

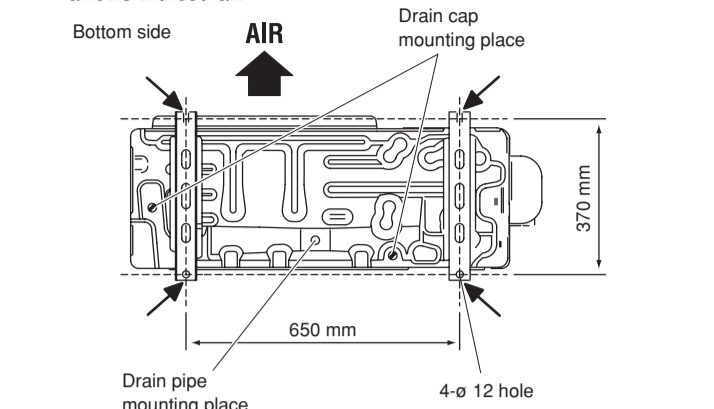
OUTDOOR UNIT

OUTDOOR UNIT INSTALLATION

⚠ WARNING

- Install the unit where it will not be tilted by more than 3°. However, do not install the unit with it tilted towards the side containing the compressor.
- When installing the outdoor unit where it may be exposed to strong wind, fasten it securely.

(1) Outdoor unit to be fasten with bolts at the four places indicated by the arrows without fail.



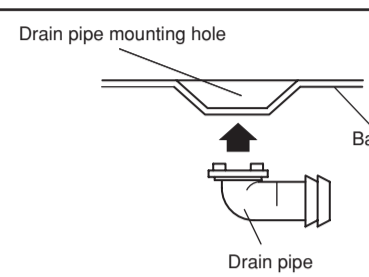
(2) Fix securely with bolts on a solid block. (Use 4 sets of commercially available M10 bolt, nut and washer.)

(3) Since the drain water flows out of the outdoor unit during heating operation, install the drain pipe and connect to a commercial 16 mm hose. (Reverse cycle model only)

(4) When installing the drain pipe, plug all the holes other than the drain pipe mounting hole in the bottom of the outdoor unit with putty so there is no water leakage. (Reverse cycle model only)

⚠ CAUTION

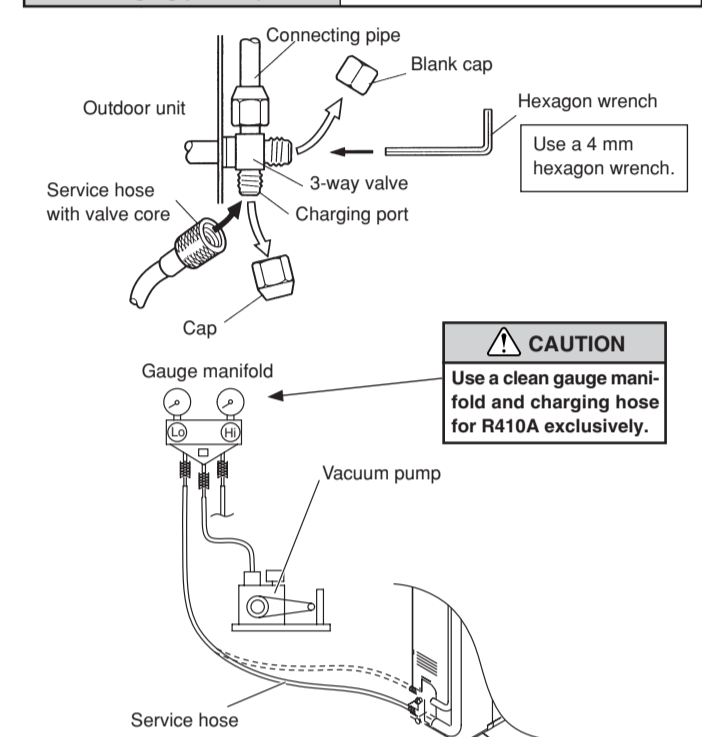
When the outdoor temperature is 0 °C or less, do not use the accessory drain pipe and drain cap. If the drain pipe and drain cap are used, the drain water in the pipe may freeze in extremely cold weather. (Reverse cycle model only)



AIR PURGE

- Remove the cap, and connect the gauge manifold and the vacuum pump to the charging valve by the service hoses.
- Vacuum the indoor unit and the connecting pipes until the pressure gauge indicates -0.1 MPa (-76 cmHg).
- When -0.1 MPa (-76 cmHg) is reached, operate the vacuum pump for at least 60 minutes.
- Disconnect the service hoses and fit the cap to the charging valve to the specified torque.
- Remove the blank caps, and fully open the spindles of the 3-way valves with a hexagon wrench [Torque: 6~7 N·m (60 to 70 kgf·cm)]
- Tighten the blank caps of the 3-way valve to the specified torque.

