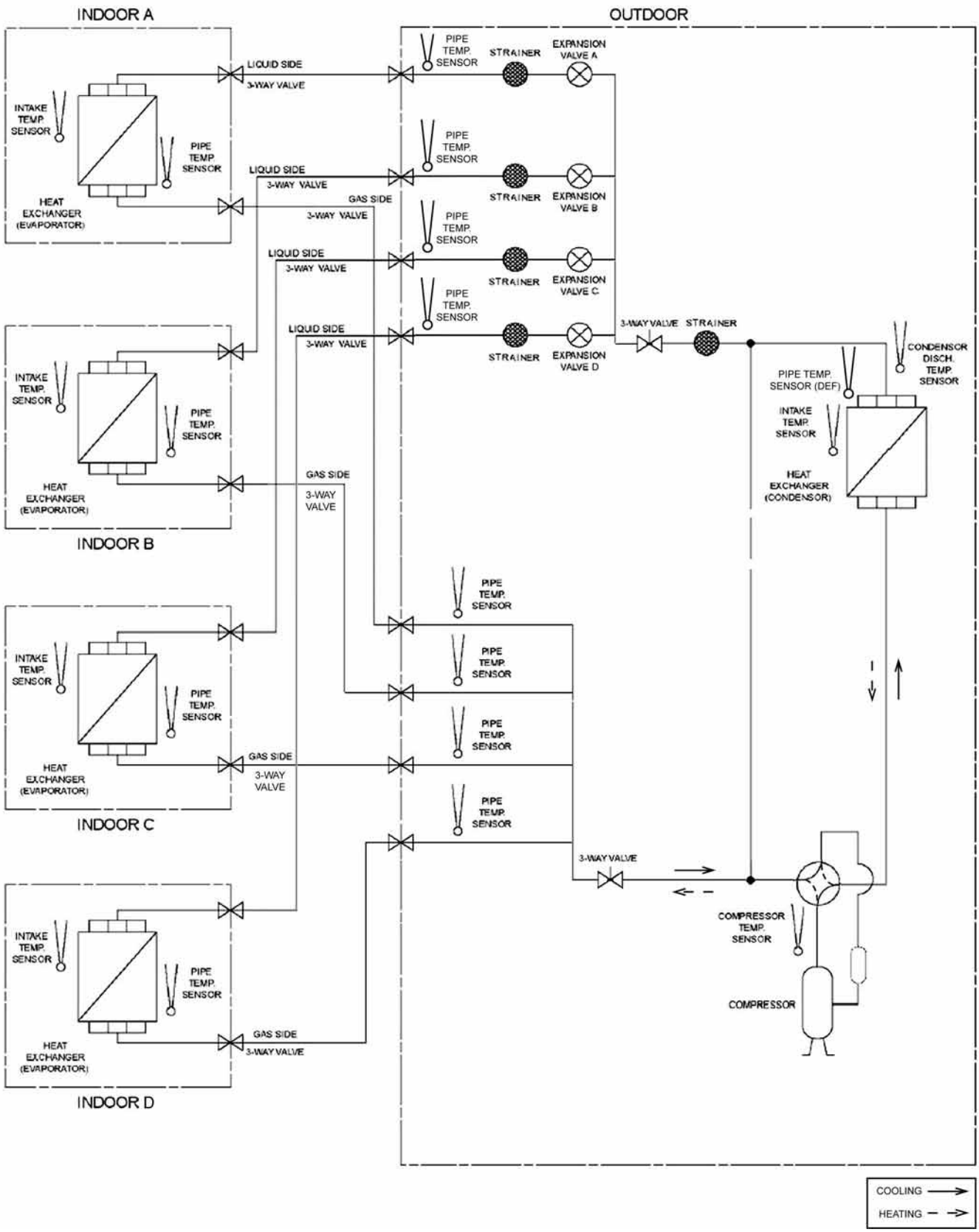


Type of pipe	CZ-3F□ Type
Liquid side pipe	ϕ6.35mm (1/4″)
Gas side pipe	ϕ9.52mm (3/8″)

4.2. CU-3E18LBE

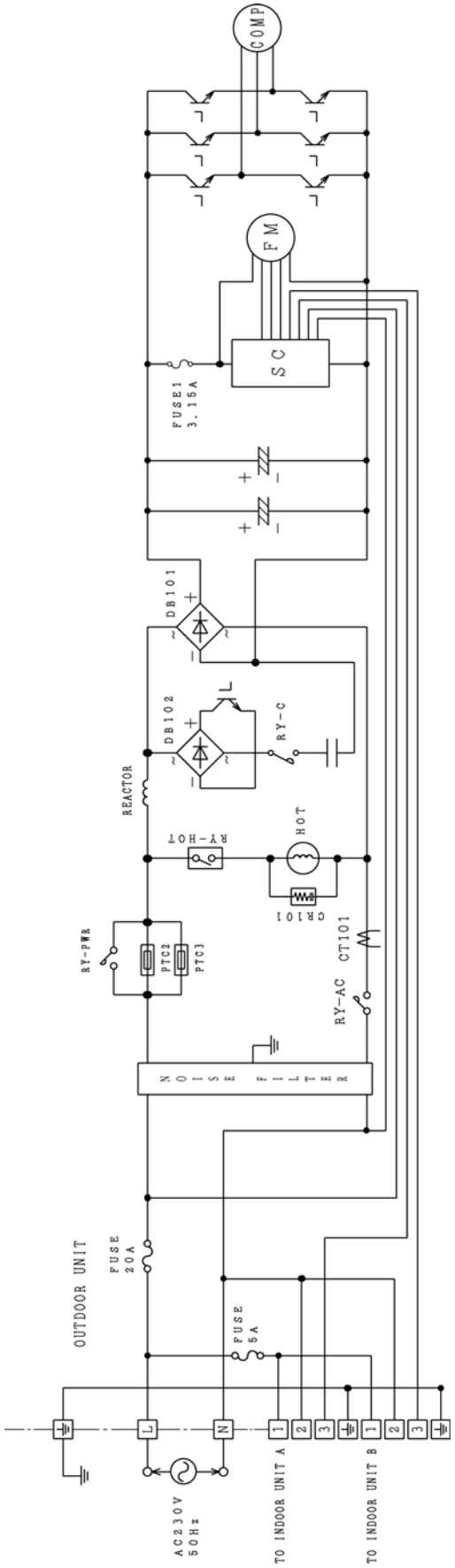


4.3. CU-4E23LBE

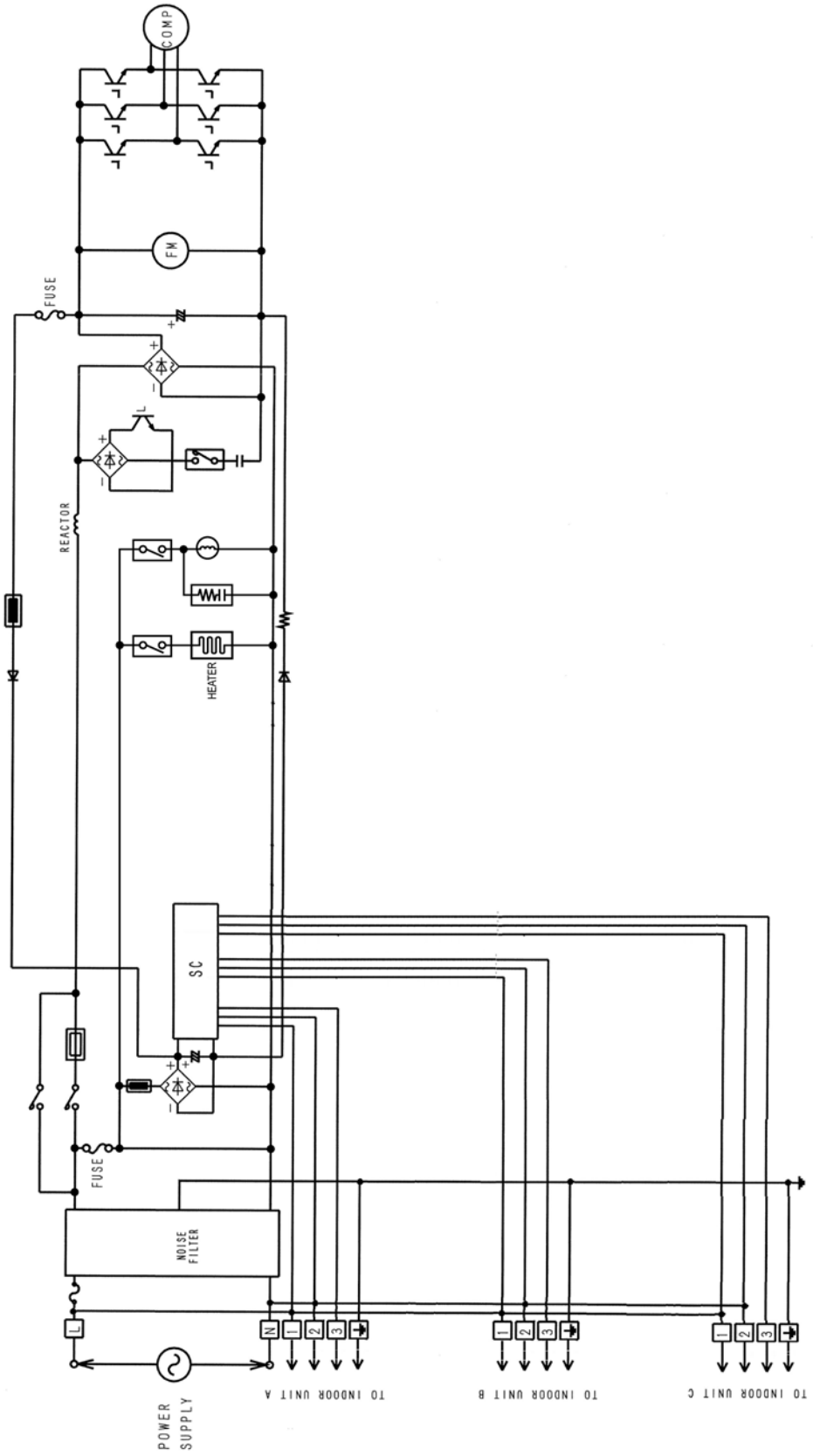


5 Block Diagram

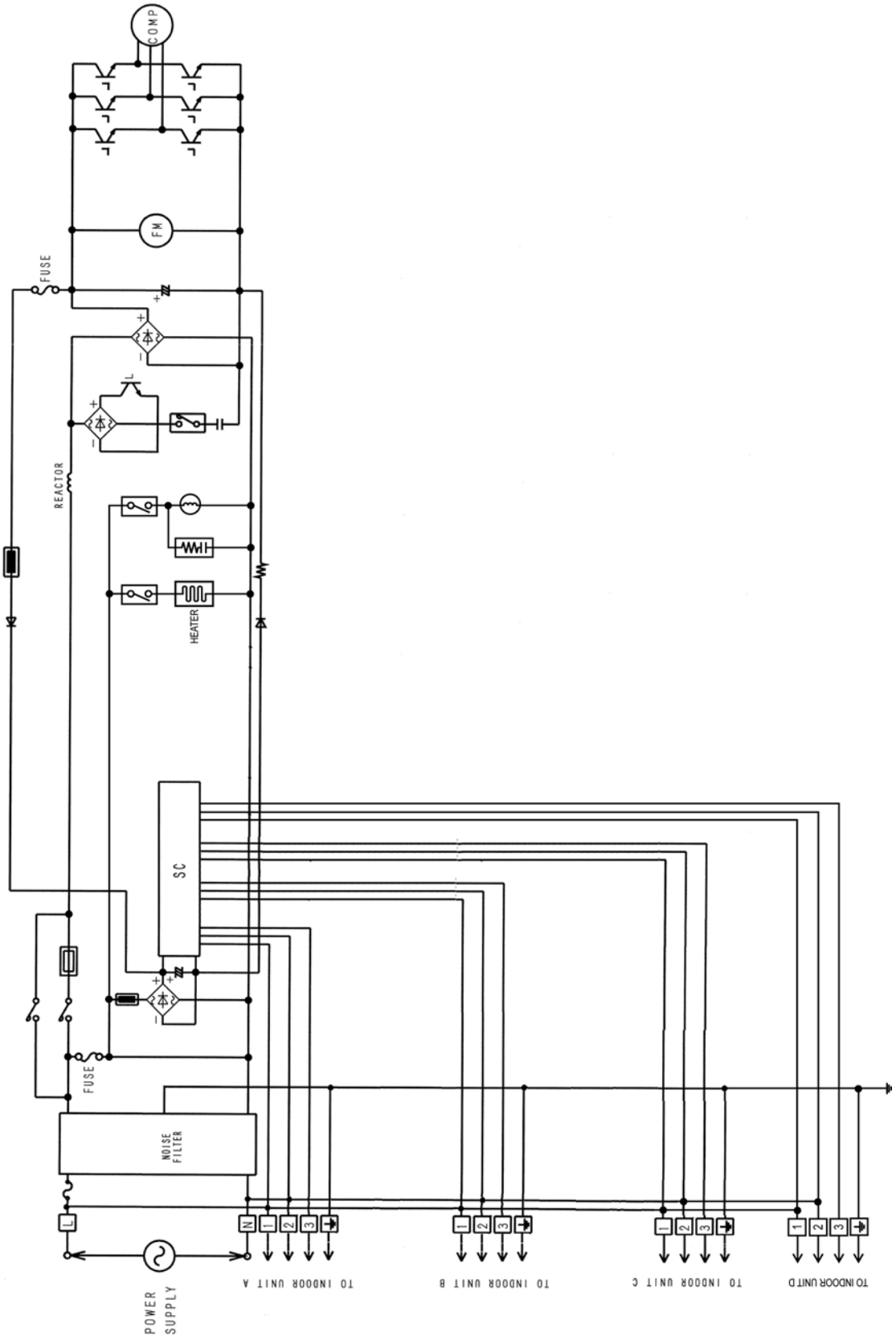
5.1. CU-2E15LBE CU-2E18LBE



5.2. CU-3E18LBE



5.3. CU-4E23LBE

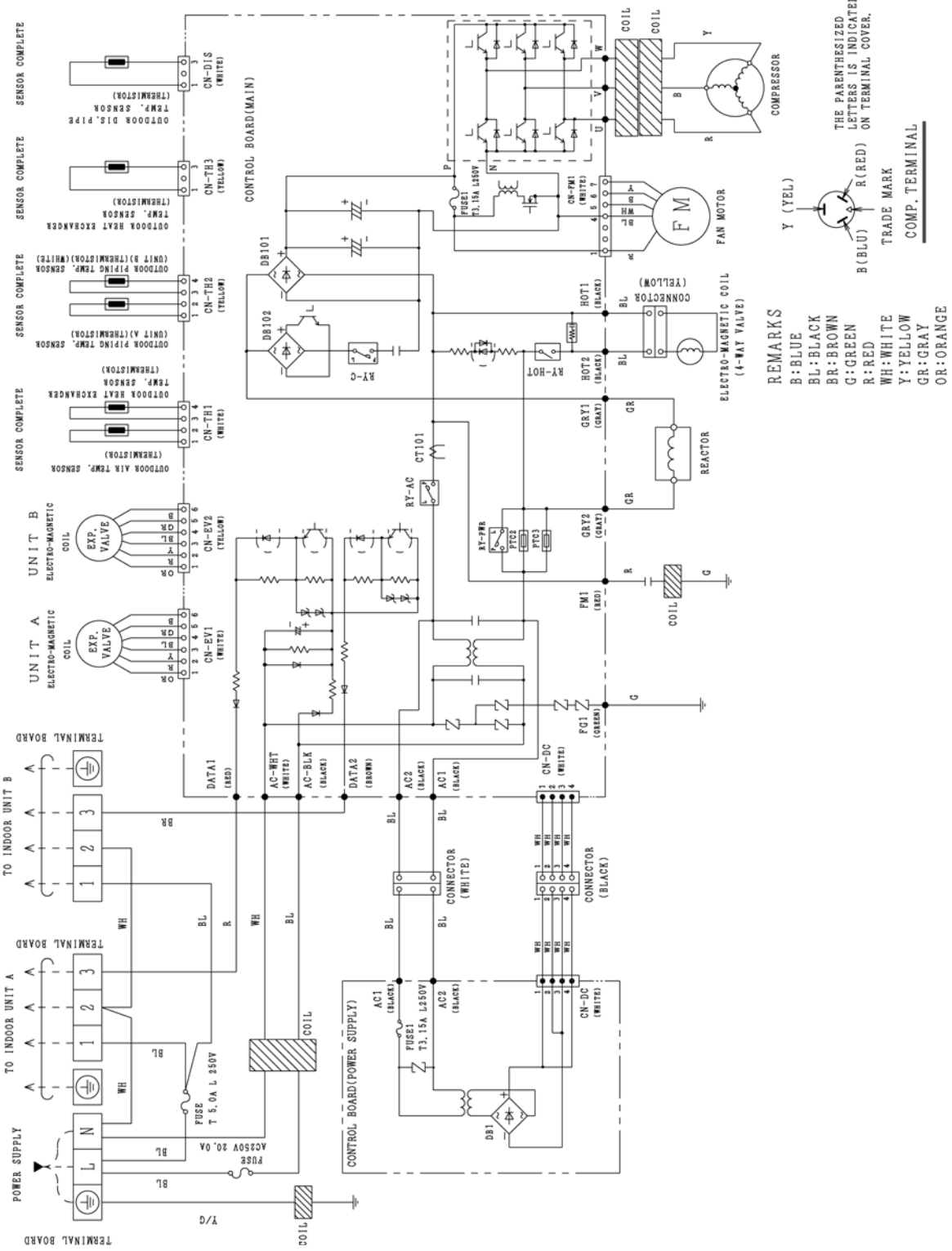


6 Wiring Connection Diagram

6.1. CU-2E15LBE CU-2E18LBE

Resistance of Compressor Windings

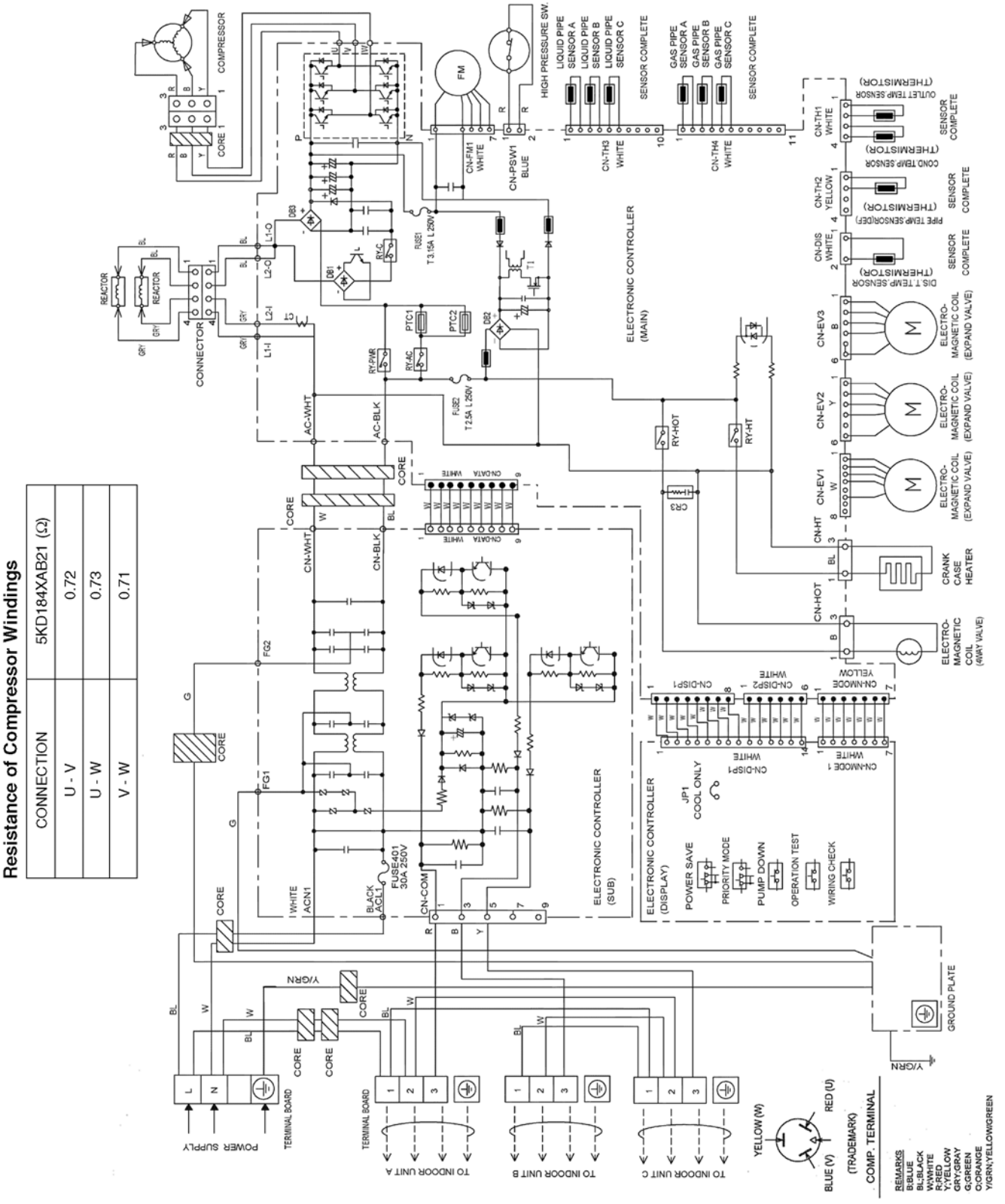
CONNECTION	5CS102XFC (Ω)
U - V	0.642
U - W	0.636
V - W	0.652



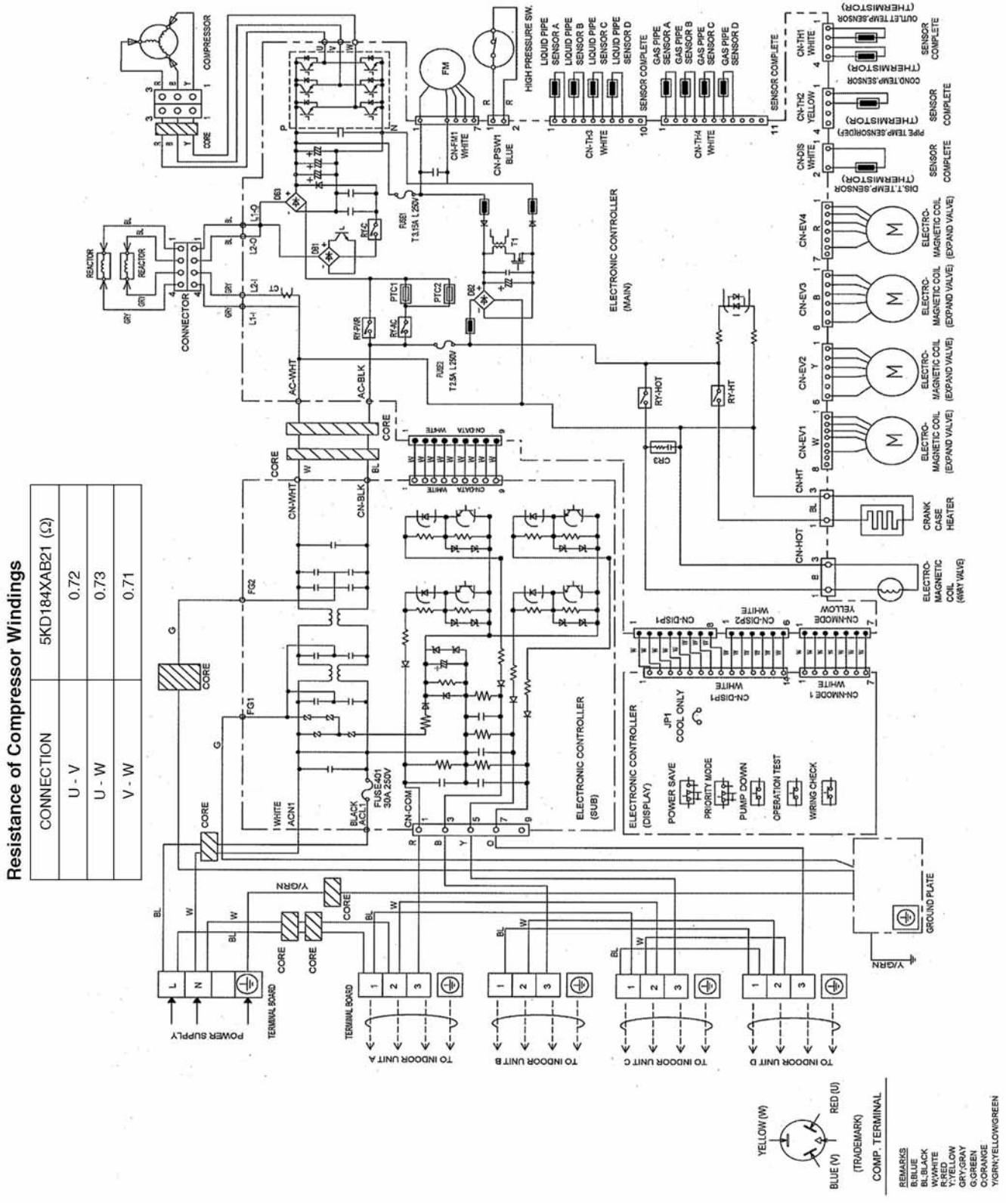
6.2. CU-3E18LBE

Resistance of Compressor Windings

CONNECTION	5KD184XAB21 (Ω)
U - V	0.72
U - W	0.73
V - W	0.71



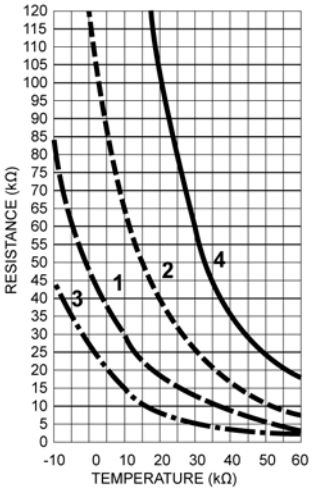
6.3. CU-4E23LBE



7 Electronic Circuit Diagram

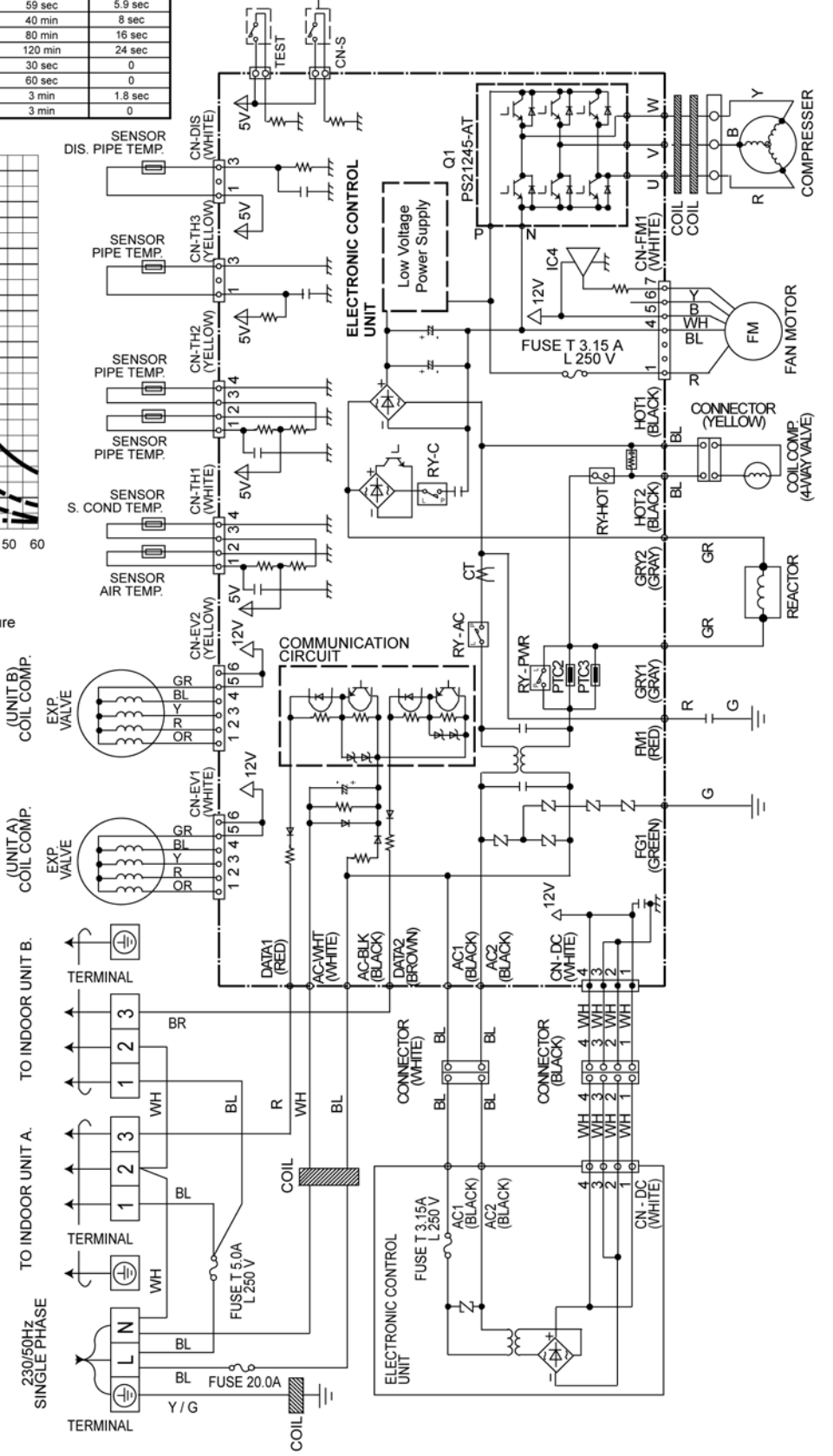
7.1. CU-2E15LBE CU-2E18LBE

Outdoor		
Function	Time	Test Mode
First deice operation time	60 min	6 sec
Deice operation starting time	45 sec	4.5 sec
Deice forced completion	10 min 30 sec	63 sec
Deice operation completion	59 sec	5.9 sec
Deice detection	40 min	8 sec
	80 min	16 sec
	120 min	24 sec
Compressor forced operation time	30 sec	0
Compressor operation frequency step up	60 sec	0
Deice operation starting 3°C	3 min	1.8 sec
DC peak detection after compressor restart	3 min	0

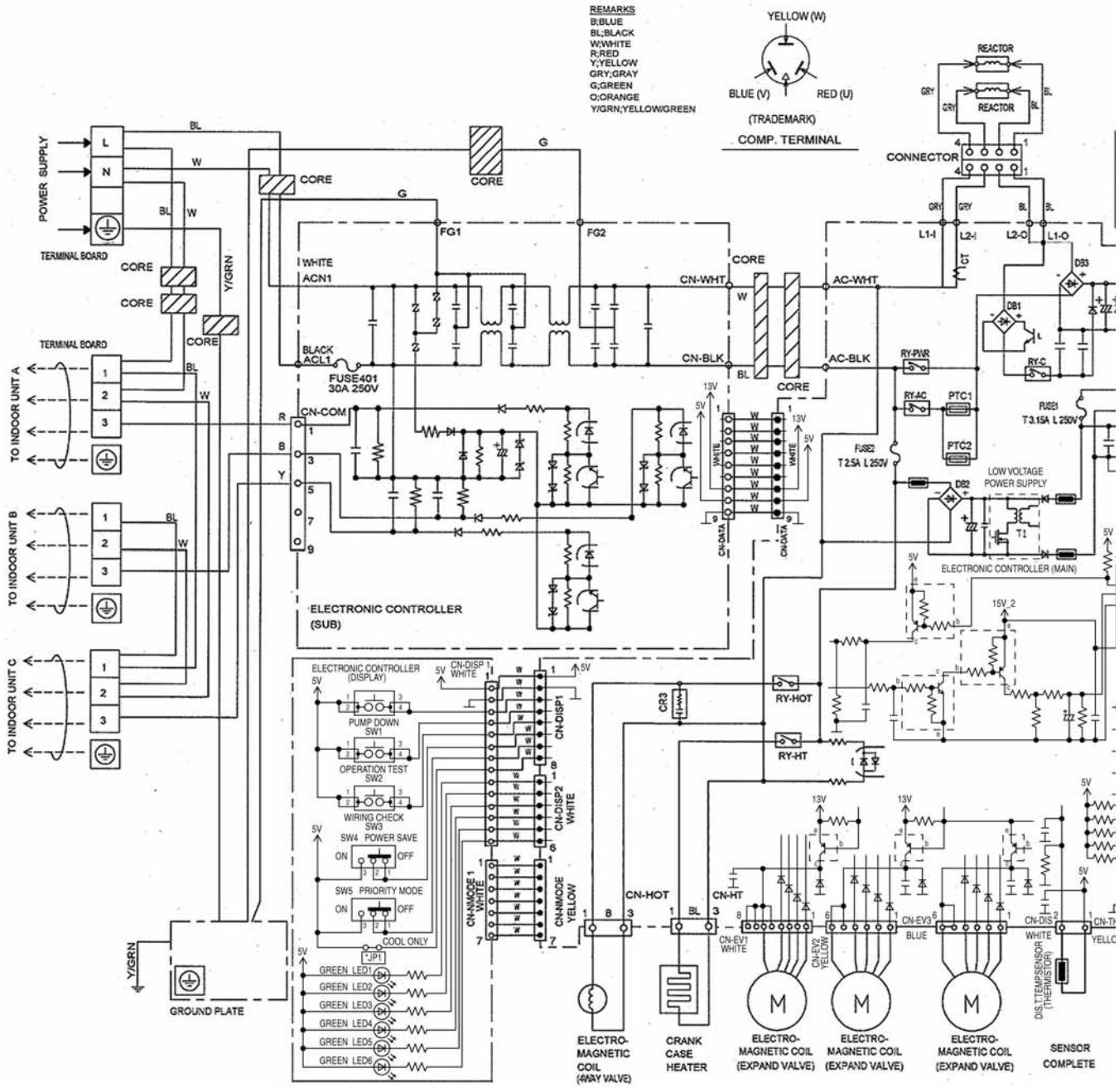


1. Outdoor air temp.
2. Pipe temp. A, B
3. Heat exchanger temperature
4. Discharge temperature

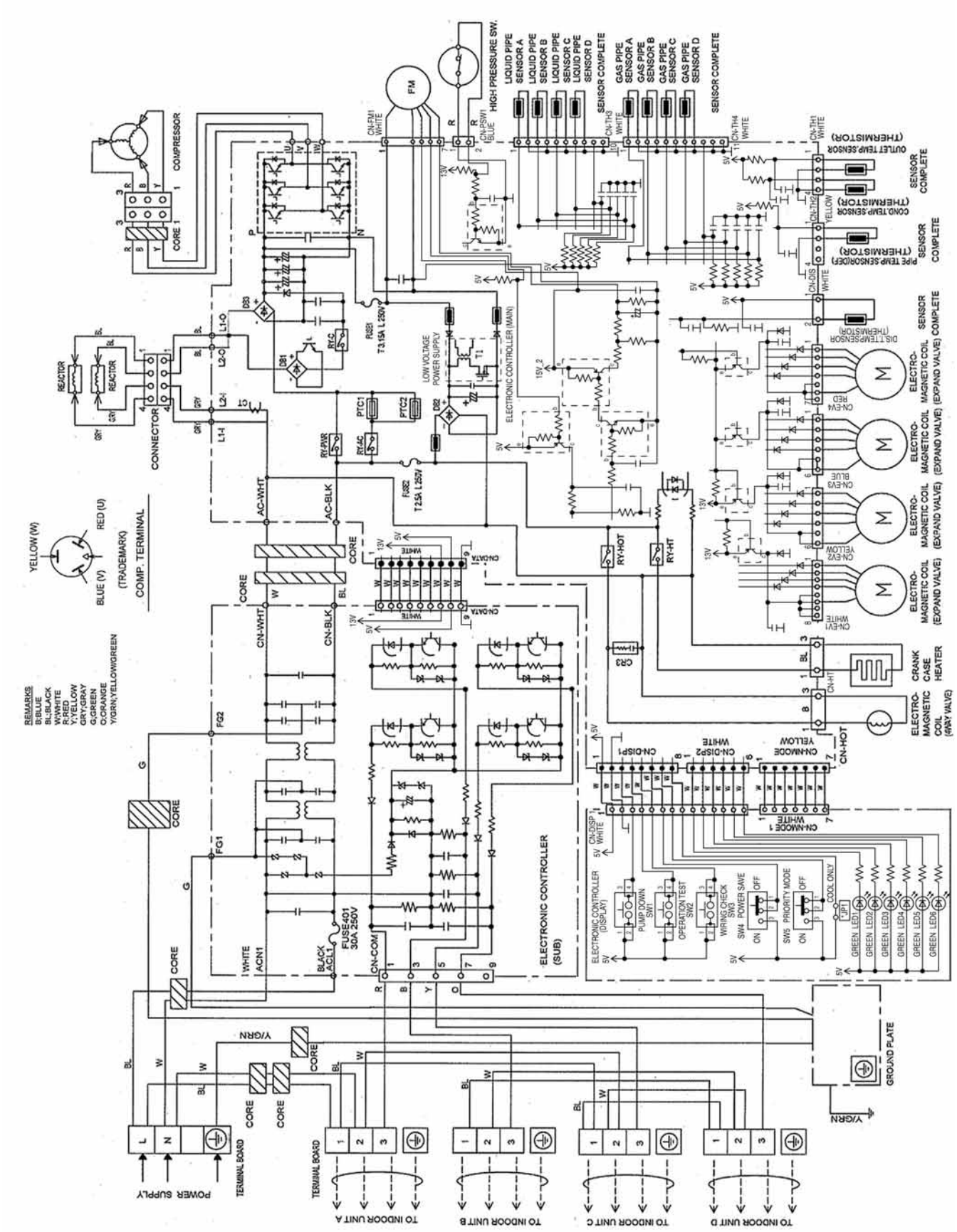
- The unit turn to the Rated Frequency Cooling Operation by short-circuiting CN-S after applying power between the terminal 1 and 2.
- Operation of the compressor and the outdoor fan motor can be checked by applying power short-circuiting CN-S.



