

Installation

2. Outdoor units

- * Leave enough margin around the unit to ensure sufficient air circulation (Figure 2 shows the recommended minimum dimensions)
- * Try to avoid exposure to direct sunlight.
- * Away from thermal sources or sources of combustible gases.
- * Not to be installed in places where there is strong wind and dust.
- * Not to be installed in places where the generated noise and discharged air flow will cause troubles to neighborhood.
- * Keep at least two sides open to outside.

*.Installation of the indoor units

Pipe lines can be connected in the directions of**
*****and* as indicated in Figure 3. When the pipelines are connected to the directions of***and*, a groove for the pipes has to be opened at the proper place on the base stand.

*.Installation of wall-mounting plate

Fix the wall-mounting plate firmly on the wall with screws. Make sure of the leveling of the plate. Slanted wall-mounting plate might jeopardize the smooth discharge of the condensed water.

2. Drill holes on the wall

Drill holes at places slightly below the wall-mounting plate, with hole diameter of 65mm and the outer edge of the hole 5-10mm lower (Figure 4) so that the condensed water can smoothly flow out. Cut the wall penetrating pipe to proper length according to the thickness of the wall (3-5mm longer than the wall thickness) and insert the pipe as indicated in Figure 4.

3. Installation of drain pipe

Install the pipelines of the indoor unit in accordance with the direction of the wall holes. Wrap tightly the drain pipe and the pipelines with tape. Make sure that the drain pipe is underneath the pipelines. (Figure 5) (When the drain pipe passes the room interior, some condensed water might occur to its surfaces if the humidity is very high).

4. Installation of indoor unit

Pass the connection wires, connecting pipelines and drain pipe through the wall hole. Hang the indoor unit on the hooks at the top of the wall-mounting plate so that the hooks at the bottom of the indoor unit match the hooks of the wall-mounting plate. (Figure 6)

Figure 2

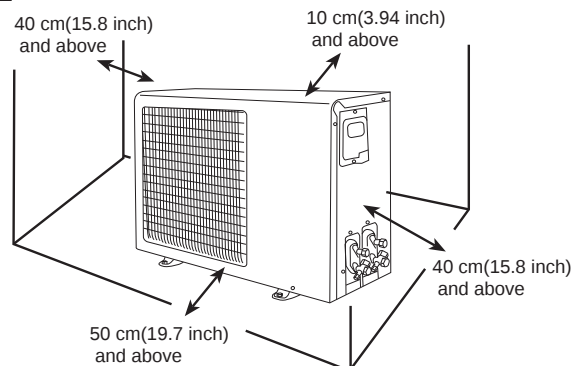


Figure 3

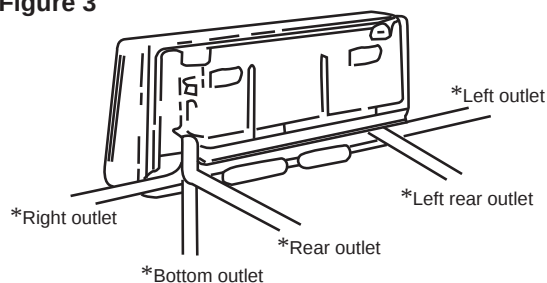


Figure 4

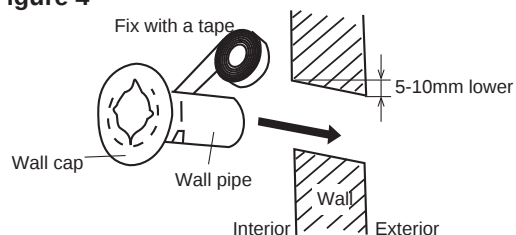


Figure 5

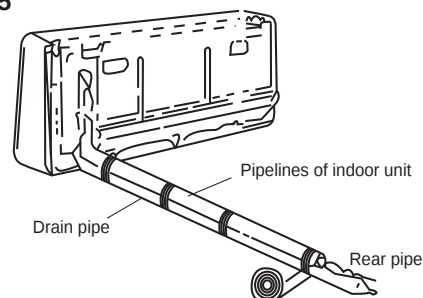
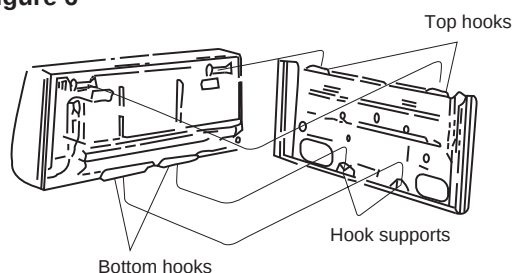


Figure 6



Installation

Inspections:

- See if the hooks at the top and bottom are firmly fixed.
- See if the position of the master unit is properly leveled.
- The drain pipe should not curve upward (Figure 7).
- The drain pipe should be at the lower part of the wall pipes (Figure 7).