Tightening torque		
Blank cap	9.52 mm (3/8 in.)	20 to 25 N·m (200 to 250 kgf·cm)
Charging port cap	15.88 mm (5/8 in.)	30 to 35 N·m (300 to 350 kgf·cm)
Charging port cap		10 to 12 N·m (100 to 120 kgf·cm)



Pipe length	30 m	40 m	50 m
Additional refrigerant	400 g	800 g	1200 g

Between 20 m and 50 m, when using a connection pipe other than that in the table, charge additional refrigerant with 40g/1 m as the criteria.

⚠ CAUTION

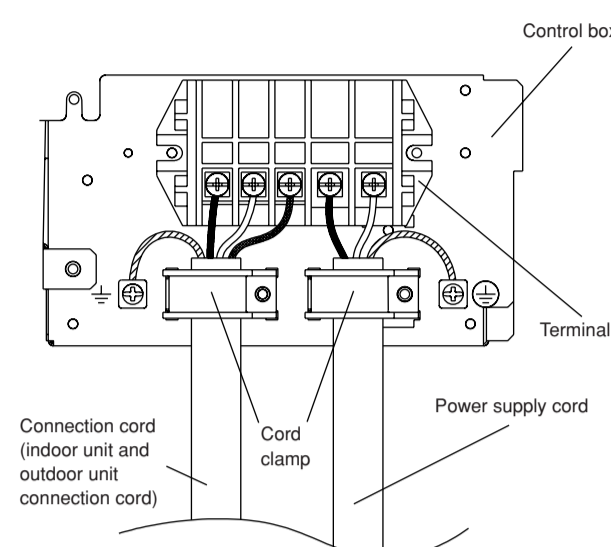
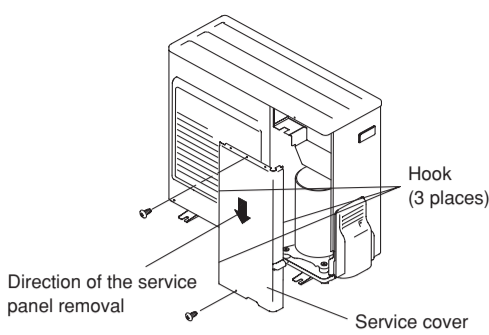
- Do not purge the air with refrigerants, but use a vacuum pump to vacuum the installation! There is no extra refrigerant in the outdoor unit for air purging!
- Use a vacuum pump and gauge manifold and charging hose for R410A exclusively. Using the same vacuum for different refrigerants may damage the vacuum pump or the unit.
- After connecting the piping, check the all joints for gas leakage with gas leak detector.
- When inspecting gas leakage, always use the vacuum pump for pressure. Do not use nitrogen gas.
- When adding refrigerant, add the refrigerant from the charging port at the completion of work.
- The maximum length of the piping is 50 m. If the units are further apart than this, correct operation can not be guaranteed.

Additional charge

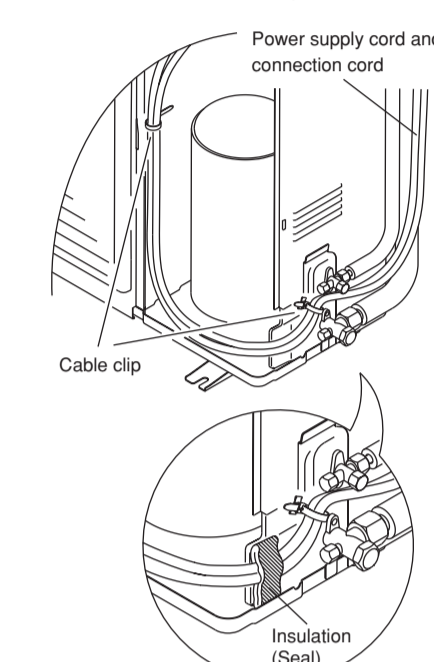
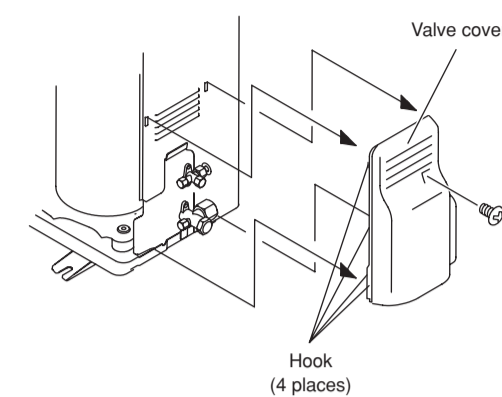
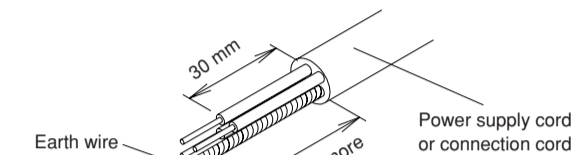
Refrigerant suitable for a piping length of 20 m is charged in the outdoor unit at the factory. When the piping is longer than 20 m, additional charging is necessary. For the additional amount, see the table below.