7.2. CU-3E18LBE



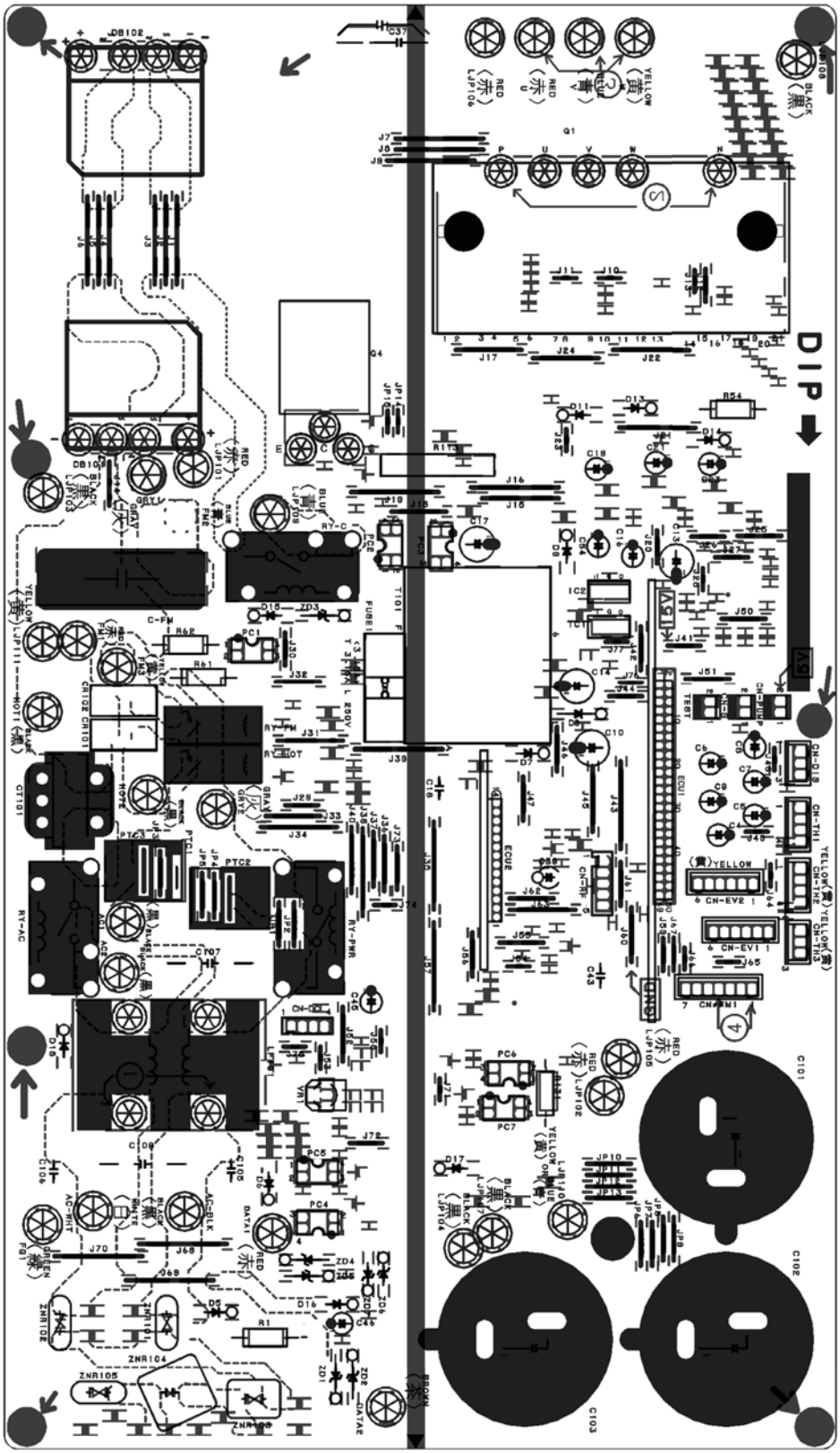
7.3. CU-4E23LBE



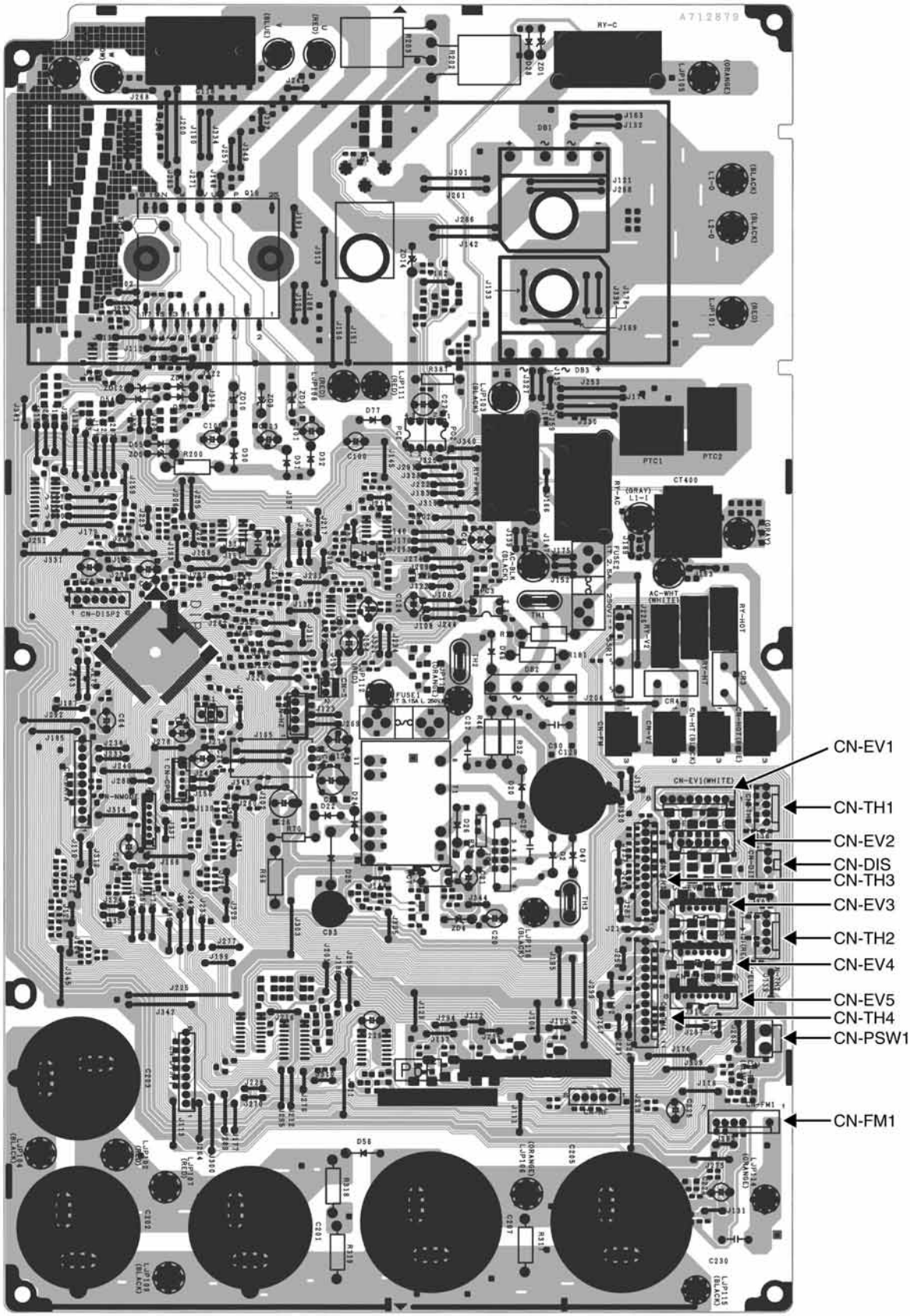
8 Printed Circuit Board

8.1. Main Printed Circuit Board

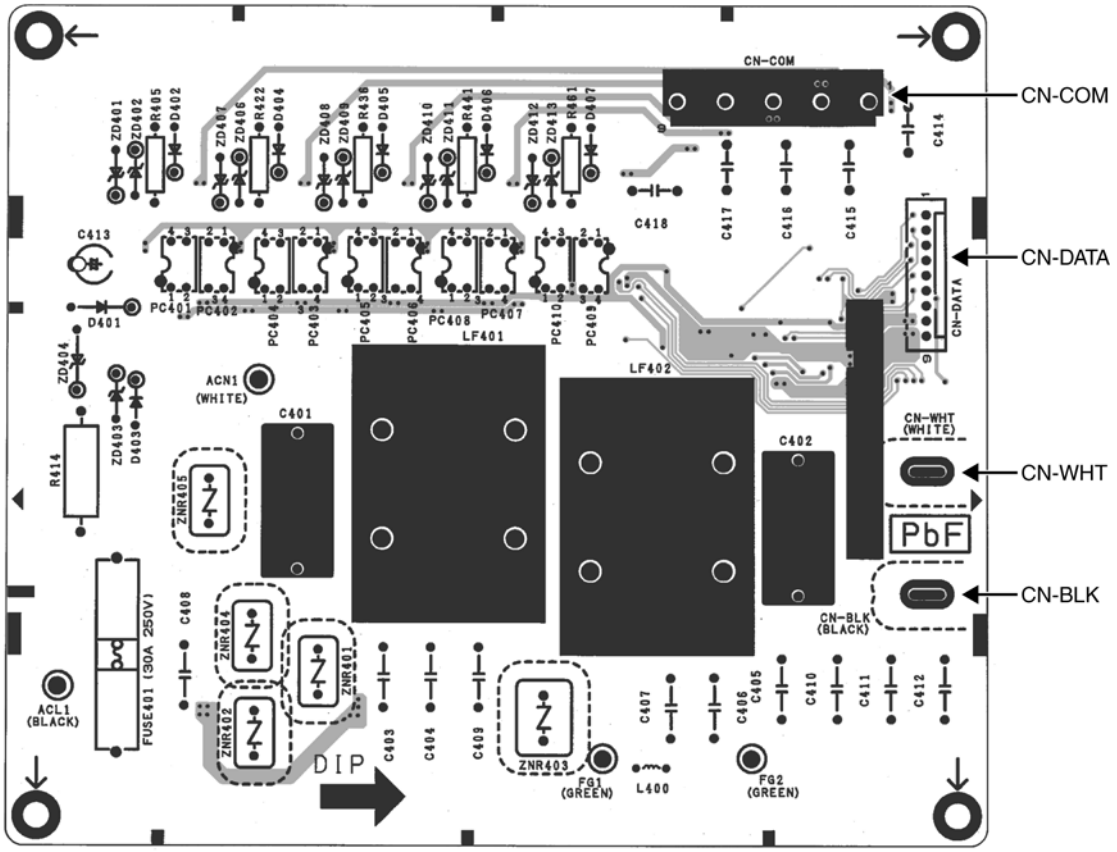
8.1.1. CU-2E15LBE CU-2E18LBE



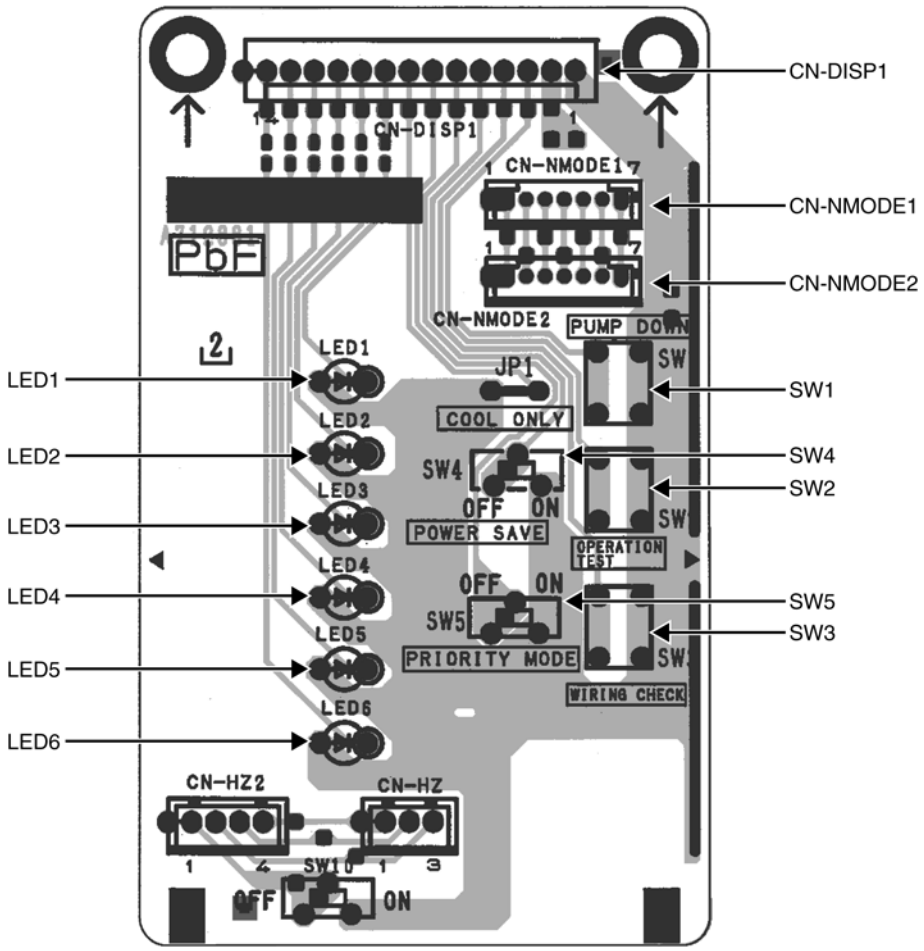
8.1.2. CU-3E18LBE CU-4E23LBE



8.2. Noise Filter Printed Circuit Board



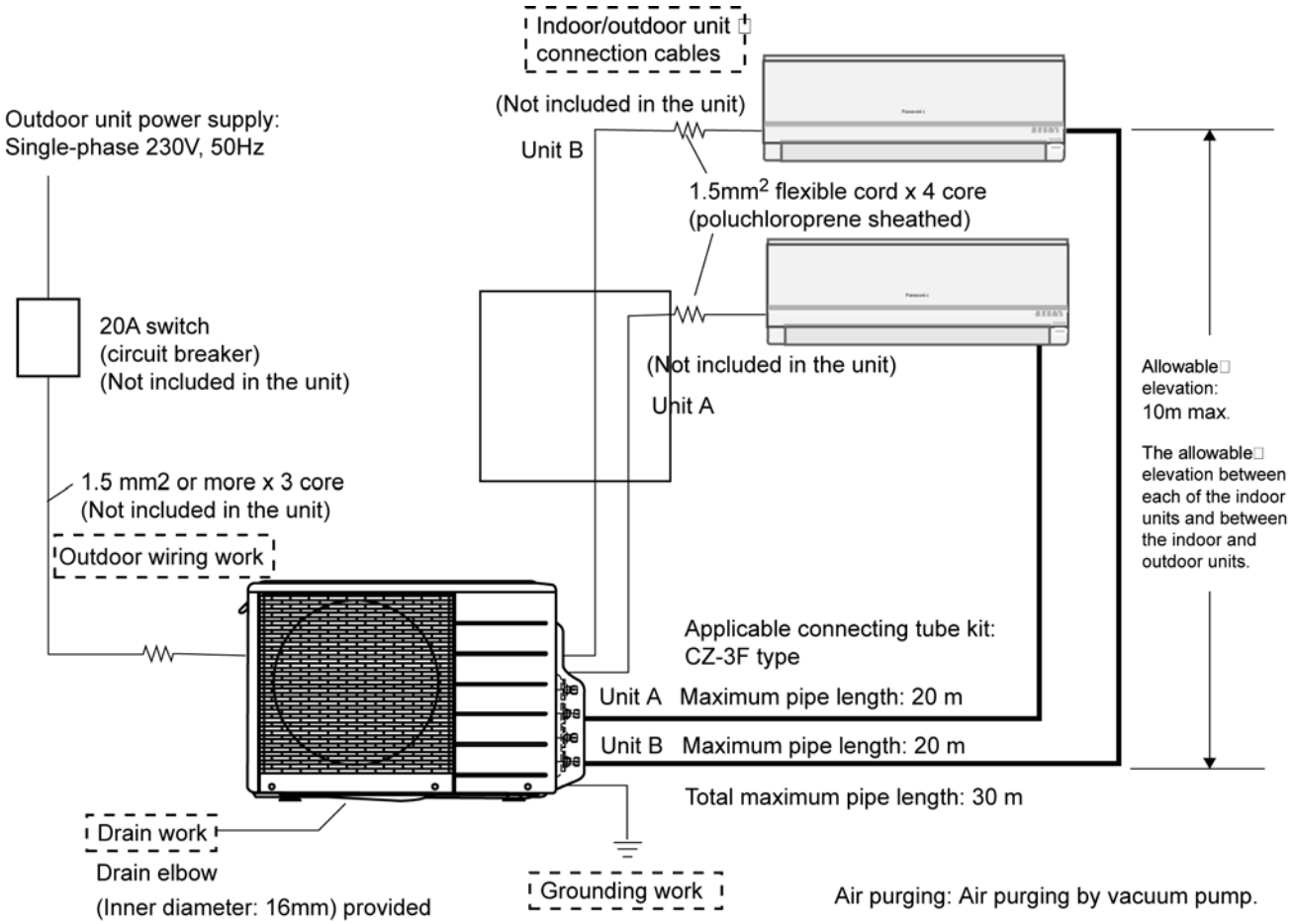
8.3. Display Printed Circuit Board



9 Installation Information

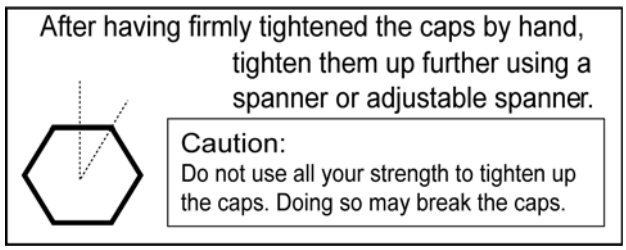
9.1. CU-2E15LBE

9.1.1. Check Points



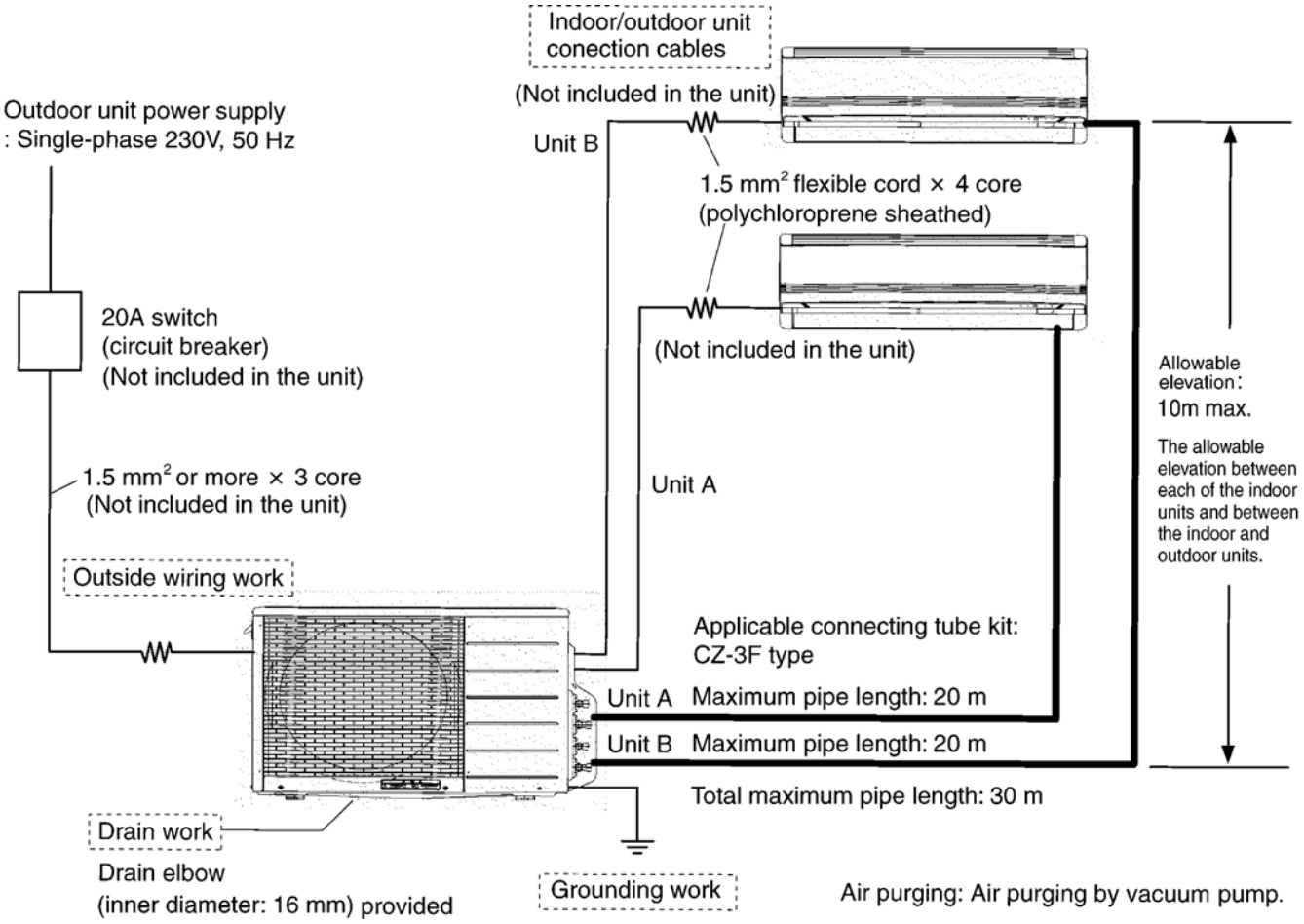
9.1.2. The Shapes of the 3-Way Valve Caps of the Outdoor Unit Have Been Changed

- Accompanying the changes in the shapes of the 3-way valve caps, the tightening method has also been changed.
- Firmly tighten the 3-way valve caps by hand, and then tighten them up by another 30 degrees or so (one-twelfth of a full turn) using a spanner or adjustable spanner.



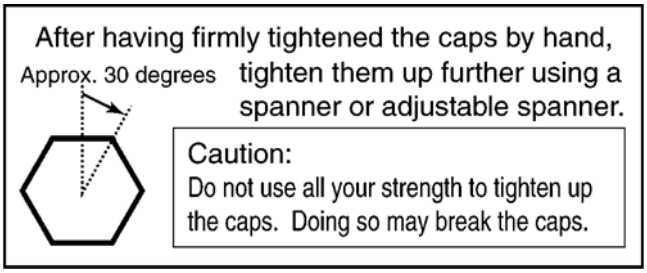
9.2. CU-2E18LBE

9.2.1. Check Points



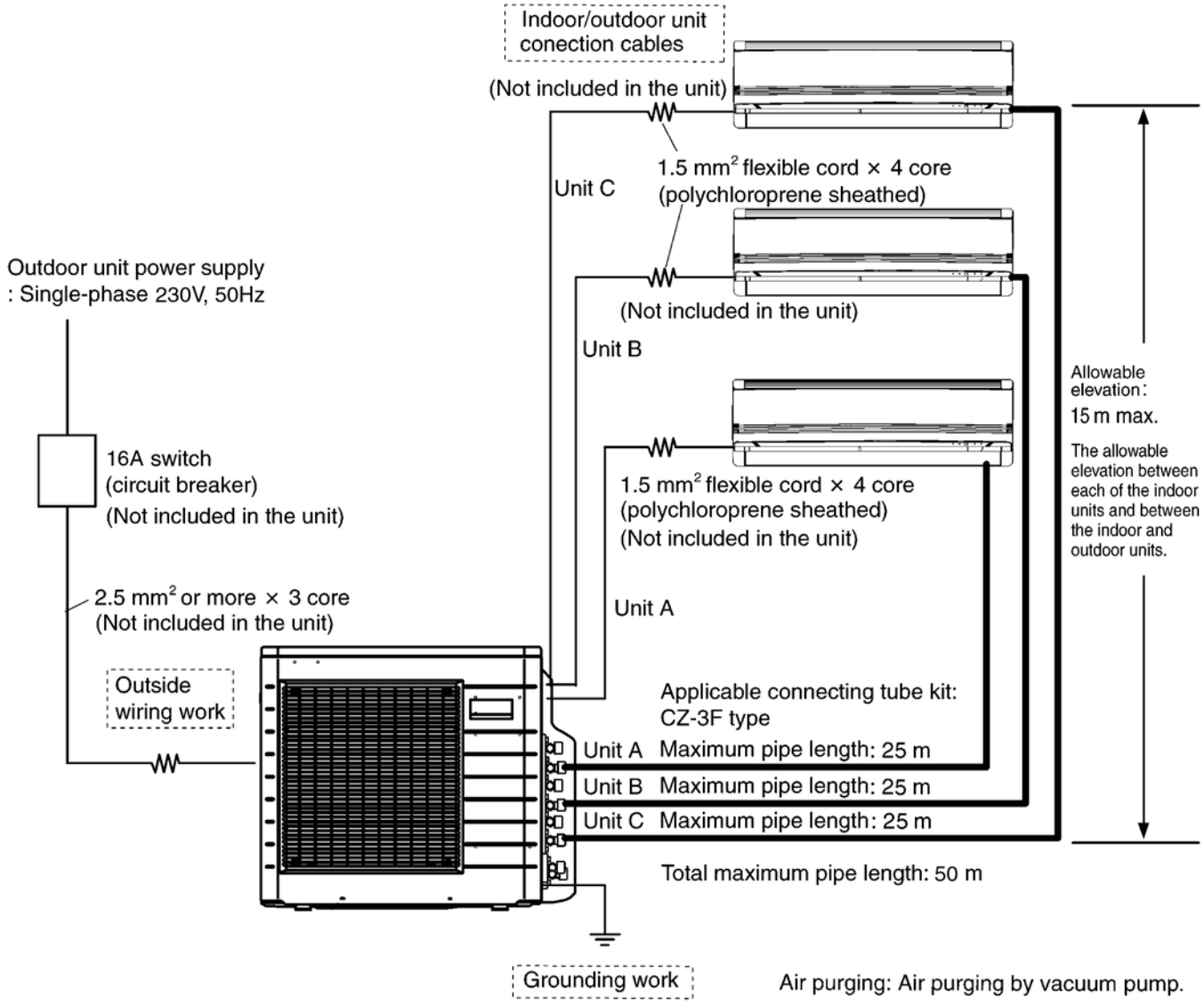
9.2.2. The Shapes of the 3-Way Valve Caps of the Outdoor Unit Have Been Changed

- Accompanying the changes in the shapes of the 3-way valve caps, the tightening method has also been changed.
- Firmly tighten the 3-way valve caps by hand, and then tighten them up by another 30 degrees or so (one-twelfth of a full turn) using a spanner or adjustable spanner.



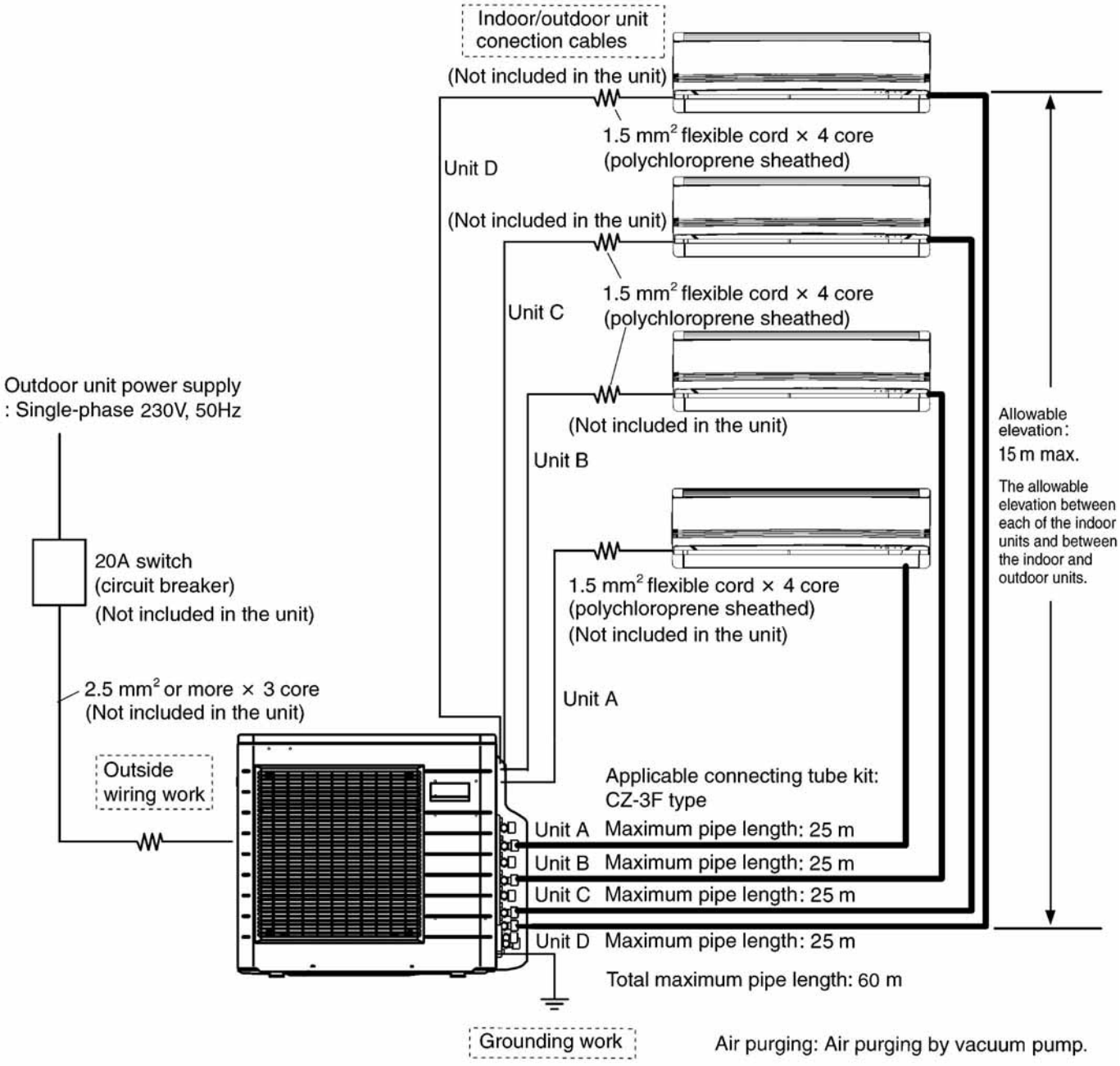
9.3. CU-3E18LBE

9.3.1. Check Points



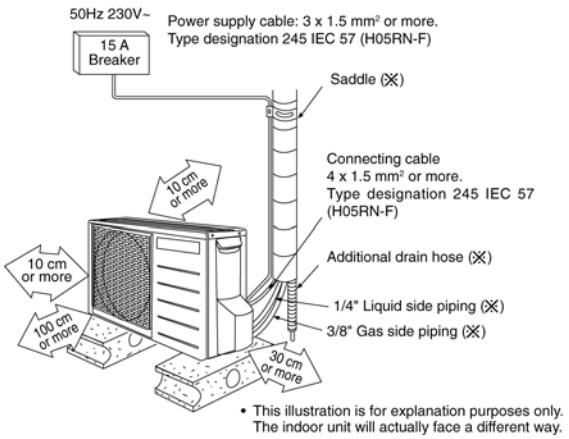
9.4. CU-4E23LBE

9.4.1. Check Points



10 Installation Instruction

10.1. CU-2E15LBE CU-2E18LBE



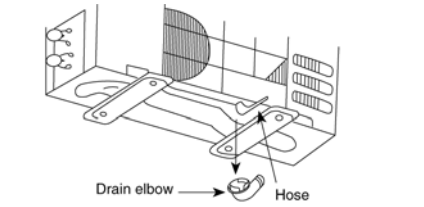
10.1.1. Select The Best Location

- If an awning is built over the unit to prevent direct sunlight or rain, be careful that heat radiation from the condenser is not obstructed.
- There should not be any animal or plant which could be affected by hot air discharged.
- Keep the spaces indicated by arrows from wall, ceiling, fence or other obstacles.
- Do not place any obstacles which may cause a short circuit of the discharged air.
- If piping length is over the common length, additional refrigerant should be added as shown in the table.

PIPE size		Common Length (m)	Min. Length (m)	Max. total Length (m)	Max. Elevation (m)	Addtional gas charge amount (g/m)
Gas	Liquid					
3/8”	1/4”	15	3 m/Indoor unit	30	10	20
Note: (1) It is possible to extent the piping length of one unit up to 20 meters. However, the total piping length must not exceed 30 meters. (2) If the piping length exceeds 20 meters, refrigerant of 20 g per meter must be added.						

10.1.2. Disposal Of Outdoor Unit Drain Water

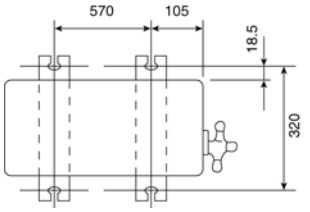
- If a drain elbow is used, the unit should be placed on a stand which is taller than 3 cm.
- If the unit is used in an area where temperature falls below 0°C for 2 or 3 days in succession, it is recommended not to use a drain elbow, for the drain water freezes and the fan will not rotate.



Install the hose at an angle so that the water smoothly flows out.

10.1.3. Install The Outdoor Unit

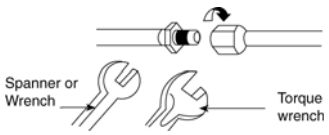
- After selecting the best location, start installation to Indoor/ Outdoor Unit Installation Diagram.
  1. Fix the unit on concrete or rigid frame firmly and horizontally by bolt nut (ø10 mm).
  2. When installing at roof, please consider strong wind and earthquake.
     Please fasten the installation stand firmly with bolt or nails.



10.1.4. Connecting The Piping

Connecting The Piping To Indoor Unit

Please make flare after inserting flare nut (locate at joint portion of tube assembly) onto the copper pipe.
(In case of using long piping)



Connect the piping

- Align the center of piping and sufficiently tighten the flare nut with fingers.
- Further tighten the flare nut with torque wrench in specified torque as stated in the table.

Piping size (Torque)	
Gas	Liquid
3/8" [42 N•m]	1/4" [18 N•m]

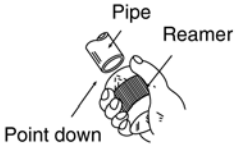
Connecting The Piping To Outdoor Unit

Decide piping length and then cut by using pipe cutter. Remove burrs from cut edge. Make flare after inserting the flare nut (locate at valve) onto the copper pipe.
Align center of piping to valves and then tighten with torque wrench to the specified torque as stated in the table.

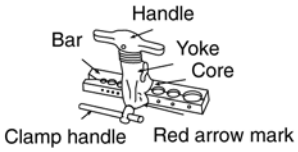
CUTTING AND FLARING THE PIPING

1. Please cut using pipe cutter and then remove the burrs.
2. Remove the burrs by using reamer. If burrs is not removed, gas leakage may be caused.
   Turn the piping end down to avoid the metal powder entering the pipe.
3. Please make flare after inserting the flare nut onto the copper pipes.

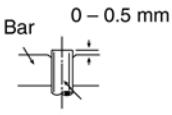
1. To cut

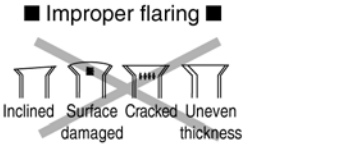


2. To remove burrs



3. To flare

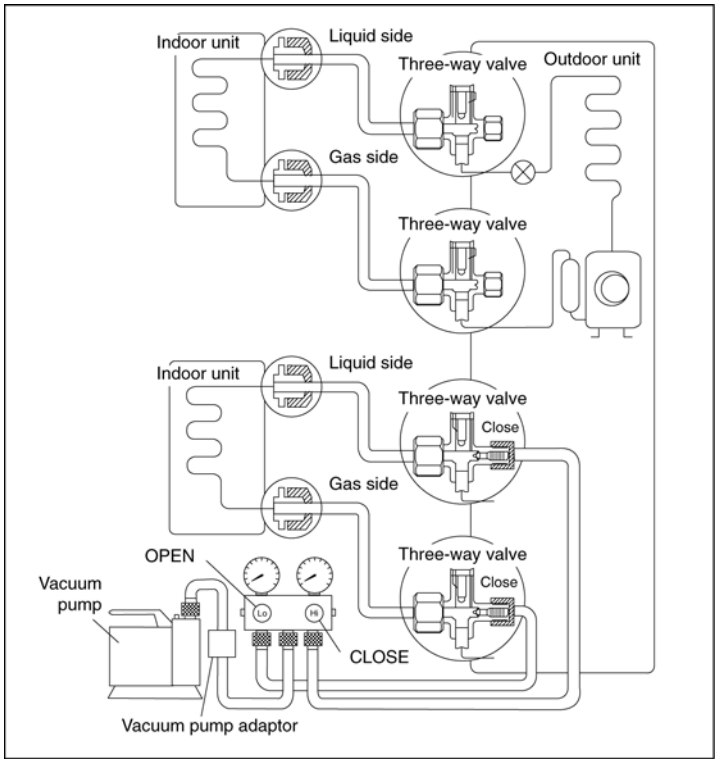




When properly flared, the internal surface of the flare will evenly shine and be of even thickness. Since the flare part comes into contact with the connections, carefully check the flare finish.

10.1.5. Evacuation of the Equipment (For EUROPE and OCEANIA Destination)

WHEN INSTALLING AN AIR CONDITIONER, BE SURE TO EVACUATE THE AIR INSIDE THE INDOOR UNIT AND PIPES in the following procedure.

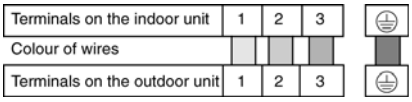


1. Connect a charging hose with a push pin to the Low side of a charging set and the service port of the 3-way valve.
   • Be sure to connect the end of the charging hose with the push pin to the service port.
2. Connect the center hose of the charging set to a vacuum pump with check valve,or vacuum pump adaptor.
3. Turn on the power switch of the vacuum pump and make sure that the needle in the gauge moves from 0 cmHg (0 MPa) to -76 cmHg (-0.1 MPa). Then evacuate the air approximately 15 minutes.
4. Close the Low and High side valves of the charging set and turn off the vacuum pump. Make sure that the needle in the gauge does not move after approximately 5 minutes.
   Note: BE SURE TO FOLLOW THIS PROCEDURE IN ORDER TO AVOID REFRIGERANT GAS LEAKAGE.
5. Disconnect the charging hose from the vacuum pump and from the service port of the 3-way valve.
6. Tighten the service port caps of the 3-way valve at a torque of 18 N•m with a torque wrench.
7. Remove the valve caps of the both 3-way valves. Position both of the valves to “OPEN” using a hexagonal wrench (4 mm).
8. Mount valve caps onto the both 3-way valve.
   • Be sure to check for gas leakage.

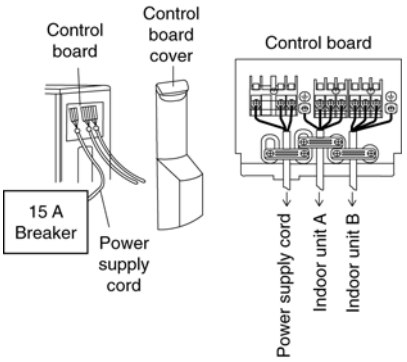
CAUTION
- If gauge needle does not move from 0 cmHg (0 MPa) to -76 cmHg (-0.1 MPa), in step ③ above take the following measure:
- If the leak stops when the piping connections are tightened further, continue working from step ③.
- If the leak does not stop when the connections are retightened, repair the location of leak.
- Do not release refrigerant during piping work for installation and reinstallation. Take care of the liquid refrigerant, it may cause frostbite.

10.1.6. Connect The Cable To The Outdoor Unit

1. Remove the control board cover metal from the unit by loosening two screws.
2. Connecting cable between indoor unit and outdoor unit shall be approved polychloroprene sheathed 4 x 1.5 mm^2 flexible cord, type designation 245 IEC 57 (H05RN-F) or heavier cord.



3. Secure the cable onto the control board with the holder (clamper).
4. Attach the control board cover in its original position with the screw.



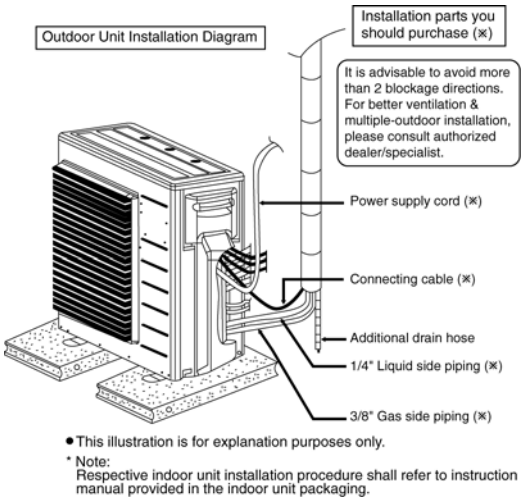
10.1.7. Pipe Insulation

1. Please carry out insulation at pipe connection portion as mentioned in Indoor/Outdoor Unit Installation Diagram. Please wrap the insulated piping end to prevent water from going inside the piping.
2. If drain hose or connecting piping is in the room (where dew may form), please increase the insulation by using POLY-E FOAM with thickness 6mm or above.

10.2. CU-3E18LBE CU-4E23LBE

10.2.1. Select The Best Location

- If an awning is built over the unit to prevent direct sunlight or rain, be careful that heat radiation from the condenser is not obstructed.
- There should not be any animal or plant which could be affected by hot air discharged.
- Keep the spaces indicated by arrows from wall, ceiling, fence or other obstacles.
- Do not place any obstacles which may cause a short circuit of the discharged air.



