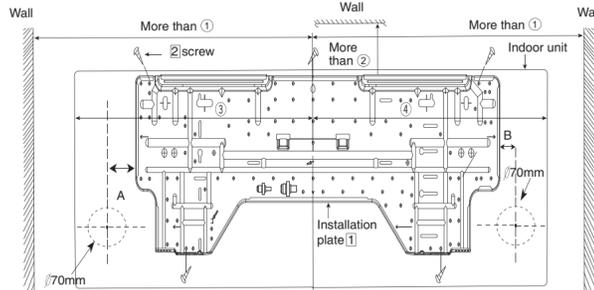


1 SELECT THE BEST LOCATION (Refer to "Select the best location" section)

2 HOW TO FIX INSTALLATION PLATE

The mounting wall shall be strong and solid enough to prevent it from vibration.



(The picture is for reference only. Please refer to the indication on installing holder for A/B distance at both sides of the hole.)

Model	Dimension			
	①	②	③	④
U9~12***	450mm	80mm	394mm	404mm
U18***	495mm	80mm	440mm	450mm

The center of installation plate should be at more than ① at right and left of the wall. The distance from installation plate edge to ceiling should more than ②. From installation plate center to unit's left side is ③. From installation plate center to unit's right side is ④.

- Mount the installation plate on the wall with 5 screws or more (at least 5 screws). (If mounting the unit on the concrete wall, consider using anchor bolts.)
 - Always mount the installation plate horizontally by aligning the marking-off line with the thread and using a level gauge.
- Drill the piping plate hole with $\phi 70$ mm hole-core drill.
 - Putting measuring tape at position as shown in the diagram above. The meeting point of the extension arrow mark is the hole center position.
 - Drill the piping hole at either the right or the left and the hole should be slightly slanting to the outdoor side. (Refer to step 3)

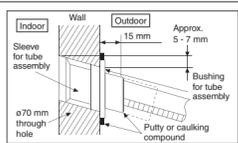
Please refer to the indication on installing holder for A/B distance at both sides of the hole.

3 TO DRILL A HOLE IN THE WALL AND INSTALL A SLEEVE OF PIPING

- Insert the piping sleeve to the hole.
- Fix the bushing to the sleeve.
- Cut the sleeve until it extrudes about 15 mm from the wall.

CAUTION

- When the wall is hollow, please be sure to use the sleeve for tube assembly to prevent dangers caused by mice biting the connection cable.

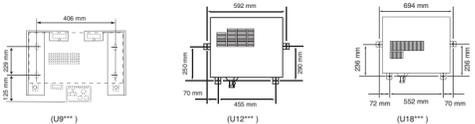


1 SELECT THE BEST LOCATION (Refer to "Select the best location" section)

2 INSTALL THE OUTDOOR UNIT

After selecting the best location, start installation to Indoor/Outdoor Unit Installation Diagram.

- Fix the unit on concrete or rigid frame firmly and horizontally by bolt nut ($\phi 10$ mm). Make sure unit install in balance level to ensure that water flow out from unit drainage hole.
- When installing at roof, please consider strong wind and earthquake. Please fasten the installation stand firmly with bolt, screws or nails.



3 CONNECT THE PIPING

Caution: There is high pressure nitrogen charged in evaporator. Please loosen the nut before installing to check if still have high pressure nitrogen. If no gas flowing out at all, there is high possibility of system leakage. Please check thoroughly before installation.

Connecting The Piping to Indoor

For connection joint of all models Please make flare after inserting (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.

Connecting The Piping to Outdoor

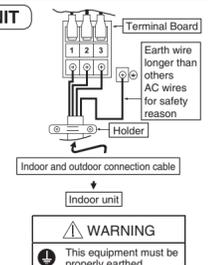
Decide piping length and then cut by using pipe cutter. Remove burrs from cut edge.

Make flare after inserting the flare nut (locate at valve) onto the copper pipe. Align center of piping to valve and then tighten with torque wrench to the specified torque as stated in the table.

