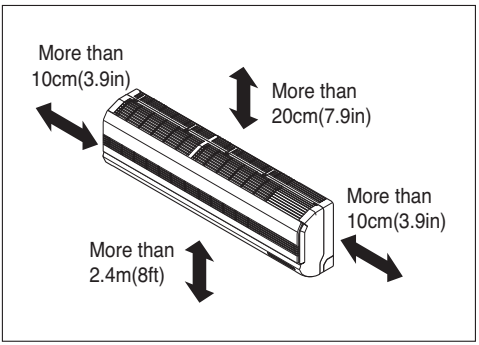
Select the best Location

Indoor unit

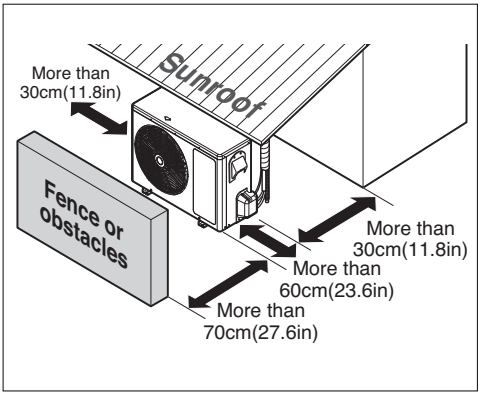


1. There should not be any heat or steam near the unit.
2. Select a place where there are no obstacles around of the unit.
3. Make sure that condensation drainage can be conveniently routed away.
4. Do not install near a doorway.
5. Ensure that the interval between a wall and the left (or right) of the unit is more than 10cm(3.9in). The unit should be installed as high as possible on the wall, allowing a minimum of 20cm(7.9in) from ceiling.
6. Use a metal detector to locate studs to prevent unnecessary damage to the wall.

⚠ CAUTION

Install the indoor unit on the wall where the height from the floor is more than 2.4m(8ft).

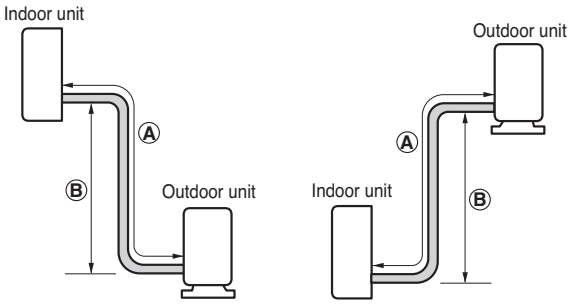
Outdoor unit



1. If an awning is built over the unit to prevent direct sunlight or rain exposure, make sure that heat radiation from the condenser is not restricted.
2. Ensure that the space around the back and sides is more than 30cm(11.8in). The space in front of the unit should be more than 70cm(27.6in) of space.
3. Do not place animals and plants in the path of the warm air.
4. Take the weight of the air conditioner into account and select a place where noise and vibration are minimum.
5. Select a place where the warm air and noise from the air conditioner do not disturb neighbors.

Piping Length and Elevation

Capacity (Btu/h)	Pipe Size				Standard Length m (ft)	Max. Elevation Ⓑ m(ft)	Max. Length Ⓐ m(ft)	Additional Refrigerant (g/m)
	GAS		LIQUID					
	mm	inch	mm	inch				
24k/36k	Ø15.88	5/8	Ø9.52	3/8	7.5(25)	15(50)	30(99)	35



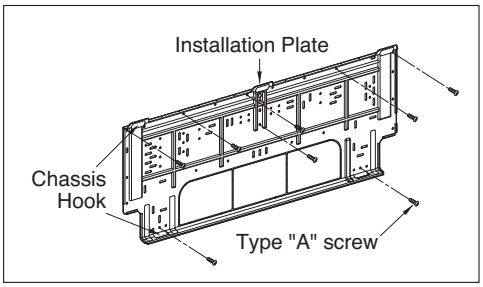
⚠ CAUTION

Capacity is based on standard length and maximum allowable length is on the basis of reliability.
Additional refrigerant must be charged after 7.5m(25ft).