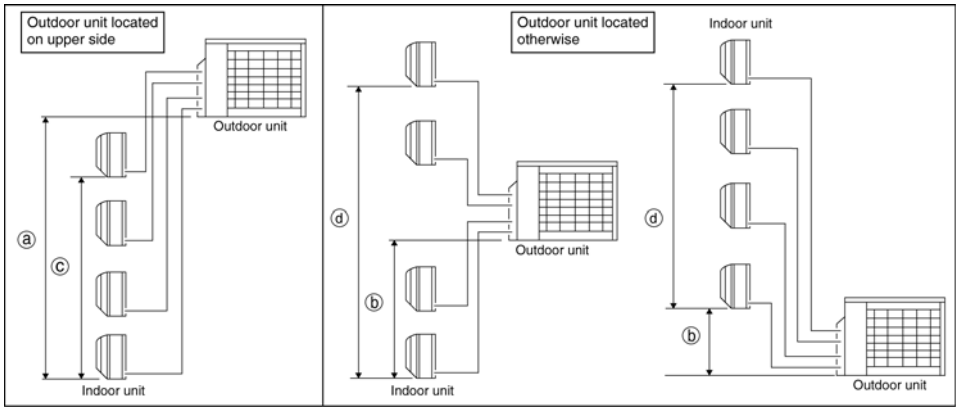
Refrigerant piping size		
Outdoor Unit	CU-3E18***	CU-4E23***
Liquid - side	ø 6.35 t0.8	ø 6.35 t0.8
Gas - side	ø 9.52 t0.8	ø 9.52 t0.8 *(ø 12.7 t0.8)

* In case of indoor is CS-E21***, CS-XE21***, then ø 12.7 t0.8 gas-pipe size must be used together with CZ-MA2P (pipe size expander)

Outdoor Unit	CU-3E18***	CU-4E23***
Equivalent length	30m	30m

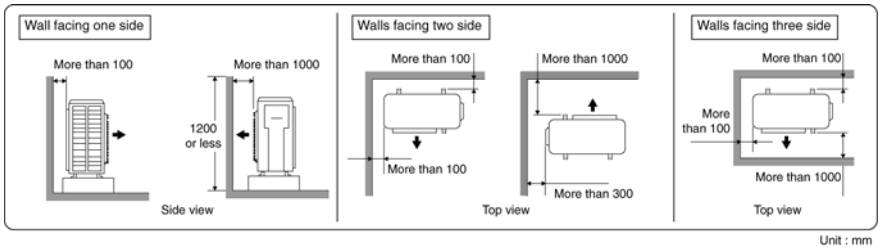
- If total piping length of all indoor units exceed the equivalent length listed above, additional charge with 20g of refrigerant (R410A) for each additional meter of piping.

Allowable piping length				
Outdoor Unit			CU-3E18***	CU-4E23***
Allowable piping length of each indoor unit (min. ~ max.)			3 m ~ 25 m	3 m ~ 25 m
Allowable total piping length of all indoor unit			50 m or less	60 m or less
Height difference between indoor and outdoor unit	Outdoor unit located on upper side	ⓐ	15 m or less	15 m or less
	Outdoor unit located otherwise	ⓑ	7.5 m or less	7.5 m or less
Height difference between indoor unit	Outdoor unit located on upper side	ⓒ	7.5 m or less	7.5 m or less
	Outdoor unit located otherwise	ⓓ	15 m or less	15 m or less



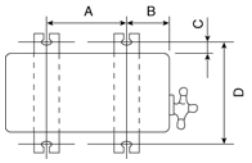
Outdoor Unit Installation Guidelines

- Where a wall or other obstacle is in the path of outdoor unit's intake or exhaust airflow, follow the installation guidelines below.
- For any of the below installation patterns, the wall height on the exhaust side should be 1200mm or less.



10.2.2. Install The Outdoor Unit

- After selecting the best location, start installation to Indoor/ Outdoor Unit Installation Diagram.
  1. Fix the unit on concrete or rigid frame firmly and horizontally by bolt nut (ø10 mm).
  2. When installing at roof, please consider strong wind and earthquake.
     Please fasten the installation stand firmly with bolt or nails.



Model	A	B	C	D
CU-3E18*** CU-4E23***	613 mm	131 mm	16 mm	360.5 mm

10.2.3. Connect The Piping

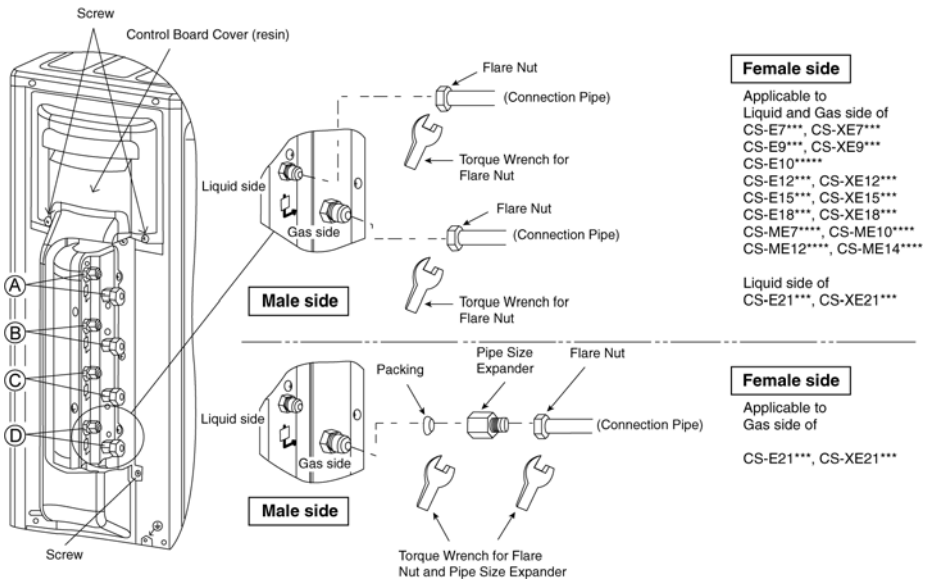
- Remove the control board cover (resin) from the unit by loosening three screws

Connecting The Piping To Outdoor Unit

Decide piping length and then cut by using pipe cutter. Remove burrs from cut edge. Make flare after inserting the flare nut (locate at valve) onto the copper pipe.

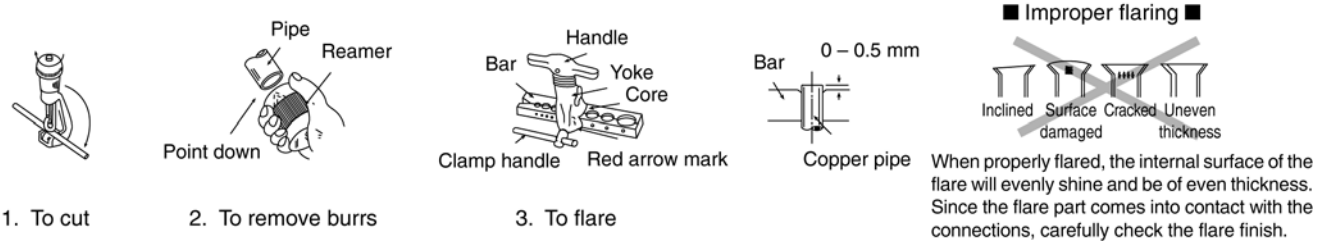
Align center of piping to valves and then tighten with torque wrench to the specified torque as stated in the table.

Piping size	Torque
1/4" [6.35 N•m]	[18 N•m (1.8 kgf.m)]
3/8" [9.52 N•m]	[42 N•m (4.3 kgf.m)]
1/2" [12.7 N•m]	[55 N•m (5.6 kgf.m)]
5/8" [15.88 N•m]	[65 N•m (6.6 kgf.m)]
3/4" [19.05 N•m]	[100 N•m (10.2 kgf.m)]
CAUTION Do not over tighten, over tightening cause gas leakage.	



CUTTING AND FLARING THE PIPING

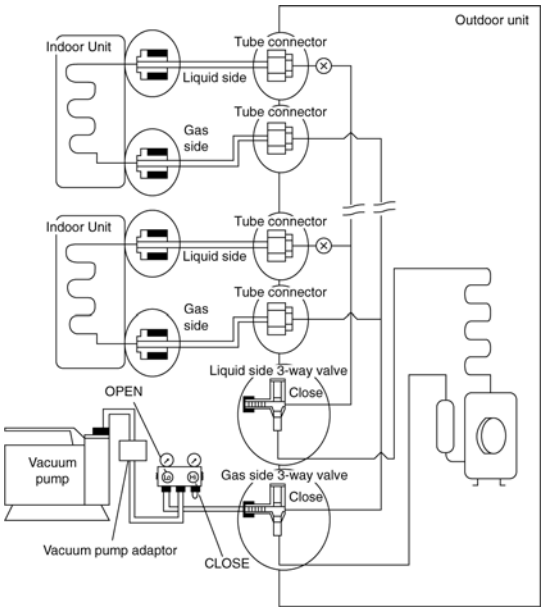
1. Please cut using pipe cutter and then remove the burrs.
2. Remove the burrs by using reamer. If burrs is not removed, gas leakage may be caused.
   Turn the piping end down to avoid the metal powder entering the pipe.
3. Please make flare after inserting the flare nut onto the copper pipes.



10.2.4. Evacuation Of The Equipment

WHEN INSTALLING AN AIR CONDITIONER, BE SURE TO EVACUATE THE AIR INSIDE THE INDOOR UNIT AND PIPES in the following procedure.

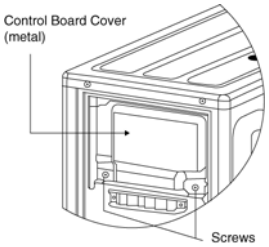
1. Connect a charging hose with a push pin to the Low side of a charging set and the service port of the gas side 3-way valve.
   • Be sure to connect the end of the charging hose with the push pin to the service port.
2. Connect the center hose of the charging set to a vacuum pump.
3. Turn on the power switch of the vacuum pump and make sure that the needle in the gauge moves from 0 cmHg (0 MPa) to -76 cmHg (-0.1 MPa). Then evacuate the air approximately ten minutes.
4. Close the Low side valve of the charging set and turn off the vacuum pump. Make sure that the needle in the gauge does not move after approximately five minutes.
   Note : BE SURE TO TAKE THIS PROCEDURE IN ORDER TO AVOID REFRIGERANT GAS LEAKAGE.
5. Disconnect the charging hose from the vacuum pump and from the service port of the 3-way valve.
6. Tighten the service port caps of gas side 3-way valve at a torque of 18 N•m with a torque wrench.
7. Remove the valve caps of both of the gas side and liquid side 3-way valve. Position both of the valves to “OPEN” using a hexagonal wrench (4 mm).
8. Mount valve caps onto the gas side and liquid side of the 3-way valve.
   • Be sure to check for gas leakages.

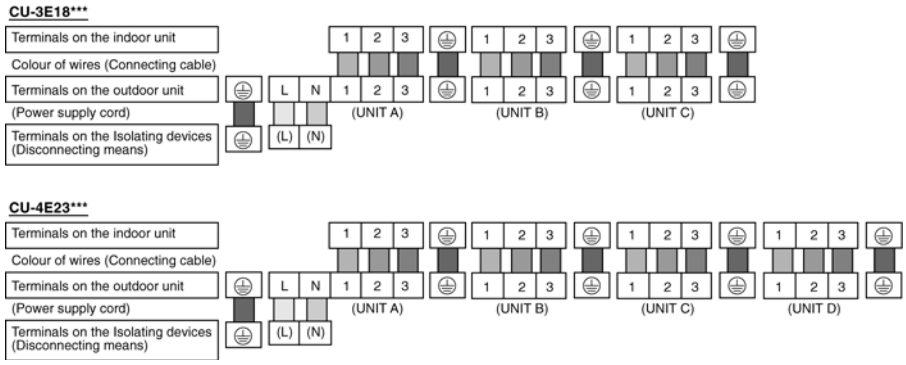


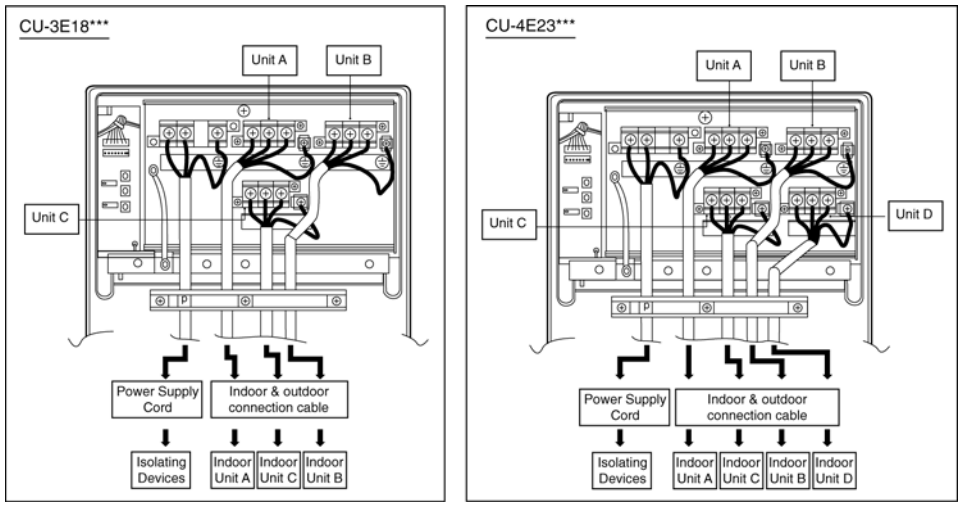
⚠ CAUTION
• If gauge needle does not move from 0 cmHg (0 MPa) to -76 cmHg (-0.1 MPa), in step ③ above take the following measure: - If the leak stops when the piping connections are tightened further, continue working from step ③. - If the leak does not stop when the connections are retightened, repair the location of leak. - Do not release refrigerant during piping work for installation and reinstallation. - Take care of the liquid refrigerant, it may cause frostbite.

10.2.5. Connect The Cable To The Outdoor Unit

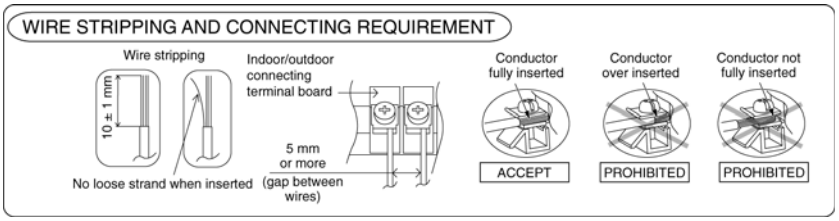
1. Remove the control board cover metal from the unit by loosening two screws.
2. Cable connection to the power supply through isolating Devices (Disconnecting means).
   - Connect approved type polychloroprene sheathed **power supply cord** 3 x 2.5 mm^2 245 IEC 57 type designation or heavier cord to the terminal board, and connect the others end of the cord to Isolating Devices (Disconnecting means).
3. **Connecting cable** between indoor unit and outdoor unit shall be approved polychloroprene sheathed 4 x 1.5 mm^2 flexible cord, type designation 245 IEC 57 or heavier cord.
4. Connect the power supply cord and connecting cable between indoor unit and outdoor unit according to the diagram as shown.







5. For wire stripping and connection requirement, refer to the diagram below.
6. Secure the power supply cord and connecting cables onto the control board with the holder.
7. Attach the control board cover back to the original position with screw.



⏚ This equipment must be properly earthed.

- Note: Isolating Devices (Disconnecting means) should have minimum 3.0 mm contact gap.
- Earth wire shall be Yellow/Green (Y/G) in colour and longer than other AC wires for safety reason.

10.2.6. Heat Insulation

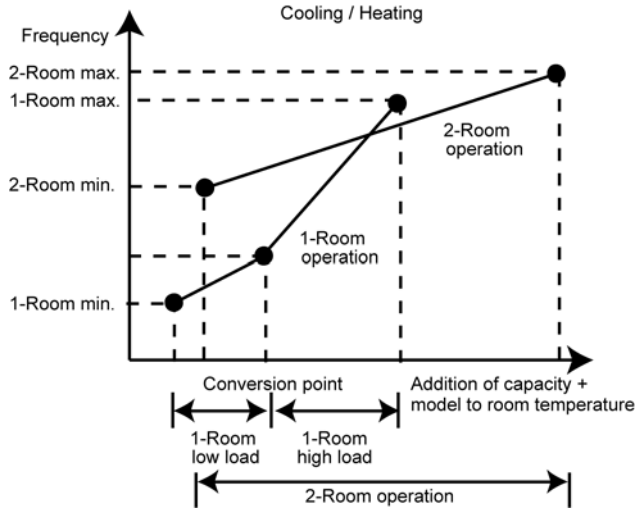
⚠ CAUTION	Use a material with good heat-resistant properties as the heat insulation for the pipes. Be sure to insulate both the gas-side and liquid-side pipes. If the pipes are not adequately insulated, condensation or water leakages may occur.

Liquid-side pipes	Material shall withstand 120°C or higher
Gas-side pipes	

11 Operation Control (CU-2E15LBE and CU-2E18LBE)

11.1. Compressor Operation Frequency

• The compressor operation frequency is determined by room temperature, capacity, and model type.
- When operation is started after the air conditioner has been stopped for more than one hour, the air conditioner operates at a high frequency which lowers the room temperature quickly for cooling (or raises it quickly for heating).
- If two or more indoor units are operating simultaneously, the thermostat is set to OFF in one room; the automatic expansion valve is closed to adjust the flow of refrigerant so as to control the room temperature.
- When the thermostat is set to OFF during 1-room operation, the compressor and fan of the outdoor unit are stopped. (The outdoor unit fan is stopped 30 seconds after the compressor stops).
- It takes about 180 seconds to restart operation when the compressor has been stopped (Time delay safety control)



11.2. Deice Operation

• During Heating operation, the deice operation judgment method:
According to outdoor heat exchanger temperature, operation time and outdoor air temperature.

• Deice operation
- The outdoor heat exchanger temperature falls below 3°C continuously for 3 minutes
- During deice operation; the 4-way valve is switched to cooling cycle to melt the frost.
- Deice operation ends about 12 minutes of operation or the temperature of heat exchanger rises above 25°C.

Deice operation Characteristic

	Deicing start				End
Elapsed time	40 min. (outdoor air temperature below -3°C)	40 min. (outdoor air temperature above -3°C)	80 min. (outdoor air temperature above -1°C)	120 min. (outdoor air temperature above -1°C)	12 min.
Operating time temperature of heat exchanger	-11°C	-9°C	-7°C	-6°C	25°C
Fuzzy control makes it increasingly harder to initiate the deice operation as the outdoor temperature drops.					

Deice operation

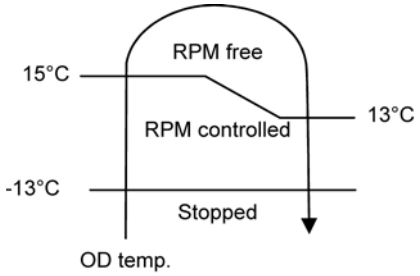
4-way valve	Outdoor unit fan	Indoor unit fan
Cooling cycle	Stopped	Stopped

12 Operation Control (CU-3E18LBE and CU-4E23LBE)

12.1. Cooling Operation

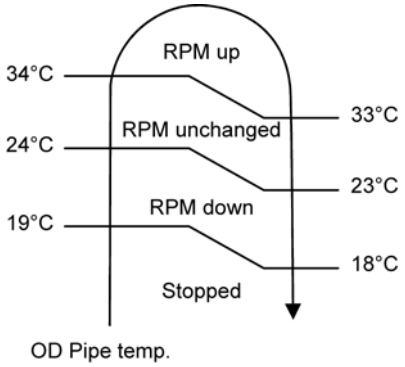
12.1.1. Outdoor fan control

• When cooling operation is enabled, based on outdoor ambient temperature, fan motor control will be adjusted according to figure below:



12.1.2. Annual Cooling control

• This control is to enable cooling operation when outdoor ambient temperature is low.
• Control start conditions:
  - Cooling operation is activated with compressor ON.
  - Outdoor ambient temperature is less than 15°C
• Control contents:
  - When the above conditions are fulfilled, based on outdoor pipe temperature, the outdoor fan motor will operate according to figure below:

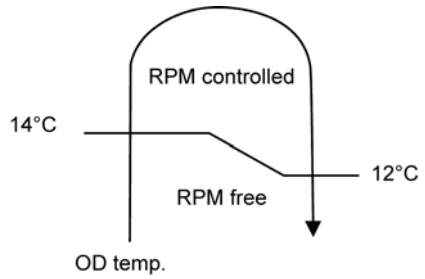


• To improve the judgment accuracy during annual cooling control, outdoor ambient temperature sampling for 2 minutes will be activated every 35 minutes under designated fan speed.
• Control stop conditions:
  - When either one of the start conditions are not complied.

12.2. Heating Operation

12.2.1. Outdoor fan control

• When heating operation is enabled, based on outdoor ambient temperature, fan motor control will be adjusted according to figure below:



• To improve the judgment accuracy, indoor room temperature sampling starts when any indoor unit has stopped capability supplied (heating thermo-off) during heating operation with compressor ON, outdoor unit will send signal to all thermo-off indoor units to ON fan motor and get room temperature sample.
• To prevent discharge temperature drop at indoor units which is ON when sampling the room temperature of heating thermo-off units, the outdoor fan speed will be adjusted accordingly.
• However, if indoor room temperature is high compare to remote control setting temperature, sampling of corresponding indoor unit will be cancelled.

12.2.2. Powerful Operation 1

• During cooling operation, this control is to concentrate outdoor unit capability to the powerful operation enabled indoor unit by temporary stop the capability supply to low load demand indoor units.
• Operation start condition:
  - Powerful operation ON for targeted indoor unit
• Operation content:
  - If other indoor units (where Powerful operation are OFF) achieve setting temperature continuously for 1 minutes after received powerful command from indoor unit, then capability supply to other indoor units are stopped for minimum 3 minutes. Capability supply stop period follows powerful operation period.
• Operation stops when comply either one of the following conditions:
  - When other indoor units (where Powerful operation are OFF) is lower than setting temperature.
  - When the powerful operation is OFF for all indoor units.
  - When Quiet operation received from 1 indoor unit.
  - When protection control starts.

12.2.3. Powerful Operation 2

• During cooling / heating operation, this control is to provide fast cooling / heating operation compare to normal operation.
• Operation start if all condition below are complied:
  - Powerful operation ON for indoor unit.
  - Not under Annual Cooling control.
• Operation content:
  - Outdoor fan speed will adjust automatically.
  - Compressor frequency will adjust automatically.
• Operation stop when comply either one of the follow conditions:
  - When the powerful operation is OFF for all indoor units.
  - When annual cooling control activated.

13 Simultaneous Operation Control

- Operation modes which can be selected using the remote control unit:
  - Automatic, Cooling, Dry, Heating and e-ion operation mode.
- Types of operation modes which can be performed simultaneously
  - Cooling operation and Cooling, Dry or e-ion operation.
  - Heating operation and Heating operation.
- Types of operation modes which cannot be performed simultaneously
  - During cooling operation, heating operation is impossible at another indoor unit in another room.
  - The priority is given to cooling operation if the cooling mode is selected first. In another room where heating mode is selected afterward, the POWER LED blinks to indicate the heating operation is in standby condition, where the fan is stopped hence no discharged air.
  - During heating operation, cooling operation is impossible at another indoor unit in another room.
  - The priority is given to heating operation if the heating mode is selected first. In another room where cooling mode is selected afterward, the POWER LED blinks to indicate the cooling operation is in standby condition, where the fan is stopped hence no discharged air.
- Operation mode priority control
  - The operation mode designated first by the indoor unit has priority.
  - If the priority indoor unit stops operation or initiates the fan operation, the priority is transferred to other indoor units.

“Waiting” denotes the standby status in which the POWER LED blinks (ON for 2.5 seconds and OFF for 0.5 seconds) and the fan is stopped.

	ROOM A / ROOM B	Non Priority Unit (2nd ON)			
		Cooling	Dry	Heating	e-ion
Priority Unit (1st ON)	Cooling	C / C	D / C	Waiting / C	E / C
	Dry	C / D	D / D	Waiting / D	E / D
	Heating	Waiting / H	Waiting / H	H / H	Stop / H
	e-ion	C / E	D / E	H / Stop	E / E

In the e-ion mode, priority is transferred to a non-priority unit.

Note

- C: Cooling operation mode
- D: Dry operation mode
- H: Heating operation mode
- F: e-ion operation mode

14 Protection Control (CU-2E15LBE and CU-2E18LBE)

14.1. Time delay safety control

• The compressor does not restart for 3 minutes after stop of compressor.

14.2. Total running current control

• When the air conditioner has been operated at the capacity designated by the indoor unit and the total running current exceeds setting I1, the operating frequency of the compressor is reduced. Conversely, when the total current drops below setting I1, it is increased (but only up to the capacity designated by the indoor unit).
• The compressor is stopped as soon as the total current exceeds setting I2.
• If the compressor is stop by the total running current control on 3 occasions in a 20-minutes period, the “F98” error is displayed.

Model	Setting	CU-2E15LBE	CU-2E18LBE
Dry-Cooling	I1	9.0A	9.0A
	I2	15.0A	15.0A
Heating	I1	12.5A	12.5A
	I2	-	17.0A

14.3. IPM (Power transistor) prevention control

Overheating prevention control

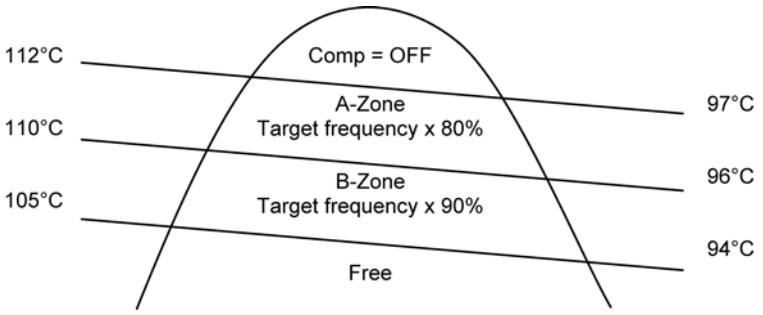
• The compressor is stopped when the overheating protection circuit inside the IPM has been activated. It restarts after 3 minutes.
• Activation temperature: 110°C Reset temperature: 95°C

DC peak current control

• When the inverter load current (DC peak current) exceeds the setting value (22.5A), the compressor is stopped immediately. If this happens within 30 seconds after it started operating, it will restart one minute later; if it happens after 30 seconds have elapsed since it started operating, it will restart 3 minutes later.
• If the DC peak current exceeds the setting value on 7 consecutive occasions within 30 seconds after the compressor started operating, the “F99” error is displayed, and the unit operation is stopped.

14.4. Compressor Overheating Prevention Control

• When the compressor discharge temperature exceeds 105°C, compressor frequency control (including expansion valve control) is conducted.



• If the compressor stops when compressor discharge temperature exceeds 112°C for 3 occasions within 30 minutes, TIMER LED blinks (F97: Compressor overheat).

14.5. Low Pressure Prevention Control (Gas Leakage Detection)

• Control start conditions
  - For 5 minutes, the compressor continuously operates and outdoor total current is between 1.5A and 1.88A.
  - During Cooling and Soft Dry operations:
    - Indoor heat exchanger temperature is above 20°C.
  - During heating operations:
    - Indoor heat exchanger temperature is below 25°C.

• Control contents
  - Compressor stops (and restart after 3 minutes).
  - If the conditions above happen 2 times within 20 minutes, the unit will:
    - Stop operation
    - Timer LED blinks and “F91” indicated (Refrigeration cycle abnormality).

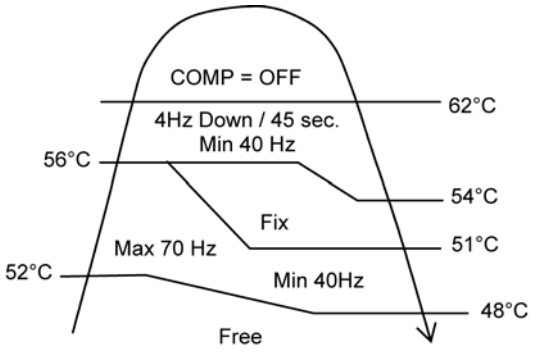
14.6. 4-Way Valve Failure Protection Control

• During Cooling operation
  - 4 minutes after compressor started, if the temperature of the indoor unit heat exchanger exceeds 45°C, the compressor stops (After 3 minutes, Time delay safety control starts).
  - If this situation occurs 4 times within 30 minutes, TIMER LED blinks (F11 error)
• During Heating operation
  - 4 minutes after compressor started, if the temperature of the indoor unit heat exchanger drops below 5°C, the compressor stops (After 3 minutes, Time delay safety control starts).
  - If this situation occurs 4 times within 30 minutes, TIMER LED blinks (F11 error)

14.7. Protection Control for Cooling & Soft Dry Operation

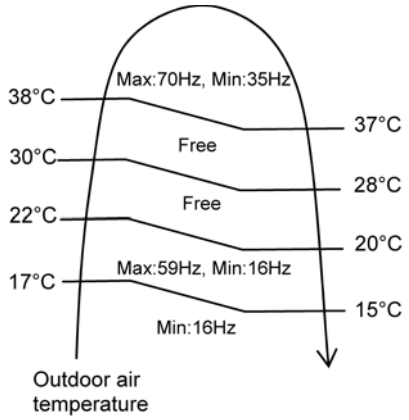
14.7.1. Cooling overload control

• Detects the outdoor pipe temperature and carry below restriction/ limitation (limit the compressor operation frequency).
• If the outdoor heat exchanger temperature exceeds 52°C during cooling / dry operation, the compressor frequency is restricted.
• If the compressor if outdoor pipe temperature exceeds 62°C.
• If the compressor stops 4 times within 20 minutes, TIMER LED blinks (F95: outdoor high pressure rise protection)



14.7.2. Outdoor air temperature control

• The compressor operating frequency is regulated in accordance to the outdoor air temperature as shown in the diagram below. This control will begin 1 minute after the compressor starts.



14.7.3. Abnormal Wiring or Piping Connection Checking Control

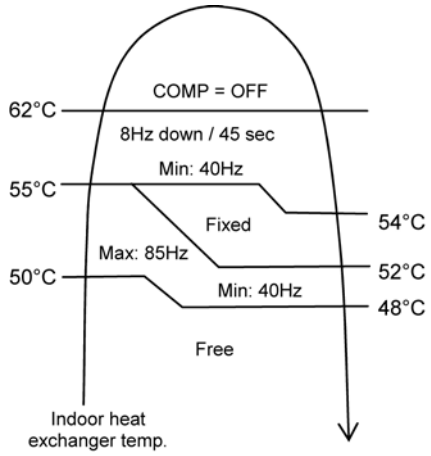
• 3 minutes after forced cooling operation was conducted for one room during the initial operation after power was turned on. The abnormal wiring or piping connection control activates when:

- The outdoor gas piping temperature (connected to non operating indoor unit) drops by more than 5°C to 5°C or below 3 minutes after compressor started.
- The non operating indoor unit pipe temperature where outdoor air temperature above 5°C has dropped by more than 20°C to 5°C or lower.
- When above conditions are satisfied, the Timer LED blinks. (H41 error)

14.8. Protection Control for Heating Operation

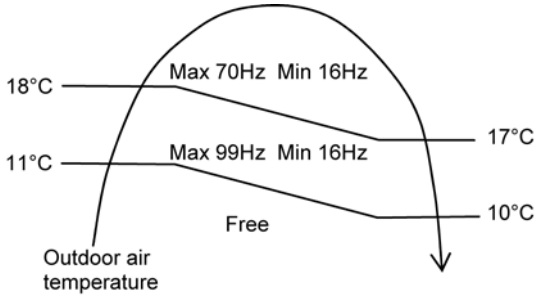
14.8.1. Overload Protection Control

• The compressor operating frequency is regulated in accordance to indoor heat exchanger temperature as shown in below figures.



14.8.2. Intake Air Temperature Control

• Compressor operating frequency changes in accordance to the outdoor air temperature.



• This control is not applicable during minimum frequency operation protection control, deice operation, pump down operation.

15 Protection Control (CU-3E18LBE and CU-4E23LBE)

15.1. Freeze Prevention control (Cool)

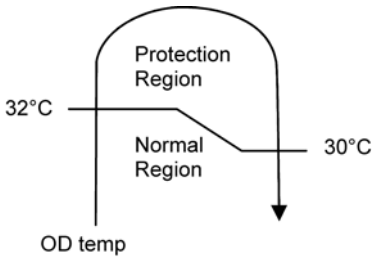
- When received freeze prevention signal from indoor unit, the compressor frequency changes according to indoor heat exchanger temperature.
- When indoor unit request capability OFF due to freeze condition , immediately the capability supply to targeted indoor unit stops.

15.2. Dew Prevention control (Cool)

- When received dew prevention signal from indoor unit, the compressor frequency changes according to indoor intake temperature and indoor heat exchanger temperature.

15.3. Electronic Parts Temperature Rise Protection 1 (Cool)

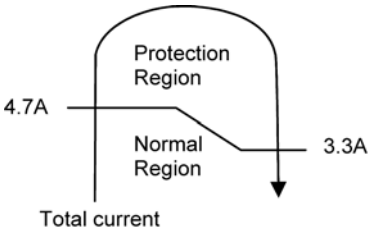
- This control prevents electronic parts temperature rise during cooling overload condition.
- Start conditions:
  - Outdoor ambient temperature is at protection region as shown in figure below:



  - Outdoor unit total current is above 5.5A
- Control content
  - Outdoor fan speed is adjusted accordingly.
- Control stop condition
  - When outdoor ambient temperature is back to normal region.
- During this control, outdoor fan speed does not reduce for Quiet operation.

15.4. Electronic Parts Temperature Rise Protection 2 (Cool)

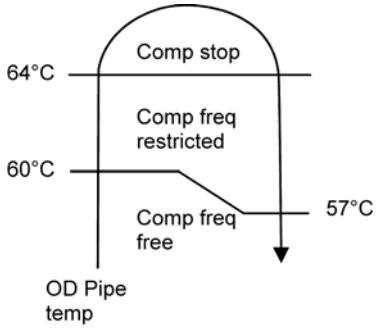
- This control prevents electronic parts temperature rise during cooling/dry operation.
- Start conditions:
  - Total current is at protection region as shown in figure below:



- Control content
  - Outdoor fan speed is adjusted accordingly.
- Control stop conditions
  - When total current is back to normal region.
- During this control, outdoor fan speed does not reduce for Quiet operation.

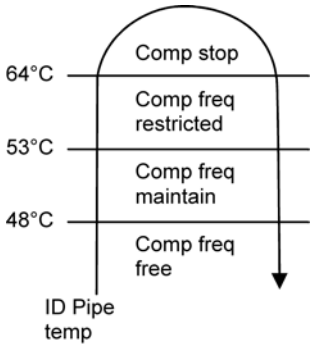
15.5. Cooling overload control (Cool)

• This control detect outdoor pipe temperature and perform the compressor frequency restriction during cooling operation.

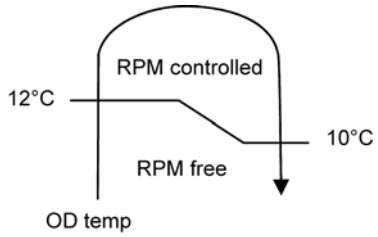


15.6. Heating overload control (Heat)

• This control detect indoor pipe temperature and perform the compressor frequency restriction during heating operation.



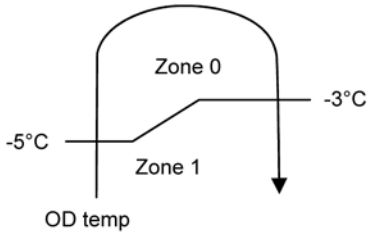
• This control detect outdoor ambient temperature and perform the fan speed adjustment during heating operation.

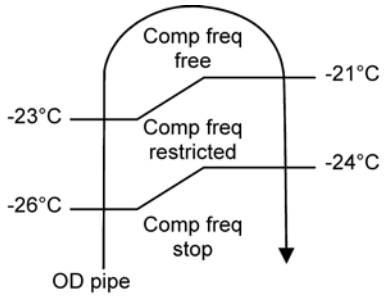


15.7. Extreme Low Temperature Compressor low pressure protection control (Heat)

• This control is to prevent low pressure drops too low during extremely low outdoor ambient temperature to improve the compressor reliability.

• During heating operation, when outdoor ambient temperature is in Zone 1, this control will be activated. Compressor frequency restriction will be based on outdoor piping temperature.





15.8. Deice Control

• When outdoor pipe temperature and outdoor air temperature is low, deice operation starts where indoor fan motor and outdoor fan motor stop, indoor unit horizontal vane close and operation LED blink with compressor ON.

15.9. Time Delay Safety Control (Restart Control)

• The compressor will not restart within three minutes after compressor is stopped.
• This control is not applicable if the power supply reset or after deice condition.

15.10. 30 seconds Force Operation

• Once the compressor starts operation, it will not stop its operation for 30 seconds in order to cycle back compressor oil.
• However, it can be stopped using remote control or Auto OFF/ON button at indoor unit.

15.11. Total Current Control

• By referring to table below, during normal (default) operation, the running current refer to Hi values and during Power Save Mode, the running current refer to Lo values.
• When the outdoor unit total running current (AC) exceeds X value, compressor frequency will decrease.
• If the running current does not exceed X value for 5 seconds, compressor frequency will increase.
• However, if total outdoor unit running current exceeds Y value, compressor will be stopped immediately for 3 minutes.

Operation Mode		CU-4E23LBE		CU-3E18LBE	
		X (A)	Y (A)	X (A)	Y (A)
Cooling/Soft Dry (A)	Hi	14.0	17.5	14.0	17.5
	Lo	9.8	17.5	9.8	17.5
Cooling/Soft Dry (B)	Hi	14.0	17.5	14.0	17.5
	Lo	9.8	17.5	9.8	17.5
Heating	Hi	14.0	17.5	14.0	17.5
	Lo	9.8	17.5	9.8	17.5

15.12. IPM (power transistor) Protection Control

• Overheating Prevention Control
  - If IPM temperature rises to 80°C, outdoor fan speed will be increased.
  - When the IPM temperature rises to 95°C, compressor operation will stop immediately.
  - Compressor operation restarts when temperature decreases to 90°C.
  - If IPM temperature detected less than -30°C, IPM is judged as open circuit (“F96” is indicated).
• DC peak current control
  - When IPM DC current exceeds set value of 30.0 ± 3.0 A, the compressor will stop.
  - If the DC peak current detected within 30 seconds after operation starts, compressor will restart after 1 minute.
  - If the DC peak current detected 30 seconds or more after operation starts, compressor will restart after 2 minute.
  - Within 30 seconds after compressor restarts, if the DC peak current is exceeded set value continuously for 7 times, all indoor and outdoor relays will be cut off (“F99” is indicated).
• Error reset can be done by power supply reset.

15.13. Compressor Protection Control (Gas leak detection control 1)

• Control start conditions
  - For 5 minutes, the compressor continuously operates and total current is low.
  - During Cooling or Soft Dry operation:
    Indoor intake temperature — indoor piping temperature is below 4°C.
  - During Heating operation:
    Indoor pipe temperature — indoor intake temperature is below 3°C.
  - Not during deice control.
  - Compressor ON with maximum frequency.
• Control content
  - Compressor stops (and restart after 3 minutes)
  - If the conditions above happen 4 times within 60 minutes, the unit will stop operation (“F91” is indicated).

15.14. Compressor Protection Control (Gas leak detection control 2)

- This control detect gas leakage condition to prevent compressor damage.
- Control start condition
  - All connected indoor units capability supply ON.
  - Compressor ON with maximum frequency.
  - Not during annual cooling.
  - Compressor discharge temperature high.
- Control content
  - Compressor OFF during this control (“F91” is memorized in EEPROM)
  - If the above conditions happen 2 times within 60 minutes, indoor units’ Timer LED will blinks (“F91” is indicated at all indoor units)

15.15. Valve close detection control

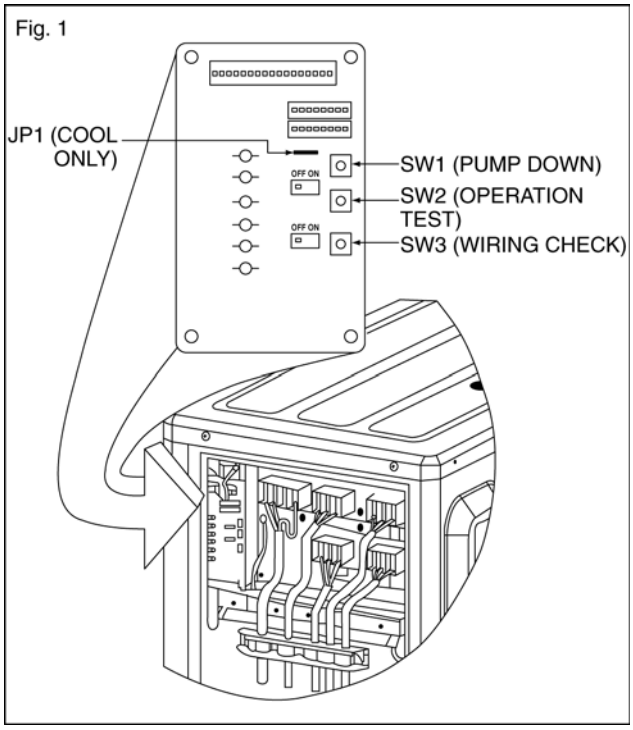
- This control detects 3-way valve close condition to prevent damage to refrigerant cycle.
- Start conditions:
  - For all connected indoor units, if Indoor intake temperature — indoor piping temperature are between -2°C and 2°C continuously for 5 minutes after compressor ON at first cooling operation.
  - The first cooling operation is defined as cooling operation is ON for less than 8 minutes after new installation or after pump down.
- Control content
  - During this control, compressor stop, indoor units’ Timer LED will blink. (“F91” is indicated at indoor units)
- Error reset can be done by power supply reset or reset by using remote control.