Piping size	Torque
6.35 mm (1/4")	18 Nm (1.8 kgf·m)
9.52 mm (3/8")	42 Nm (4.3 kgf·m)
12.7 mm (1/2")	55 Nm (5.6 kgf·m)
15.88 mm (5/8")	65 Nm (6.6 kgf·m)
19.05 mm (3/4")	100 Nm (10.2 kgf·m)

5 CONNECT THE CABLE TO THE OUTDOOR UNIT

- Remove the control board cover from the unit by loosening the screw.
- Connection cable between indoor unit and outdoor unit shall be approved polychloroprene sheathed 4 x 1.5 mm² (1.0 ~ 2.0HP) flexible cord, type designation 60245 IEC 57 or heavier cord. Do not use joint connection cable. Replace the wire if the existing wire (from concealed wiring, or otherwise) is too short.
- Secure the cable onto the control board with the holder (clammer).
- Attach the control board cover back to the original position with screw.
- For wire stripping and connection requirement, refer to instruction ⑤ of indoor unit.
 - Earth wire shall be Yellow/Green (Y/G) in colour and longer than other AC wires for safety reason.



6 PIPING INSULATION

- 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.
- 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 6 mm or above.

4 INDOOR UNIT INSTALLATION

1. FOR THE RIGHT REAR PIPING

- Pull out the Indoor piping
- Install the Indoor Unit
- Secure the Indoor Unit
 - If indoor power supply, excess length of power supply must arrange accordingly, please refer "Power supply cord arrangement" before secure the indoor unit.
- Insert the connection cable

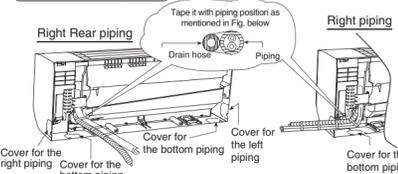
2. FOR THE RIGHT AND RIGHT BOTTOM PIPING

- Pull out the Indoor piping
- Install the Indoor Unit
- Insert the connection cable
 - If indoor power supply, excess length of power supply must arrange accordingly, please refer "Power supply cord arrangement" before secure the indoor unit.
- Secure the Indoor Unit

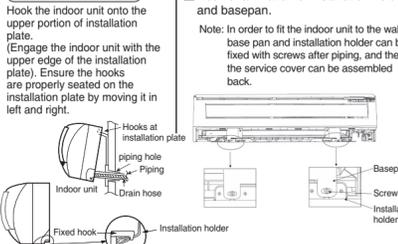
Secure the Indoor Unit

- Power supply cord arrangement
Excess length of power supply cord should be arranged behind the chassis at piping keeping area as shown in the diagram without tying up in a bundle. Ensure that the power supply cord is not clamped in between unit's hook (2 position) and installation plate. Ensure that the power supply cord is not stretched between chassis back and installation plate. It may create squeak sound.

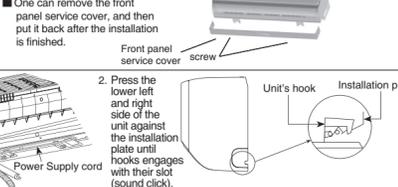
Pull out the Indoor piping



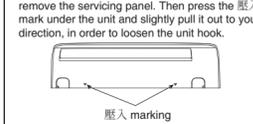
Install the indoor unit



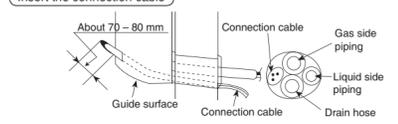
Secure the indoor unit



If you would like to take out the unit, first please remove the servicing panel. Then press the 壓入 mark under the unit and slightly pull it out to your direction, in order to loosen the unit hook.

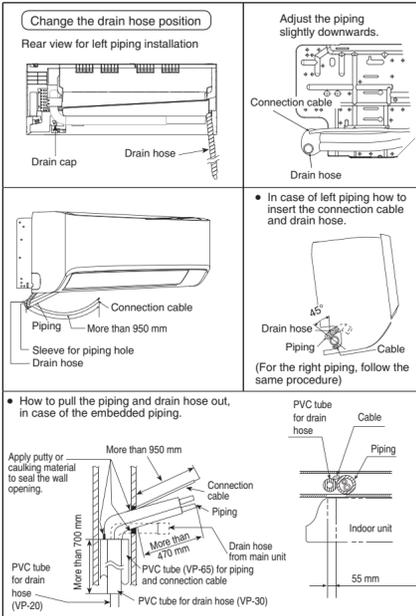


Insert the connection cable



3. FOR THE EMBEDDED PIPING

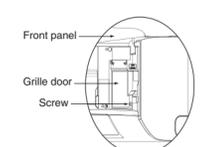
- Change the drain hose position
- Bend the embedded piping
 - Use a spring bender or equivalent to bend the piping so that the piping is not crushed.
- Pull the connection cable into Indoor Unit
 - The indoor unit and outdoor unit connection cable can be connected without removing the front grille.
- Cut and flare the embedded piping
 - When determining the dimensions of the piping, slide the unit all the way to the left on the installation plate.
 - Refer to the column "Cutting and flaring the piping".
- Install the Indoor Unit
- Connect the piping
 - Please refer to "Connecting the piping" column in outdoor unit section. (Below steps are done after connecting the outdoor piping and gas-leakage confirmation.)
- Insulate and finish the piping
 - Please refer to "Insulation of piping connection" column as mentioned in indoor/outdoor unit installation.
- Secure the Indoor Unit
 - (This can be used for left rear piping also.)



5 CONNECT THE CABLE TO THE INDOOR UNIT

The indoor and outdoor unit connection cable can be connected without removing the front grille.

- Install the indoor unit on the installing holder that mounted on the wall.
- Open the front panel and grille door by loosening the screw.
 - Connection cable between indoor unit and outdoor unit shall be approved polychloroprene sheathed, 4 x 1.5 mm² (1.0 ~ 2.0HP) flexible cord, type designation 60245 IEC 57 or heavier cord. Do not use joint connection cable. Replace the wire if the existing wire (from concealed wiring, or otherwise) is too short.
- Bind all the indoor and outdoor Connection cable with tape and route the connection cable via the right side escapement.

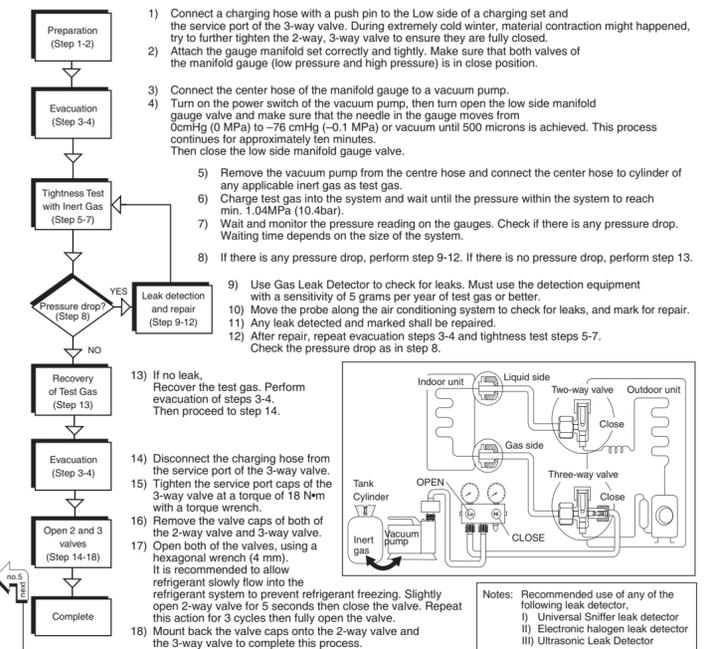


4 AIR TIGHTNESS TEST ON THE REFRIGERATING SYSTEM

Do not purge the air with refrigerants but use a vacuum pump to vacuum the installation.

There is no extra refrigerant in the outdoor unit for air purging.

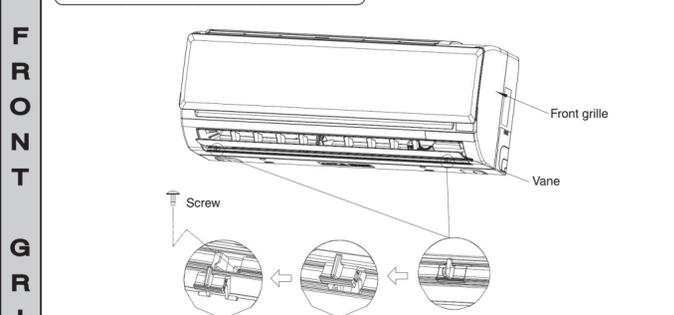
- Before system is charged with refrigerant and before the refrigerating system is put into operation, below site test procedure and acceptance criteria shall be verified by the certified technicians, and/or the installer.
- Be sure to check whole system for gas leakage.



CUTTING AND FLARING THE PIPING

- Please cut using pipe cutter and then remove the burrs.
- 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.
- Please make flare after inserting the flare nut onto the copper pipes.

HOW TO TAKE OUT FRONT GRILLE

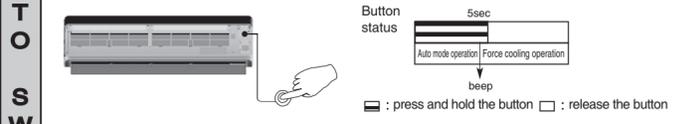


- Please follow the steps below to take out front grille if necessary such as when servicing.
- Set the vertical airflow direction (vane) to horizontal position as shown in the illustration.
 - Pull up and hang the 2 caps.
 - And then remove the 2 mounting screws.
 - Pull the lower section of the front grille towards you to remove the front grille.

When reinstalling the front grille, carry out above step 2 - 3 in the reverse order

When the remote controller is unavailable

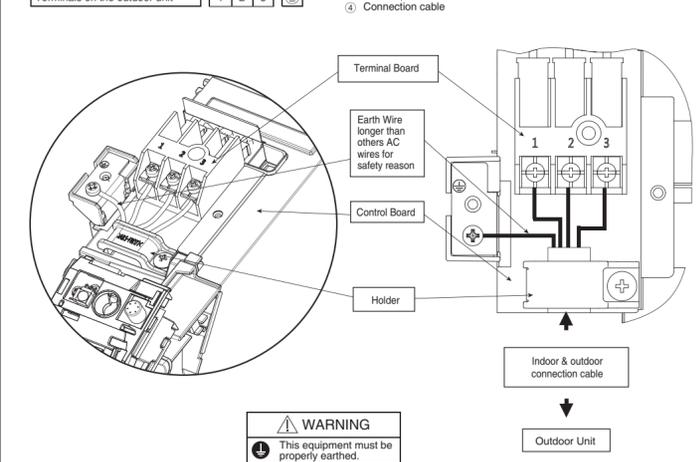
- Press "Stop/Start" button to operate the unit when the battery is running down or the remote controller is missing. It's AUTO mode operation at this time.
- Operation procedure
 - Press "Stop/Start" button to operate the unit.
 - Press again "Stop/Start" button to stop the unit.
 - Control method of "Stop/Start" button



- Power outage
 - If power is off when TIMER is set the TIMER setting will be cancelled. 'TIMER' indicator light on the unit goes off! Please reset the TIMER after power is back.
- Thunder
 - If you are worried about thunder effect, please stop operation and switch off the fuse in order to protect the unit.

5 Remove the tapes and connect the connection cable between indoor unit and outdoor unit according to the diagram below.

Terminals on the indoor unit	1	2	3
Colour of wires (connection cable)	1	2	3
Terminals on the outdoor unit	1	2	3



- Secure firmly the connecting cable onto the control board with the holder. Do not overtighten holder screw, as this may damage the holder.
- Close grille door by tighten with screw and close the front panel.
 - Isolating Devices (Disconnecting means) should have minimum 3.0 mm contact gap.
 - Ensure the colour of wires of outdoor unit and the terminal Nos. are the same to the indoor's respectively.
 - Earth wire shall be Yellow/Green (Y/G) in colour and longer than other AC wires as shown in the figure for the electrical safety in case of the slipping out of the cord from the anchorage.

WIRE STRIPPING, CONNECTING REQUIREMENT

Wire stripping

No loose strand when inserted

Indoor/outdoor connection terminal board

5 mm or more (gap between wires)

Conductor fully inserted

Conductor over inserted

Conductor not fully inserted

ACCEPT PROHIBITED PROHIBITED

RISK OF FIRE JOINING OF WIRES MAY CAUSE OVERHEATING AND FIRE.

Do not joint wires

Use complete wire without jointing.

Wire connection in this area must follow to national wiring rules.

CHECK THE DRAINAGE

- Open front panel and remove air filters. (Drainage checking can be carried out without removing the front grille.)
- Pour a glass of water into the drain tray-styrofoam.
- Ensure that water flows out from drain hose of the indoor unit.

EVALUATION OF THE PERFORMANCE

- Operate the unit at cooling operation mode for fifteen minutes or more.
- Measure the temperature of the intake and discharge air.
- Ensure the difference between the intake temperature and the discharge is more than 8 °C.

Note: During winter, turn on the power supply and standby the unit for at least 15 minutes before test run. Allow sufficient time to warm up refrigerant and prevent wrong error code judgement.

IN CASE OF REUSING EXISTING REFRIGERANT PIPING

- Observe the followings to decide reusing the existing refrigerant piping. Poor refrigerant piping could result in product failure.
 - In the circumstances listed below, do not reuse any refrigerant piping. Instead, make sure to install a new piping.
 - Heat insulation is not provided for either liquid-side or gas-side piping or both.
 - The existing refrigerant pipe has been left in an open condition.
 - The diameter and thickness of the existing refrigerant piping does not meet the requirement.
 - The piping length and elevation does not meet the requirement.
 - Perform proper pump down before reuse piping.
 - In the circumstances listed below, clean it thoroughly before reuse.
 - Pump down operation cannot be performed for the existing air-conditioner.
 - The compressor has a failure history.
 - Oil color is darken. (ASTM 4.0 and above).
 - The existing air-conditioner is gas/oil heat pump type.
 - Do not reuse the flare to prevent gas leak. Make sure to install a new flare.
 - If there is a welded part on the existing refrigerant piping, conduct a gas leak check on the welded part. Heat insulating material is required for both liquid-side and gas-side piping.

Proper Pump Down Method

- Operate air conditioner at cooling mode for 10 ~ 15 minutes.
- After 10 ~ 15 minutes of pre operation, close 2 way valve. After 3 minutes, close 3 way valve.
- Take out air conditioner unit.
- Install New Refrigerant air conditioner.

CHECK ITEMS

<input type="checkbox"/> Is there any gas leakage at flare nut connections?	<input type="checkbox"/> Is the indoor unit properly hooked to the installation plate?
<input type="checkbox"/> Has the heat insulation been carried out at flare nut connection?	<input type="checkbox"/> Is the power supply voltage complied with rated value?
<input type="checkbox"/> Is the connection cable being fixed to terminal board firmly?	<input type="checkbox"/> Is there any abnormal sound?
<input type="checkbox"/> Is the connection cable being clamped firmly?	<input type="checkbox"/> Is the cooling/heating operation normal?
<input type="checkbox"/> Is the drainage ok? (Refer to "Check the drainage" section)	<input type="checkbox"/> Is the thermostat operation normal?
<input type="checkbox"/> Is the earth wire connection properly done?	<input type="checkbox"/> Is the remote control's LCD operation normal?