5. Wire connections of indoor and outdoor units

Connect the wires of the indoor and outdoor units properly according to the schematic diagram.

Note: Do not connect the wires in a wrong way, otherwise electric malfunctions will be caused and even damages to the units will occur.

If the supply cord is damaged, it must be replaced by the manufacture or its service agent or a similarly qualified person in order to avoid a hazard.

The plug shall be accessible after installed the appliance.

*. Installation of outdoor units

The outdoor unit should be installed on a rigid base or stand. The installation surface should be as leveled as possible.

*. Installation the connection pipe

- Align the center of the piping flare with then relevant valve.
- Screw in the flare nut by hand and then tighter the nut with spanner and torque wrench refer to the diagram at right.

Note:Exceeding tightening torque will damage the flare surface.

Tightening torque table

Hex nut diameter	Tightening torque(N.m)
Ø 6mm(1/4")	15-20
Ø 9.5mm(3/8")	31-35
Ø 12mm(1/2")	50-55

*. Wire connections for outdoor units

As shown in Figure 9

- * Remove the drawer of the outdoor unit, properly connect the wires to the corresponding terminals in accordance with the electric schematic diagram and make sure that the connection is firmly done.
- * Use a press plate to fix the wires firmly, and re-install the drawer.

Note:

- * Make sure that the wiring has been connect correctly.
- * Wrong wiring connection will cause electrical mal-function.
- * Do not pull the wire when fixing it with wire clamp.

Figure 7

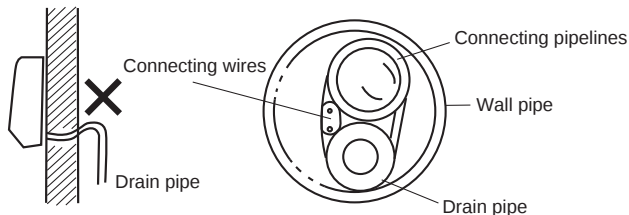


Figure 8

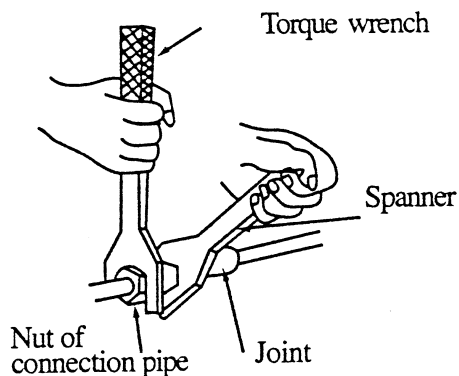
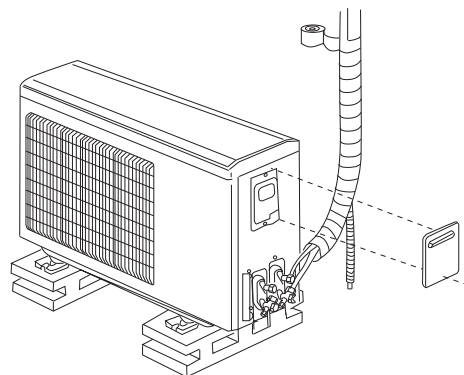
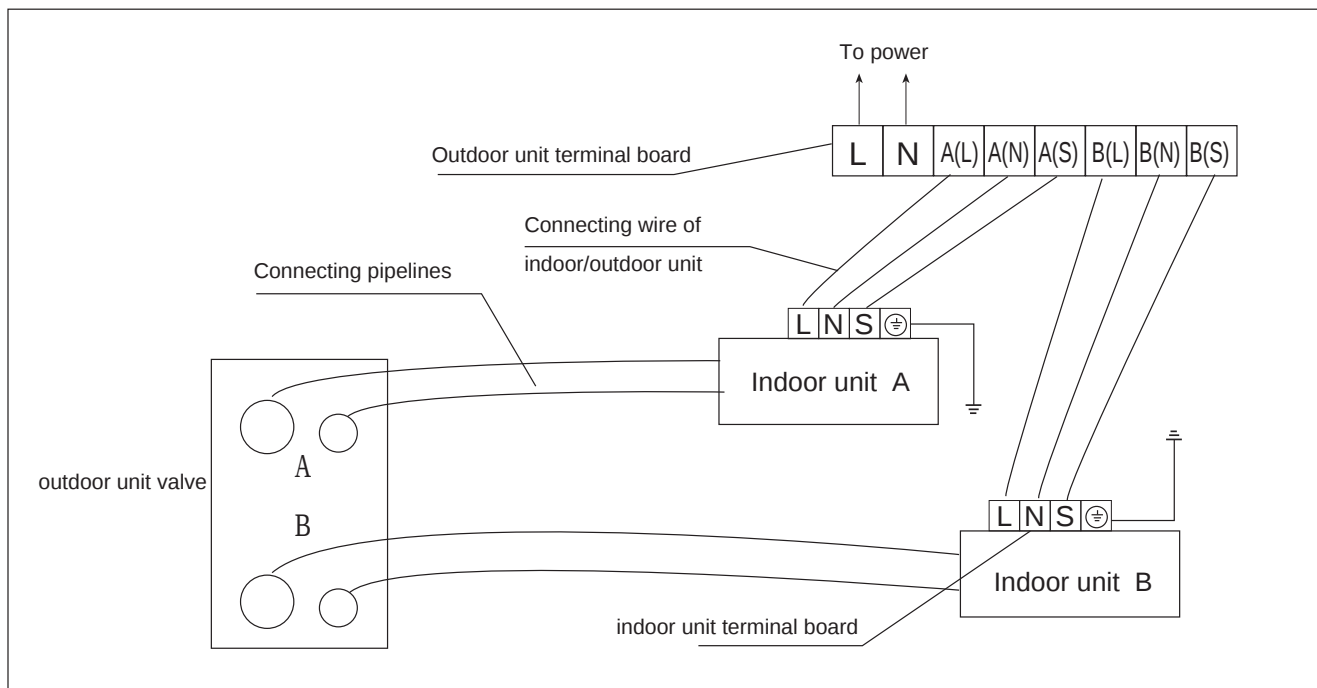