15.16. Compressor discharge high pressure protection control

- This control protect by using high pressure switch during operation.
- Start conditions
  - High pressure switch is activated (from normally close to open) when outdoor operation mode is cooling or heating during compressor running.
- Control 1 content
  - Compressor stop when high pressure switch is opened and restart after high pressure switch closed. If this condition happen 4 times within 30 minutes, “F94” is indicated.
  - After 30 minutes, counter is reset if this condition does not happen for 4 times.
- Control 1 stop conditions
  - Power supply reset
  - Reset by using remote control

16 Servicing Mode

16.1. CU-3E18LBE & CU-4E23LBE



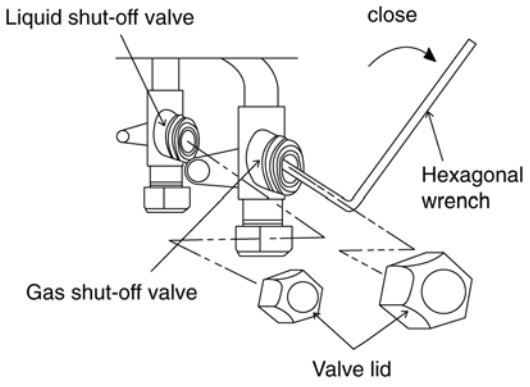
16.1.1. Pump down operation (SW1)

- Operate the pump down process according to the following procedure
  - Confirm the valve on the liquid side and gas side are open.
  - Press PUMP DOWN button (SW1) on the Service PCB inside the outdoor unit for more than 5 seconds. Pump down (cooling) operation is performed for 15 minutes.
  - Set the liquid side 3 way valve to close position and wait until the pressure gauge indicates 0.01Mpa (0.1kg/cm^{2}G).
  - Immediate set the gas side valve to close position and then press the PUMP DOWN button (SW1) to stop the pump down operation.

NOTE: Pump down operation will stop automatically after 15 minutes if PUMP DOWN switch (SW1) is not pressed again. Pump down operation is not started within 3 minutes after compressor is stopped.

LED	2	3	4	5	Message
Status	○	○	○	○	Pump down operation in progress
	○	○	○		3 minutes before operation end
	○	○			2 minutes before operation end
	○				1 minute before operation end
					Pump down operation end

○: Blinking



16.1.2. Test Run operation

- Test operation can be carried out using TEST OPERATION button (SW2) on the Service PCB inside the outdoor unit.
- For Cooling test, press the TEST OPERATION button (SW2) for 5 seconds or more but less than 10 seconds, LED1 and LED 2 will illuminate when shift into cooling test operation.
- For Heating test, press the TEST OPERATION button (SW2) for more than 10 seconds, LED 1 and LED 3 will illuminate when shift into heating test operation.
- Press the TEST OPERATION button (SW2) again to cancel test operation.

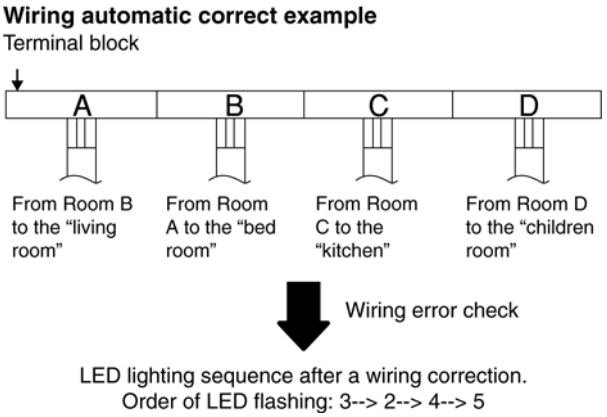
16.1.3. Wiring Error check

- The unit capable to correct the wiring error automatically by following procedures.
  - Confirm the valve on the liquid side and gas side is open.
  - Press WIRING CHECK button (SW3) on the Service PCB inside the outdoor unit for more than 10 seconds to start wiring check operation.
  - Wiring check process will complete in approximately 20 - 25 minutes. However, wiring check operation will not start within 3 minutes after compressor is stopped. When outdoor air temperature is less than 5°C or unit has abnormality, wiring check will not start. (See NOTE 2)
- The LED 2 to LED 6 in Service PCB inside the outdoor unit indicate the possibility of the correction as shown in the table below:

LED	2	3	4	5	6	Message
Room	A	B	C	D	-	
Status	All flashing					Automatic correction impossible
	LED2, 4, 6 and LED 3, 5 alternatively flashing					Wiring check in progress
	Flashing one after another					Automatic correction completed
	Other than above					Unit has abnormality (NOTE 4)

- If automatic correct is impossible, check the indoor unit wiring and piping manually.

Wiring automatic correct example



LED lighting sequence after a wiring correction.
Order of LED flashing: 3--> 2--> 4--> 5

NOTE:

1. For two rooms connection, LED 4 and 5 are not illuminated and for three rooms connections, LED 5 is not illuminated after wiring operation complete.
2. If the outdoor air temperature is less than 5°C or unit has abnormality, wiring operation will not start.
3. After wiring check operation is complete, LED indication will illuminated until normal operation starts.
4. Follow the product diagnosis procedure.
5. When LED 1 only illuminate, indicates that outdoor unit is operating normally.

16.1.4. Power Save Mode

- Power Save Mode can be enabled by pushing POWER SAVE switch (SW4) to ON before power supply ON.
- When Power Save Mode is ON, the unit can be operate at lower running current where the breaker capacity not achieve the requirement.

16.1.5. Mode priority function

- Mode priority function can be enabled by pushing MODE PRIORITY switch (SW5) to ON before power supply ON.
- When Mode Priority Function is ON, the mode priority is given to higher capacity indoor units.

16.1.6. Cooling only function

- The unit capable to limit the operation mode to Cooling Mode only (Heating mode disabled) by cutting JP1 (COOL ONLY) before power supply ON.
- This function prevent wrong operation during the unit installed in server room.
- This function could be disabled again by short the JP1 (COOL ONLY) before power supply ON.

17 Troubleshooting Guide

17.1. Self Diagnosis Function (CU-2E15LBE and CU-2E18LBE)

Diagnosis display	Abnormality or protection control	Abnormality judgement	Emergency operation	Primary location to verify
H11	Indoor/outdoor abnormal communication	> 1 min after starting operation	Indoor fan operation can start by entering into force cooling operation	• Internal/external cable connections • Indoor/outdoor PCB
H12	Indoor unit capacity unmatched	—	—	• Indoor unit total capacity
H14	Intake air temperature unmatched	—	—	• Intake air temperature sensor (defective or disconnected)
H16	Outdoor current transformer	—	—	• Decreased amount of refrigerant • Outdoor PCB
H19	Indoor fan motor mechanism lock	—	—	• Fan motor • Indoor PCB
H23	Indoor heat exchanger temperature sensor	Continue for 5 sec	—	• Heat exchanger temperature sensor (defective or disconnected)
H27	Outdoor air temperature sensor	Continue for 5 sec	—	• Outdoor air temperature sensor (defective or disconnected)
H28	Outdoor heat exchanger temperature sensor 1	Continue for 5 sec	—	• Outdoor heat exchanger temperature sensor (defective or disconnected)
H30	Outdoor discharge pipe temperature sensor	Continue for 5 sec	—	• Outdoor discharge pipe temperature sensor (defective or disconnected)
H32	Outdoor heat exchanger temperature sensor 2 (discharge pipe temp)	Continue for 5 sec	—	• Outdoor heat exchanger temperature sensor (defective or disconnected)
H34	Outdoor heatsink temperature sensor at Control Board	Continue for 2 sec	—	• Outdoor heatsink temperature sensor at control board (defective or disconnected)
H36	Outdoor gas pipe temperature sensor	Continue for 2 sec	—	• Outdoor gas pipe temperature sensor (defective or disconnected)
H37	Outdoor liquid pipe temperature sensor	Continue for 2 sec	—	• Outdoor liquid pipe temperature sensor (defective or disconnected)
H39	Abnormal indoor operating unit or standby units	—	—	• Piping connection error • Indoor/outdoor connection cable connection error
H41	Abnormal wiring or piping connection	—	—	• Wiring or piping connection
H97	Outdoor fan motor mechanism lock	—	—	• Outdoor fan motor
H98	Indoor high pressure protection	—	—	• Air filter dirty • Air circulation short circuit
H99	Indoor heat exchanger freeze protection	—	—	• Insufficient refrigerant • Air filter dirty
F11	Cooling/heating cycle changeover abnormality	4 times occurrences within 30 minutes	—	• 4-way valve • V-coil
F17	Indoor standby unit freezing	—	—	• Outdoor expansion valve leakage • Indoor unit pipe temperature sensor
F90	PFC circuit protection	—	—	• Outdoor PCB • Outdoor fan motor
F91	Refrigeration cycle abnormality	2 times occurrences within 20 minutes	—	• No refrigerant (3-way valve is closed)

Diagnosis display	Abnormality or protection control	Abnormality judgement	Emergency operation	Primary location to verify
F93	Outdoor compressor abnormal revolution	4 times occurrences within 20 minutes	—	• Compressor
F95	Cooling high pressure protection	4 times occurrences within 20 minutes	—	• Outdoor refrigerant cycle
F96	IPM (power transistor) overheating protection	—	—	• Express refrigerant • Improper heat radiation • Outdoor PCB
F97	Outdoor compressor overheating protection	4 times occurrences within 10 minutes	—	• Insufficient refrigerant • Compressor
F98	Total running current protection	3 times occurrences within 20 minutes	—	• Excess refrigerant • Improper heat radiation
F99	Outdoor direct current (DC) peak detection	7 times occurrences	—	• Outdoor PCB • Compressor

Note:
“○” - Frequency measured and fan speed fixed.

17.2. Self Diagnosis Function (CU-3E18LBE and CU-4E23LBE)

- The display screen of wireless remote control unit and the self-diagnosis LEDs (green) on the outdoor printed circuit board in the outdoor unit can be used to identify the location of the problem.
  Refer to the table below to identify and solve the cause of the problem, and then re-start the air conditioner system.
- If the problem is solved and operation returns to normal.
  LED 1 illuminates and others LED are off.

Diagnosis display	Abnormality or protection control	LED 6	LED 5	LED 4	LED 3	LED 2	LED 1	Abnormality judgement	Protection operation	Problem	Check location
H11	Indoor/outdoor abnormal communication						○	After operation for 1 minute	Indoor fan only operation can start by entering into force cooling operation	Indoor/outdoor communication not establish	• Indoor/outdoor wire terminal • Indoor/outdoor PCB • Indoor/outdoor connection wire
H12	Indoor unit capacity unmatched					○		90s after power supply	—	Total indoor capability more than maximum limit or less than minimum limit, or number of indoor unit less than two.	• Indoor/outdoor connection wire • Indoor/outdoor PCB • Specification and combination table in catalogue
H15	Compressor temperature sensor abnormality					○	○	Continuous for 5s	—	Compressor temperature sensor open or short circuit	• Compressor temperature sensor lead wire and connector
H16	Outdoor current transformer (CT) abnormality				○		○	—	—	Current transformer faulty or compressor faulty	• Outdoor PCB faulty or compressor faulty
H27	Outdoor air temperature sensor abnormality				○	○		Continuous for 5s	—	Outdoor air temperature sensor open or short circuit	• Outdoor air temperature sensor lead wire and connector
H28	Outdoor heat exchanger temperature sensor 1 abnormality				○	○	○	Continuous for 5s	—	Outdoor heat exchanger temperature sensor 1 open or short circuit	• Outdoor heat exchanger temperature sensor 1 lead wire and connector
H32	Outdoor heat exchanger temperature sensor 2 abnormality			○				Continuous for 5s	—	Outdoor heat exchanger temperature sensor 2 open or short circuit	• Outdoor heat exchanger temperature sensor 2 lead wire and connector
H33	Indoor / outdoor misconnection abnormality			○			○	—	—	Indoor and outdoor rated voltage different	• Indoor and outdoor units check
H36	Outdoor gas pipe temperature sensor abnormality			○		○		Continuous for 5s	Heating protection operation only	Outdoor gas pipe temperature sensor open or short circuit	• Outdoor gas pipe temperature sensor lead wire and connector
H37	Outdoor liquid pipe temperature sensor abnormality			○		○	○	Continuous for 5s	Cooling protection operation only	Outdoor liquid pipe temperature sensor open or short circuit	• Outdoor liquid pipe temperature sensor lead wire and connector

Diagnosis display	Abnormality or protection control	LED 6	LED 5	LED 4	LED 3	LED 2	LED 1	Abnormality judgement	Protection operation	Problem	Check location
H64	Outdoor high pressure sensor abnormality			○	○			Continuous for 1 minutes	—	High pressure sensor open circuit during compressor stop	• High pressure sensor • Lead wire and connector
H97	Outdoor fan motor mechanism lock			○	○		○	2 times happen within 30 minutes	—	Outdoor fan motor lock or feedback abnormal	• Outdoor fan motor lead wire and connector • Fan motor lock or block
H98	Indoor high pressure protection			○	○	○		—	—	Indoor high pressure protection (Heating)	• Check indoor heat exchanger • Air filter dirty • Air circulation short circuit
H99	Indoor operating unit freeze protection			○	○	○		—	—	Indoor freeze protection (Cooling)	• Check indoor heat exchanger • Air filter dirty • Air circulation short circuit
F11	4-way valve switching abnormality			○	○	○	○	4 times happen within 30 minutes	—	4-way valve switching abnormal	• 4-way valve • Lead wire and connector.
F17	Indoor standby units freezing abnormality		○					3 times happen within 40 minutes	—	Wrong wiring and connecting pipe, expansion valve leakage, indoor heat exchanger sensor open circuit	• Check indoor/ outdoor connection wire and pipe • Indoor heat exchanger sensor lead wire and connector • Expansion valve lead wire and connector.
F90	Power factor correction (PFC) circuit protection		○				○	4 times happen within 10 minutes	—	Power factor correction circuit abnormal	• Outdoor PCB faulty
F91	Refrigeration cycle abnormality		○			○		2 times happen within 20 minutes	—	Refrigeration cycle abnormal	• Insufficient refrigerant or valve close
F93	Compressor abnormal revolution		○			○	○	4 times happen within 20 minutes	—	Compressor abnormal revolution	• Power transistor module faulty or compressor lock
F94	Compressor discharge pressure overshoot protection		○		○			4 times happen within 30 minutes	—	Compressor discharge pressure overshoot	• Check refrigeration system
F95	Outdoor cooling high pressure protection		○		○		○	4 times happen within 20 minutes	—	Cooling high pressure protection	• Check refrigeration system • Outdoor air circuit
F96	Power transistor module overheating protection		○		○	○		4 times happen within 30 minutes	—	Power transistor module overheat	• PCB faulty • Outdoor air circuit (fan motor)

Diagnosis display	Abnormality or protection control	LED 6	LED 5	LED 4	LED 3	LED 2	LED 1	Abnormality judgement	Protection operation	Problem	Check location
F97	Compressor overheating protection		○		○	○	○	3 times happen within 30 minutes	—	Compressor overheat	• Insufficient refrigerant
F98	Total running current protection		○	○				3 times happen within 20 minutes	—	Total current protection	• Check refrigeration system • Power source or compressor lock
F99	Outdoor direct current (DC) peak detection		○	○			○	Continuous happen for 7 times	—	Power transistor module current protection	• Power transistor module faulty or compressor lock

LED 1 illuminate is indicated that outdoor unit is operating normally. If the LED 1 is switched off or flashing, check the power supply and self-diagnosis indication.

●------ Illuminate
○------ Flashing
Blank ------ OFF

18 Disassembly and Assembly Instructions

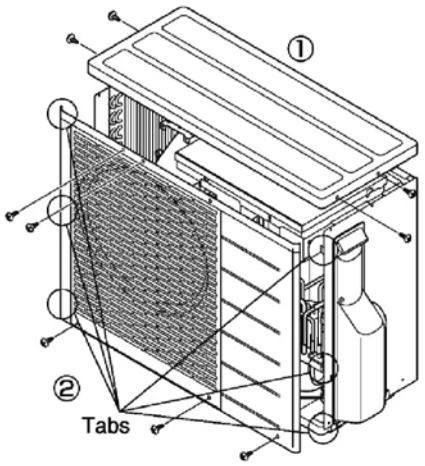
> **WARNING**
>
> High voltages are generated in the electrical parts area by the capacitor. Ensure that the capacitor has discharged sufficiently before proceeding with repair work. Failure to heed this caution may result in electric shocks.

18.1. Outdoor Unit Removal Procedure (CU-2E15LBE CU-2E18LBE)

⚠ Caution! When handling electronic controller, be careful of electrostatic discharge.

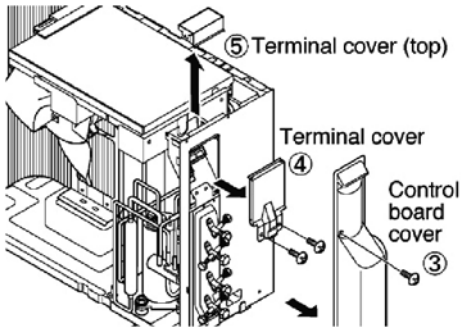
18.1.1. Removing the Cabinet Top Plate and Cabinet Front Plate

1. Remove the cabinet top plate (by removing the 4 screws).
2. Remove the 5 screws fixing the cabinet front plate, release 6 hooks and pull the cabinet front plate toward front side.



18.1.2. Removing the Control Board Cover

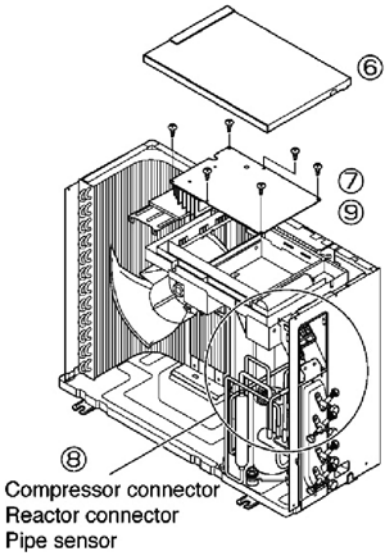
3. Remove the control board cover (remove 1 screw).
4. Remove the terminal cover (remove 2 screws).
5. Remove the terminal cover (top) and disconnect all the lead wires (3 fasten tab) inside.



18.1.3. Removing the Control Board

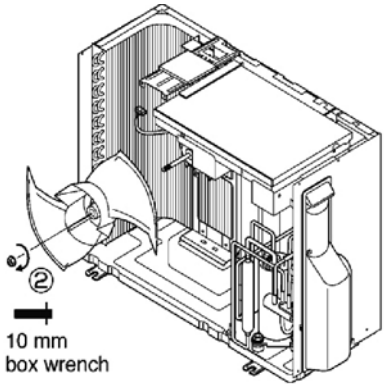
6. Remove the control board cover.
7. Remove the 6 screws at the positions on the control board indicated by arrows.
8. Disconnect the connectors and pipe sensor connected to the compressor and reactor.
9. Remove the control board.

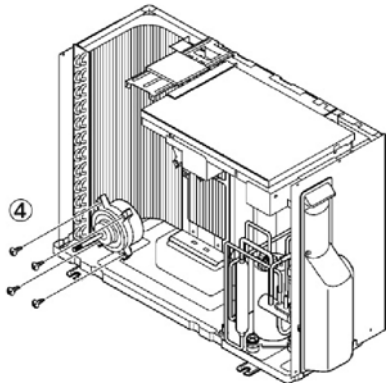
   When pulling the control board upward, it may not be possible to remove it because of the way in which the ground wire and other wires are routed. In this case, it is removed after the control board cover itself has been removed.



18.1.4. Removing the Propeller Fan and Fan Motor

1. Remove the cabinet top plate and cabinet front plate.
2. Remove the propeller fan by removing the nut turning clockwise at its center.
3. Disconnect the connector of the fan motor from the control board.
4. Loosen the 4 screws at the fan motor mounting then remove the fan motor.



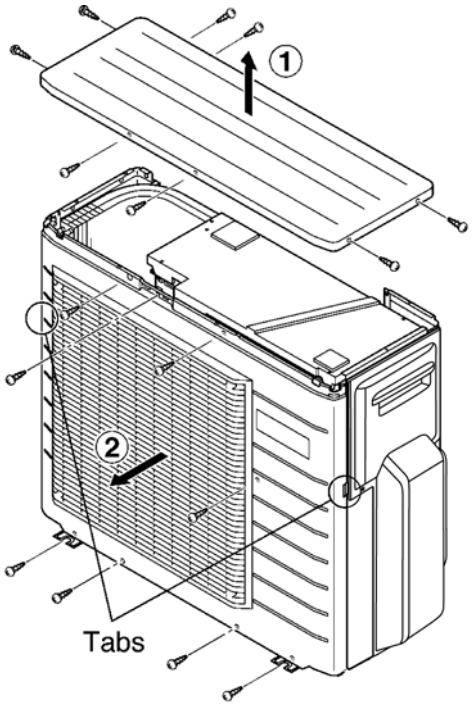


18.2. Outdoor Unit Removal Procedure (CU-3E18LBE CU-4E23LBE)

⚠ Caution! When handling electronic controller, be careful of electrostatic discharge.

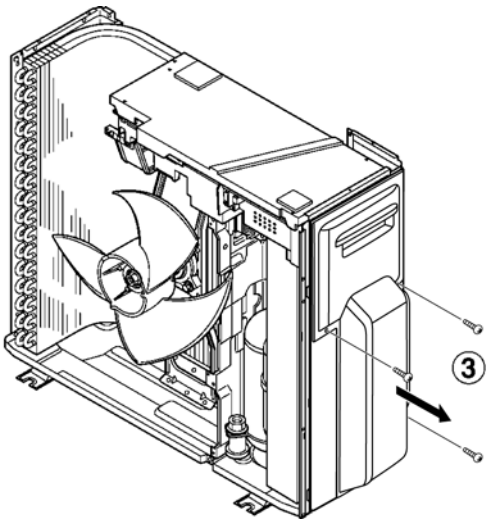
18.2.1. Removing the Cabinet Top Plate and Cabinet Front Plate

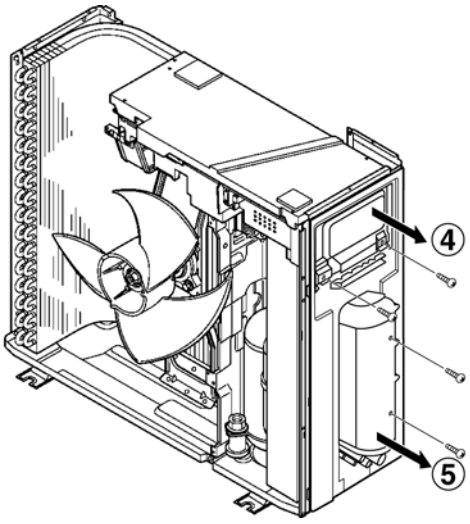
1. Remove the cabinet top plate (remove the 8 screws).
2. Remove the 8 screws (1 on the center, 3 at the top and 4 at the bottom) securing the cabinet front plate, release the 2 hooks (1 each at the left and right), and pull the cabinet front plate toward front side.



18.2.2. Remove the Control Board Cover and Particular Plates

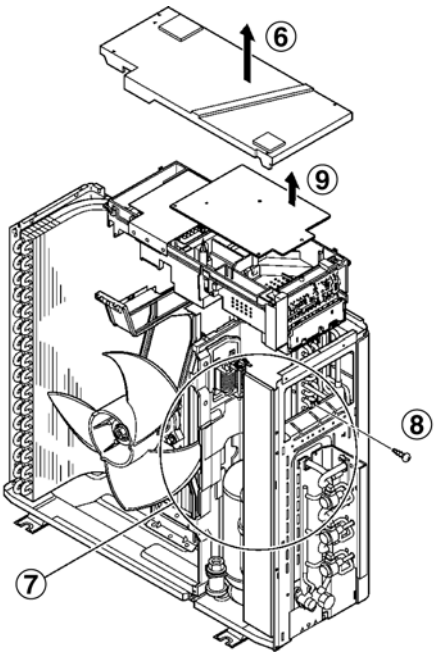
3. Remove the control board cover (remove 3 screw).
4. Remove the particular plate (remove 2 screw).
5. Remove the particular plate (remove 2 screw).





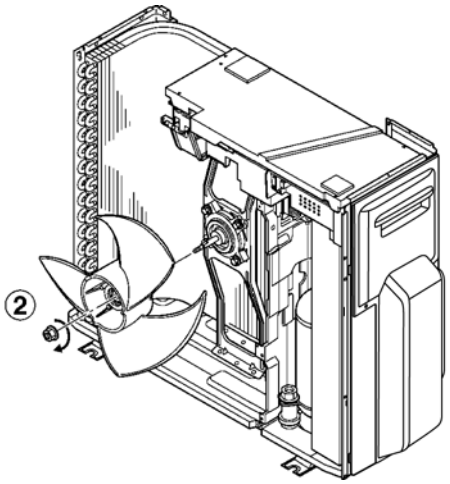
18.2.3. Removing the Control P.C. Board

6. Remove the drip proof cover.
7. Disconnect the connectors (lead wires of the compressor, sensor, and others).
8. Remove the screw at the right side of the control box, and pull out the entire control box.
9. Release the control P.C. Board tab to remove the control P.C. Board.

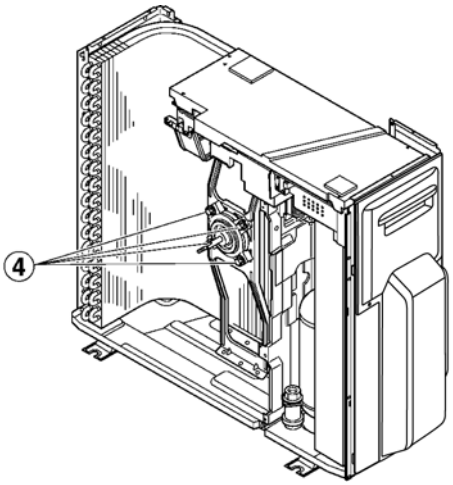


18.2.4. Removing the Propeller Fan and Fan Motor

1. Follow the steps in 16.2.1 for removing the cabinet top plate and cabinet front plate.
2. Remove the propeller fan by removing the nut turning clockwise at its center.



3. Disconnect the fan motor connector from the control P.C. Board.
4. Loosen the 4 fan motor mounting screws then remove the fan motor.



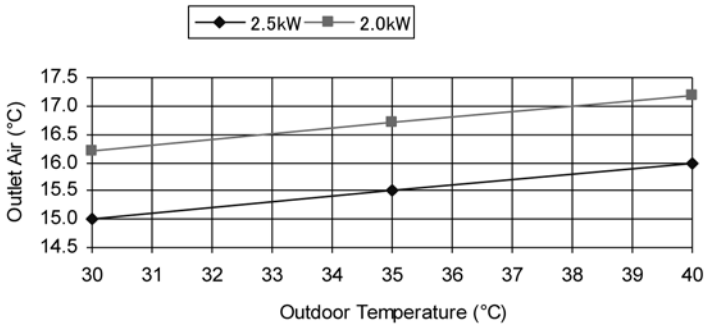
19 Technical Data

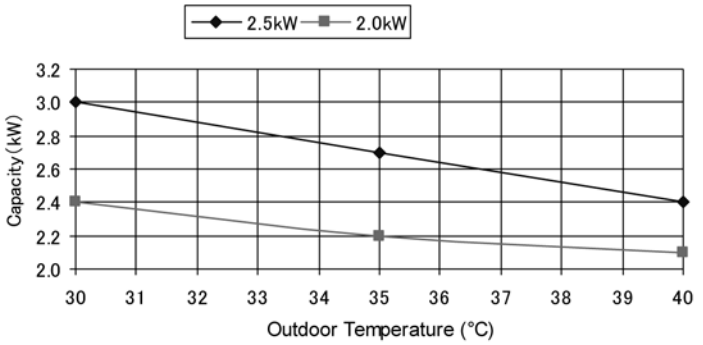
19.1. Operation Characteristics (CU-2E15LBE)

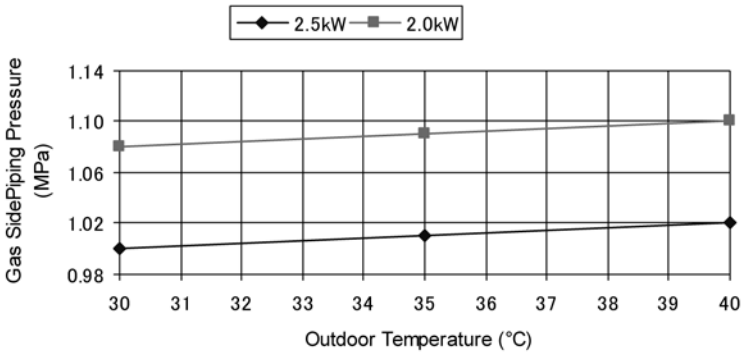
19.1.1. One Indoor Unit Operation

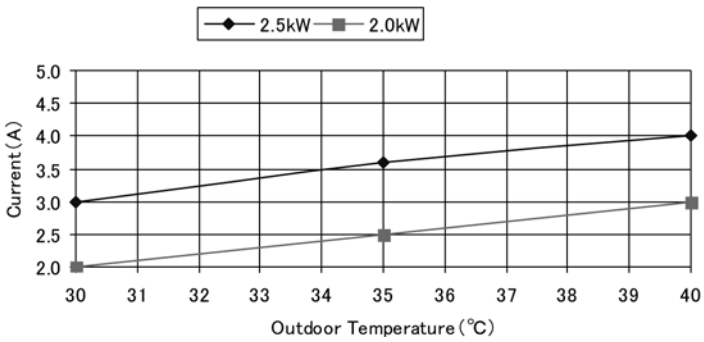
• Cooling Characteristic

[Condition] Room temperature: 27°C (DBT), 19°C (WBT)
Operation condition: High fan speed
Piping length: 7.5m



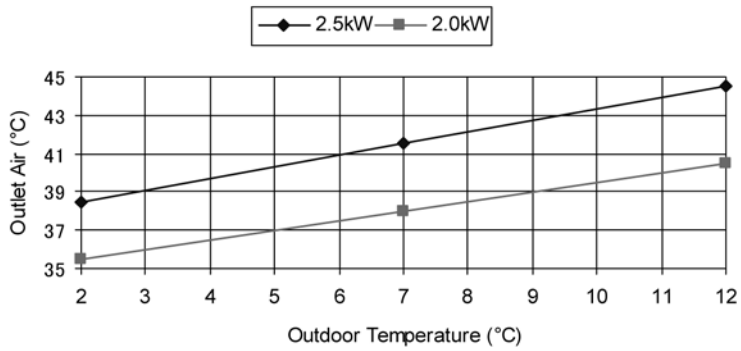


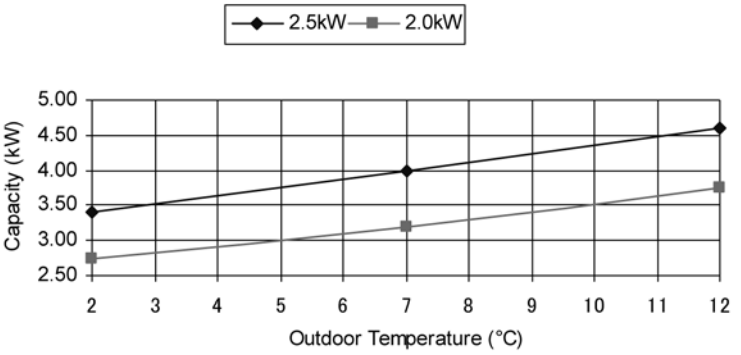


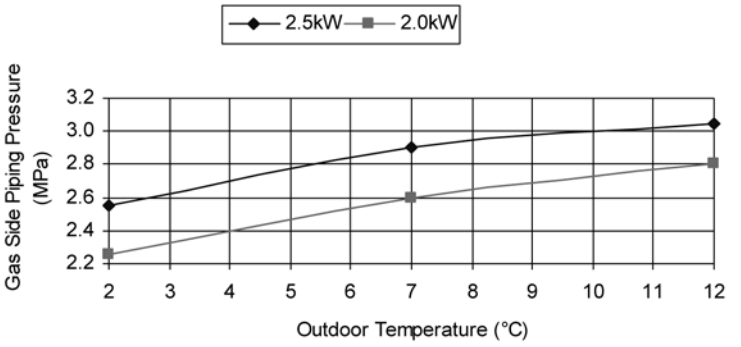


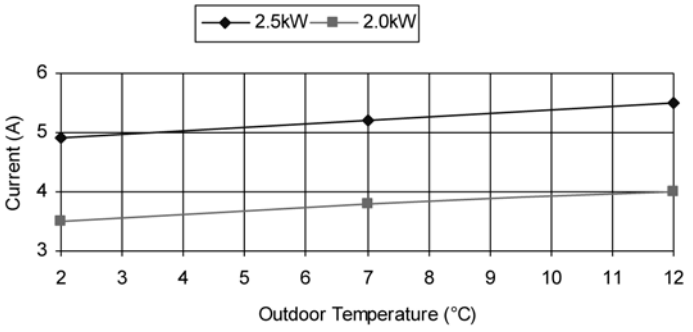
• Heating Characteristic

[Condition] Room temperature: 27°C (DBT), 19°C (WBT)
Operation condition: High fan speed
Piping length: 7.5m





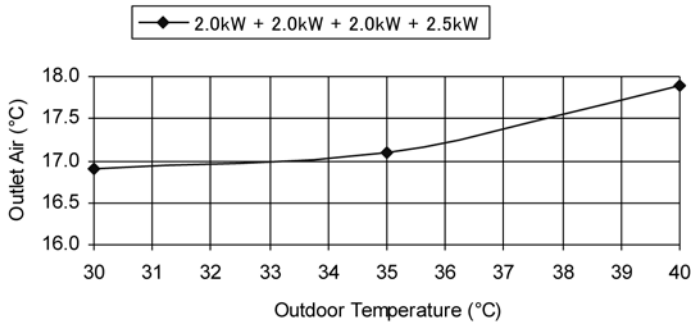


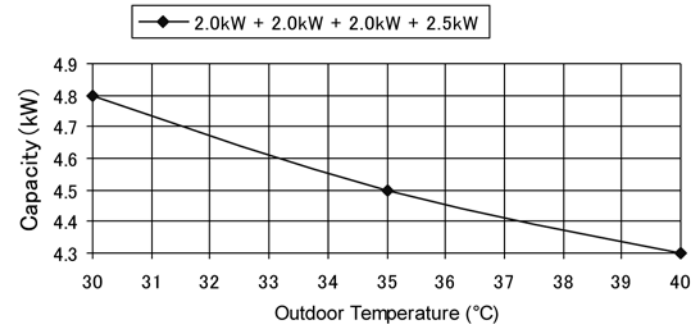


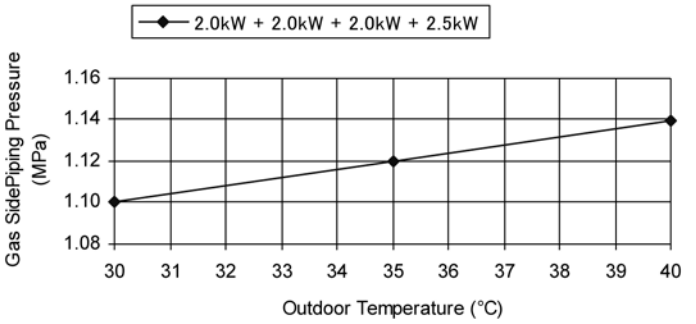
19.1.2. Two Indoor Unit Operation

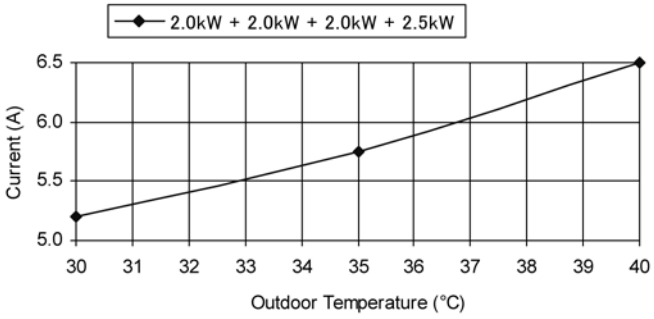
• Cooling Characteristic

[Condition] Room temperature: 27°C (DBT), 19°C (WBT)
Operation condition: High fan speed
Outdoor temperature: 7.5m



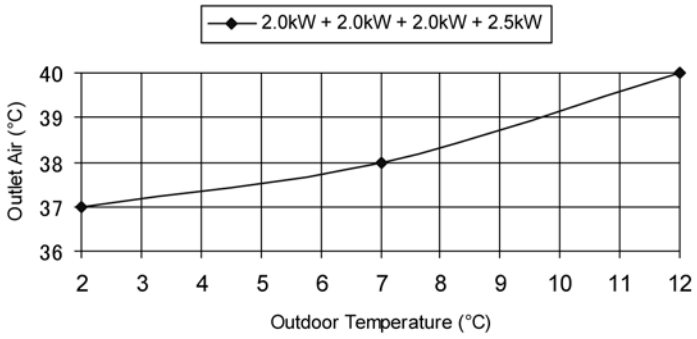


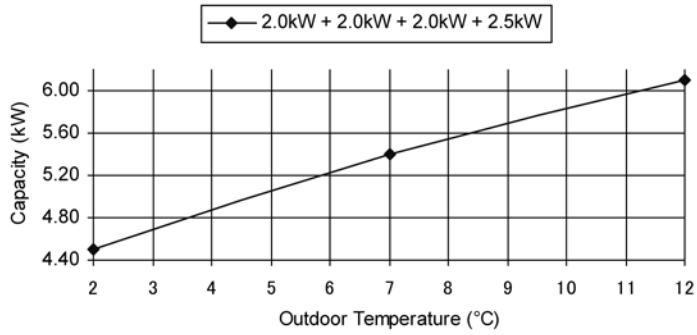


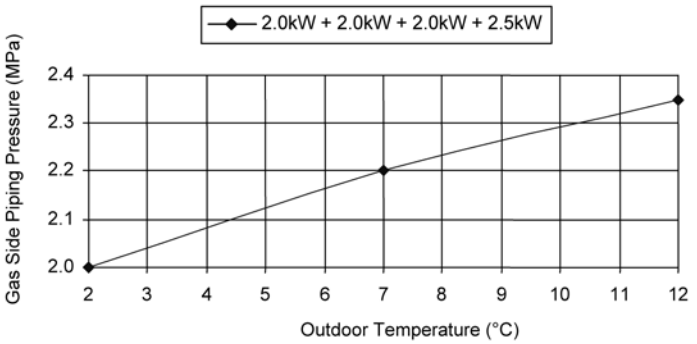


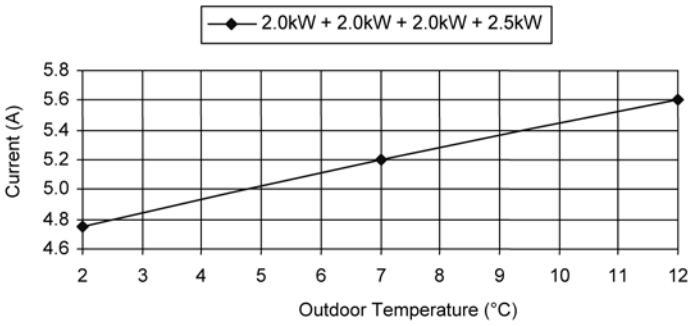
• Heating Characteristic

[Condition] Room temperature: 27°C (DBT), 19°C (WBT)
Operation condition: High fan speed
Piping length: 7.5m







