

- Carefully read through the procedures of proper installation before starting installation work.
- The sales agent should inform customers regarding the correct operation of installation.

Tools Needed For Installation Work

- $\oplus \ominus$ Screwdriver • Measuring Tape • Knife
- Saw • ϕ 65mm Power Drill • Allen Key (\square 4mm)
- Wrench (14, 17, 19, 22mm)
- Gas Leakage Detector • Pipe Cutter
- Plastic Tape • Pliers • Flare Tool

SAFETY PRECAUTION

- Read the safety precautions carefully before operating the unit.
 - The contents of this section are vital to ensure safety. Please pay special attention to the following sign.
- ⚠ WARNING** Incorrect methods of installation may cause death or serious injury.
- ⚠ CAUTION** Improper installation may result in serious consequence.
- Be sure that the unit operates in proper condition after installation. Explain to customer the proper way of operating the unit as described in the user's guide.

⚠ WARNING

- Please request your sales agent or qualified technician to install your unit. Water leakage, short circuit or fire may occur if you do the installation work yourself.
- Please observe the instructions stated in the installation manual during the process of installation. Improper installation may cause water leakage, electric shock and fire.
- Make sure that the units are mounted at locations which are able to provide full support to the weight of the units. If not, the units may collapse and impose danger.
- Observe the rules and regulations of the electrical installation and the methods described in the installation manual when dealing with the electrical work. Use wire which is specified for the air conditioner. A short circuit and fire may occur due to the use of low quality wire or improper work.
- Be sure to use the specified wire for connecting the indoor and outdoor units. Please ensure that the connections are tight after the conductors of the wire are inserted into the terminals. Improper insertion and loose contact may cause over-heating and fire.
- Please use the specified components for installation work. Otherwise, the units may collapse or water leakage, electric shock and fire may occur.
- Do not mix any coolant other than R-22 into the cooling circulation path when mounting or shifting the unit. If it is mixed with air, the high pressure in the circulation path will rise and this may result in broken copper pipes or faults.

⚠ CAUTION

- Be sure to use the earth line. Do not place earth line near gas or water pipes, lightning conductor and the earth line of telephone. Improper earthing may cause electric shocks.
- A circuit breaker should be installed depending on the mounting size of the unit. Without a circuit breaker, the danger of electric shock exists.
- Do not install the unit near a location where there is flammable gas. The outdoor unit may catch fire if flammable gas leaks around it.
- Please ensure smooth flow of water when installing the drain hose.

THE CHOICE OF MOUNTING SITE (Please note the following matters and obtain permission from customer before installation).

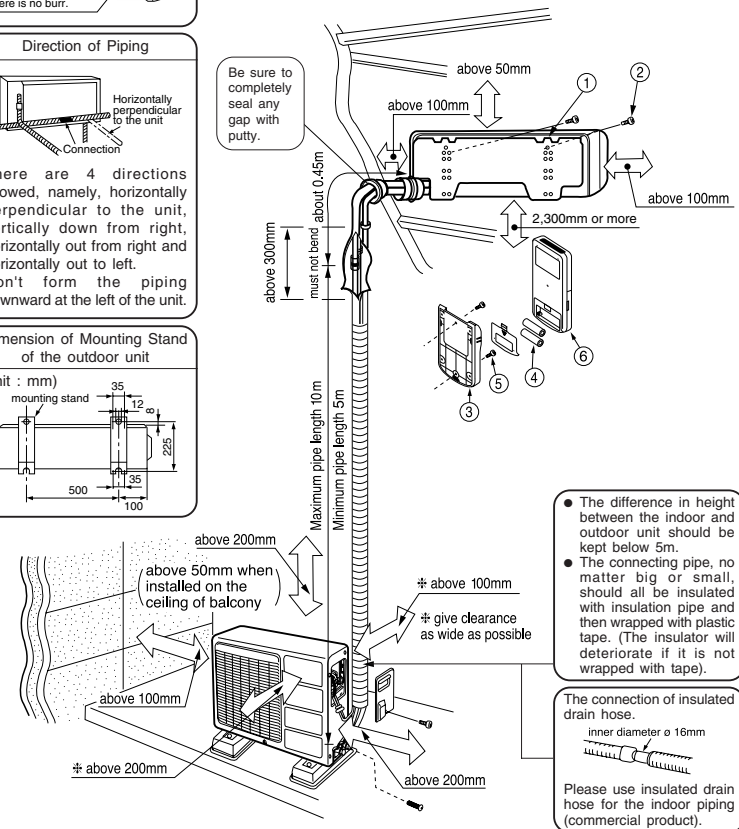
- INDOOR UNIT**
- ⚠ WARNING**
 - The unit should be mounted at stable, non-vibratory location which can provide full support to the unit.
 - ⚠ CAUTION**
 - No nearby heat source and no obstruction near the air outlet is allowed.
 - The clearance distances from top, right and left are specified in figure below.
 - The location must be convenient for water drainage and pipe connection with the Outdoor unit.
 - To avoid interference from noise please place the unit and its remote controller at least 1m from the radio, television and inverter type fluorescent lamp.
 - To avoid any error in signal transmission from the remote controller, please put the controller far away from high-frequency machines and high-power wireless systems.
 - The installation height of indoor unit must be 2.3m or more in a non public area.
- OUTDOOR UNIT**
- ⚠ WARNING**
 - The outdoor unit must be mounted at a location which can support heavy weight. Otherwise, noise and vibration will increase.
 - ⚠ CAUTION**
 - Do not expose the unit under direct sunshine or rain. Besides, ventilation must be good and clear of obstruction.
 - The air blown out of the unit should not point directly to animals or plants.
 - The clearances of the unit from top, left, right and front are specified in figure below. At least three of the above sides must be open air.
 - Be sure that the hot air blown out of the unit and noise do not disturb the neighbourhood.
 - Do not install at a location where there is flammable gas, steam, oil and smoke.
 - The location must be convenient for water drainage.
 - Place the outdoor unit and its connection wire at least 1m away from the antenna or signal line of television, radio or telephone. This is to avoid noise interference.