Fixing Installation Plate

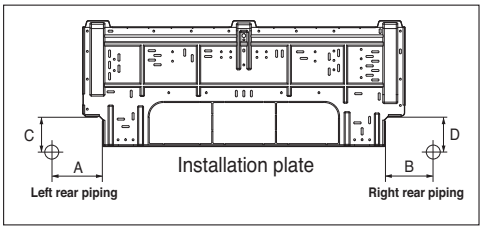
The wall you select should be strong and solid enough to prevent vibration

1. Mount the installation plate on the wall with type "A" screws. If mounting the unit on a concrete wall, use anchor bolts.
• Mount the installation plate horizontally by aligning the centerline using a level.

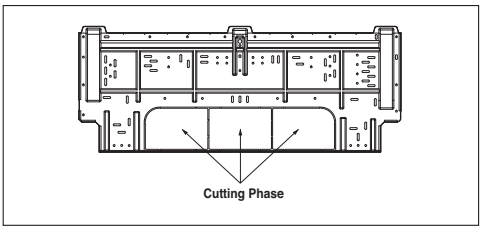


2. Measure the wall and mark the centerline. It is also important to use caution concerning the location of the installation plate-routing of the wiring to power outlets is through the walls typically. Drilling the hole through the wall for piping connections must be done safely.

CHASSIS (Grade)	Distance mm(in)			
	A	B	C	D
SD	120(4 3/4")	110(4 1/3")	43(1 3/4")	43(1 3/4")

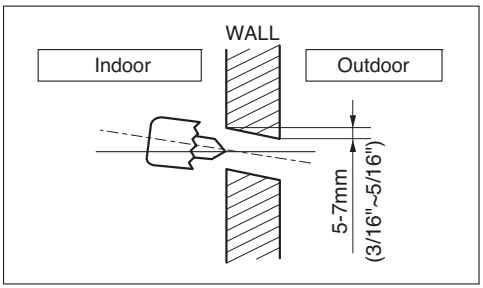


3. Install after removing one of the indicated cutting phase according to the installation location of the indoor unit's piping.



Drill a Hole in the Wall

• Drill the piping hole with a ø70mm(2.76in) hole core drill. Drill the piping hole at either the right or the left with the hole slightly slanted to the outdoor side.

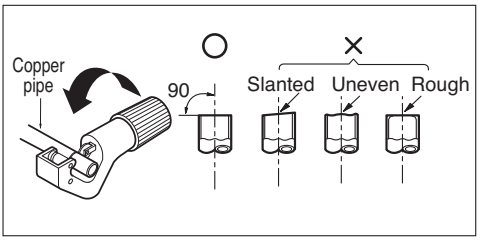


Flaring Work

Main cause for gas leakage is due to defect in flaring work. Carry out correct flaring work in the following procedure.

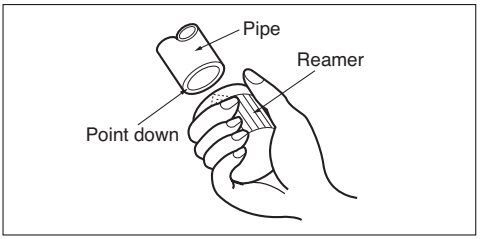
Cut the pipes and the cable.

1. Use the piping kit accessory or the pipes purchased locally.
2. Measure the distance between the indoor and the outdoor unit.
3. Cut the pipes a little longer than measured distance.
4. Cut the cable 1.5m(59.1in) longer than the pipe length.



