



OWNER'S MANUAL

Split Air Conditioner



Thank you for choosing our product.
For proper operation, please read and keep this manual carefully.

Precautions

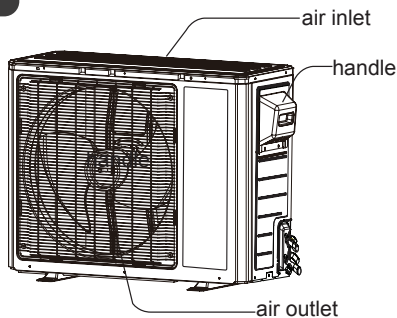


Warning

- Do not connect air conditioner to multi-purpose socket. Otherwise, it may cause fire hazard.
- Do disconnect power supply when cleaning air conditioner. Otherwise, it may cause electric shock.
- Do not spill water on the remote controller, otherwise the remote controller may be broken.
- Do not repair air conditioner by yourself. It may cause electric shock or damage. Please contact dealer when you need to repair air conditioner.
- Do not block air outlet . It may cause malfunction.
- If you need to relocate the air conditioner to another place, only the qualified person can perform the work. Otherwise, it may cause personal injury or damage.
- Do not step on top panel of outdoor unit, or put heavy objects. It may cause damage or personal injury.
- Do not extend fingers or objects into air outlet. It may cause personal injury or damage.
- Air Conditioner should be properly grounded. Incorrect grounding may cause electric shock.
- Do install the air switch. If not, it may cause malfunction.
- Installation and maintenance must be performed by qualified professionals. Otherwise, it may cause personal injury or damage.

Parts Name

Outdoor Unit



Notice: Actual product may be different from above graphics, please refer to actual products.

Clean and Maintenance



Note:

- Turn off the air conditioner and disconnect the power before cleaning the air conditioner to avoid electric shock.
- Do not wash the air conditioner with water. This will avoid electric shock.
- Do not use volatile liquid to clean the air conditioner.

Checking before use-season

1. Check whether the air inlets and/or outlets are blocked.
2. Check the air switch, plug, and socket.
3. Check the filter.
4. Check the mounting bracket for the outdoor unit for damage or corrosion. If it is damaged or corroded, please contact your installer for removal and re installation of a new bracket.
5. Make sure the drain tube is undamaged and clear.

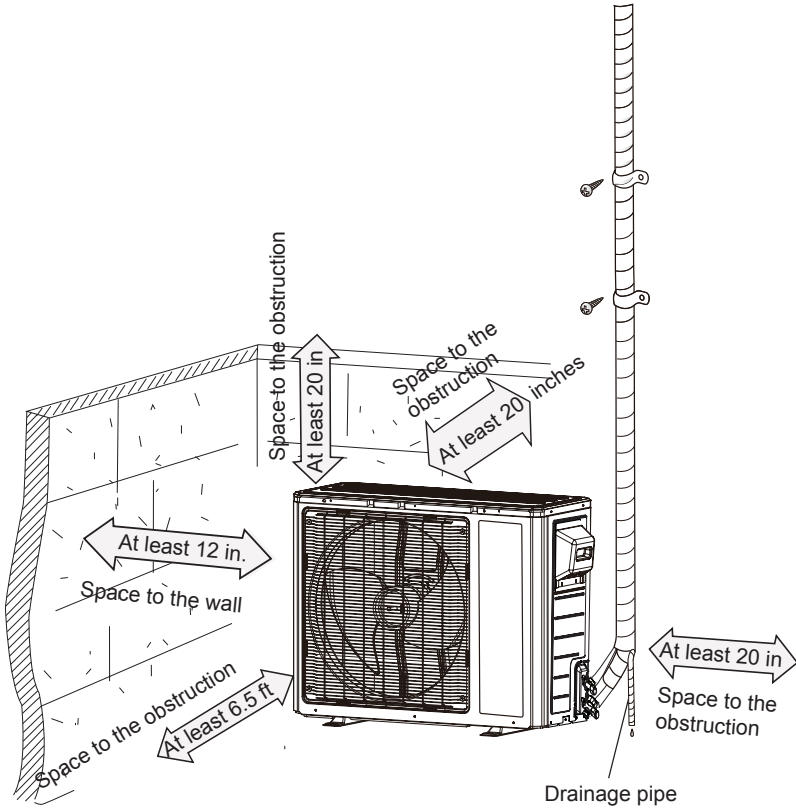
Checking after use-season

1. Disconnect the power supply.
2. Check the mounting bracket for the outdoor unit for damage or corrosion. If it is damaged or corroded, please contact your installer for removal and re installation of a new bracket.

Notice for recovery

1. Many packing materials are recyclable. Please dispose them in appropriately.
2. If you want to dispose of the air conditioner, please contact local dealer or service center for the correct disposal method.

Installation dimension diagram



Tools for installation

1 Level meter	2 Screw driver	3 Impact drill
4 Drill head	5 Pipe expander	6 Torque wrench
7 Open-end wrench	8 Pipe cutter	9 Leakage detector
10 Vacuum pump	11 Pressure meter	12 Universal meter
13 Inner hexagon spanner		14 Measuring tape

Note:

- Please contact a local contractor for installation.
- Don't use unqualified power cord.

Selection of installation location

Basic requirement

Installing the unit in the following places may cause malfunction. If it is unavoidable, please consult the local dealer:

1. Places with strong heat sources, vapors, flammable or explosive gases, or volatile objects that spread in the air.
2. Places with high-frequency devices such as welding machines, medical equipment, etc
3. Sea coast locations
4. Places with oil or fumes in the air.
5. Places with sulfured gases.
6. Other places with extenuating circumstances.
7. