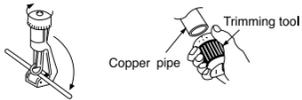


4. Preparation of Pipe

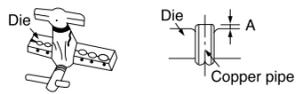
- Use a pipe cutter to cut the copper pipe.



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.



- Please use exclusive tool

Outer Diameter (Ø)	A (mm)	
	Imperial flaring tool	Rigid flaring tool
6.35 (1/4")	0 ~ 0.5mm	1.0mm
9.52 (3/8")	0 ~ 0.5mm	1.0mm
12.7 (1/2")	0 ~ 0.5mm	1.0mm

5. Pipe Connection

5.1 Pipe connection

Connecting the pipe to outdoor unit

- Remove the flare nut and seal cap from the service valve.
- Apply refrigerant oil to the service valve and the flared portion of the pipe.
- Using a wrench, security tighten.

Tighten all the way by hand.

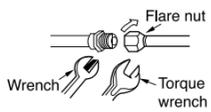
Do not tighten all at once, but tighten it while fitting the flared surface to the pipe.



CAUTION

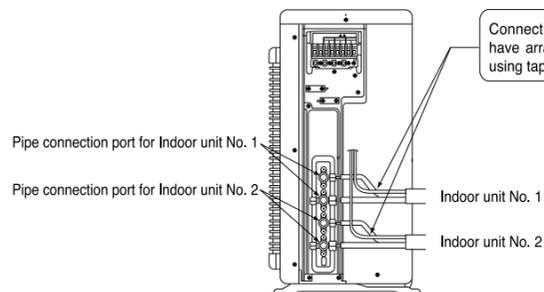
- In case of removing flare nut of an indoor unit, first remove a nut of small diameter side, or seal cap of large diameter side will fly out. Free from water into the piping when working.
- During connection, keep away from water.
- Be sure to tighten the flare nut to the specified torque using a torque wrench. If the flare nut is tightened excessively, it may crack as time elapses, causing refrigerant leakage.

- Please be careful when bending the copper pipe.
- Screw in manually while adjusting the center. After that, use of torque wrench to tighten the connection.



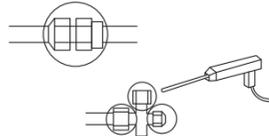
	Outer diameter of pipe (Ø)	Torque N·m (kgf·cm)
Small diameter side	6.35 (1/4")	13.7-18.6 (140-190)
	9.52 (3/8")	34.3-44.1 (350-450)
Large diameter side	12.7 (1/2")	44.1-53.9 (450-550)
Valve head cap	Small diameter side	6.35 (1/4")
	Large diameter side	9.52 (3/8")
Valve core cap	Small diameter side	6.35 (1/4")
	Large diameter side	9.52 (3/8")
	12.7 (1/2")	29.4-34.3 (300-350)
		12.3-15.7 (125-160)

- Install the unit in a stable place to minimize vibration or noise.
- After arranging the cords and pipes, secure them in place.



Gas leakage inspection

Please use gas leakage detector to check if leakage occurs at connection of flare nut as shown on the right. If gas leakage occurs, further tighten the connection to stop leakage. (Use the detector provided for R410A)



6. Removal Of Air From The Pipe And Gas Leakage Inspection

6.1 Air purging by using vacuum pump

Remove the valve cap of valve core.

Connect the charge hoses to the vacuum pump and the charge port of the valve core large dia. pipe side service valve, respectively.

Fully open the LO knob of the manifold valve.

Run the vacuum pump.

Vacuum for more than 10 min.

Close the LO knob of the manifold valve.

Stop the vacuum pump.

Remove the valve cap from the spindle of the service valve.

Turn the spindles of each large and small dia. pipe side service valves full counterclockwise until they are securely tightened. Then retighten them more than 10 degrees [using a hexagon wrench key (4mm □) without fail].

Disconnect the charge hose from the service valve.

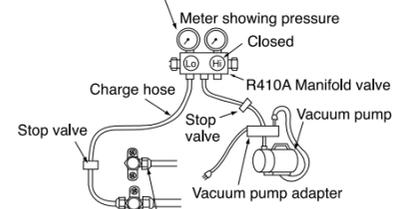
Tighten the valve cap of valve core. [Torque 12.3 - 15.7 N·m (125 - 160 kgf·cm)]

Attach the valve cap to the spindles of each large and small dia. pipe side service valves.

Tighten the valve cap of the spindle. [Torque 19.6 - 24.5 N·m (200 - 250 kgf·cm)]

Air purging by vacuum pump

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.

Be sure the stop valve is always fully opened.

Fig. 6-1

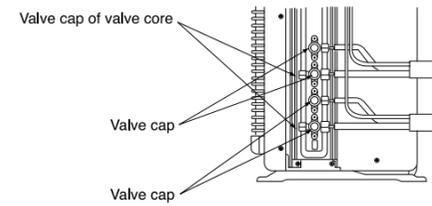


Fig. 6-2

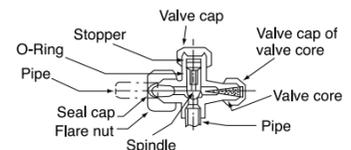


Fig. 6-3

The refrigerant channel is opened so that the refrigerant will flow from the outdoor unit into the indoor unit.

7. Operation test

- Please ensure that the air conditioner is in normal operating condition during the operation test.
- Explain to your customer the proper operation procedures as described in the user's manual.
- If the indoor unit does not operate, check to see that the connections are correct.

CAUTION

- Trial run should be conducted on one unit at a time to check for incorrect wiring of connecting cord.