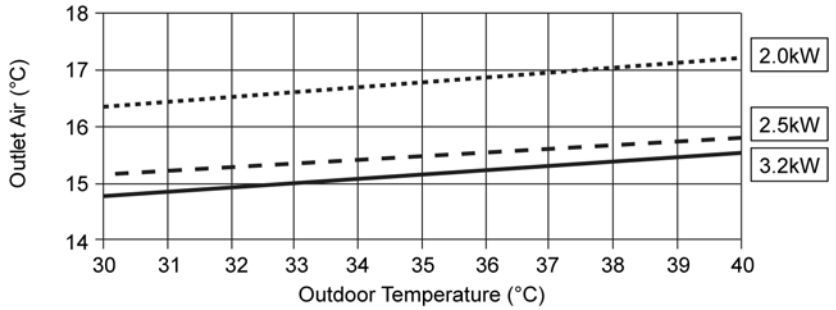


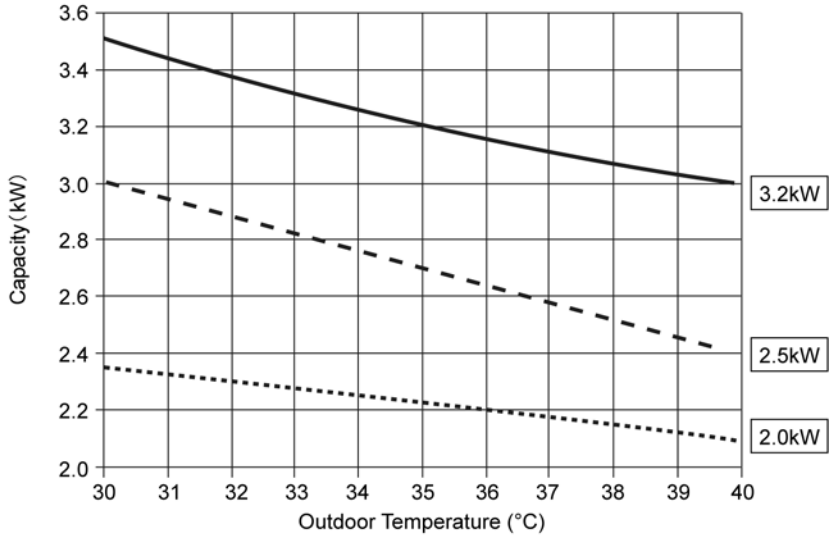
19.2. Operation Characteristics (CU-2E18LBE)

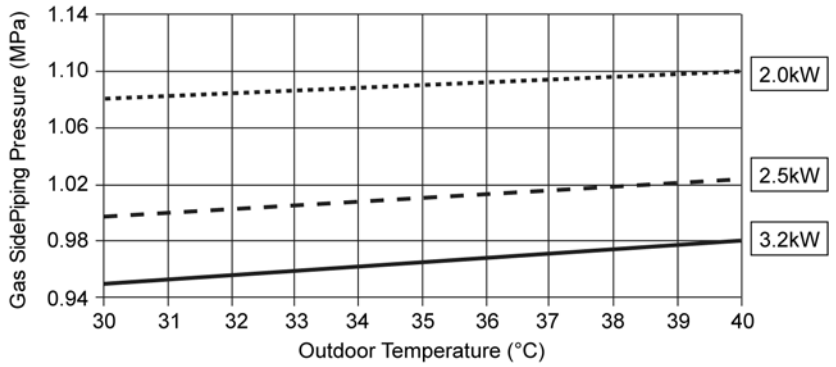
19.2.1. One Indoor Unit Operation

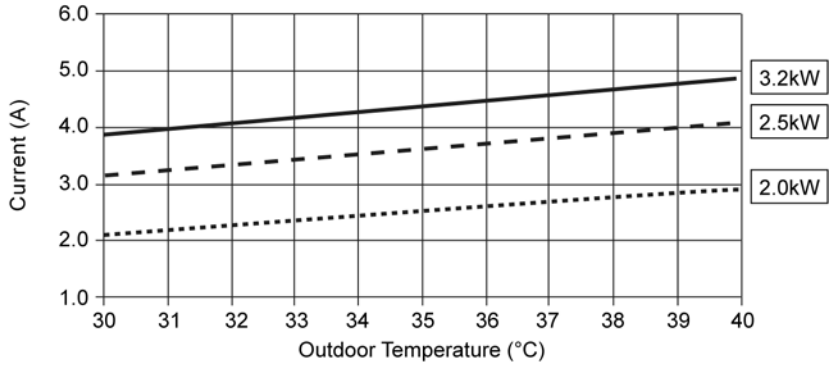
• Cooling Characteristic

[Condition] Room temperature: 27°C (DBT), 19°C (WBT)
Operation condition: High fan speed
Piping length: 7.5m



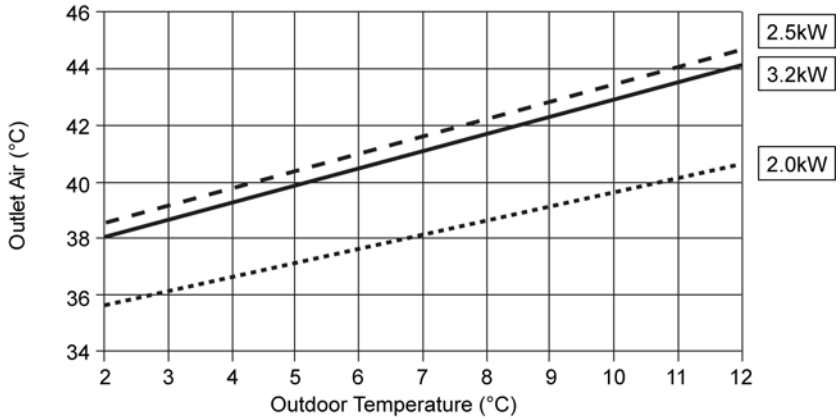


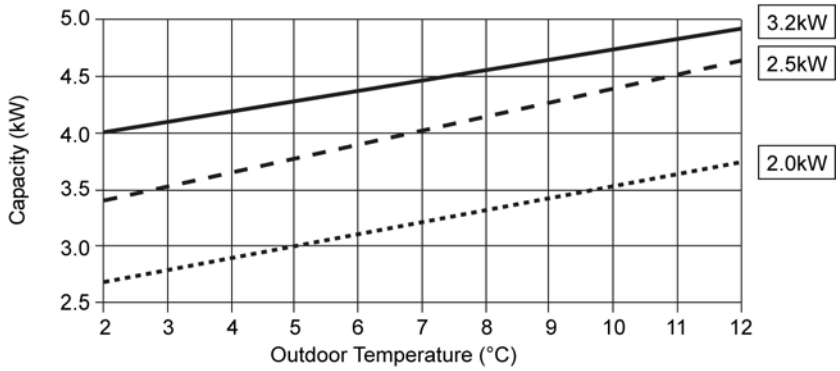


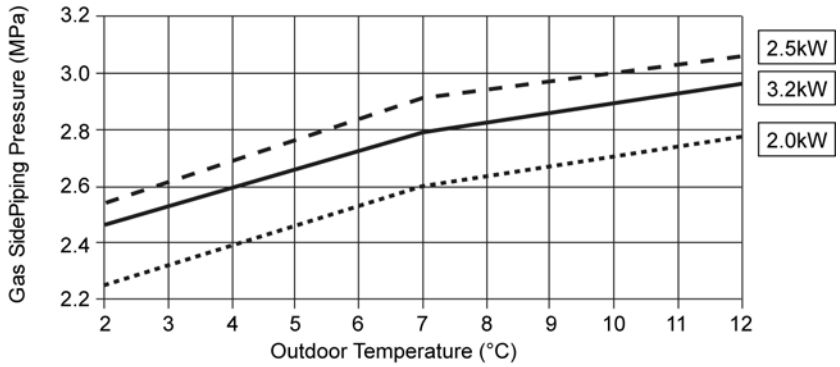


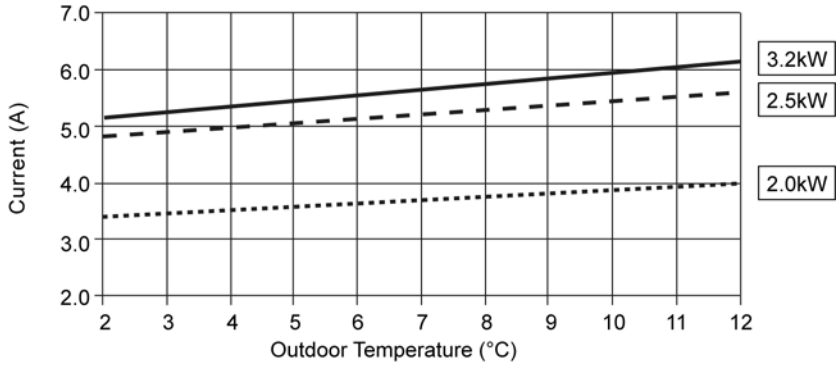
• Heating Characteristic

[Condition] Room temperature: 20°C (DBT), 12°C (WBT)
Operation condition: At high fan
Piping length: 7.5m





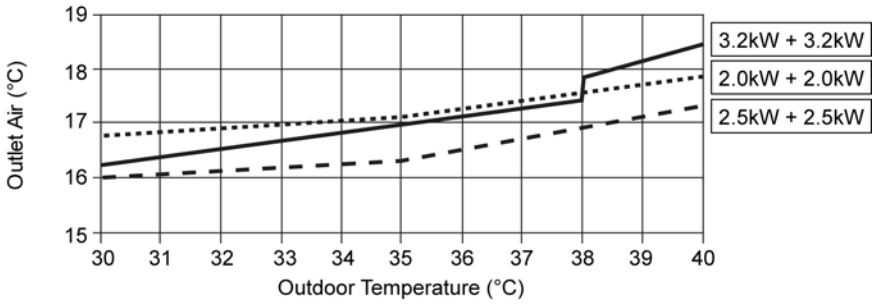


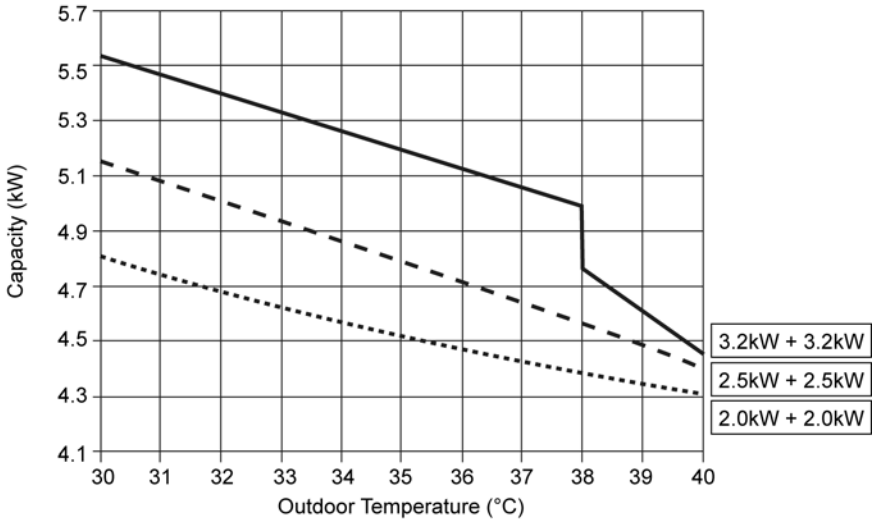


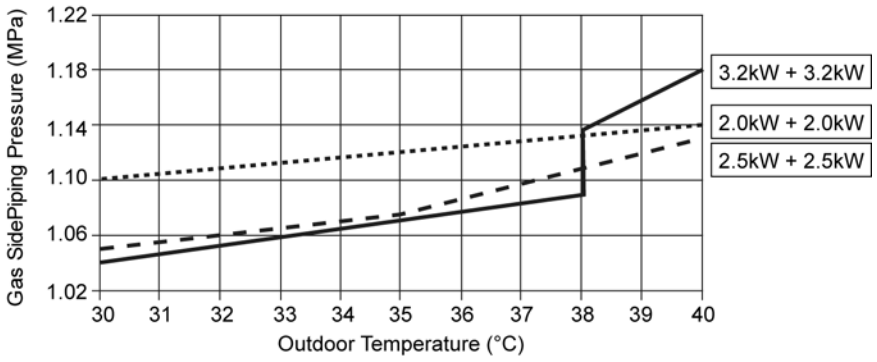
19.2.2. Two Indoor Unit Operation

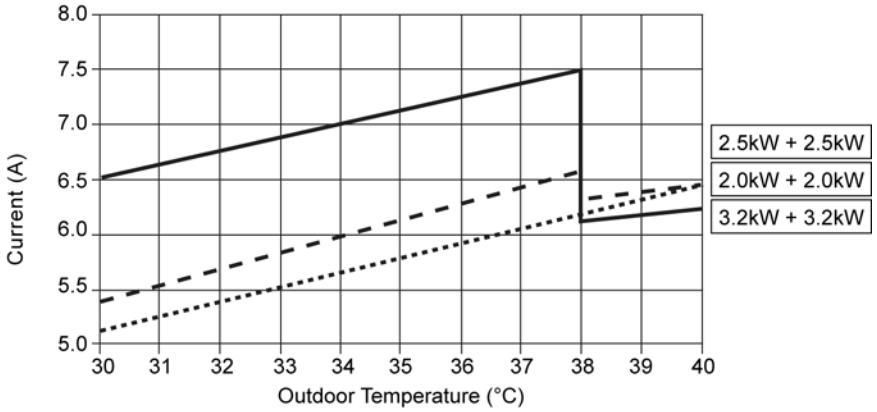
• Cooling Characteristic

[Condition] Room temperature: 27°C (DBT), 19°C (WBT)
Operation condition: High fan speed
Piping length: 7.5m



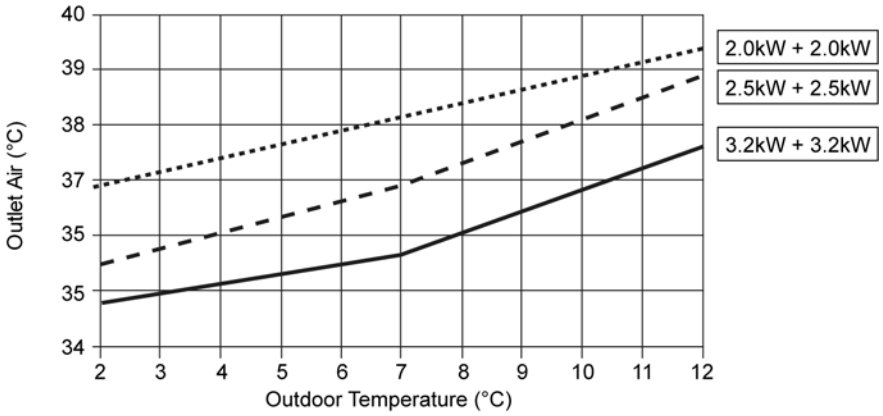


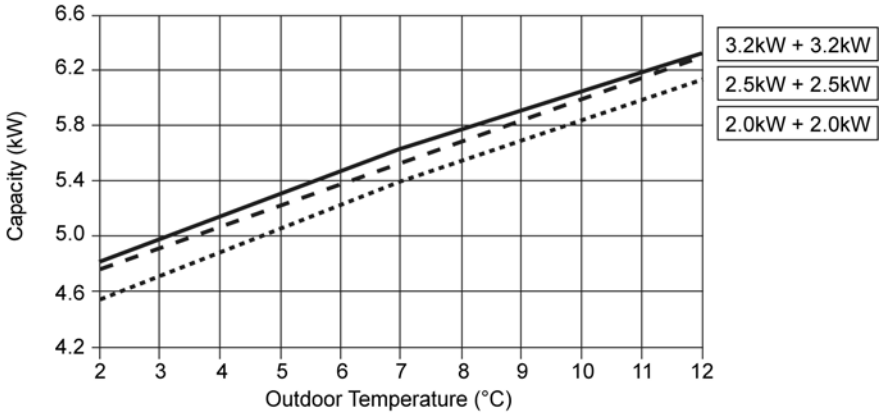


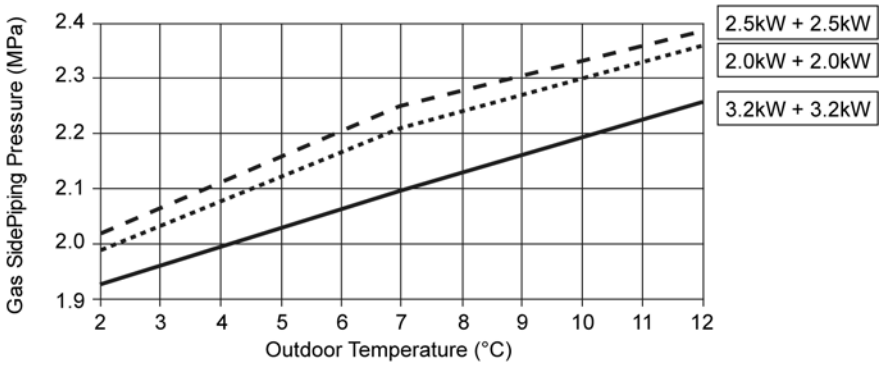


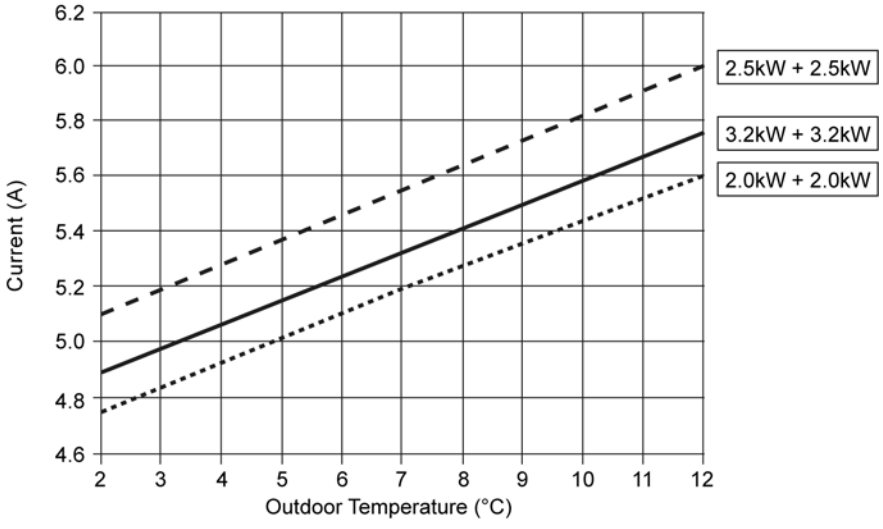
• Heating Characteristic

[Condition] Room temperature: 20°C (DBT), 12°C (WBT)
Operation condition: At high fan
Piping length: 7.5m









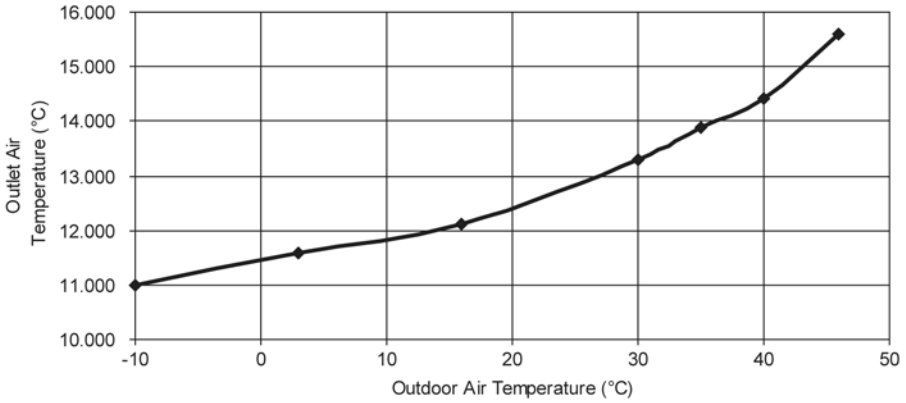
19.3. Operation Characteristics (CU-3E18LBE)

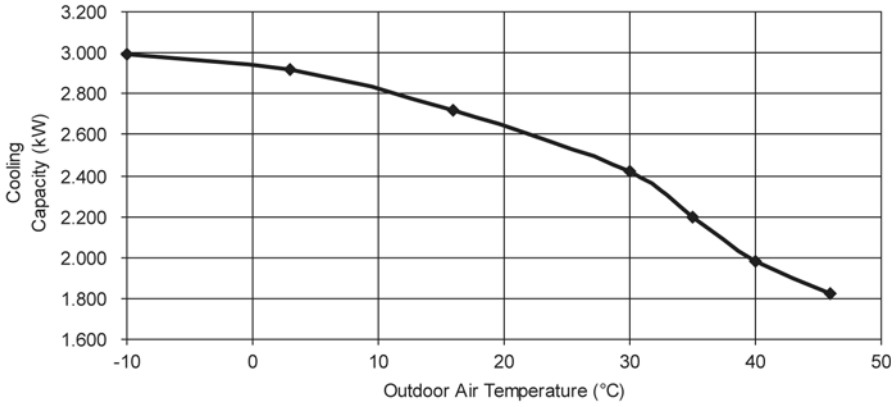
19.3.1. One Indoor Unit Operation

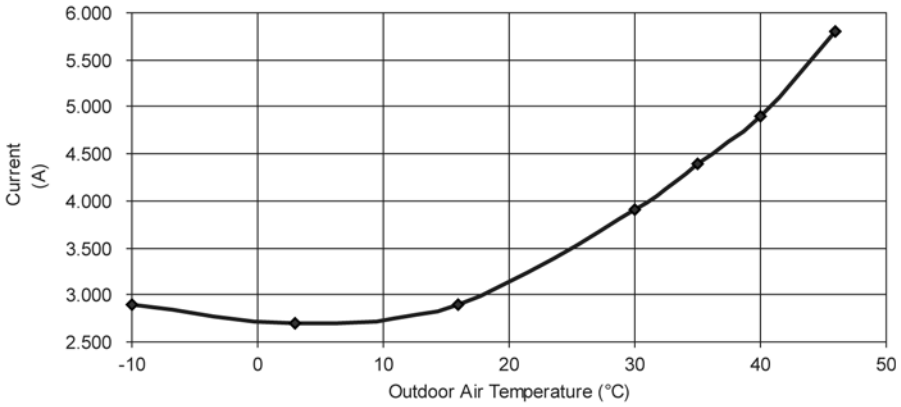
• Cooling Characteristic

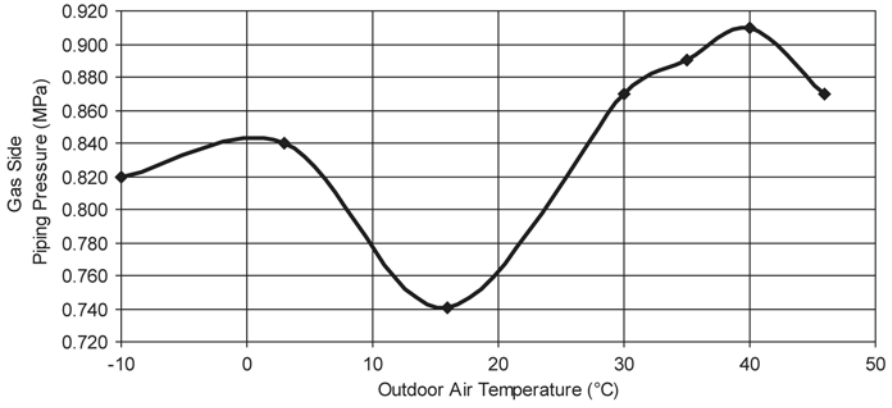
[Condition] Room temperature: 27°C (DBT), 19°C (WBT)
Operation condition: High fan speed
Piping length: 5m
230V 50Hz

A) Indoor unit capacity: Cooling (2.0: CS-E7LKEW), service mode frequency = 32 Hz





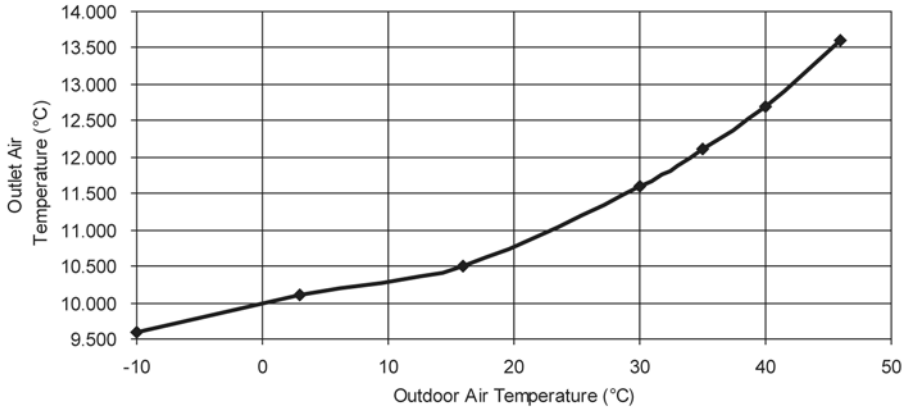


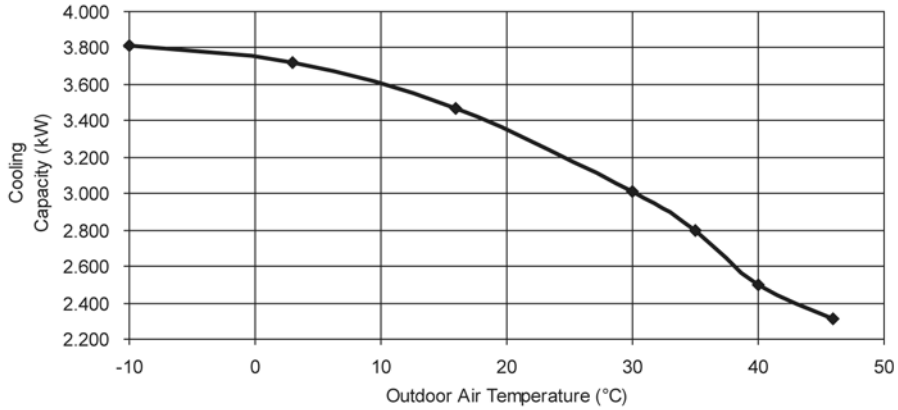


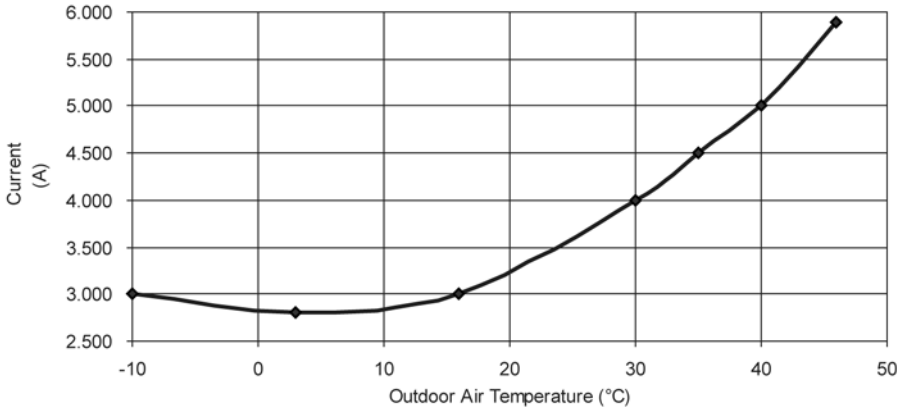
• Cooling Characteristic

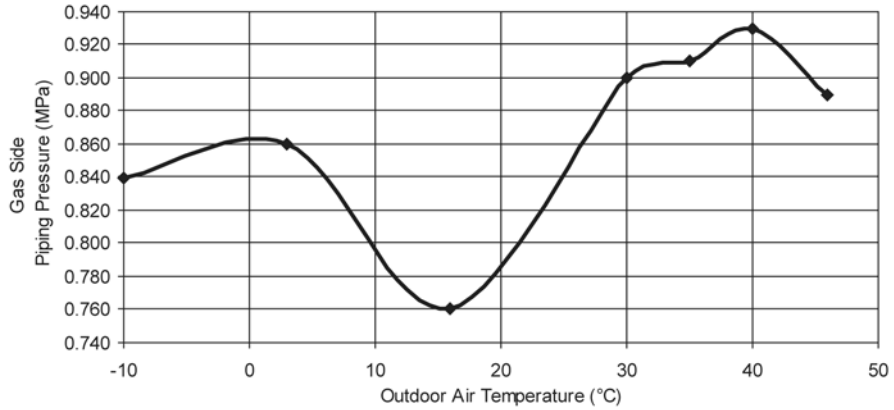
[Condition] Room temperature: 27°C (DBT), 19°C (WBT)
Operation condition: High fan speed
Piping length: 5m
230V 50Hz

B) Indoor unit capacity: Cooling (2.5: CS-E9LKEW), service mode frequency = 32 Hz





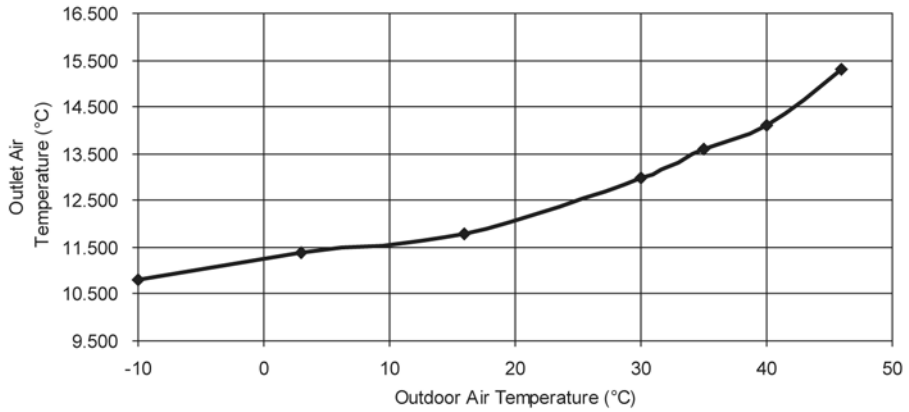


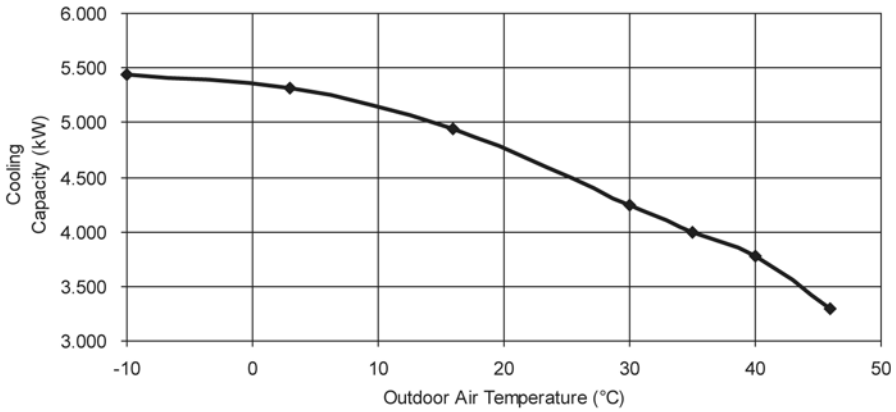


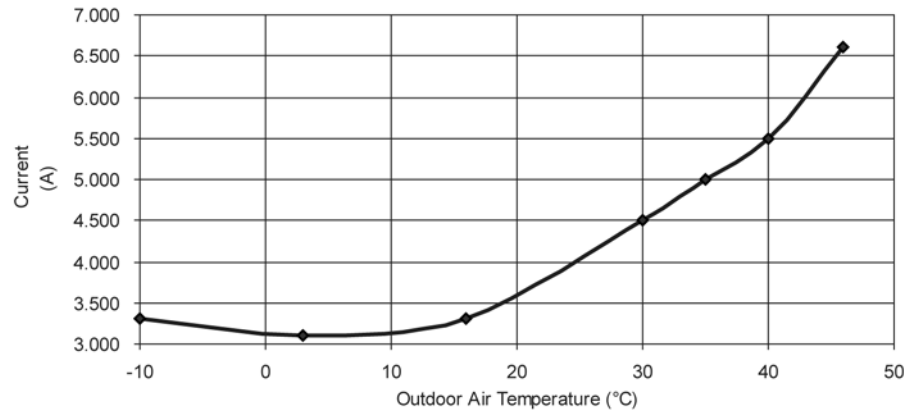
• Cooling Characteristic

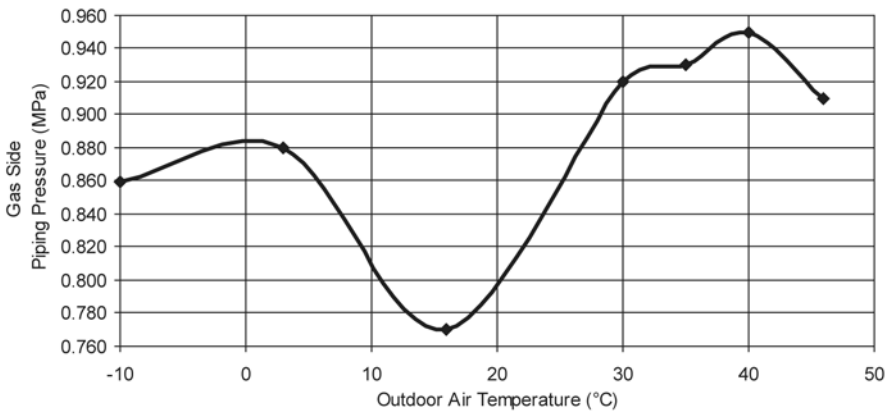
[Condition] Room temperature: 27°C (DBT), 19°C (WBT)
Operation condition: High fan speed
Piping length: 5m
230V 50Hz

C) Indoor unit capacity: Cooling (4.0: CS-E15LKEW), service mode frequency = 35 Hz





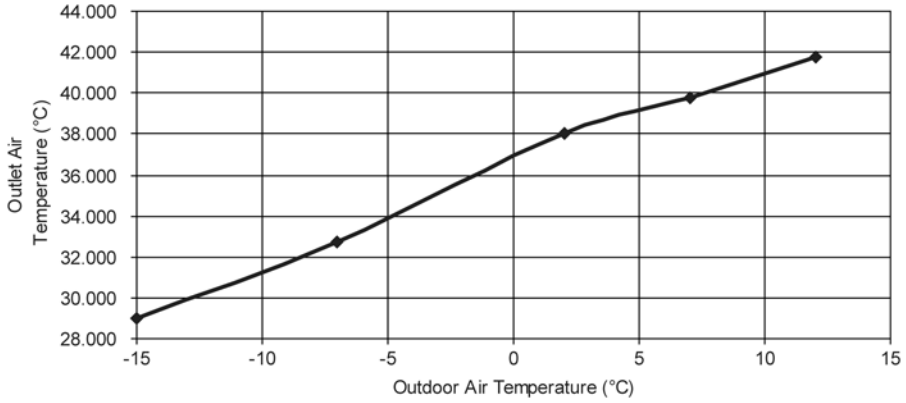


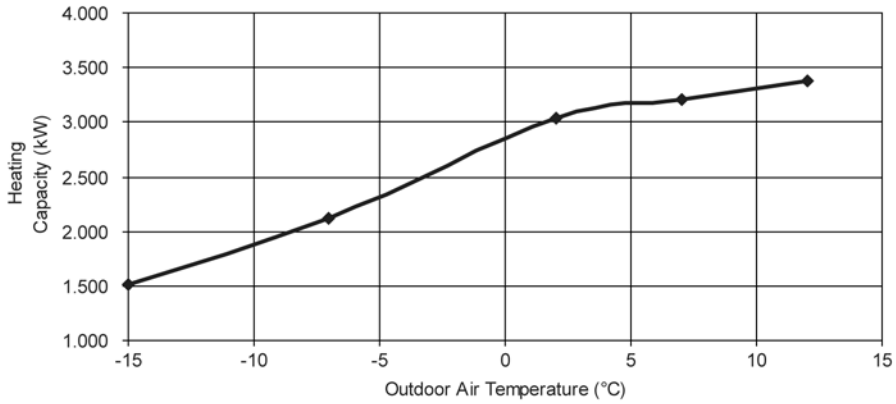


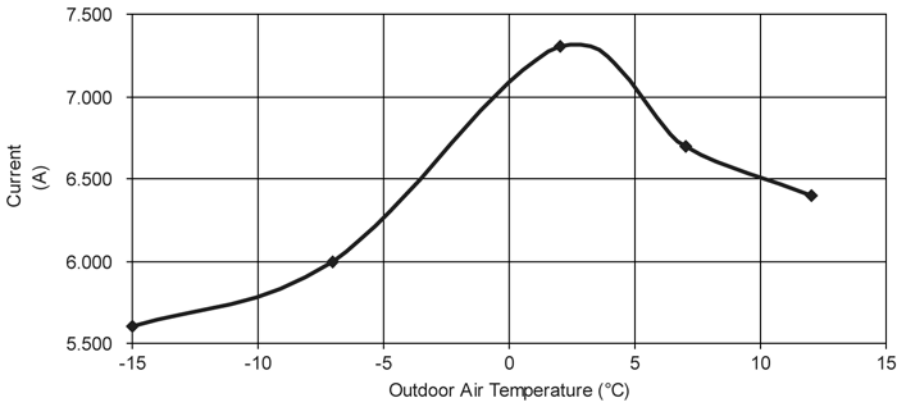
• Heating Characteristic

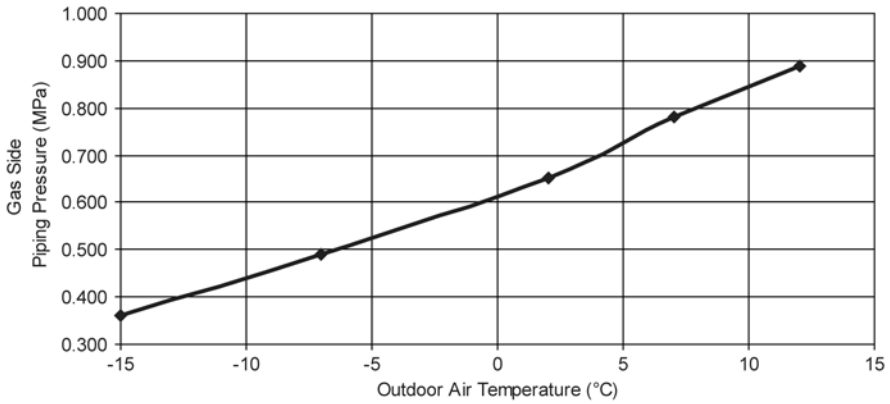
[Condition] Room temperature: 20°C (DBT), 12°C (WBT)
Operation condition: High fan speed
Piping length: 5m
230V 50Hz

A) Indoor unit capacity: Heating (2.0: CS-E7LKEW), service mode frequency = 43 Hz





