

- Lead

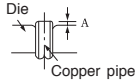
1 Preparation of Pipe

- Use a pipe cutter to cut the copper pipe.



CAUTION

- Jagged edge will cause leakage.
- Point the side to be trimmed downwards during trimming to prevent copper chips from entering the pipe.
- Before flaring, please put on the flare nut.



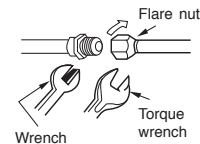
- Recommend to use R32 flaring tool.

Outer Diameter mm (inch)	Thickness (mm)	A (mm)		
		Flare tool for R32 Clutch type	Conventional flare tool	
6.35 (1/4")	0.8	0.0 ~ 0.5	Clutch type	Wing nut type
9.52 (3/8")	0.8	0.0 ~ 0.5	1.0 ~ 1.5	1.5 ~ 2.0
12.70 (1/2")	0.8	0.0 ~ 0.5	1.0 ~ 1.5	1.5 ~ 2.0
15.88 (5/8")	1.0	0.0 ~ 0.5	1.0 ~ 1.5	1.5 ~ 2.5

2 Pipe Connection

CAUTION

In case of removing flare nut of an Indoor unit, first remove a nut of small diameter side, or a seal cap of big diameter side will fly out. Prevent water from entering into the piping when working.



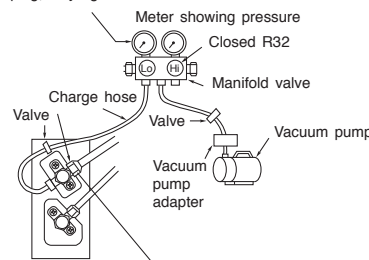
		Outer dia. of pipe	Torque N·m (kgf · cm)
Small dia. side	Large dia. side	6.35 (1/4")	14.0 – 18.0 (140 ~ 180)
		9.52 (3/8")	33.0 – 42.0 (330 ~ 420)
		12.70 (1/2")	50.0 – 62.0 (500 ~ 620)
Valve head cap	Small dia. side	6.35 (1/4")	19.6 – 24.5 (200 ~ 250)
	Large dia. side	9.52 (3/8")	19.6 – 24.5 (200 ~ 250)
		12.7 (1/2")	29.4 – 34.3 (300 ~ 350)
Valve core cap		15.88 (5/8")	29.0 – 31.0 (296 ~ 316)
			12.3 – 15.7 (125 ~ 160)

3 Removal Of Air From The Pipe And Gas Leakage Inspection

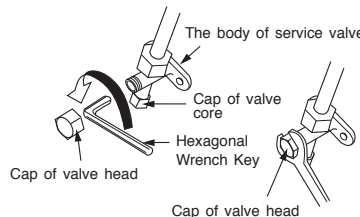
Procedures of using Vacuum Pump for Air Removal

- As shown in right figure, remove the cap of valve core. Then, connect the charge hose. Remove the cap of valve head. Connect the vacuum pump adapter to the vacuum pump and connect the charge hose to the adapter.
- Fully tighten the "Hi" knob of the manifold valve and completely unscrew the "Lo" knob. Run the vacuum pump for about 10~15 minutes, then completely tighten the "Lo" knob and switch off the vacuum pump.
- Remove the charge hose and tighten the cap of valve core. Check the cap's periphery if there is any gas leakage.
- Completely unscrew the spindle of the service valve (at 2 places) in anti-clockwise direction to allow the flow of refrigerant (using Hexagonal Wrench key).
- Re-cap the service valve and tighten using wrench. Check the cap's periphery if there is any gas leakage. The task is then completed.

When the meter reaches - 101KPa (-76cmHg) during pumping, fully tighten the shuttle.



When pumping starts, slightly loosen the flare nut to check of air sucked in. Then tighten the flare nut.

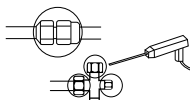


CAUTION

- Prevent moisture from entering pipe connection.
- Refrigerating machine oil not be applied to the outside of the flare. When refrigerating machine oil is applied to the outside of the flare, excessive tightening of the flare nut, cracking of the flare nut, destruction of the flare and gas leakage may occur.
- When using the control valve, do not use deteriorated packing. And, do not overtighten the steering wheel. Gas leakage from the service valve part, stagnation, touching fire, rarely cause ignition.

Gas Leakage Inspection

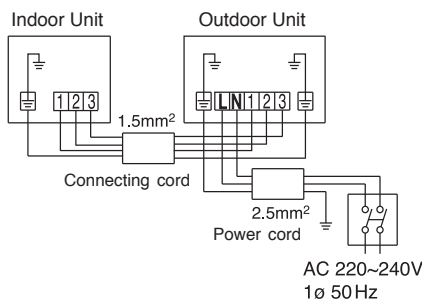
Please use gas leakage detector to check if leakage occurs at the connection of Flare nut as shown on the right.



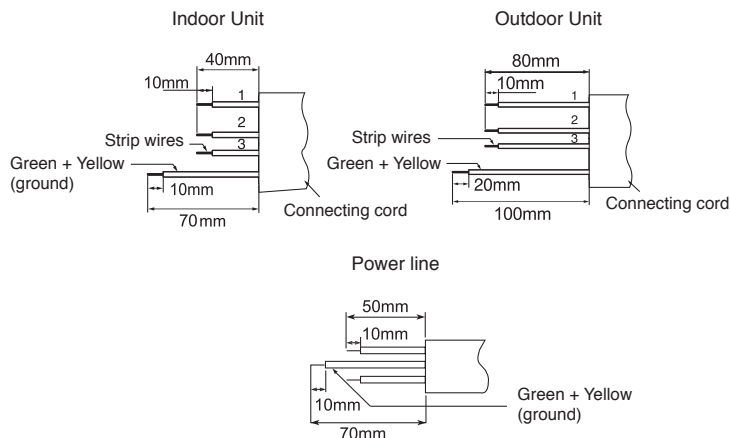
If gas leakage occurs, further tighten the connection to stop leakage. (Be sure to use R32 detector)

WARNING THIS APPLIANCE MUST BE EARTHED.