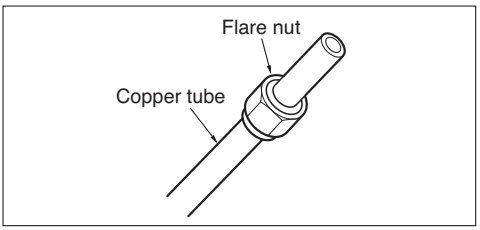
Burrs removal

1. Completely remove all burrs from the cut cross section of pipe/tube.
2. Put the end of the copper tube/pipe in a downward direction as you remove burrs in order to avoid dropping burrs into the tubing.



Putting nut on

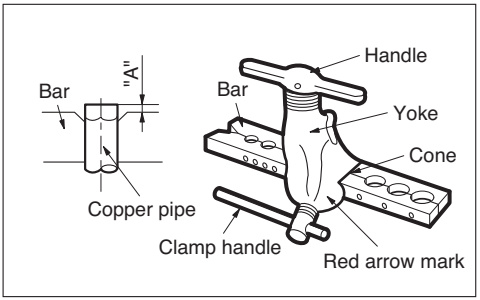
• Remove flare nuts attached to indoor and outdoor unit, then put them on pipe/tube having completed burr removal.
(not possible to put them on after flaring work)



Flaring work

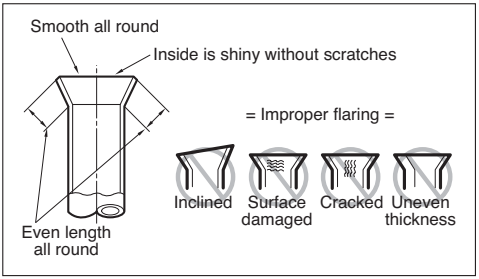
1. Firmly hold copper pipe in a die in the dimension shown in the table below.
2. Carry out flaring work with the flaring tool.

Outside diameter		A
mm	inch	mm
Ø6.35	1/4	1.1~1.3
Ø9.52	3/8	1.5~1.7
Ø12.7	1/2	1.6~1.8
Ø15.88	5/8	1.6~1.8
Ø19.05	3/4	1.9~2.1



Check

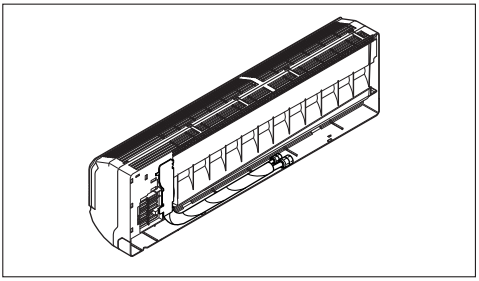
1. Compare the flared work with the figure by.
2. If a flared section is defective, cut it off and do flaring work again.



Connecting the Piping

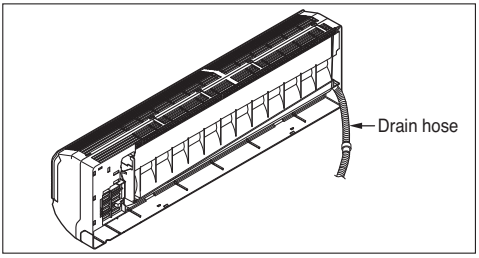
Indoor

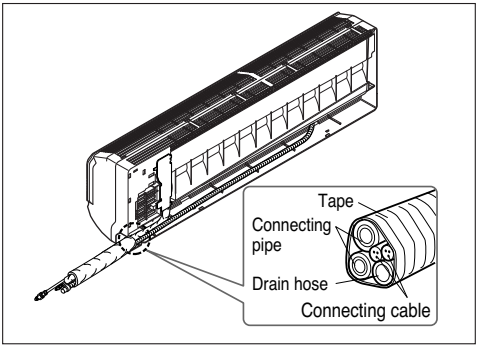
1. Prepare the indoor unit's piping and drain hose for installation through the wall.
2. Remove the plastic tubing retainer(see the illustration by) and pull the tubing and drain hose away from chassis.
3. Replace only the plastic tubing holder 1, not the holder 2 in the original position.