Names of Indoor Components

No.	Component's Name	Qty	The Length of Indoor Unit Power Cord
①	Mounting Plate	1	about 0.9m ~ about 1.6m Do not alter the power cord.
②	Screw for Mounting Plate (4.1 x 32)	6	
③	Holder for Remote Controller	1	Cut away shaded portion, and finish the edge of the opening so that there is no burr.
④	AAA Size Battery	2	
⑤	Screw for holder of Remote Controller (3.1 x 16)	2	
⑥	Remote Controller	1	Direction of Piping There are 4 directions allowed, namely, horizontally perpendicular to the unit, vertically down from right, horizontally out from right and horizontally out to left. Don't form the piping downward at the left of the unit.
⑦	Purifying Filter	1	Dimension of Mounting Stand of the outdoor unit (unit : mm) 500, 100, 25, 12, 35, 282

Figure showing the Installation of Indoor and Outdoor Unit.

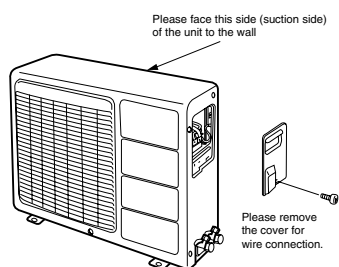
- ⚠ CAUTION**
- In case the pipe length is more than 8m, add refrigerant R22 at 15 gram per every meter exceeds. However, pipe length shall not exceed 15m.





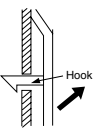
OUTDOOR UNIT

- Please mount the outdoor unit on stable ground to prevent vibration and increase of noise level.
- Decide the location for piping after sorting out the different types of pipe available.



Procedure to remove the cover of wiring terminals

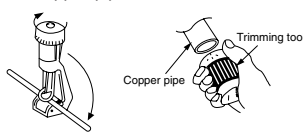
- Remove the screw (1 piece).
- Hold the projected part at the lower left of the cover and push the cover upwards to remove it.
- To close the cover, insert the upper part of the cover into the body of outdoor unit, then be sure that the hook below the cover is plugged in before screwing.



INSTALLATION OF COOLANT PIPES AND AIR REMOVAL

1 Preparation of Pipe

- Use a pipe cutter to cut the copper pipe.



CAUTION

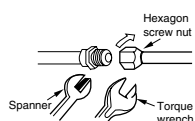
- Jagged edge will cause leakage.
- Point the side to be trimmed downwards during trimming to prevent copper chips from entering the pipe.
- Before flaring, please put on the hexagon screw cap.