Procedures of Wiring



Detail of Cutting the Connecting Cord



WARNING

- The naked part of the wire core should be 10 mm and fix it to the terminal tightly. Then try to pull the individual wire to check if the contact is tight. Improper insertion may burn the terminal.
- Be sure to use only wire specified for the use of air-conditioner.
- Please refer to the manual for wire connection and the wiring technique should meet the standard of the electrical installation.
- There is an AC voltage drop between the LN terminal if the power is on. Therefore, be sure to remove the plug from its socket.

Wiring of The Outdoor Unit

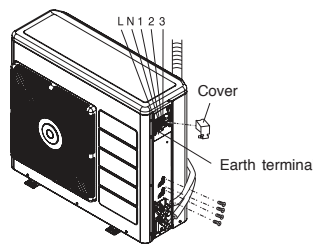
- Please remove the side plate for wire connection.

WARNING

- If you cannot attach the side plate due to the connection cord, please press the connecting cord in the direction to the front panel to fix it.
- Be sure that the hooks of the side plate is fixed in certainly. Otherwise water leakage may occur and this causes short circuit or faults.
- The connecting cord should not touch to service valve and pipes. (It becomes high temperature in heating operation.)

Checking for the electric source and the voltage range

- Before installation, the power source must be checked and necessary wiring work must be completed. To make the wiring capacity proper, use the wire gauge list below for the wiring from house distribution fuse box to the outdoor unit in consideration of the locked rotor current.
- Investigate the power supply capacity and other electrical conditions at the installing location. Depending on the model of room air conditioner to be installed, request the customer to make arrangements for the necessary electrical work etc. The electrical work includes the wiring work up the outdoor unit. In localities where electrical conditions are poor, use of a voltage regulation is recommended.
- Install outdoor for the room air conditioner within the reaching range of the line cord.



For (Power cord - L, N, Earth)

Wire cross-section
2.5 mm ²

For (Connecting cord - 1, 2, 3, Earth)

Wire length	Wire cross-section
up to 30 m	1.5mm ²

IMPORTANT

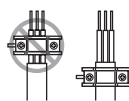
Circuit Breaker	Residual Current Device
20A	2 Poles 40A 30mA

CAUTION

Outdoor supply cords shall not be lighter than polychloroprene sheathed flexible cord with code designation 60245 IEC 57.

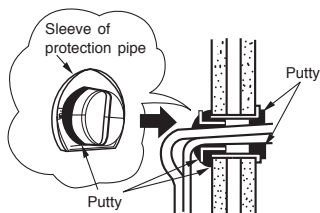
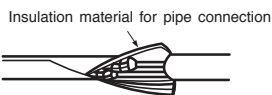
WARNING

- Leave some space in the connecting cord for maintenance purpose and be sure to secure it with the cord band.
- Secure the connecting cord along the coated part of the wire using the cord band. Do not exert pressure on the wire as this may cause overheating or fire.



1 Insulation And Maintenance Of Pipe Connection

- The connected terminals should be completely sealed with heat insulator and then tied up with rubber strap.
- Please tie the pipe and power line together with vinyl tape as shown in the figure showing the installation of Indoor and Outdoor units. Then fix their position with holders.
- To enhance the heat insulation and to prevent water condensation, please cover the outdoor part of the drain hose and pipe with insulation pipe.
- Completely seal any gap with putty.



2 Power Source And Operation Test

Power Source

WARNING

- Never remodel the power plug nor extend the long-distance cord.
- Keep additional length for the power cord and do not render the plug under external force as this may cause poor contact.
- Do not fix the power cord with U-shape nail.
- The power cable easily generates heat. Do not bring the cable together with a wire or vinyl tie.

Operation Test

- Please be sure to measure the supply voltage before operation test.
- Please ensure that the air conditioner is in normal operating condition during the operation test.
- Operate with Cool Mode(in summer) or Heat Mode(in winter).
- Press Temperature Button on the remote controller to set the desired temperature to 16.0°C for Cool Mode or 32.0°C for Heating Mode.
- Set the desired fan speed to " (High).

- Operate the air conditioner for 20 minutes at least and make sure that the air from the air conditioner is cool or warm.
- Press the ON/Off button on the remote controller to make sure that the air conditioner stops running.

- If the indication lamps of the indoor unit blink with sounding the buzzer during the operation test, perform a check following the procedures below.

Indication lamps blinking mode	What do check
All indication lamps blink three times repeatedly.	Make sure that the spindles of both service valves are open. (Outdoor fan might operate for near 15 minutes after the operation stop for the protection. For the reoperation at that case, do it after outdoor fan will stop.)

- Before the check and the reoperation, reset the power supply by turning off and on the circuit breaker only after:-
 - waiting for at least 5 mints; or
 - pressing the Temporary Switch Button only once while the power is OFF.

CAUTION

- Don't operate for over 5 minutes with the situation that the spindle of the service valve is closed. This will cause the defect.
- Don't operate by Cool Mode or Dry Mode with the door and windows opened, (the room humidity is always above 80%) for a long period of time. Water will condense and drip down occasionally. This will wet your furniture.

- Explain to your customer the proper operation procedures as described in the user's manual.
- If the indoor unit won't operate, check the cable for correct connection.
- Turn on the lamp in the room where the indoor unit is installed and check the remote controller for normal operation.