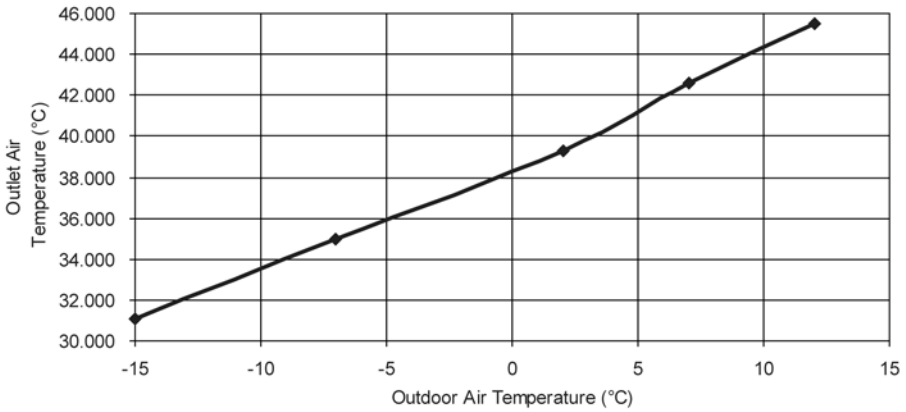


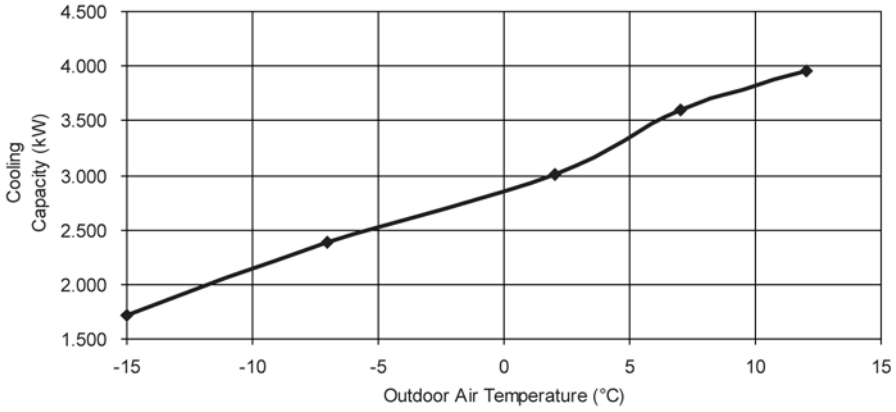


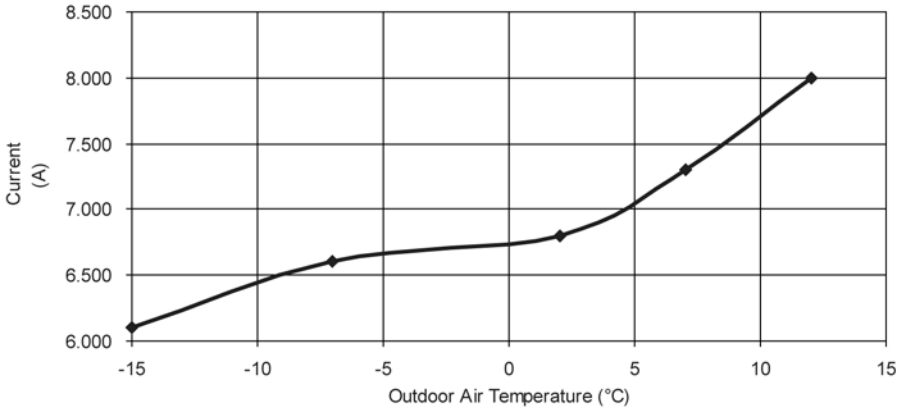
• Heating Characteristic

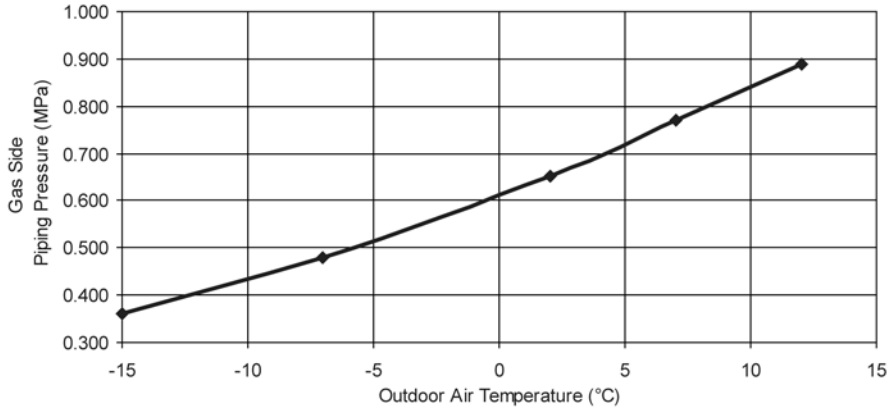
[Condition] Room temperature: 20°C (DBT), 12°C (WBT)
Operation condition: High fan speed
Piping length: 5m
230V 50Hz

B) Indoor unit capacity: Heating (2.5: CS-E9LKEW), service mode frequency = 49 Hz





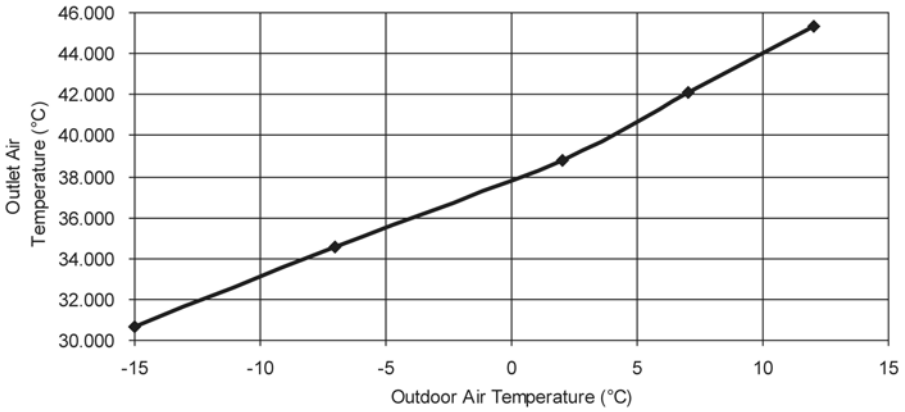


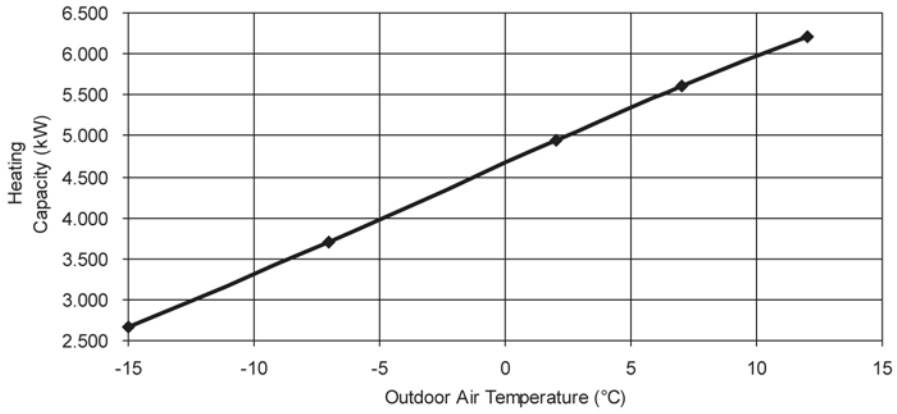


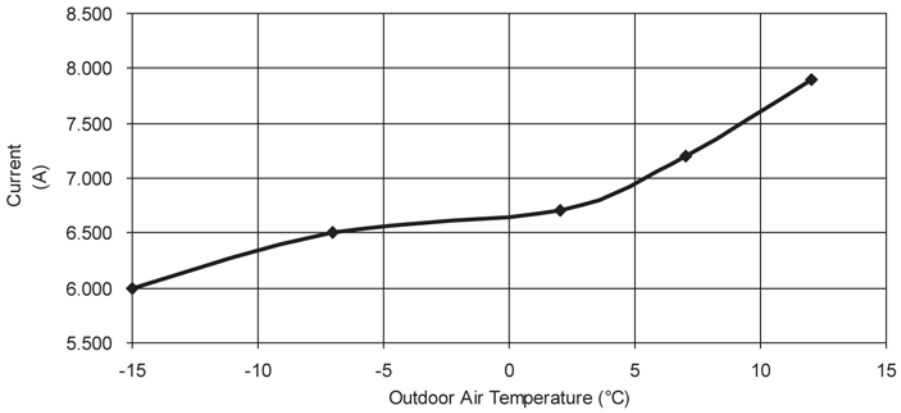
• Heating Characteristic

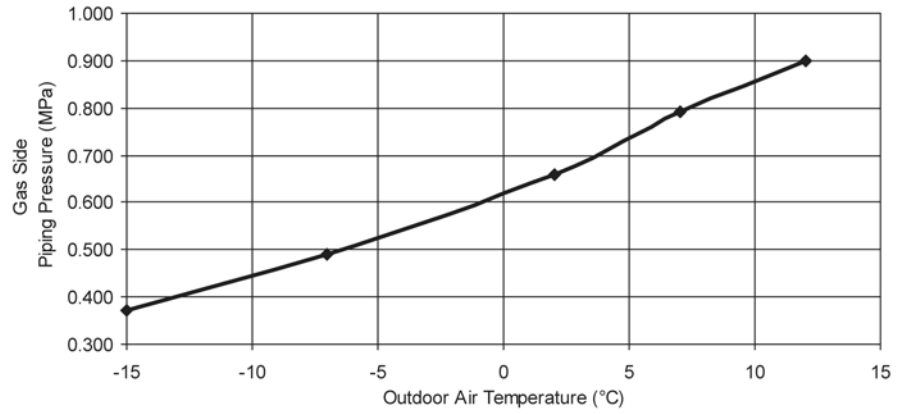
[Condition] Room temperature: 20°C (DBT), 12°C (WBT)
Operation condition: High fan speed
Piping length: 5m
230V 50Hz

C) Indoor unit capacity: Heating (4.0: CS-E15LKEW), service mode frequency = 49 Hz







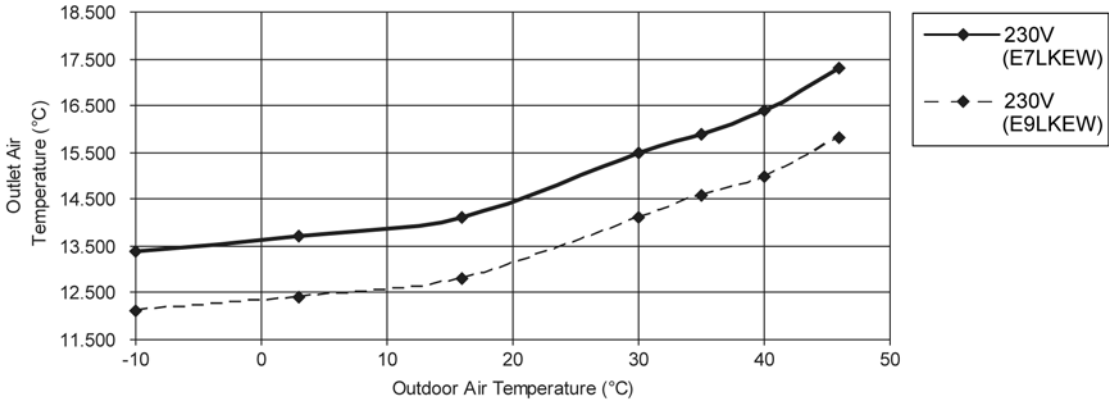


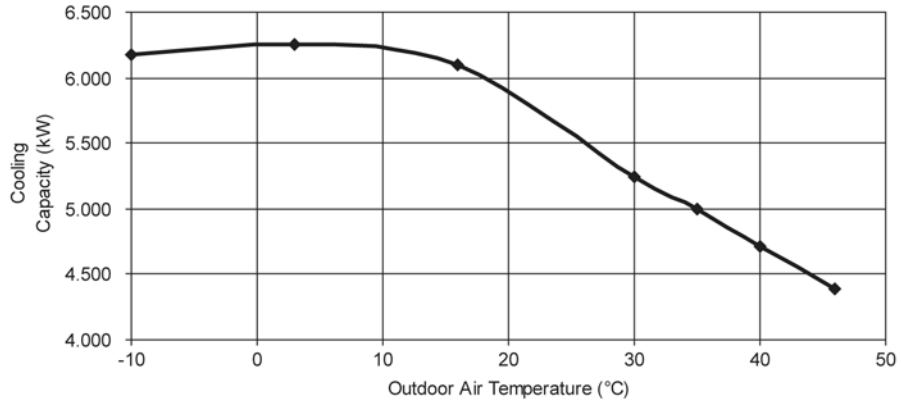
19.3.2. Two Indoor Unit Operation

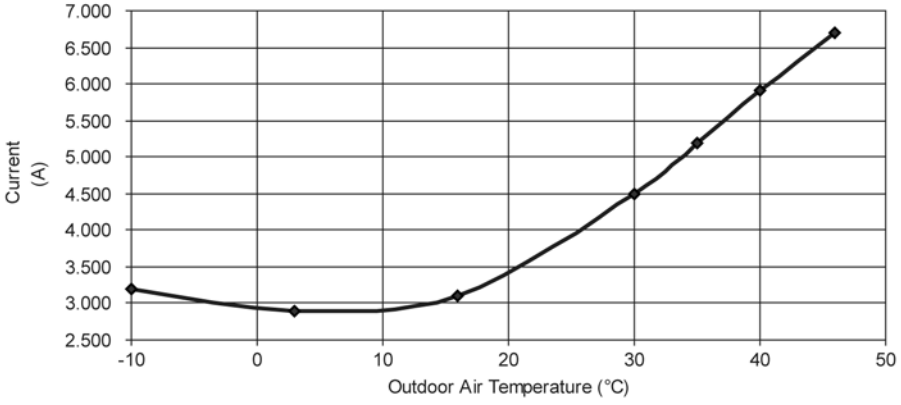
• Cooling Characteristic

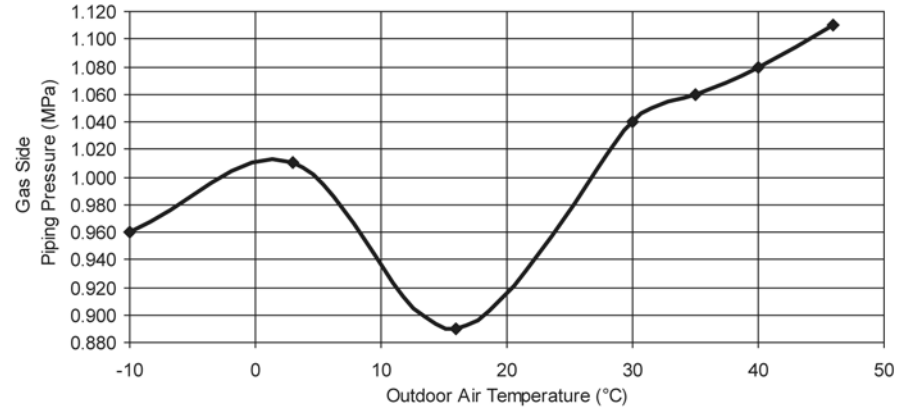
[Condition] Room temperature: 27°C (DBT), 19°C (WBT)
Operation condition: High fan speed
Piping length: 5m
230V 50Hz

A) Indoor unit capacity: Cooling (2.0 + 2.5: CS-E7LKEW + CS-E9LKEW), service mode frequency = 38 Hz





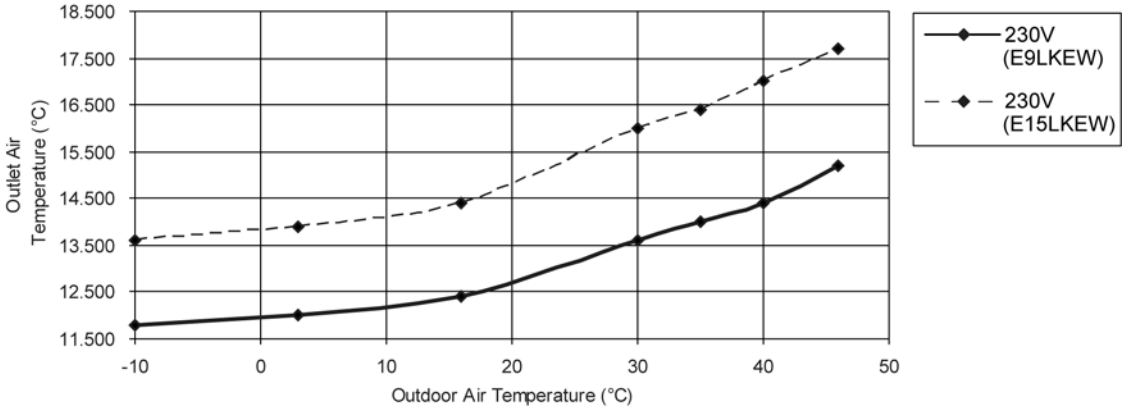


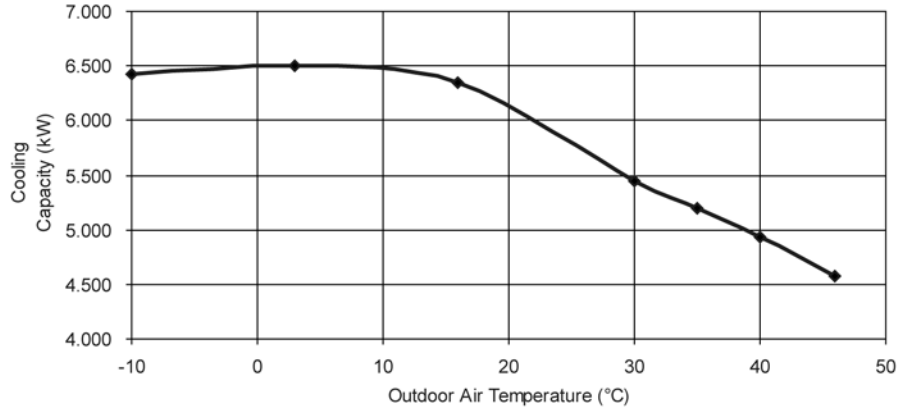


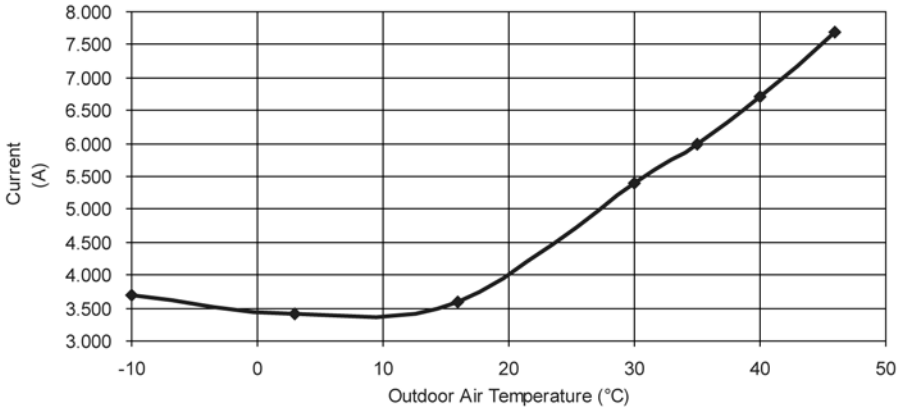
• Cooling Characteristic

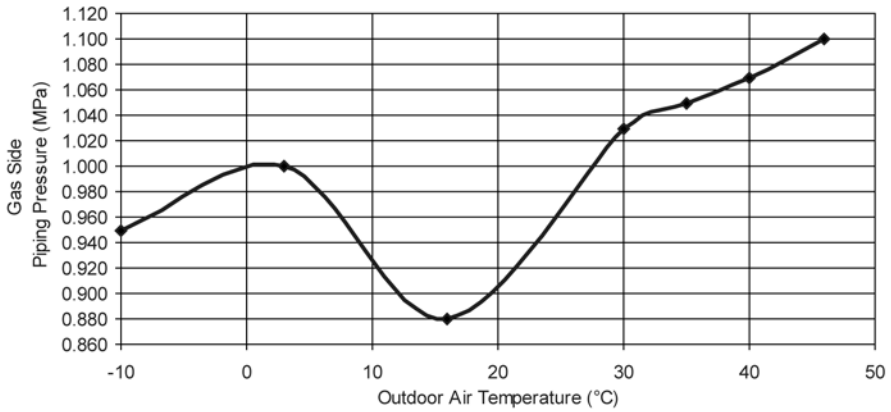
[Condition] Room temperature: 27°C (DBT), 19°C (WBT)
Operation condition: High fan speed
Piping length: 5m
230V 50Hz

B) Indoor unit capacity: Cooling (2.5 + 4.0: CS-E9LKEW + CS-E15LKEW), service mode frequency = 42 Hz





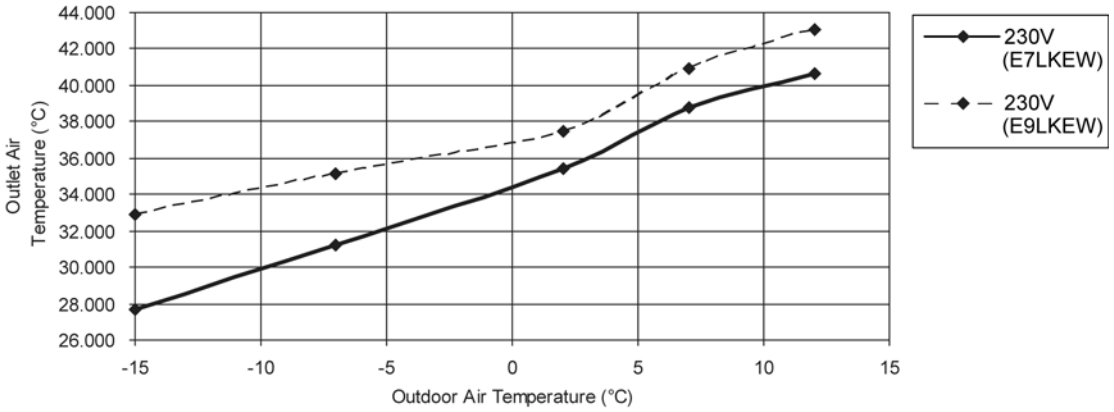


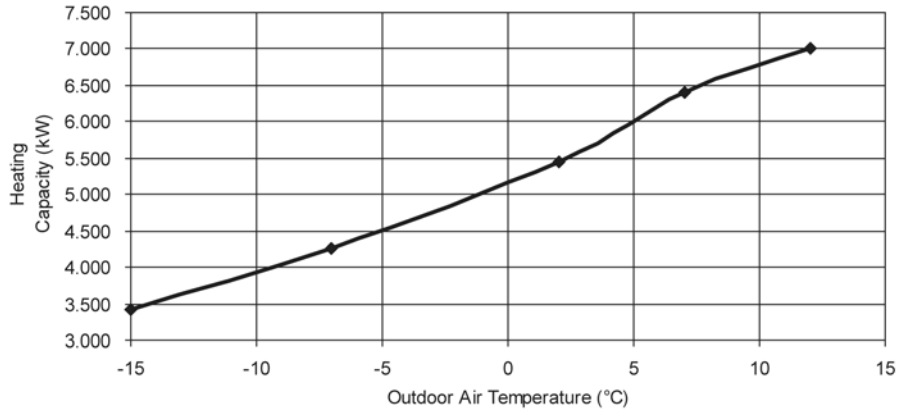


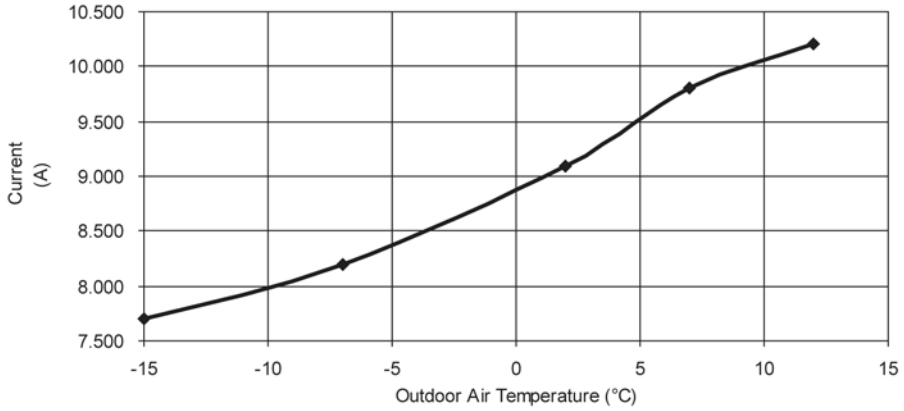
• Heating Characteristic

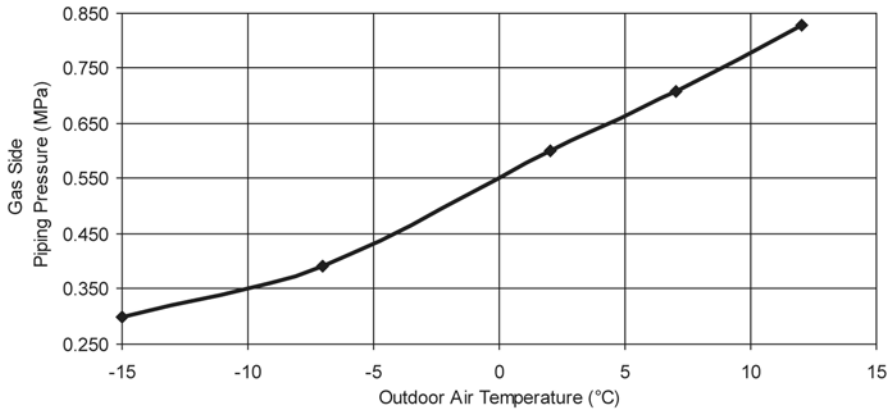
[Condition] Room temperature: 27°C (DBT), 19°C (WBT)
Operation condition: High fan speed
Piping length: 5m
230V 50Hz

A) Indoor unit capacity: Heating (2.0 + 2.5: CS-E7LKEW + CS-E9LKEW), service mode frequency = 70 Hz





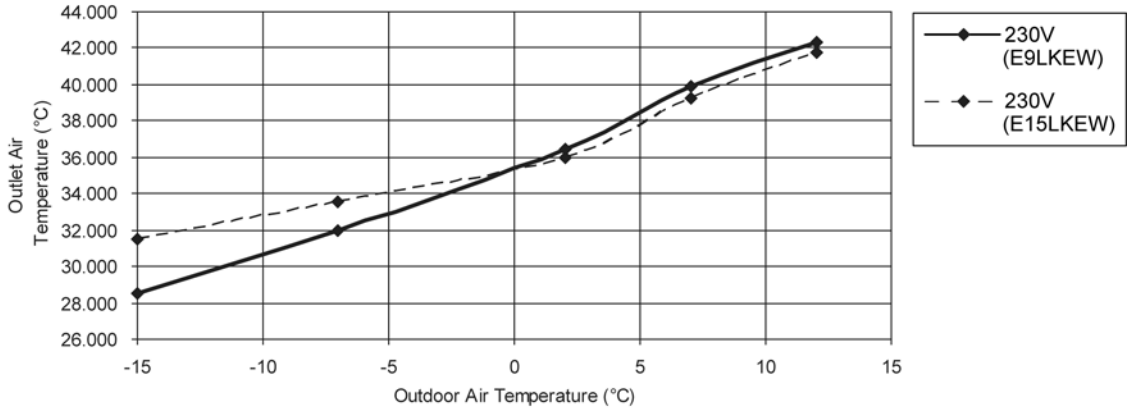


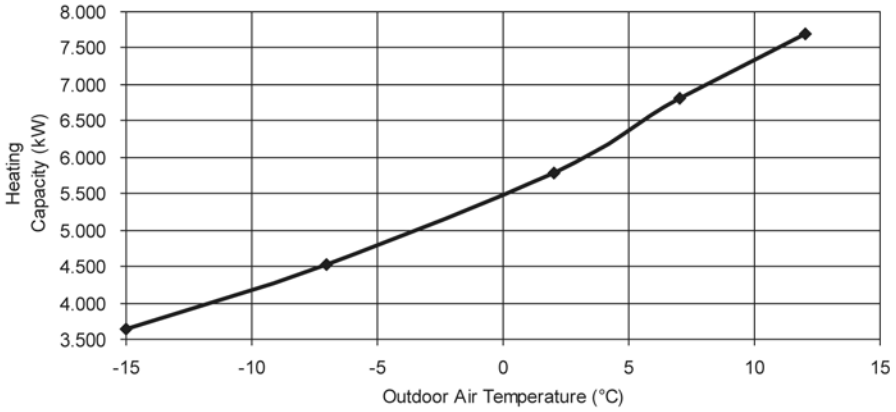


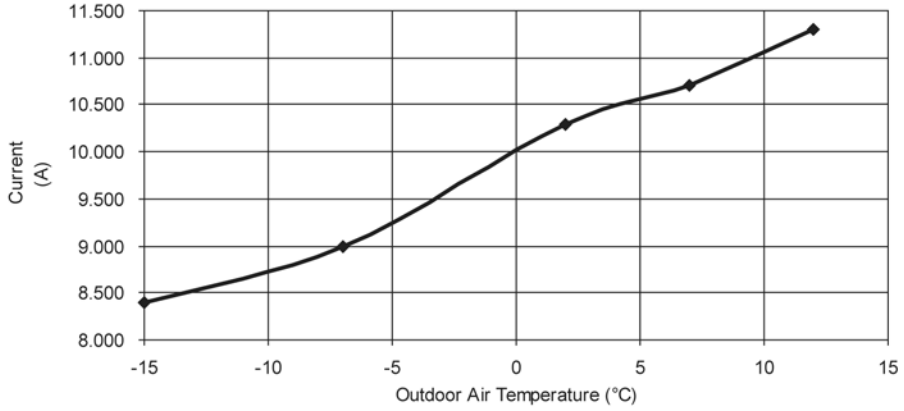
• Heating Characteristic

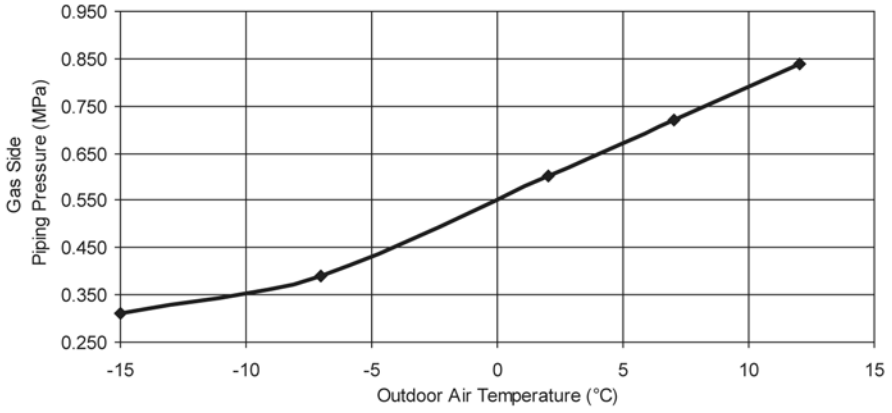
[Condition] Room temperature: 27°C (DBT), 19°C (WBT)
Operation condition: High fan speed
Piping length: 5m
230V 50Hz

B) Indoor unit capacity: Heating (2.5 + 4.0: CS-E9LKEW + CS-E15LKEW), service mode frequency = 75 Hz







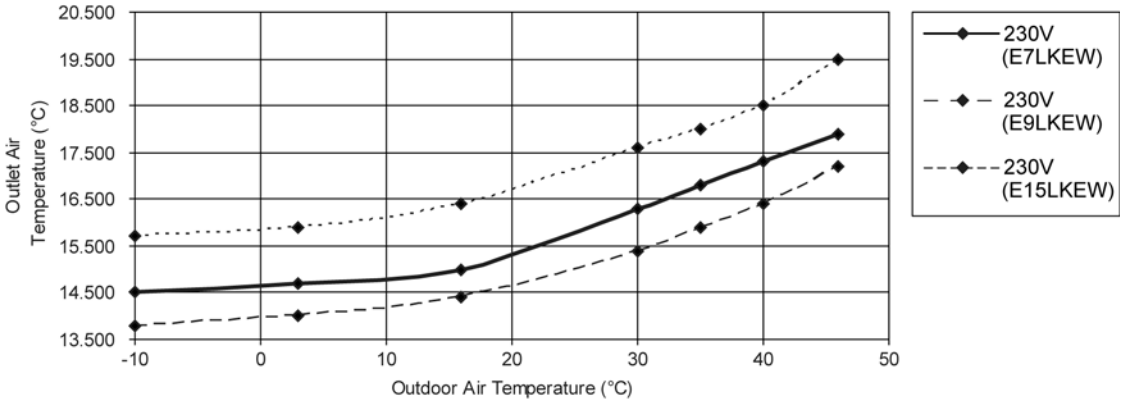


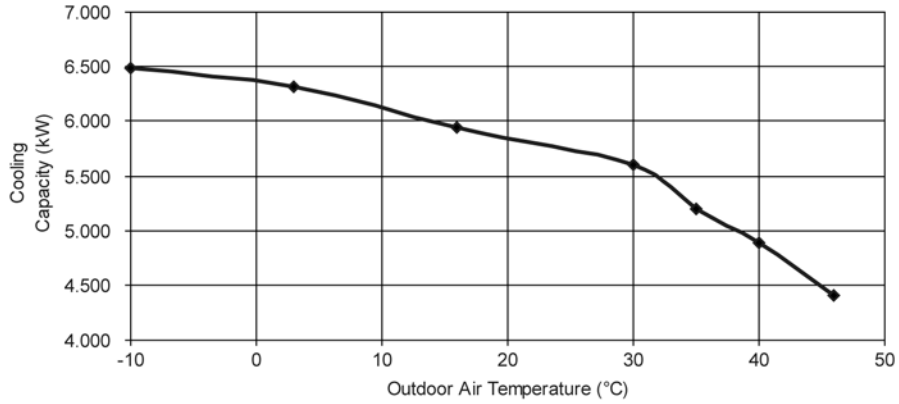
19.3.3. Three Indoor Unit Operation

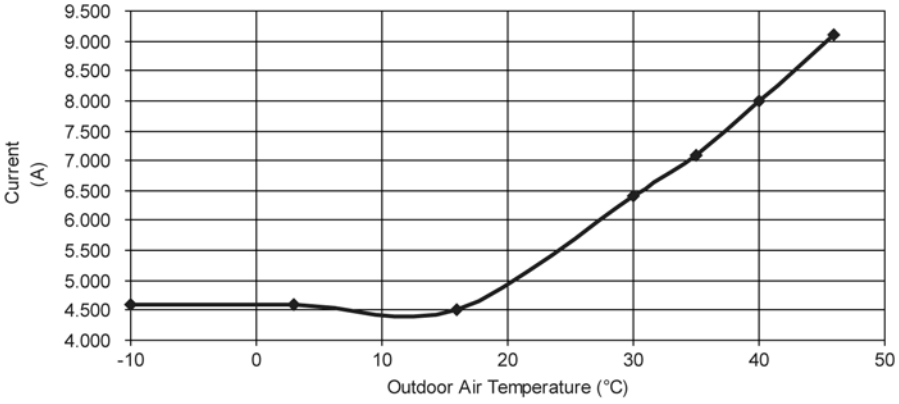
• Cooling Characteristic

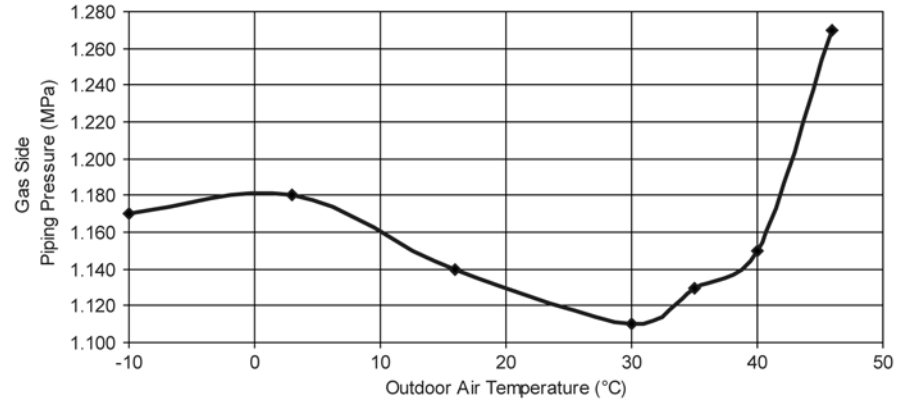
[Condition] Room temperature: 27°C (DBT), 19°C (WBT)
Operation condition: High fan speed
Piping length: 5m
230V 50Hz

C) Indoor unit capacity: Cooling (2.0 + 2.5 + 4.0: CS-E7LKEW + CS-E9LKEW + CS-E15LKEW), service mode frequency = 49 Hz





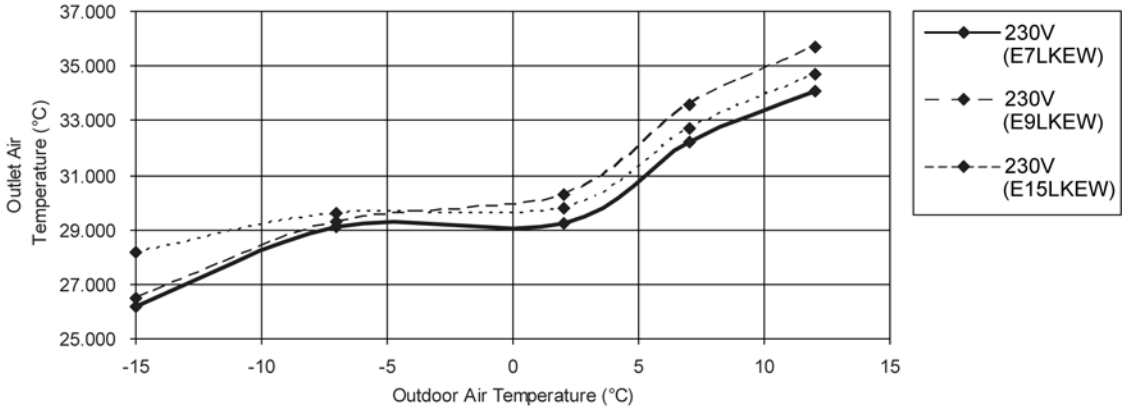


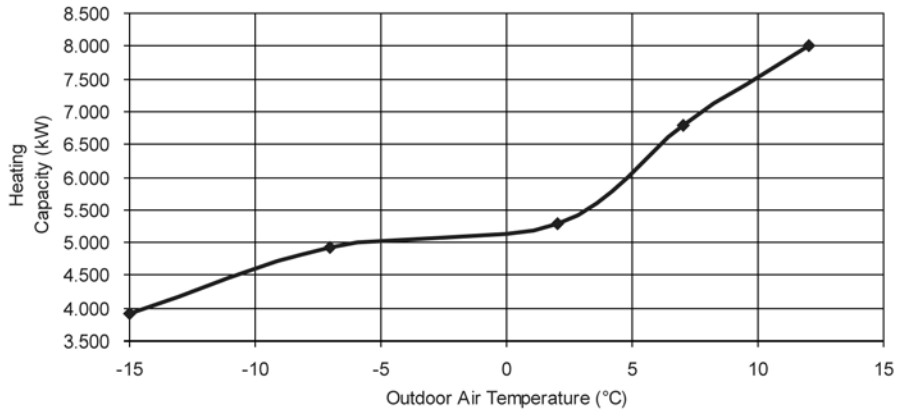


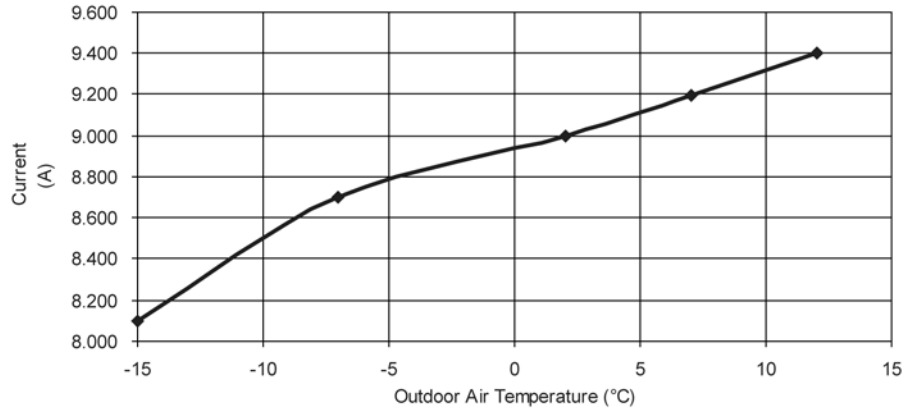
• Heating Characteristic

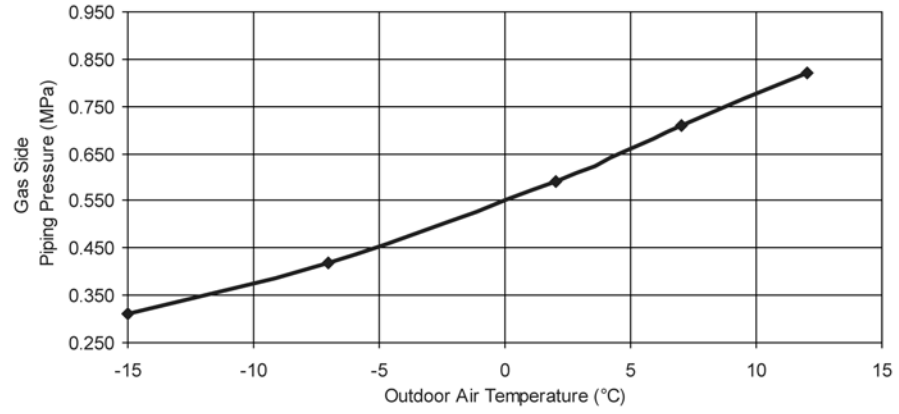
[Condition] Room temperature: 20°C (DBT), 12°C (WBT)
Operation condition: High fan speed
Piping length: 5m
230V 50Hz