Outer Diameter (ø)	A (mm)	
	Imperial flaring tool	Rigid flaring tool
6.35 (1/4")	0.8 - 1.5	0 - 0.5
9.52 (3/8")	1.0 - 1.8	0 - 0.5

2 Pipe Connection

- Please be careful when bending the copper pipe.
- Applied frozen grease to the connection points and then screw in manually. After that, use a torque wrench to tighten the connection.

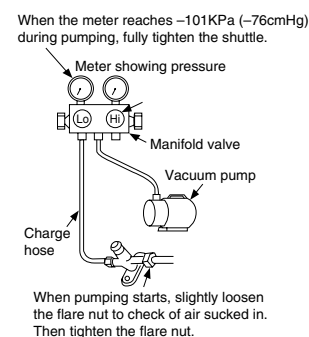


	Outer diameter of pipe	Torque N.m (kgf • cm)
Small diameter side	6.35 (1/4")	13.7 - 18.6 (140 - 190)
Big diameter side	9.52 (3/8")	34.3 - 44.1 (350 - 450)
Valve head cap		19.6 - 24.5 (200 - 250)
Valve core cap		12.3 - 15.7 (125 - 160)

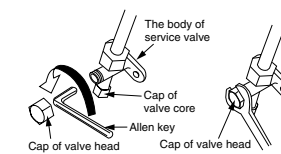
3 Removal Of Air From The Pipe And Gas Leakage Inspection

Procedures of using Vacuum Pump for Air Removal

- 1 As shown in figure on the right, remove the cap of valve head and valve core and then connect them to the vacuum pump and sub-division valve.
- 2 Fully tighten the "Hi" shuttle of the sub-division valve and completely unscrew the "Lo" shuttle. Run the vacuum pump for about 10-15 minutes, then completely tighten the "Lo" shuttle and switch off the vacuum pump.
- 3 Completely unscrew the spindle of the service valve (at 2 places) in anti-clockwise direction to allow the flow of coolant (using Allen key).
- 4 Remove the connection pipe and tighten the cap of valve head. The task is then completed.



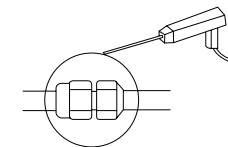
When pumping starts, slightly loosen the flare nut to check of air sucked in. Then tighten the flare nut.



Gas Leakage Inspection

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

If gas leakage occurs, further tighten the connection to stop leakage.

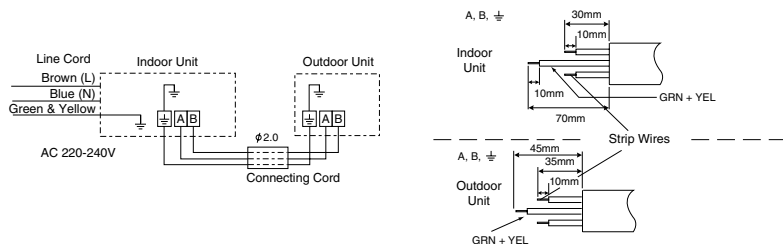


CONNECTION OF POWER CORD

WARNING THIS APPLIANCE MUST BE EARTHED.

Power supply shall be connected at the rated voltage, otherwise the unit will be broken or could not reach the specified capacity.

Procedures of Wiring



WARNING

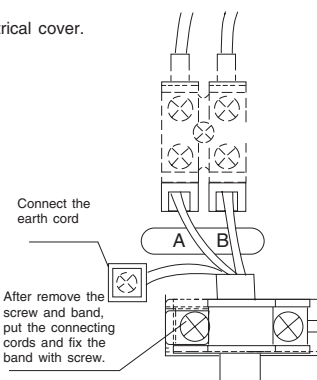
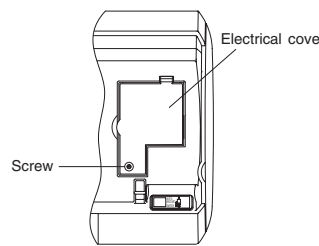
- The naked part of the wire core should be 14 mm and the insulated part of the wire must be push into the terminal for 3 - 4 mm. Then try to pull the individual wire to check if the contact is tight. Improper insertion may burn the terminal.
- Be sure to use only wire specified for the use of air-conditioner.
- Please refer to the installation manual for wire connection and the wiring technique should meet the standards of electrical installation.
- There is a AC voltage drop between the AB terminals if the power is on. Therefore, be sure to remove the plug from its socket.