ELECTRICAL WIRING (OUTDOOR UNIT)

- Service cover removal
 - Remove the two mounting screws.
 - Remove the service cover by pushing downwards.
- Valve cover removal
 - Remove the one mounting screw.
 - Remove the valve cover by sliding upward.
- Connect the power supply cord and the connection cord to terminal.
- Fasten the power supply cord and connection cord with cord clamp.
- Power supply cord and connection cord should be fixed with cable clip as shown in the figure.
- Fill in a gap at the entrance of the cords with insulation (seal).
- Put the service cover and valve cover back after completion of the work.



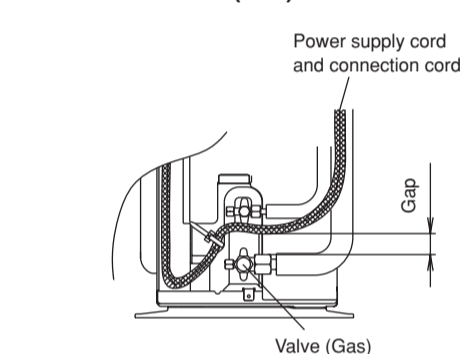
Keep the earth wire longer than the other wires.



⚠ CAUTION

When connecting the power supply cord, make sure that the phase of the power supply matches with the phase of the terminal board. If the phases do not match, the compressor will rotate in reverse and will not be able to compress.

Do not make power supply cord and connection cord come in contact with valve (Gas).

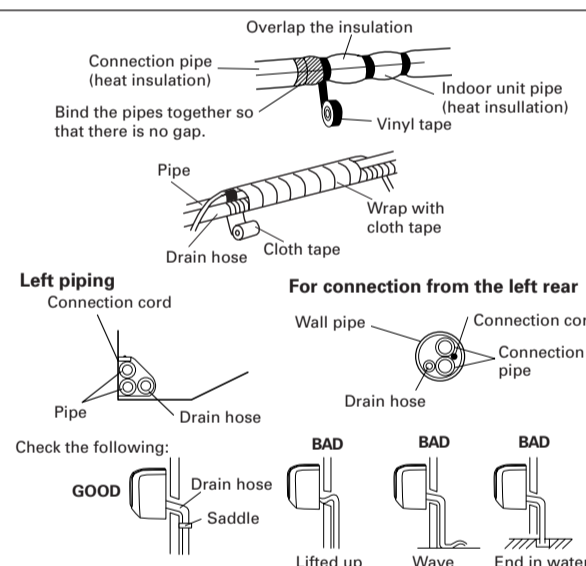


⚠ WARNING

- Before starting work, check that power is not being supplied to the indoor unit and outdoor unit.
- Match the terminal board numbers and connection cord colors with those of the outdoor unit. Erroneous wiring may cause burning of the electric parts.
- Connect the connection cords firmly to the terminal board. Imperfect installation may cause a fire.
- Always fasten the outside covering of the connection cord with the cord clamp. (If the insulator is chafed, electric leakage may occur.)
- Always connect the ground wire.

FINISHING

- Insulate between pipes.
 - For rear, right, and bottom piping, overlap the connection pipe heat insulation and indoor unit pipe heat insulation and bind them with vinyl tape so that there is no gap.
 - For left and left rear piping and center piping, bind the connection pipe heat insulation and indoor unit pipe heat insulation together and bind them with vinyl tape so that there is no gap.
 - For left and left rear piping and center piping, wrap the area which accommodates the rear piping housing section with cloth tape.
 - For left and left rear piping and center piping, bind the connection cord to the top of the pipe with vinyl tape.
 - For left and left rear piping and center piping, 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.
- Temporarily fasten the connection cord along the connection pipe with vinyl tape. (Wrap to about 1/2 the width of the tape from the bottom of the pipe so that water does not enter.)
- Fasten the connection pipe to the outside wall with saddles, etc.
- Fill the gap between the outside wall pipe hole and the pipe with sealer so that rain water and wind cannot blow in.
- Fasten the drain hose to the outside wall, etc.



TEST RUNNING

- Perform test operation and check items 1 and 2 below.
- For the test operation method, refer to the operating manual.
- The outdoor unit, may not operate, depending on the room temperature. In this case, press the test run button on the remote control unit within the air conditioner is running. (Point the transmitter section of the remote control unit toward the air conditioner and press the test run button with the tip of a ball-point pen, etc.)
- To end test operation, press the remote control unit START/STOP button. (When the air conditioner is run by pressing the test run button, the OPERATION indicator lamp and TIMER indicator lamp will simultaneously flash slowly.)

1. INDOOR UNIT

- Is operation of each button on the remote control unit normal?
- Does each lamp light normally?
- Do the air flow-direction louver operate normally?
- Is the drain normal?

2. OUTDOOR UNIT

- Is there any abnormal noise and vibration during operation?
- Will noise, wind, or drain water from the unit disturb the neighbors?
- Is there any gas leakage?