A) Indoor unit capacity: Heating (2.0 + 2.5 + 4.0: CS-E7LKEW + CS-E9LKEW + CS-E15LKEW), service mode frequency = 75 Hz









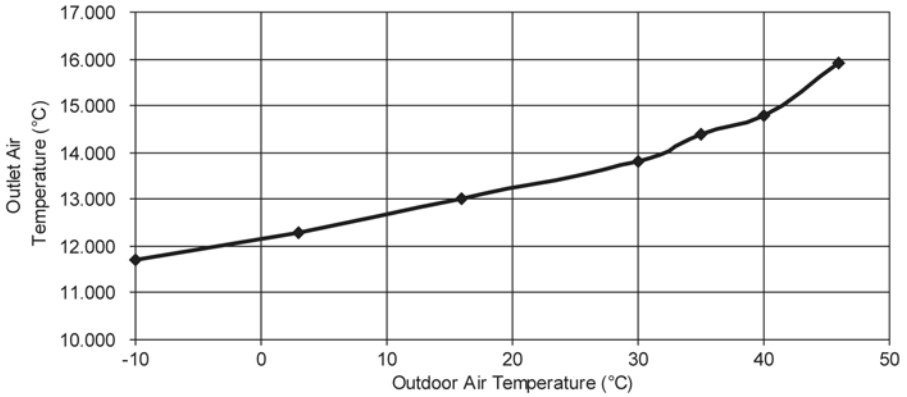
19.4. Operation Characteristics (CU-4E23LBE)

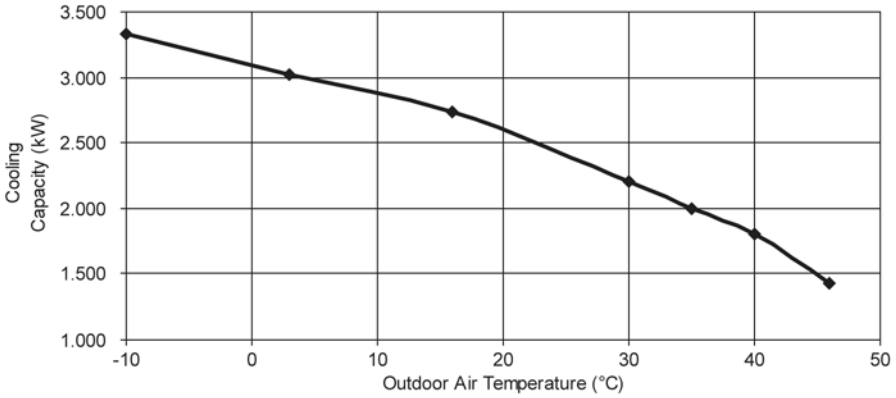
19.4.1. One Indoor Unit Operation

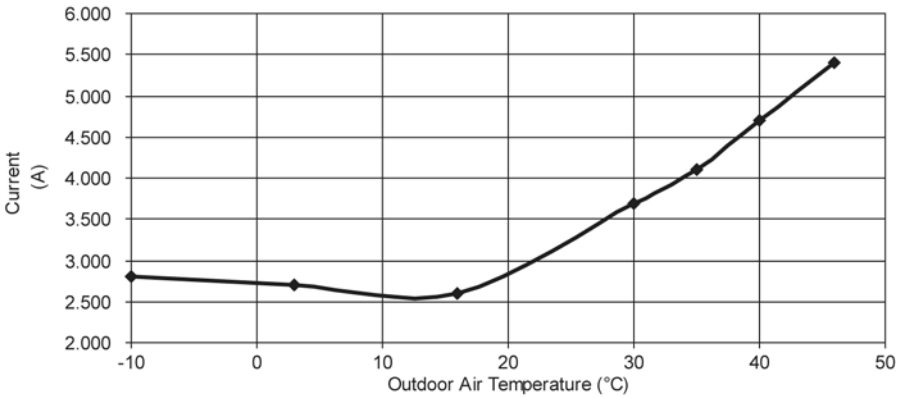
• Cooling Characteristic

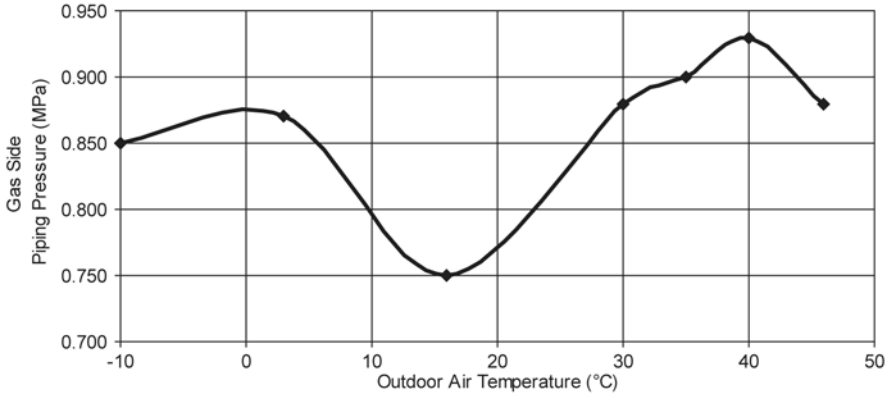
[Condition] Room temperature: 27°C (DBT), 19°C (WBT)
Operation condition: High fan speed
Piping length: 5m
230V 50Hz

A) Indoor unit capacity: Cooling (2.0: CS-E7LKEW), service mode frequency = 32 Hz





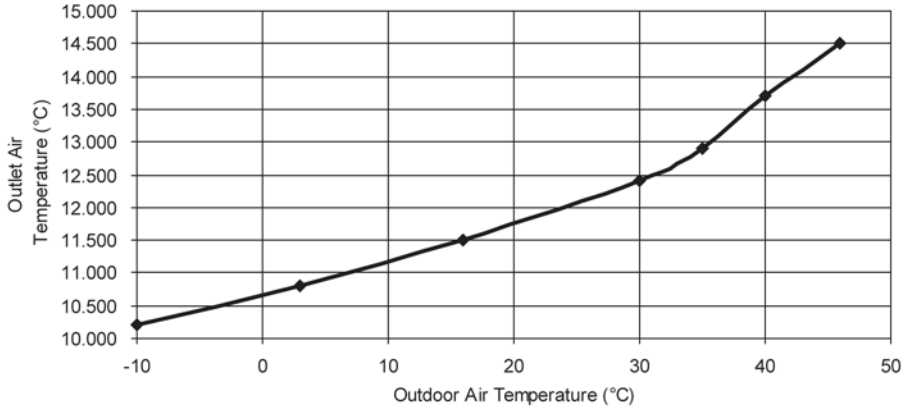


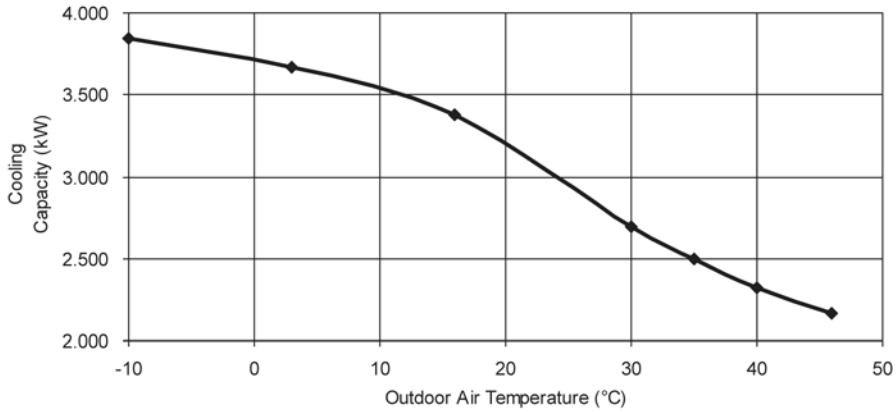


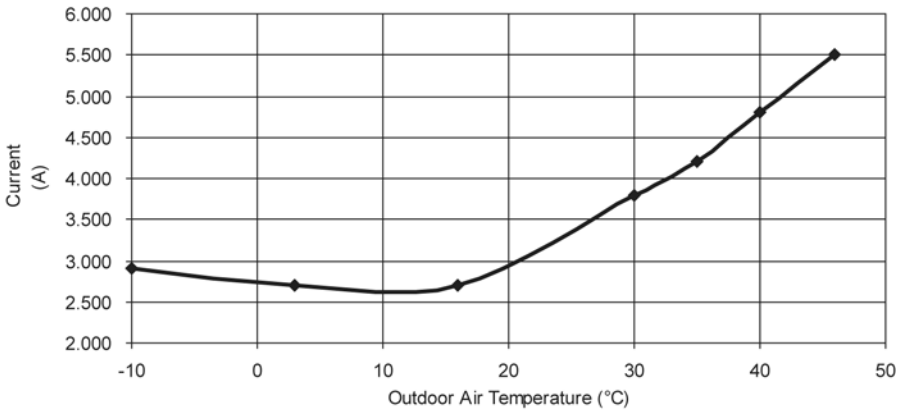
• Cooling Characteristic

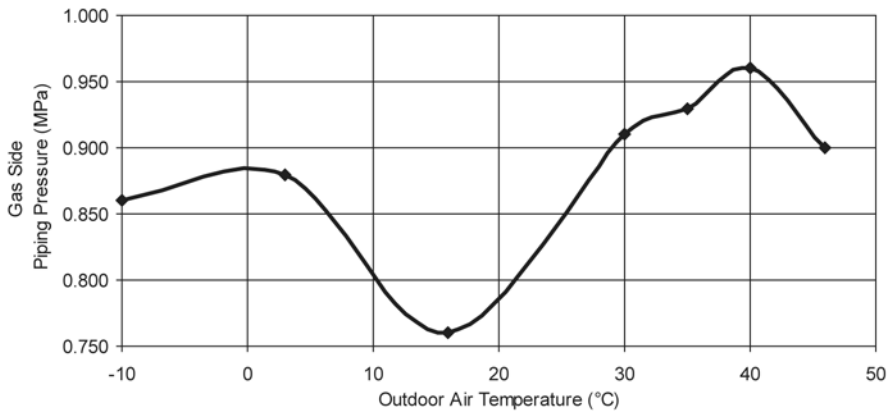
[Condition] Room temperature: 27°C (DBT), 19°C (WBT)
Operation condition: High fan speed
Piping length: 5m
230V 50Hz

B) Indoor unit capacity: Cooling (2.5: CS-E9LKEW), service mode frequency = 32 Hz





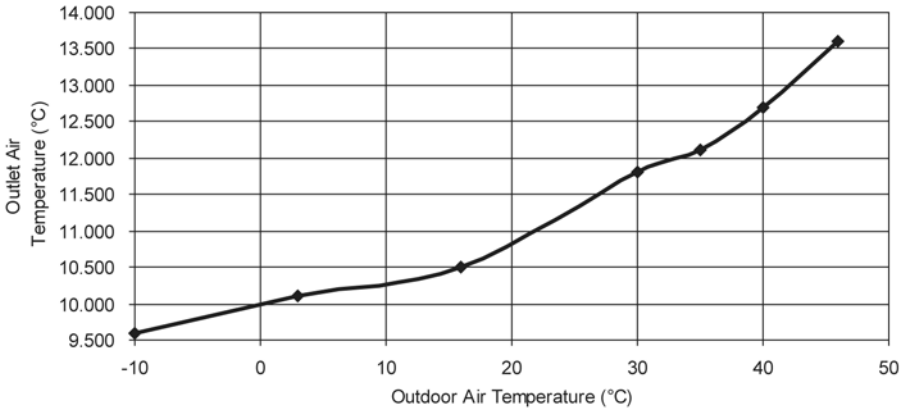


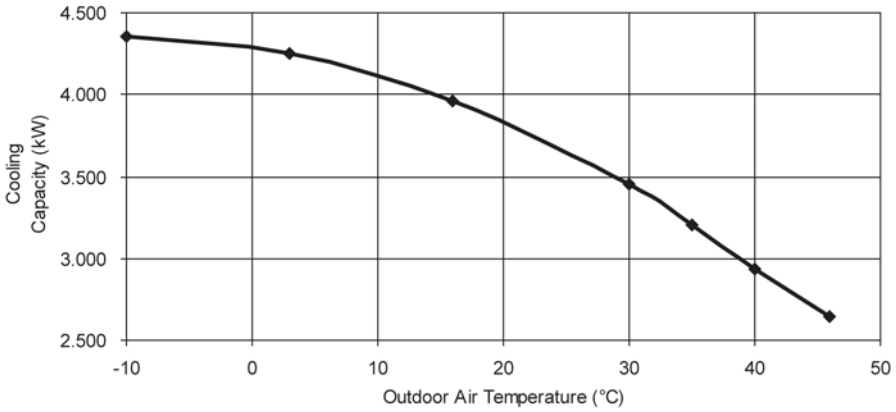


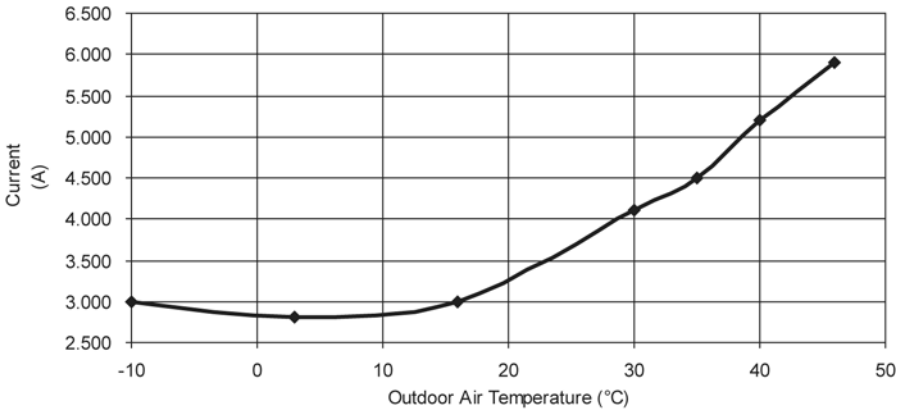
• Cooling Characteristic

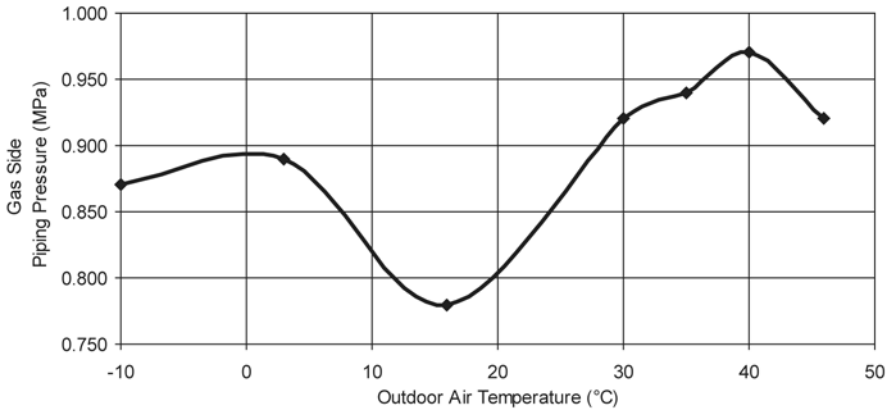
[Condition] Room temperature: 27°C (DBT), 19°C (WBT)
Operation condition: High fan speed
Piping length: 5m
230V 50Hz

C) Indoor unit capacity: Cooling (3.2: CS-E12LKEW), service mode frequency = 35 Hz





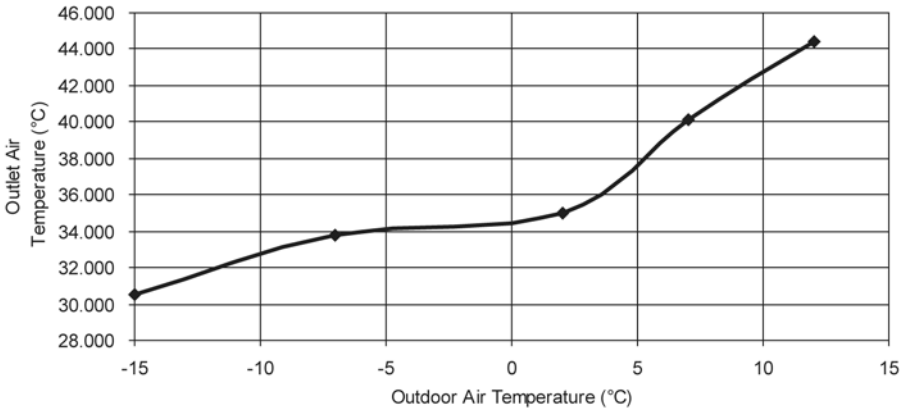


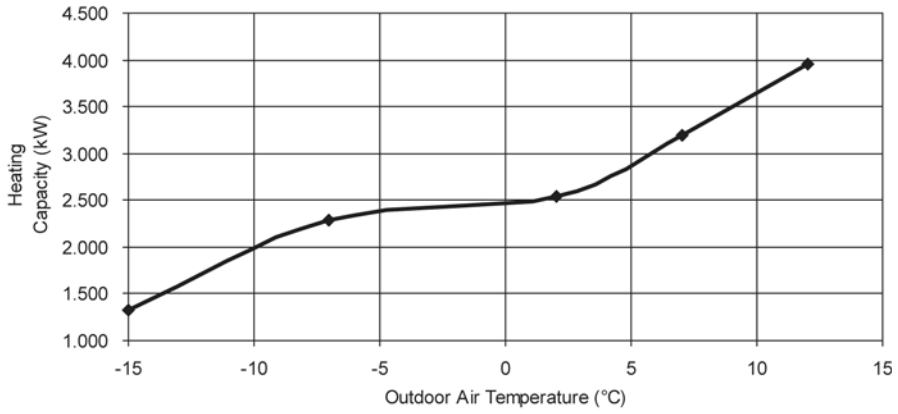


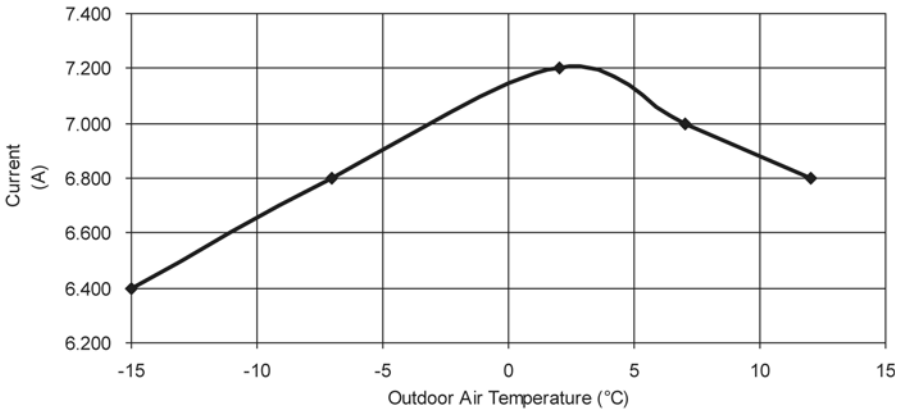
• Heating Characteristic

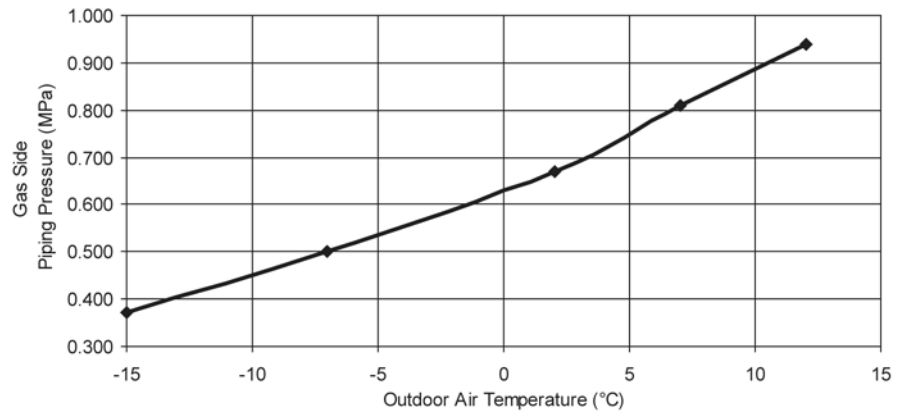
[Condition] Room temperature: 20°C (DBT), 12°C (WBT)
Operation condition: High fan speed
Piping length: 5m
230V 50Hz

A) Indoor unit capacity: Heating (2.0: CS-E7LKEW), service mode frequency = 49 Hz





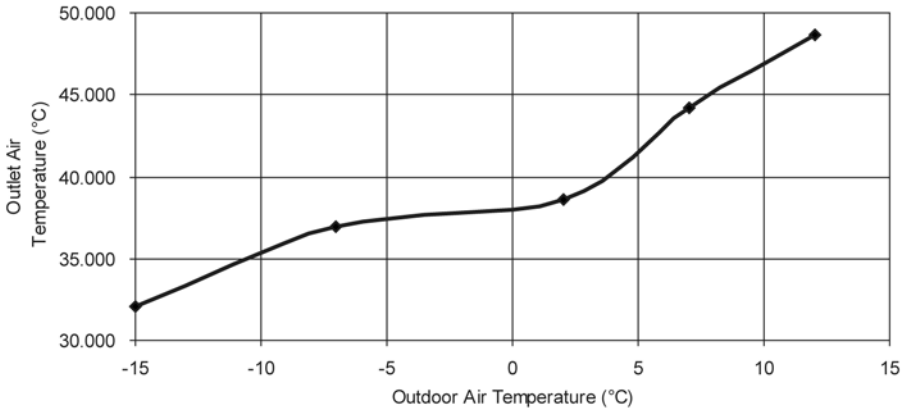


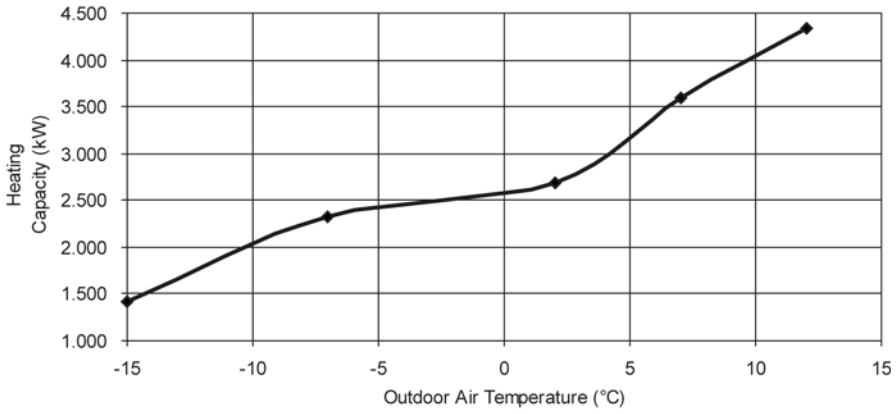


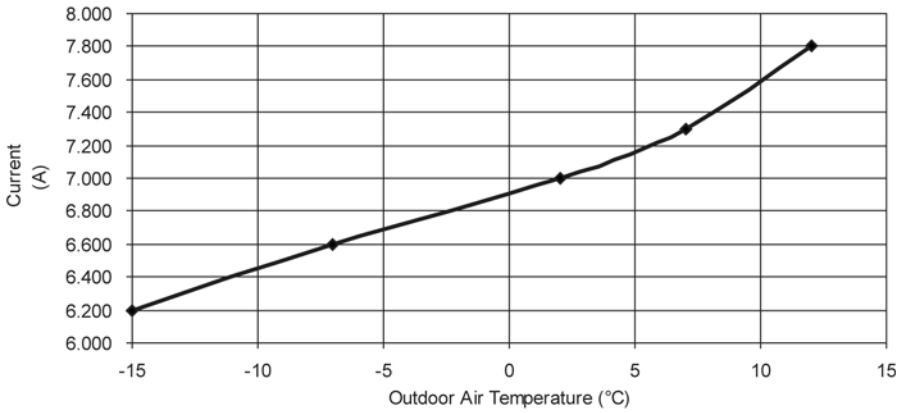
• Heating Characteristic

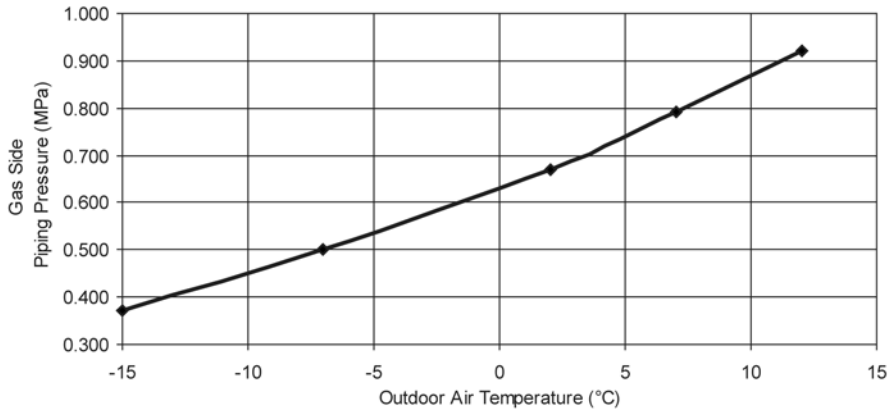
[Condition] Room temperature: 20°C (DBT), 12°C (WBT)
Operation condition: High fan speed
Piping length: 5m
230V 50Hz

B) Indoor unit capacity: Heating (2.5: CS-E9LKEW), service mode frequency = 49 Hz





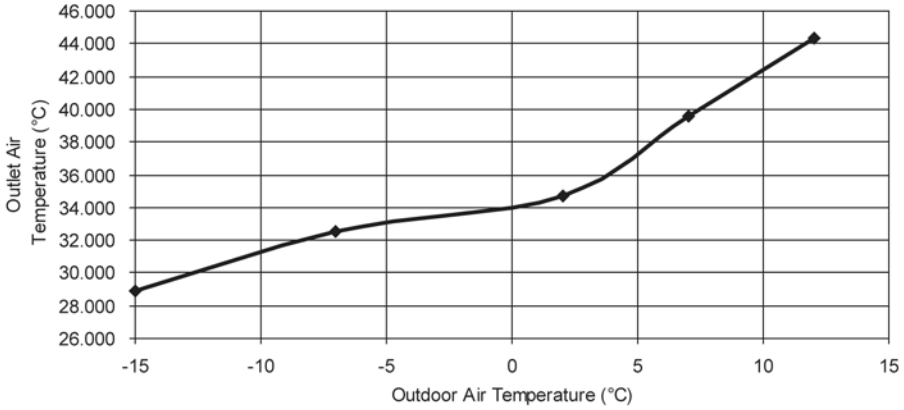


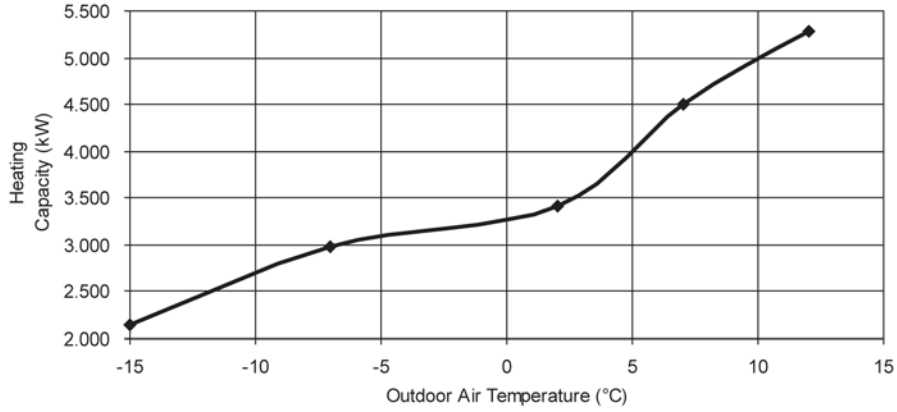


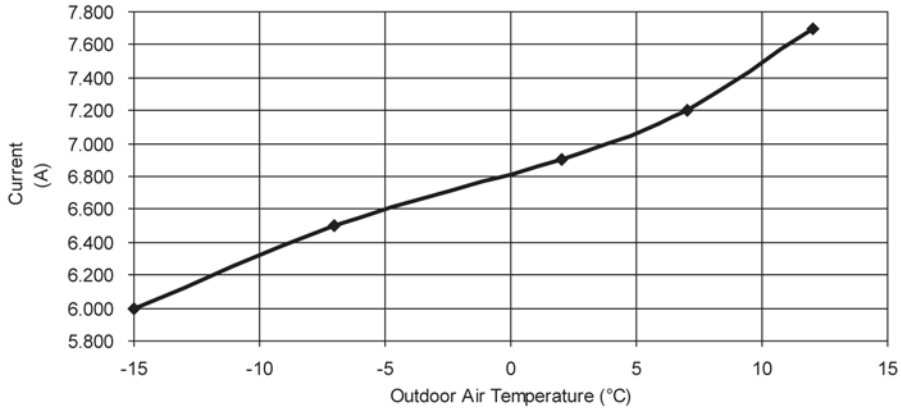
• Heating Characteristic

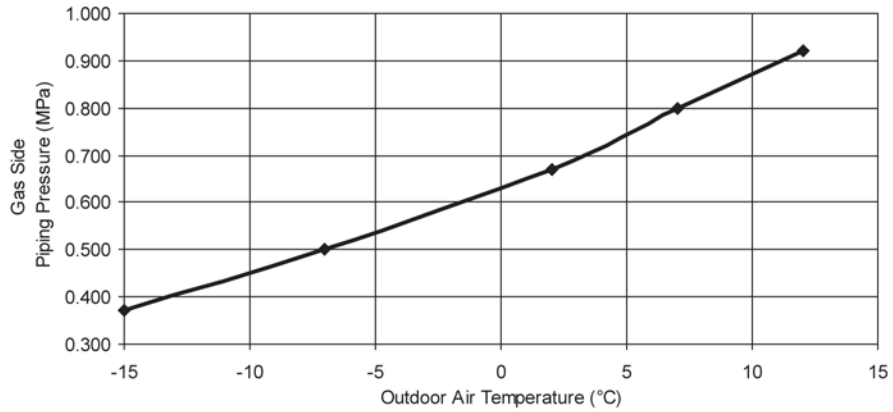
[Condition] Room temperature: 20°C (DBT), 12°C (WBT)
Operation condition: High fan speed
Piping length: 5m
230V 50Hz

C) Indoor unit capacity: Heating (3.2: CS-E12LKEW), service mode frequency = 49 Hz







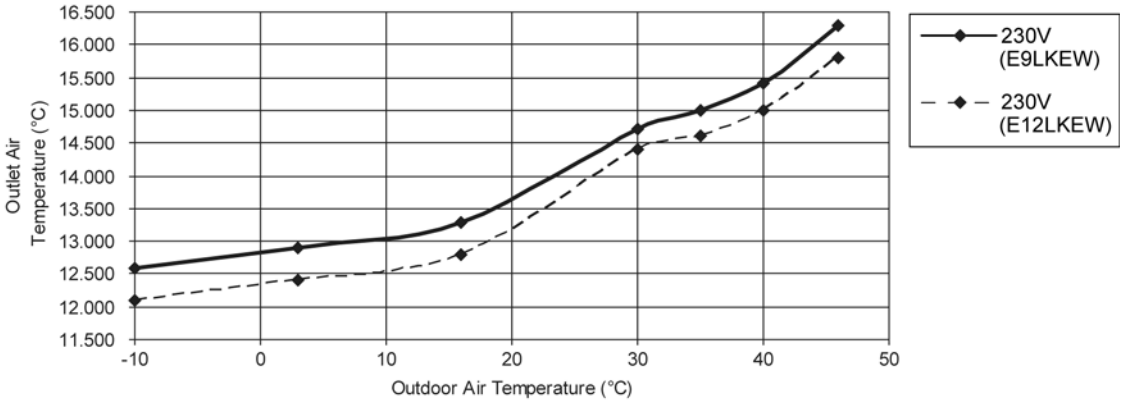


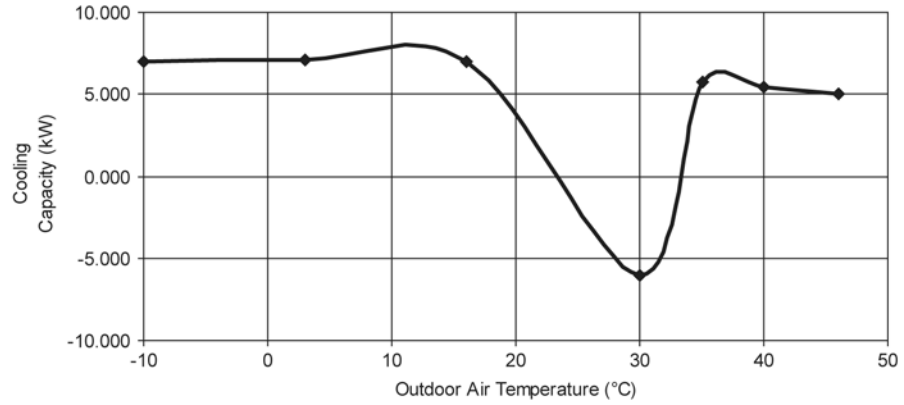
19.4.2. Two Indoor Unit Operation

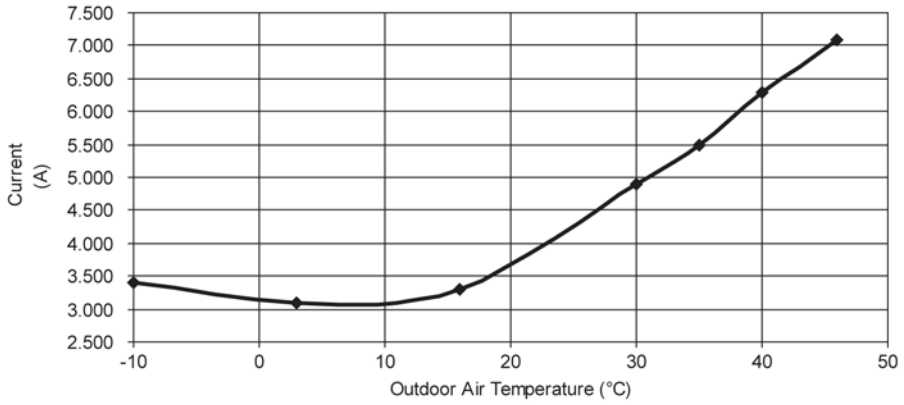
• Cooling Characteristic

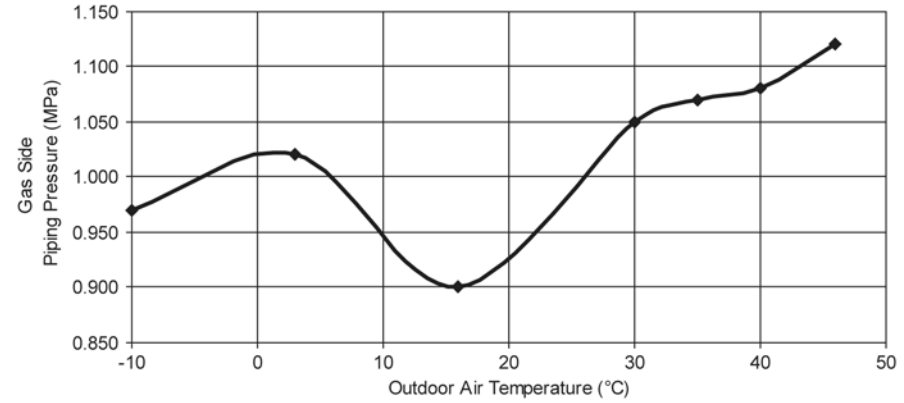
[Condition] Room temperature: 27°C (DBT), 19°C (WBT)
Operation condition: High fan speed
Piping length: 5m
230V 50Hz

A) Indoor unit capacity: Cooling (2.5 + 3.2: CS-E9LKEW + CS-E12LKEW), service mode frequency = 42 Hz





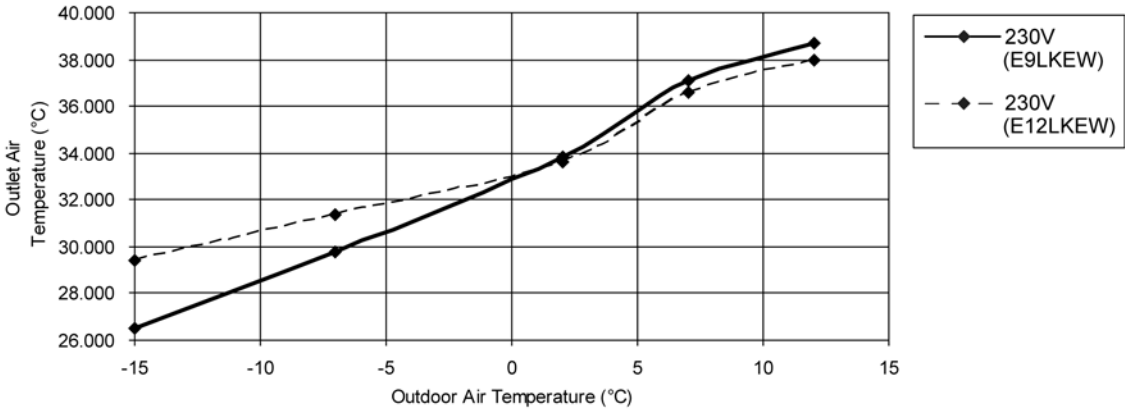


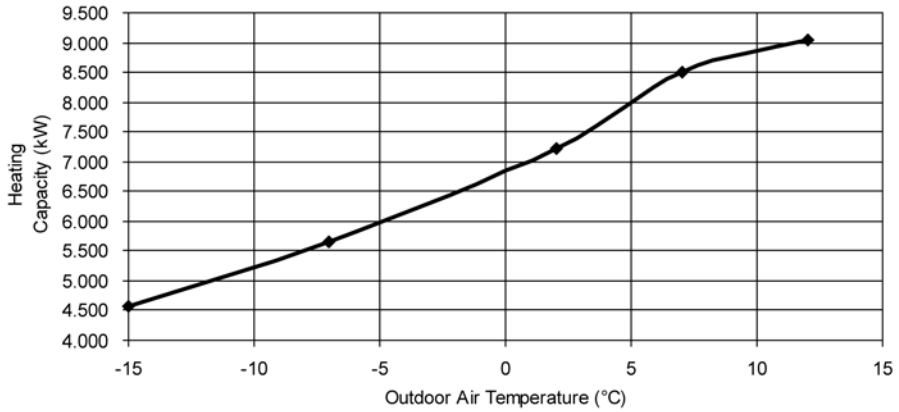


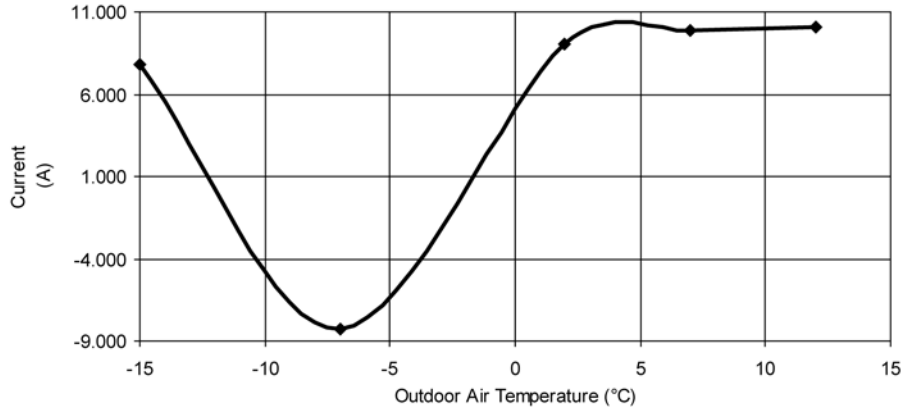
• Heating Characteristic

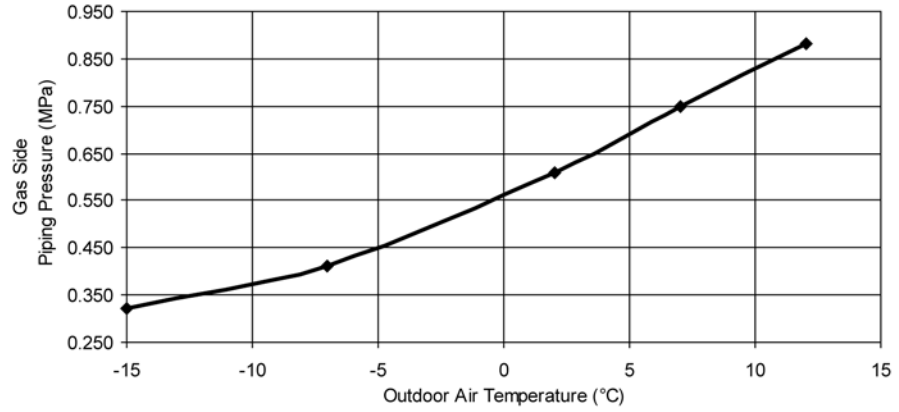
[Condition] Room temperature: 27°C (DBT), 19°C (WBT)
Operation condition: High fan speed
Piping length: 5m
230V 50Hz