Figure 9



Installation

Wrie and pipe connections for units



NOTE: The height difference should be less than 15 meters between the indoor unit A and B, 20 meters less between indoor unit and outdoor unit after installing.

VI Refrigerant adjustment

If the liquid pipe length exceeds 10m, additional refrigerant charge is required.

liquid Pipe length	10m maximum	No additional charge require	—	
	exceeding 10m	Additional charge require	Refrigerant to be added	30g/m

example:

After the installation if the length of liquid connecting pipelines is 15 meters, the refrigerant adjustment should be 150g.

NOTE:

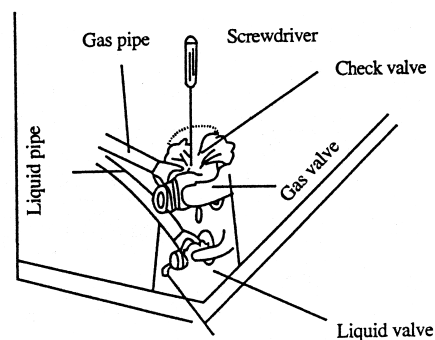
The length of liquid connecting pipelines can not exceed 20 meters.

VI Air purging and leakage test

R22:

1. Remove the flare nuts from the cut-off valves of the outdoor unit.
2. Align the center of the piping flare with the relevant valve, and screw in the flare nut about 3~ 4 turns hand.
3. Tighten the flare nut with spanner and torque wrench.
4. Remove the valve caps of the gas valve and liquid valve and the service port nut.
5. Loosen the valve stem of the liquid valve with a hex wrench.
6. Push the check valve core of the gas valve to discharge air and moisture remaining in the refrigerant system.
7. Stop pushing the valve core as soon as the refrigerant starts to be discharged, and reinstall the service port nut.
8. Open the liquid valve and gas valve entirely (shown in Fig.10).

Figure 10



Installation

9. Tighten the valve caps and test leakage at all joints of the piping(both indoor and outdoor) with liquid soap or leak detector.
10. If possible, discharge air and moisture remaining in the refrigerant system with a vacuum pump.(shown in Fig.11)
11. CAUTION: If there is no exhaust or the exhaust capacity is not enough, please make sure all wires are connected correctly first, then electrify the outdoor main power("L" "N") (no need to power on) for tens of seconds. When the corresponding electric expansion valve opens, exhaust again.

R407C/R410a:

NOTE:During the installation or future maintenance,special material are for copper pipes,many-handed pressure gauge, valve, Four-way valve, compressor etc which touch refrigerant, These are different from R22.