Wiring Of The Indoor Unit

- For wire connection of the Indoor unit, you need to remove front panel and electrical cover.
- Method to remove front panel
- Refer to "How to Remove The Front Cover".

Method to remove electrical cover

- Remove the screw and electrical cover.
- Insert the connecting cord (A, B) from the bottom of unit.
- Fixed the wire to terminal wires firmly as shown in figure at right side.

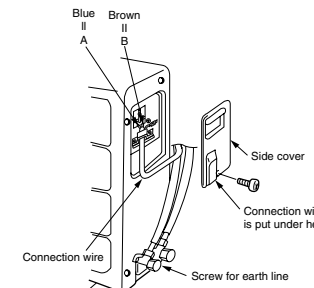


Wiring Of The Outdoor Unit

- Please remove the side cover for wire connection.

WARNING

- You may not be able to close the side cover due to the connecting cord, under such situation, please press against the wait of side cover to fix it.
- Be sure that the hooks (2 places) are plugged in. Otherwise, water leakage may occur and this causes short circuit or faults.

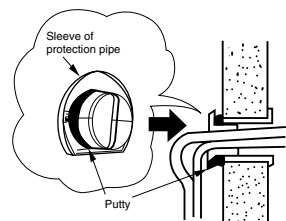
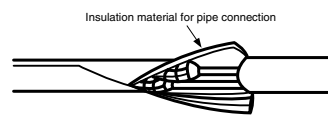


Use 10A time delay FUSE

FINAL STAGE OF INSTALLATION

1 Insulation And Maintenance Of Pipe Connection

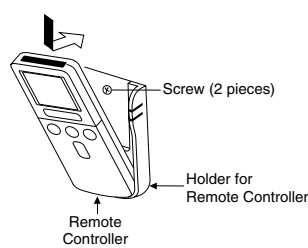
- The connected terminals should be completed sealed with heat insulator and then tied up with rubber strap.
- Please tie the pipe and power line together with plastic tape as shown in the figure of installation of both the indoor and outdoor units. Then fix their position with holders.
- To enhance 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 Installation Of Remote Control

- The remote controller can be placed in its holder which is fixed on wall or beam.
- To operate the remote controller at its holder, please ensure that the unit can receive signal transmitted from the controller at the place where the holder is to be fixed. The unit will beep when signal is received from the remote controller. The signal transmission is weakened by the fluorescent light. Therefore, during the installation of the remote control holder, please switch on the light, even during day time, to determine the mounting location of the holder.

The controller must be hooked onto the hook at the lower part of the holder. Push in the remote controller in the direction as shown in figure below.



3 Earth Line And Circuit Breaker

CAUTION

- The earth line terminal of the outdoor unit is below the service valve.
- To avoid short circuit, it is necessary to install circuit breaker depending on the mounting location of the unit.
- Do not place earth line near the following objects:
 - (1) Water pipe
 - (2) Gas pipe - There is danger of catching fire.
 - (3) The earth line of lightning conductor and telephone - short circuit may occur during lightning.

4 Power Source And Operation Test

Power Source

WARNING

- Do not alter the plug of power cord.
- Do not make extension to the power cord.

CAUTION

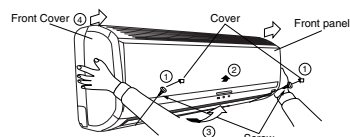
- Please use a new socket. Accident may occur due to the use of old socket because of poor contact.
- Please plug in and then remove the plug for 2 - 3 times. This is to ensure that the plug is completely plugged into the socket.
- Keep additional length for the power cord and do not render the plug under external force as this may cause poor contact.
- Do not fix the power cord with U-shape nail.

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.

How to Remove the Front Cover

- Open the cover ① and remove the screw.
- After open the front panel, remove the screw and open the cover ②.
- Remove the filter, release the axis by pulling the center portion of front cover in the direction of arrow ③.
- Push vertical air deflector handle to the right or left side.
- After raise the front cover from bottom side as ③, release the front cover by pull the right or left sides as ④.



How to Install the Front Cover

- Insert the two hooks ⑤ at the upper side certainly.
- Open Front Panel, push the center down in the direction of the arrow to insert the axis at the center of the front cover into the hook at the outlet frame.
- Fixed the screw and cover ① and ②.