For right rear piping

1. Route the indoor tubing and the drain hose in the direction of rear right.
2. Insert the connecting cable into the indoor unit from the outdoor unit through the piping hole.
   - Do not connect the cable to the indoor unit.
   - Make a small loop with the cable for easy connection later.
3. Tape the tubing, drain hose, and the connecting cable. Be sure that the drain hose is located at the lowest side of the bundle. Locating at the uper side can cause drain pan to overflow inside the unit.



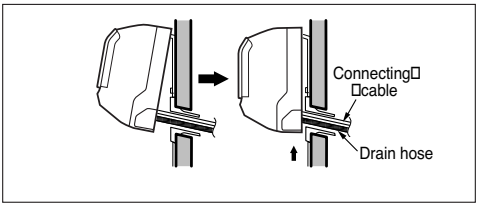


⚠ CAUTION

If the drain hose is routed inside the room, insulate the hose with an insulation material* so that dripping from "sweating"(condensation) will not damage furniture or floors.
*Foamed polyethylene or equivalent is recommended.

4. Indoor unit installation
   Hook the indoor unit onto the upper portion of the installation plate.(Engage the two hooks of the rear top of the indoor unit with the upper edge of the installation plate.) Ensure that the hooks are properly seated on the installation plate by moving it left and right.

   Press the lower left and right sides of the unit against the installation plate until the hooks engage into their slots(clicking sound).

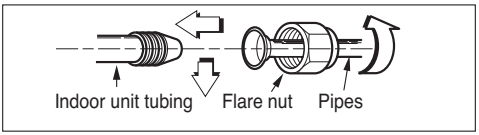


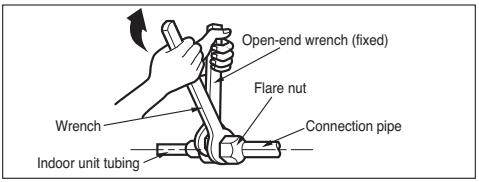
Connecting the piping to the indoor unit and drain hose to drain pipe.

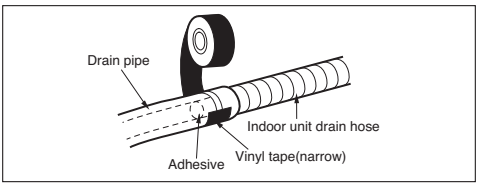
1. Align the center of the pipes and sufficiently tighten the flare nut by hand.
2. Tighten the flare nut with a wrench.

Outside diameter		Torque	
mm	inch	kg·m	lb·ft
Ø6.35	1/4	1.8~2.5	13~18
Ø9.52	3/8	3.4~4.2	24.6~30.4
Ø12.7	1/2	5.5~6.6	39.8~47.7
Ø15.88	5/8	6.3~8.2	45.6~59.3

3. When extending the drain hose at the indoor unit, install the drain pipe.

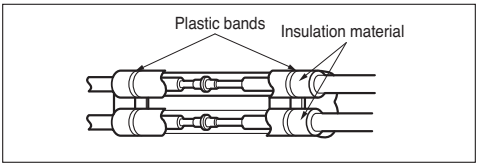


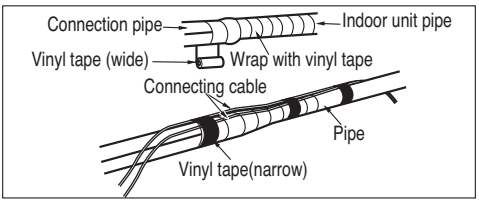




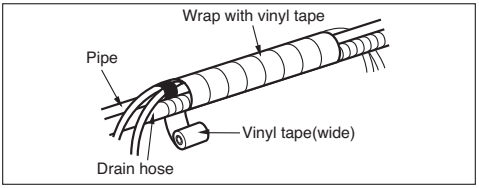
Wrap the insulation material around the connecting portion.