A) Indoor unit capacity: Heating (2.5 + 3.2: CS-E9LKEW + CS-E12LKEW), service mode frequency = 75 Hz







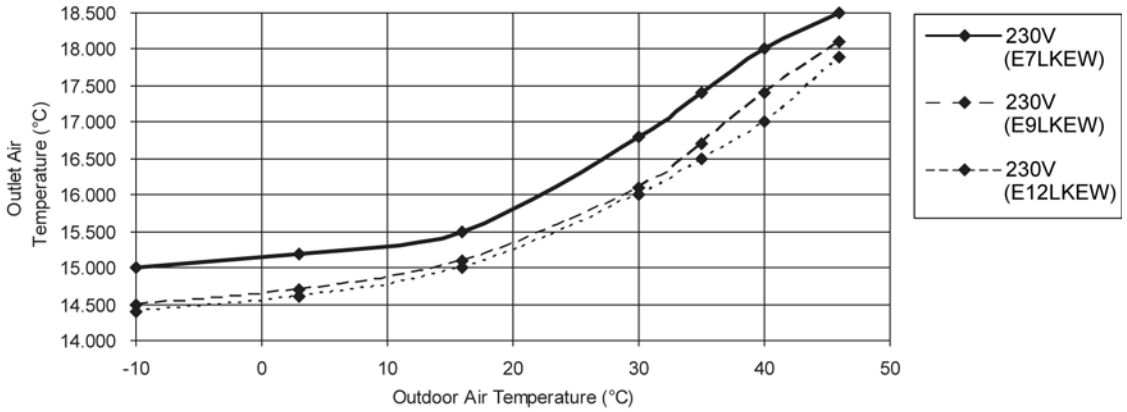


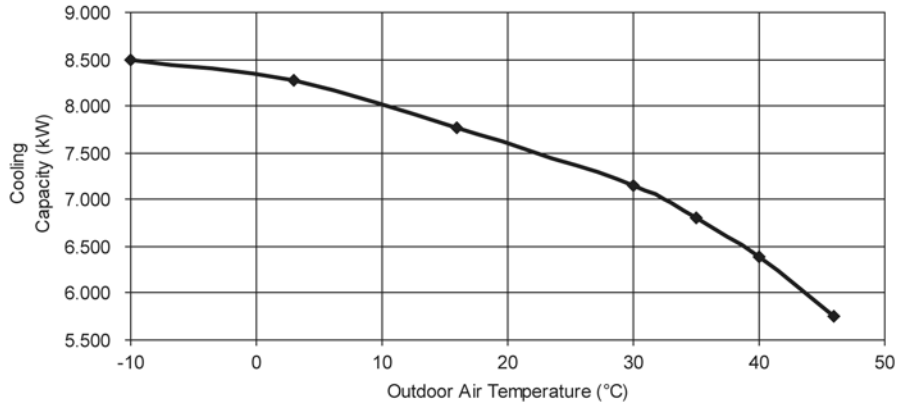
19.4.3. Three Indoor Unit Operation

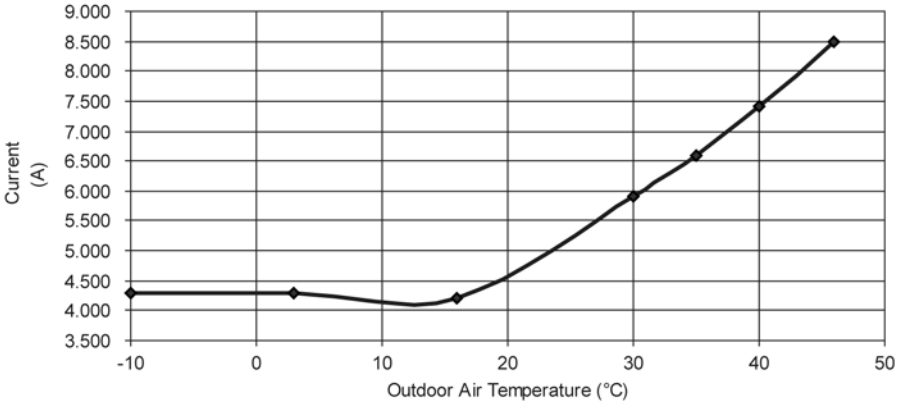
• Cooling Characteristic

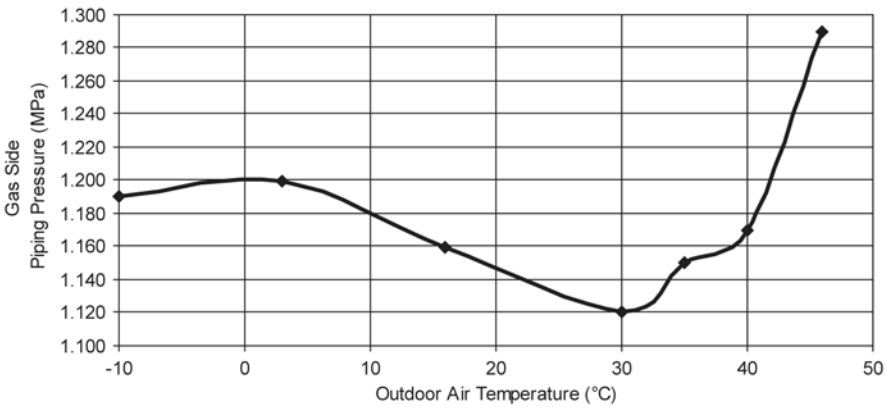
[Condition] Room temperature: 27°C (DBT), 19°C (WBT)
Operation condition: High fan speed
Piping length: 5m
230V 50Hz

A) Indoor unit capacity: Cooling (2.0 + 2.5 + 3.2: CS-E7LKEW + CS-E9LKEW + CS-E12LKEW), service mode frequency = 49 Hz





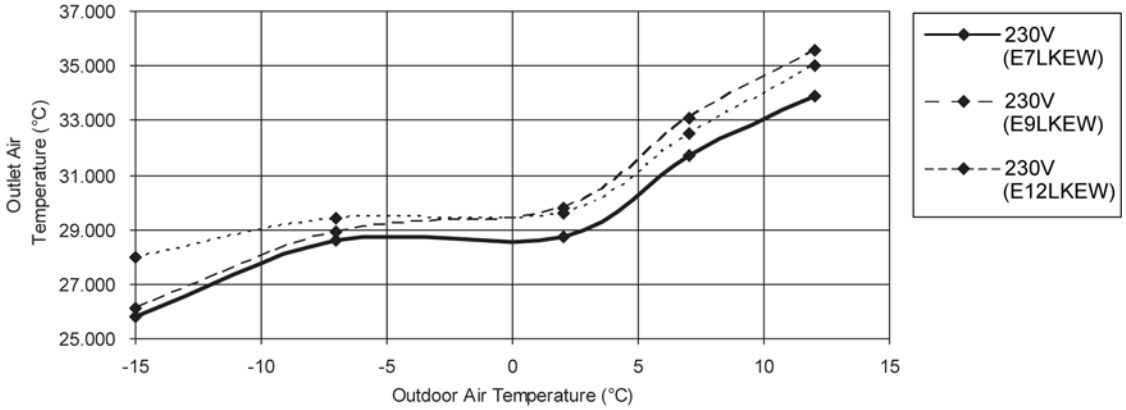


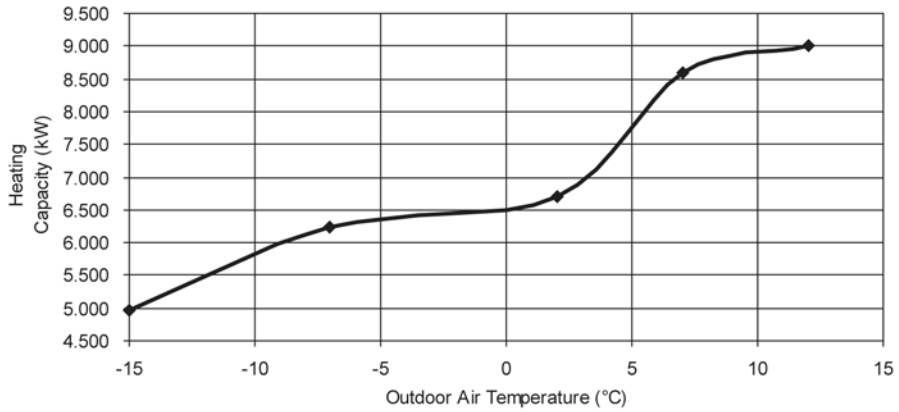


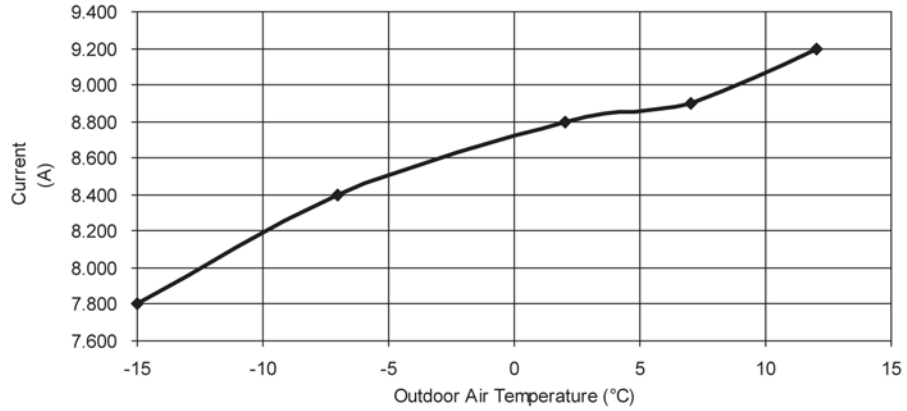
• Heating Characteristic

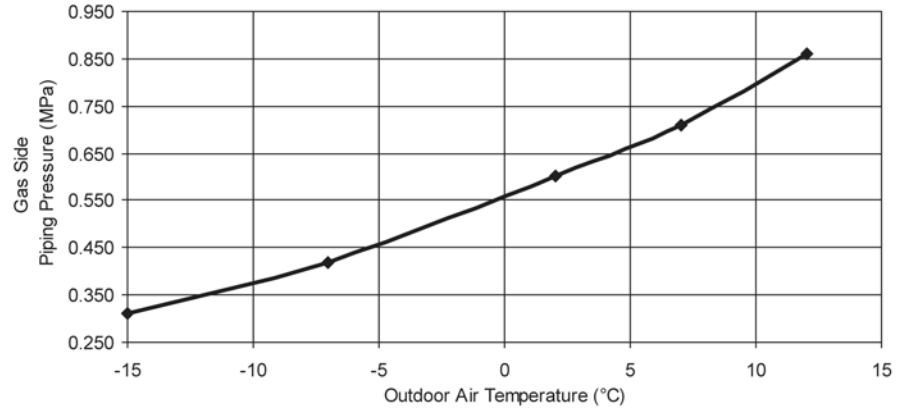
[Condition] Room temperature: 20°C (DBT), 12°C (WBT)
Operation condition: High fan speed
Piping length: 5m
230V 50Hz

A) Indoor unit capacity: Heating (2.0 + 2.5 + 3.2: CS-E7LKEW + CS-E9LKEW + CS-E12LKEW), service mode frequency = 75 Hz







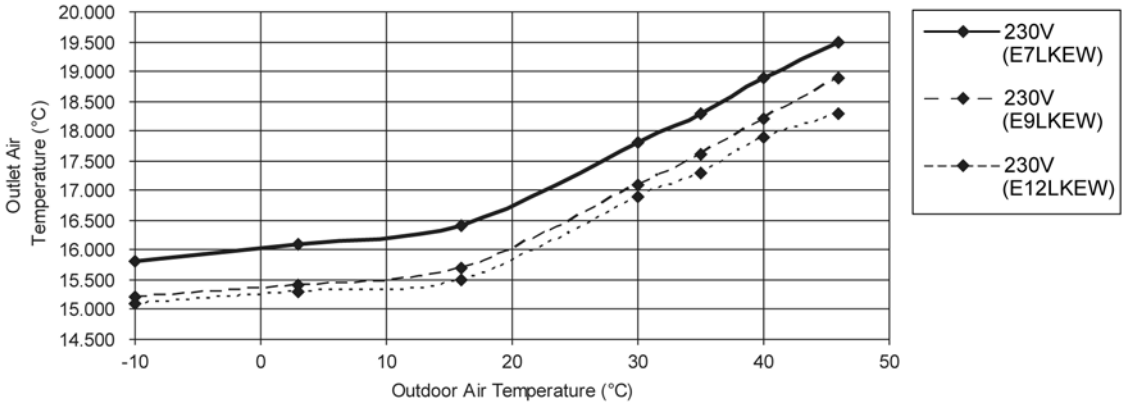


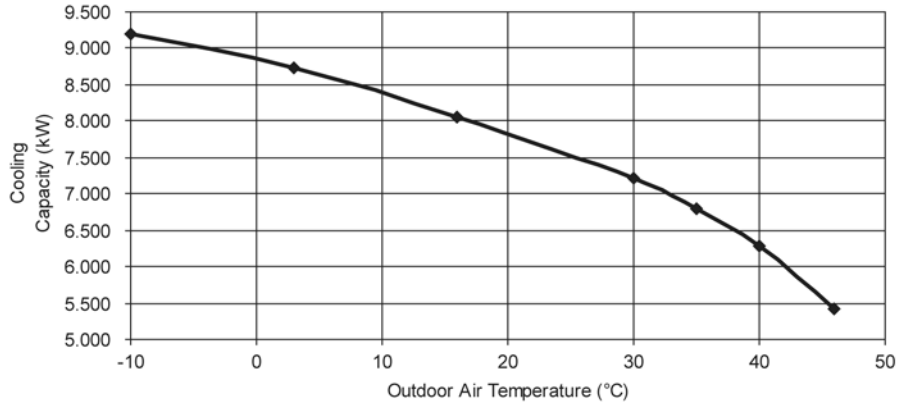
19.4.4. Four Indoor Unit Operation

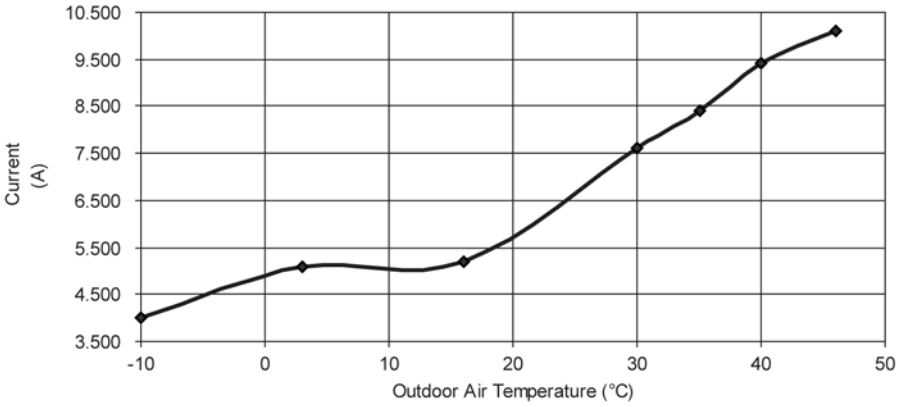
• Cooling Characteristic

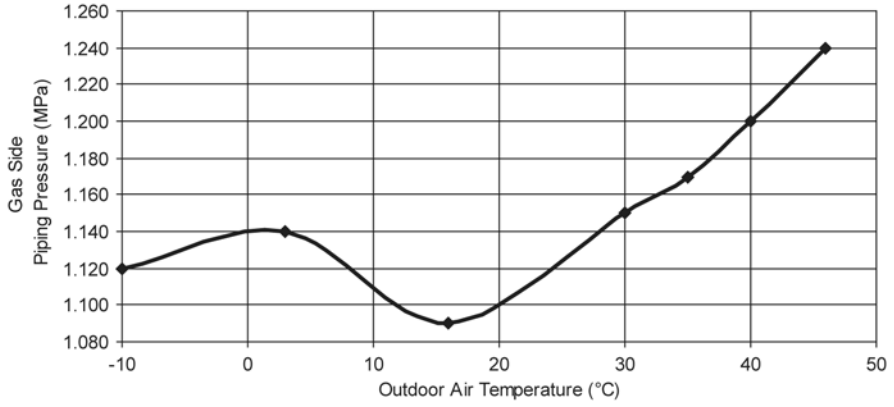
[Condition] Room temperature: 27°C (DBT), 19°C (WBT)
Operation condition: High fan speed
Piping length: 5m
230V 50Hz

A) Indoor unit capacity: Cooling (2.0 + 2.5 + 2.5 + 3.2: CS-E7LKEW + CS-E9LKEW x 2 + CS-E12LKEW), service mode frequency = 59 Hz





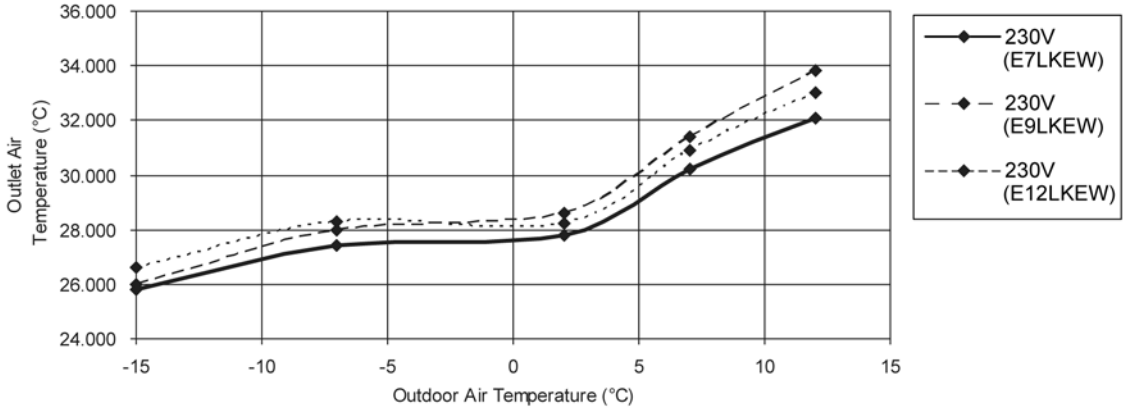


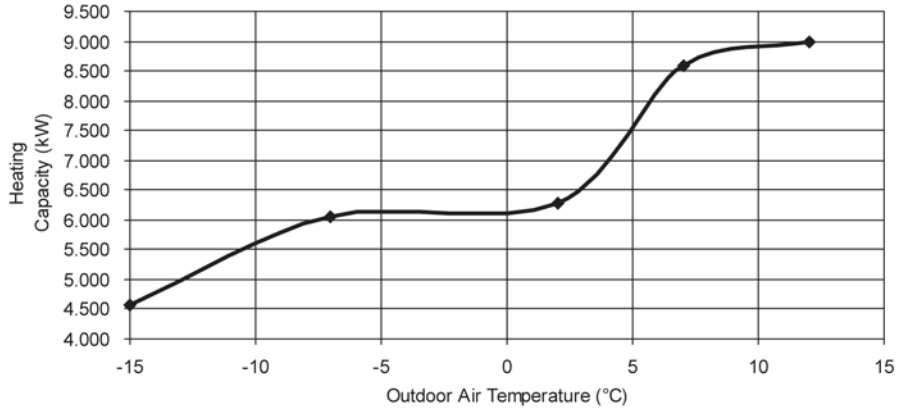


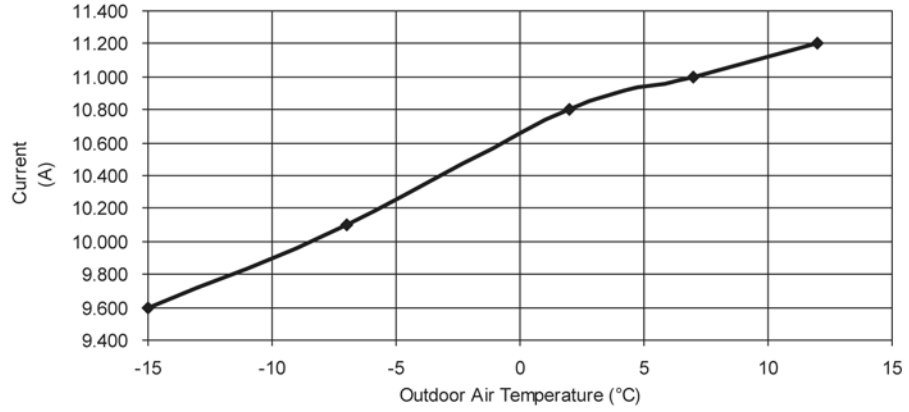
• Heating Characteristic

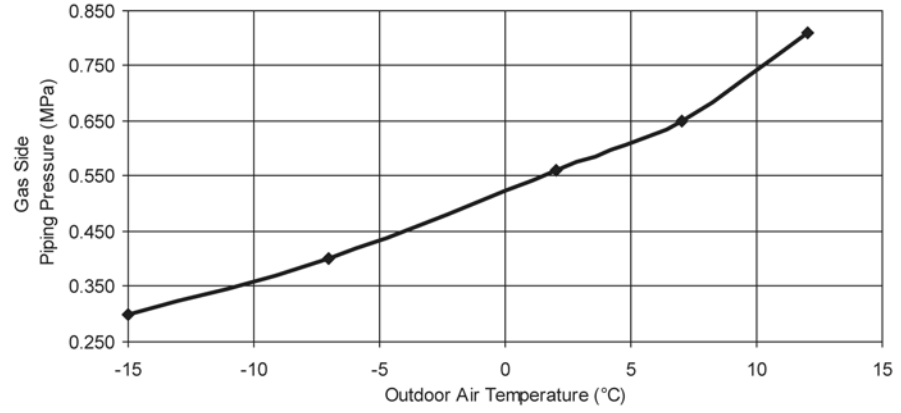
[Condition] Room temperature: 20°C (DBT), 12°C (WBT)
Operation condition: High fan speed
Piping length: 5m
230V 50Hz

A) Indoor unit capacity: Heating (2.0 + 2.5 + 2.5 + 3.2: CS-E7LKEW + CS-E9LKEW x 2 + CS-E12LKEW), service mode frequency = 90 Hz



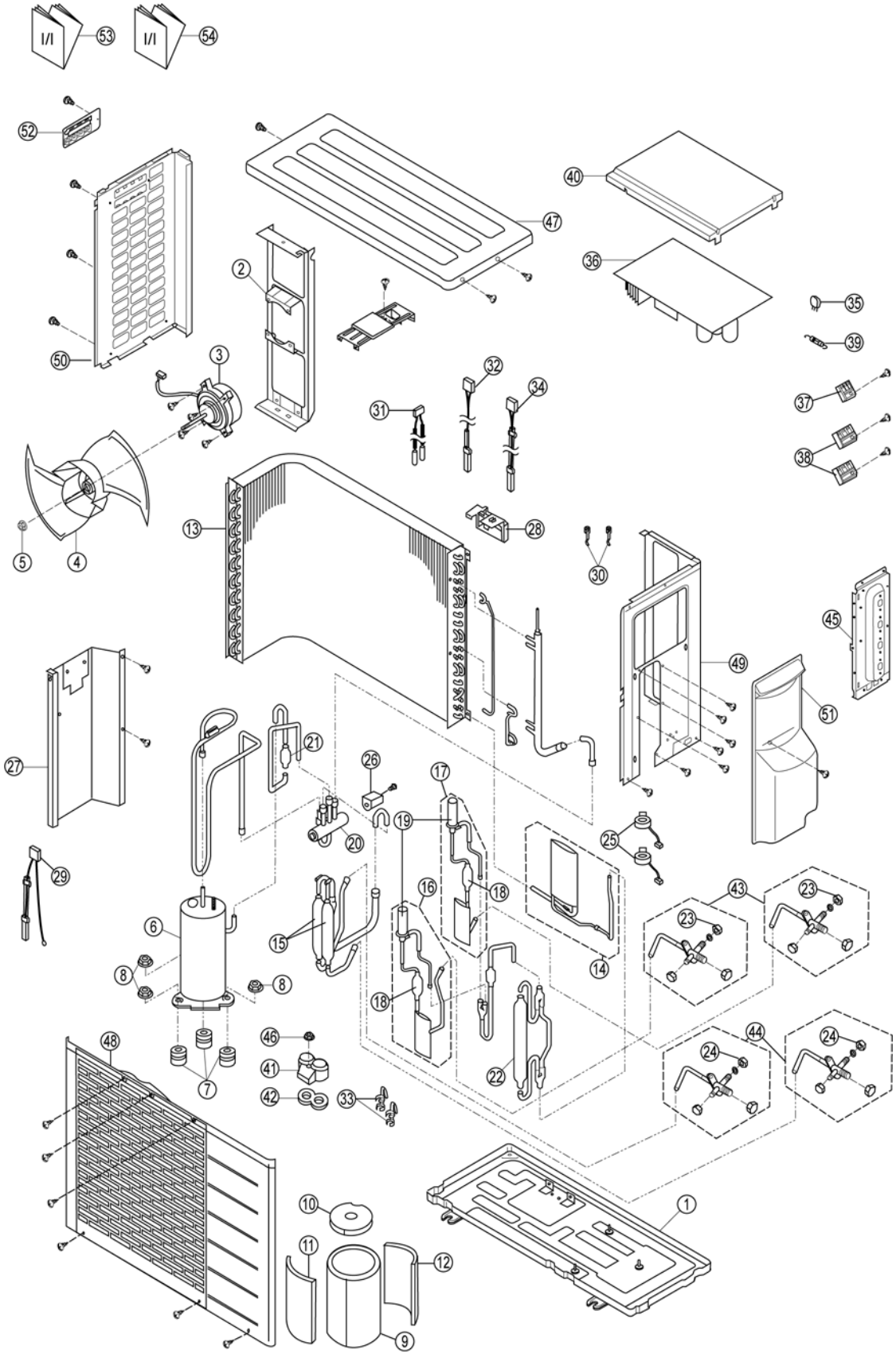






20 Exploded View and Replacement Parts List

20.1. CU-2E15LBE CU-2E18LBE



Note

The above exploded view is for the purpose of parts disassembly and replacement.

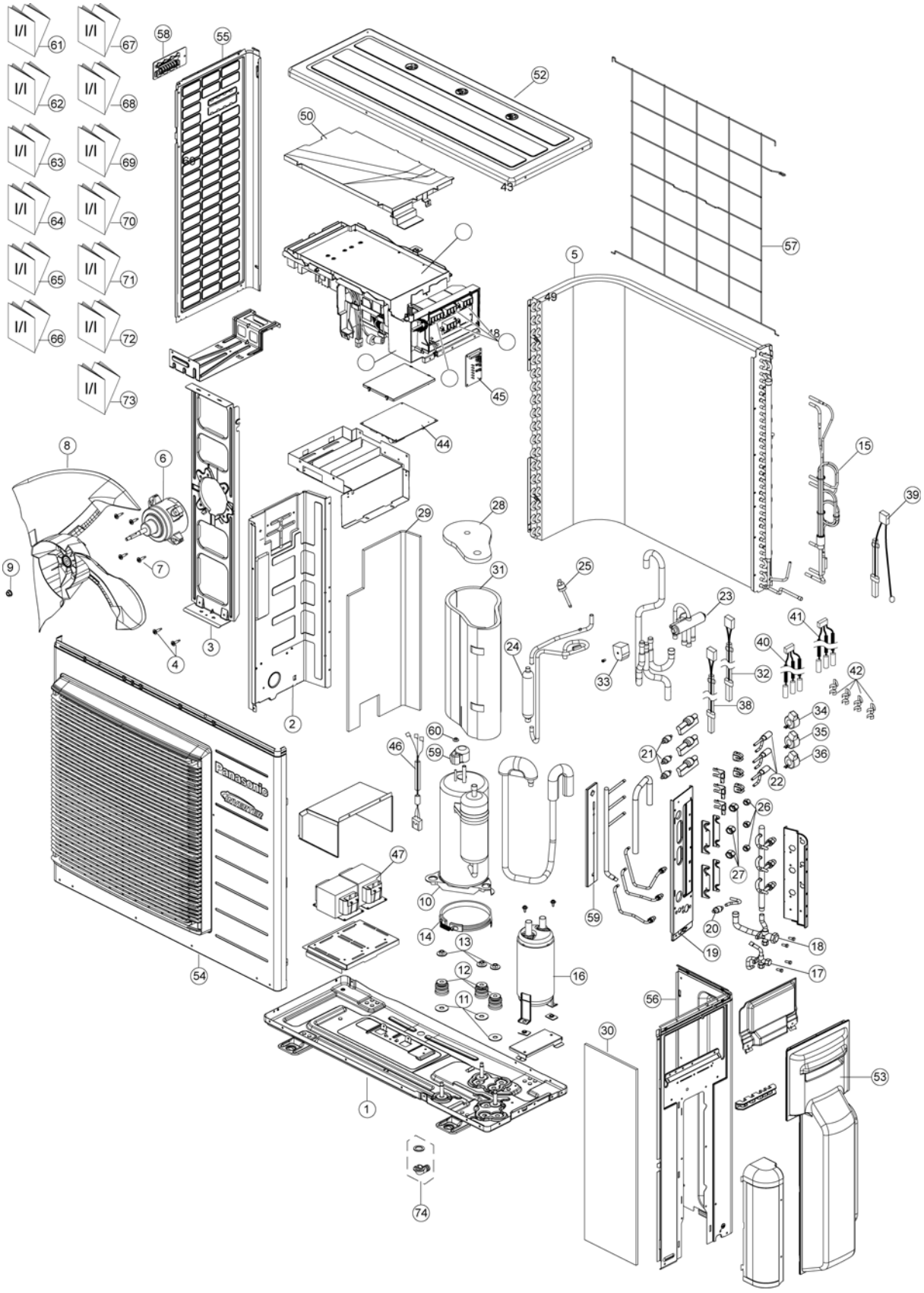
The non-numbered parts are not kept as standard service parts.

REF. NO.	PART NAME & DESCRIPTION	QTY.	CU-2E15LBE	CU-2E18LBE	REMARKS
1	CHASSY ASSY	1	CWD50K2058	←	
2	FAN MOTOR BRACKET	1	CWD541089	←	
3	FAN MOTOR AC 50W SINGLE	1	CWA981072	←	O
4	PROPELLER FAN	1	CWH03K1013	←	
5	NUT - PROPELLER FAN	1	CWH561034J	←	
6	COMPRESSOR	1	5CS102XFC	←	
7	ANTI - VIBRATION BUSHING	3	CWH501022	←	
8	NUT - COMPRESSOR	3	CWH56000J	←	
9	SOUND PROOF MATERIAL	1	CWG302138	←	
10	SOUND PROOF MATERIAL	1	CWG302139	←	
11	SOUND PROOF MATERIAL	1	CWG302404	—	
12	SOUND PROOF MATERIAL	1	CWG302405	—	
13	CONDENSER COMPLETE	1	CWB32C1816	←	
14	TUBE ASS'Y (CAPPILLARY TUBE)	1	CWT01C4066	←	
15	RECEIVER	2	CWB14013	←	
16	TUBE ASS'Y (CAPI TUBE MUFLER EXP VALVE)	1	CWT01C2499	←	
17	TUBE ASS'Y (CAPI TUBE MUFLER EXP VALVE)	1	CWT01C2500	←	
18	DISCHARGE MUFFLER	2	CWB121002	←	
19	EXPANTION VALVE	2	CWB051008J	←	
20	4-WAYS VALVE	1	CWB001027J	←	
21	STRAINER	1	CWB111004	←	
22	DRYER	1	CWB101016J	←	
25	V-COIL COMPLETE	2	CWA43C2086J	←	O
26	V-COIL COMPLETE	1	CWA43C2212	←	O
27	SOUND-PROOF BOARD	1	CWH151032	←	
28	HOLDER-SENSOR	1	CWMH320001	←	
29	SENSOR-COMPLETE	1	CWA50C2088	←	O
30	HOLDER-SENSOR	3	CWH32138	←	
31	SENSOR-COMPLETE	1	CWA50C2089	←	O
32	SENSOR-COMPLETE	1	CWA50C2090	←	O
33	HOLDER-SENSOR	2	CWH32074	←	
34	SENSOR-COMPLETE	1	CWA50C2097	←	O
35	NORMAL-MODE LINE CHOKE COILS	1	G0A193M00001	←	O
36	ELECTRONIC CONTROLLER	1	CWA73C4521R	CWA73C4522R	O
37	TERMINAL BOARD ASS'Y	1	CWA28K1162	←	
38	TERMINAL BOARD ASS'Y	2	CWA28K1161	←	
39	FUSE	1	XBA2C50TR0	←	
40	CONTROL BOARD COVER	1	CWH131116	←	
41	TERMINAL COVER	2	CWH171001	←	
42	RUBBER GASKET	2	CWH7070603	←	
43	3-WAY VALVE	2	CWB011418	←	
44	3-WAY VALVE	2	CWB011081J	←	
45	HOLDER COUPLING	1	CWH351018	←	
46	NUT - TERMINAL COVER	2	CWH7080300J	←	
47	CABINET TOP PLATE	1	CWE031014A	←	
48	CABINET FRONT PLATE CO.	1	CWE06C1136	←	
49	CABINET SIDE PLATE COMP	1	CWE04C1085	←	
50	CABINET SIDE PLATE	1	CWE041074A	←	
51	CONTROL BOARD COVER COMPLETE	1	CWH13C1073	←	
52	HANDLE	1	CWE161010	←	
53	INSTALLATION INSTRUCTION	1	CWF613180	←	
54	INSTALLATION INSTRUCTION	1	CWF613181	←	

(NOTE)

- All parts are supplied from PHAAM, Malaysia (Vendor Code: 00029488).
- "O" marked parts are recommended to be kept in stock.

20.2. CU-3E18LBE CU-4E23LBE



Note
The above exploded view is for the purpose of parts disassembly and replacement.
The non-numbered parts are not kept as standard service parts.

REF. NO.	PART NAME & DESCRIPTION	QTY.	CU-3E18LBE	CU-4E23LBE	REMARKS
1	CHASSY ASSY	1	CWD52K1212	←	
2	SOUND PROOF BOARD	1	CWH151194	←	
3	FAN MOTOR BRACKET	1	CWD541127	←	
4	SCREW-BRACKET FAN MOTOR	3	CWH551217	←	
5	CONDENSER COMPLETE	1	CWB32C2680	←	
6	FAN MOTOR DC 60W 3PH	1	EHDS80C60AC	←	O
7	SCREW-FAN MOTOR MOUNT	4	CWH551016J	←	
8	PROPELLER FAN ASSY	1	CWH00K1006	←	
9	NUT	1	CWH561051	←	
10	COMPRESSOR	1	5KD184XAB21	←	
11	PACKING	3	CWB81043	←	
12	BUSHING - COMPRESSOR MOUNT	3	CWH50055	←	
13	NUT-COMPRESSOR MOUNT	3	CWH561049	←	
14	CRANKCASE HEATER	1	CWA341047	←	
15	TUBE ASSY (CAPILLARY TUBE)	1	CWT01C4955	←	
16	ACCUMULATOR	1	CWB131050	←	
17	3-WAY VALVE	1	CWB011601	←	
18	3-WAY VALVE	1	CWB011602	←	
19	HOLDER COUPLING	1	CWH351141	←	
20	STRAINER	1	CWB11061	←	
21	STRAINER	3/4	CWB111024	←	
22	EXPANSION VALVE	3	CWB051029	←	
23	4-WAYS VALVE	1	CWB001026J	←	
24	DISCHARGE MUFFLER	1	CWB121014	←	
25	HEATING PRESSURE SWITCH	1	CWA101007	←	
26	FLARE NUT (1/4)	3/4	CWT251030	←	
27	FLARE NUT (3/8)	3/4	CWT251031	←	
28	SOUND PROOF MATERIAL	1	CWG302246	←	
29	SOUND PROOR MATERIAL	1	CWG302520	←	
30	SOUND PROOR MATERIAL	1	CWG302521	←	
31	SOUND PROOR MATERIAL	1	CWG302522	←	
32	SENSOR COMPLETE	1	CWA50C2515	←	O
33	V-COIL COMPLETE (4 WAY VALVE)	1	CWA43C2169J	←	O
34	V-COIL COMPLETE (EXPAND VALVE-WHITE)	1	CWA43C2334	←	O
35	V-COIL COMPLETE (EXPAND VALVE-YELLOW)	1	CWA43C2335	←	O
36	V-COIL COMPLETE (EXPAND VALVE-BLUE)	1	CWA43C2336	←	O
38	SENSOR-COMPLETE	1	CWA50C2625	←	O
39	SENSOR COMPLETE (OUTLET TEMP SENSOR)	1	CWA50C2517	←	O
40	SENSOR-COMPLETE (CN-TH4)	1	CWA50C2620	CWA50C2616	O
41	SENSOR-COMPLETE (CN-TH3)	1	CWA50C2622	CWA50C2617	O
43	ELECTRONIC CONTROLLER	1	CWA73C3817RX	CWA73C3815RX	O
44	ELECT.CONTROLLER-NOISE FILTER	1	CWA745291	←	O
45	ELECTRONIC CONTROLLER (DISPLAY)	1	CWA745292	←	O
47	REACTOR	2	G0C403J00001	←	
48	TERMINAL BOARD ASSY	1	CWA28K1195	←	
49	TERMINAL BOARD ASSY	4	CWA28K1196	←	
50	CONTROL BOARD COVER	1	CWH131333	←	
52	CABINET TOP PLATE	1	CWE031083A	←	
53	CONTROL BOARD COVER	1	CWH13C1194	←	
54	CABINET FRONT PLATE	1	CWE06K1065	←	
55	CABINET SIDE PLATE	1	CWE041317A	←	
56	CABINET SIDE PLATE	1	CWE041395A	←	
57	WIRE NET	1	CWD041128A	←	
58	HANDLE	1	CWE161010	←	
59	TERMINAL COVER	1	CWH171035	←	

REF. NO.	PART NAME & DESCRIPTION	QTY.	CU-3E18LBE	CU-4E23LBE	REMARKS
60	NUT-TERMINAL COVER	1	CWH7080300J	←	
61	INSTALLATION INSTRUCTION	1	CWF614367	←	
62	INSTALLATION INSTRUCTION	1	CWF614368	←	
63	INSTALLATION INSTRUCTION	1	CWF614369	←	
64	INSTALLATION INSTRUCTION	1	CWF614370	←	
65	INSTALLATION INSTRUCTION	1	CWF614371	←	
66	INSTALLATION INSTRUCTION	1	CWF614372	←	
67	INSTALLATION INSTRUCTION	1	CWF614373	←	
68	INSTALLATION INSTRUCTION	1	CWF614374	←	
69	INSTALLATION INSTRUCTION	1	CWF614375	←	
70	INSTALLATION INSTRUCTION	1	CWF614376	←	
71	INSTALLATION INSTRUCTION	1	CWF614377	←	
72	INSTALLATION INSTRUCTION	1	CWF614378	←	
73	INSTALLATION INSTRUCTION	1	CWF614379	←	
74	ACCESSORY CO. (DRAIN ELBOW)	1	CWG87C900	←	

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