1. Remove the flare nuts from the cut-off valves of the outdoor unit.
 2. Align the center of the piping flare with the relevant valve, and screw in the flare nut about 3~ 4 turns hand.
 3. Tighten the flare nut with spanner and torque wrench.
 4. Remove the valve caps of the gas valve and liquid valve and the service port nut.
 5. Connect the low-pressure needle valve with the soft tube of refrigerant bottle. Open the bottle switch to let the air from the small pipe flared nut for about 10 seconds. Tighten the flared nut after the with a torque force as indicated in Table 1. Then close the bottle switch, loose the needle valve junction and use a socket head cap wrench to with stand the needle to let remain refrigerant out completely from the pipe.
 6. Stop pushing the valve core as soon as the refrigerant starts to be discharged, and reinstall the service port nut.
 7. Open the liquid valve and gas valve entirely(shown in Fig.11).
 8. Prevented there is any leakage stop adding refrigerant and all refrigerant in system must be let out, then supply the lack, evacuation, repour, and lay the refrigerant-container refering to the detailed description on it for pouring in liquid careful attention should be paid during pouring. Furthermore all the R407c/R410a have to be let out if is poured too much, then pour again.
- the way above is similarly available in future maintenance.

VII Outdoor condensation drainage(Heat pump type only)

When the unit is heating or defrosting, the waste water formed in the outdoor unit can be drained out reliably through the drain hose.

Installation:

Install the outdoor drain elbow in the $\varnothing$ 25 hole on the base plate as shown in Fig. 12, and joint the drain hose to the elbow, so that the waste water formed in the outdoor unit can be drained out to a proper place.

* .Finishing touches

- * Use thermal tube to wrap the joints and wrap the tube tightly with ethylene tapes.
- * Fix the wrapped pipelines on the exterior wall with clamps.
- * Fill in the gaps left over by the pipeline hole and wall hole to prevent rain-water from entering.

* .Test running

- * Connect to the power source, check if the function selection keys on the remote controller are working properly.
- * Check if the room temperature adjustments and timer settings are working properly.
- * Check if the drain is smooth.
- * Check if there is any abnormal noise or vibration during operation.
- * Check if there is leakage of refrigerant.

Figure 11

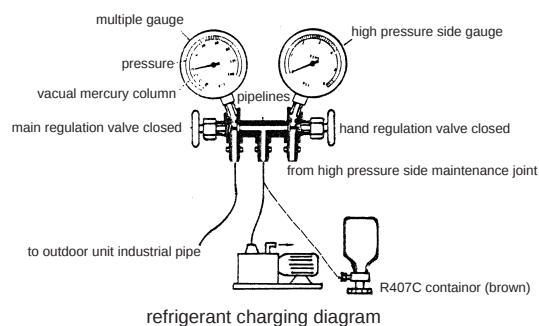
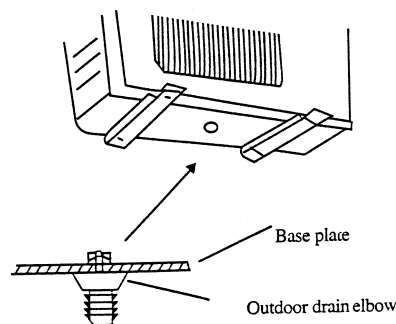


Figure 12



Is the unit installed correctly?

Suitable Installation Position

Isn't there anything which prevents ventilation or obstructs operation in front of the indoor unit ? Do not install the unit following place .

Inflammable gases may leak .

Oil splashes a lot .

In case where the unit is used in such places as poisonous or sultry gases are generated or seaside district exposed to sea breezes corrosion may cause malfunction . Consult with your distributor .

Air conditioner body and remote controller must be 1 m or more away from a TV or a radio .

Drain the dehumidified water from the indoor unit to a place which drains well .

Pay attention to operation noise

*When installing the unit , choose a place which can stand the weight of the unit well and does not increase the operation noise or vibration . Especially where there is a possibility that vibration be transmitted to the house , fix the unit by inserting attached vibration -proof pads between the unit and fittings .

*Choose the place where hot air and operation noise from the outlet of the outdoor unit do not annoy the neighborhood .

*Things left near the outlet and inlet of the outdoor unit cause malfunction or increased operation noise .

Do not leave obstacles near the outlet and inlet .

*If irregular sound is heard during operation , consult with your distributor .

Inspection and Maintenance

According to the service conditions and operating environment , the inside of the air conditioner will become dirty after several seasons (3 to 5years) of service , resulting in decreased operating performance .Inspection and maintenance are recommended in addition to usual cleaning (The air conditioner can be used for a longer period and without anxiety .)

As to inspection and maintenance , consult your dealer or any one of business offices of dealing companies .(Service charge is required in this case .)

We recommend to perform inspection and maintenance during an off seasons.