1. Overlap the connection pipe insulation material and the indoor unit pipe insulation material. Bind them together with vinyl tape so that there may be no gap.
2. Wrap the area which accommodates the rear piping housing section with vinyl tape.



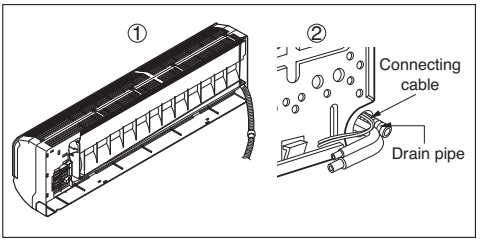


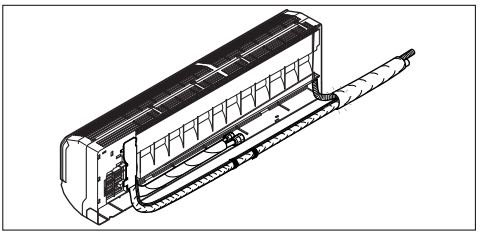
3. Bundle the piping and drain hose together by wrapping them with vinyl tape for enough to cover where they fit into the rear piping housing section.



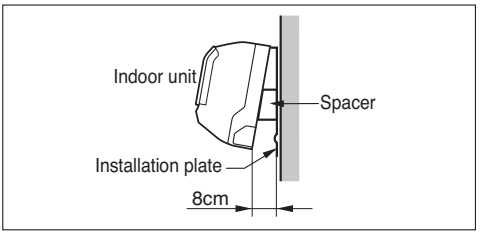
For left rear piping

1. Route the indoor tubing and the drain hose to the required piping hole position.
2. Insert the piping, drain hose, and the connecting cable into the piping hole.
3. Insert the connecting cable into the indoor unit.
   - Don't connect the cable to the indoor unit.
   - Make a small loop with the cable for easy connection later.
4. Tape the drain hose and the connecting cables.



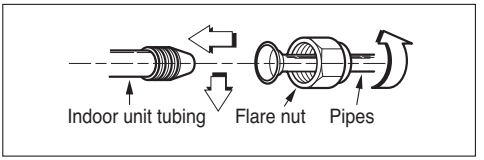


5. Indoor unit installation
   - Hang the indoor unit from the hooks at the top of the installation plate.
   - Insert the spacer etc. between the indoor unit and the installation plate and separate the bottom of the indoor unit from the wall.



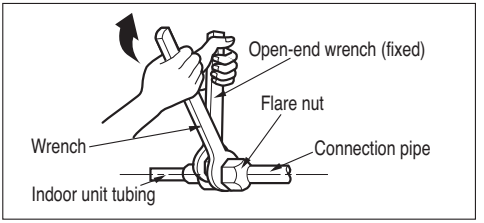
Connecting the piping to the indoor unit and the drain hose to drain pipe.

1. Align the center of the pipes and sufficiently tighten the flare nut by hand.

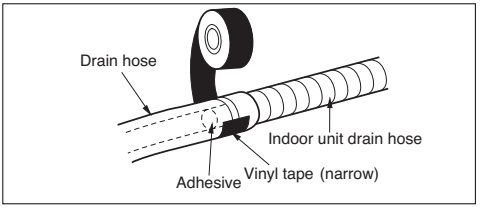


2. Tighten the flare nut with a wrench.

Outside diameter		Torque	
mm	inch	kg·m	lb·ft
Ø6.35	1/4	1.8~2.5	13~18
Ø9.52	3/8	3.4~4.2	24.6~30.4
Ø12.7	1/2	5.5~6.6	39.8~47.7
Ø15.88	5/8	6.3~8.2	45.6~59.3

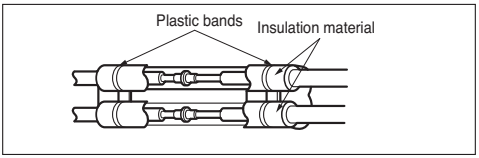


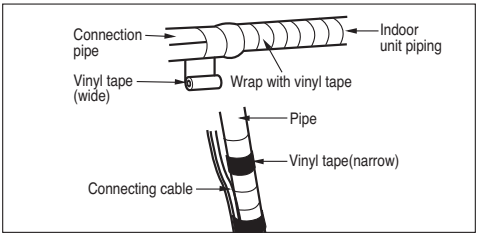
3. When extending the drain hose at the indoor unit, install the drain pipe.



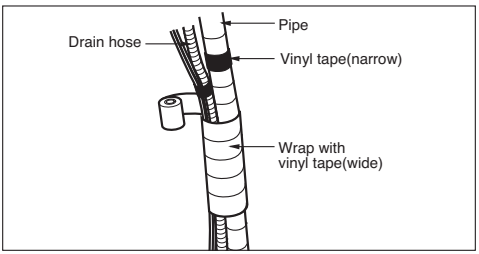
Wrap the insulation material around the connecting portion.

1. Overlap the connection pipe heat insulation and the indoor unit pipe heat insulation material. Bind them together with vinyl tape so that there may be no gap.
2. Wrap the area which accommodates the rear piping housing section with vinyl tape.

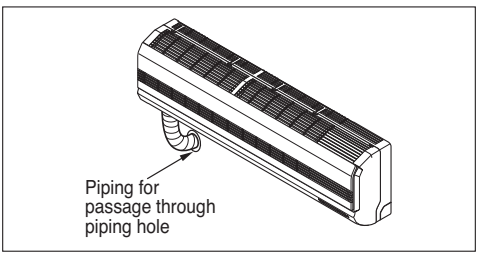




3. Bundle the piping and drain hose together by wrapping them with cloth tape over the range within which they fit into the rear piping housing section.

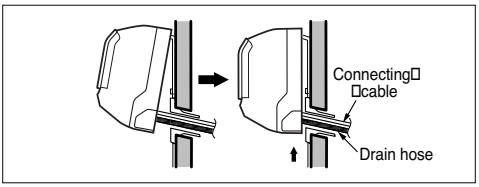


Reroute the pipings and the drain hose across the back of the chassis.



Indoor unit installation

1. Remove the spacer.
2. Ensure that the hooks are properly seated on the installation plate by moving it left and right.
3. Press the lower left and right sides of the unit against the installation plate until the hooks engage into their slots(clicking sound).

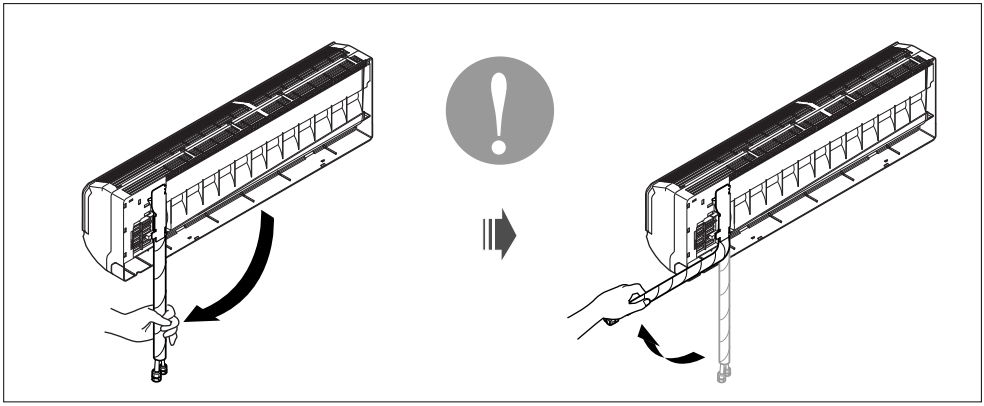


⚠ CAUTION

Installation Information. For left piping. Follow the instruction below.

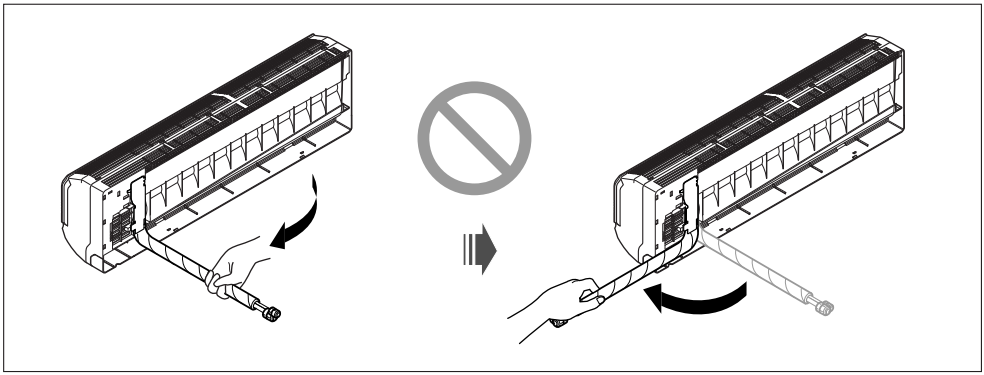
Good case

• Press on the upper side of clamp and unfold the tubing to downward slowly.



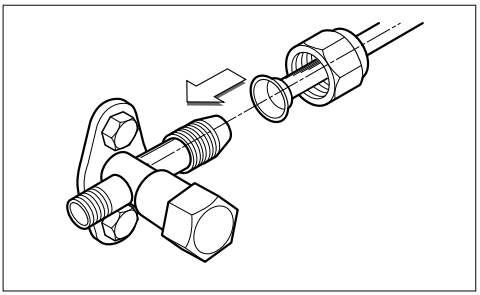
Bad case

• Following bending type from right to left may cause damage to the tubing.



Outdoor

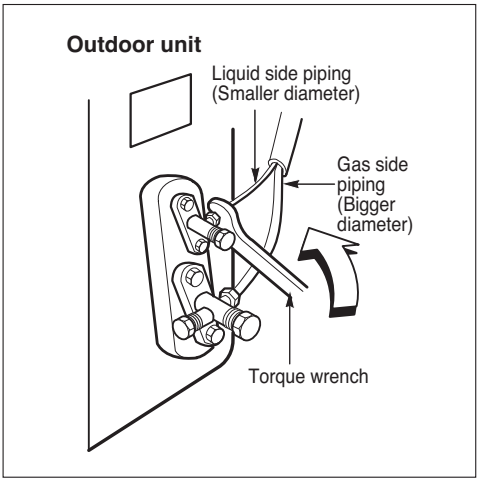
Align the center of the pipings and sufficiently tighten the flare nut by hand.



Finally, tighten the flare nut with torque wrench until the wrench clicks.

- When tightening the flare nut with torque wrench, ensure the direction for tightening follows the arrow on the wrench.

Outside diameter		Torque	
mm	inch	kg·m	lb·ft
Ø6.35	1/4	1.8~2.5	13~18
Ø9.52	3/8	3.4~4.2	24.6~30.4
Ø12.7	1/2	5.5~6.6	39.8~47.7
Ø15.88	5/8	6.3~8.2	45.6~59.3
Ø19.05	3/4	9.9~12.1	71.6~87.5



Connecting the Cables

Indoor

Connect the cable to the indoor unit by connecting the wires to the terminals on the control board individually according to the outdoor unit connection. (Ensure that the color of the wires of the outdoor unit and the terminal No. are the same as those of the indoor unit.)

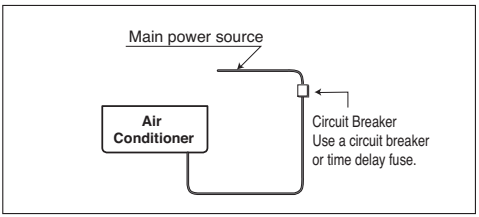
⚠ CAUTION

- The circuit diagram is a subject to change without notice.
- The earth wire should be longer than the common wires.
- When installing, refer to the circuit diagram on the chassis cover.
- Connect the wires firmly so that they may not be pulled out easily.
- Connect the wires according to color codes, referring to the wiring diagram.

⚠ CAUTION

Provide a circuit breaker between power source and the outdoor unit as shown below.

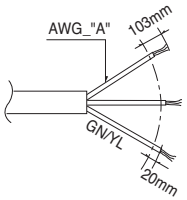
Circuit Breaker (A)	Capacity(Btu/h)
	24k/36k
	25



⚠ CAUTION

The power cord connected to the outdoor unit should be complied with the following specifications (UL recognized or CSA certified).

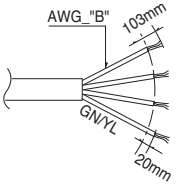
Power supply cable (208/230V)



Power	Capacity(Btu/h)
	24k/36k
"A"	12

The power connecting cable connected to the indoor and outdoor unit should be complied with the following specifications (UL recognized or CSA certified).

Connecting cable (208/230V)



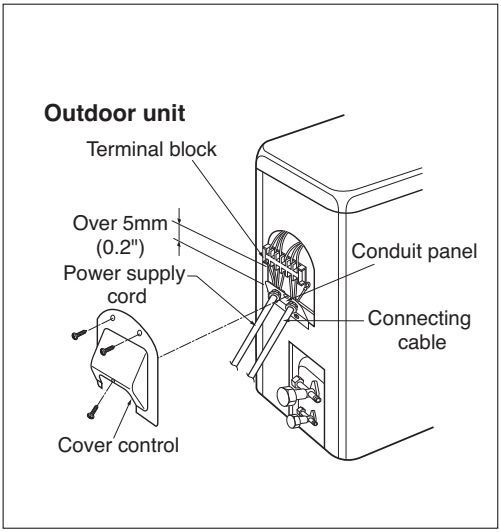
Power	Capacity(Btu/h)
	24k/36k
"B"	18

⚠ CAUTION

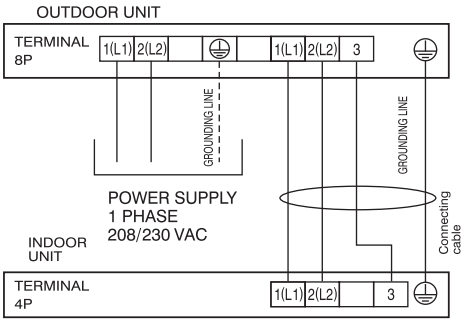
When using the separate wire as the power cord, please fix the separate wire into the control box panel by using tie wrap as the fixture.

Outdoor

1. Remove the cover control from the unit by loosening the screw.
   Connect the wires to the terminals on the control board individually as the following.
2. Secure the cable onto the control board with the holder (clamper).
3. Refix the cover control to the original position with the screw.



Wiring Diagram



NOTICE

1. Separately wire power supply cord and connecting cable.
2. Use heat-proof electrical wiring capable of withstanding temperature up to 75°C(167°F).
3. Use outdoor and waterproof connection cable NRTL(UL, ETL, CSA...) listed and rated more than 300V for the connection between indoor and outdoor unit. (For example, Type SJO-WA), and this cable should be enclosed in conduit.

⚠WARNING

- Be sure to comply with local codes while running the wire from the indoor unit to the outdoor unit(size of wire and wiring method, etc).
- Every wire must be connected firmly.
- No wire should be allowed to touch refrigerant tubing, the compressor or any moving parts.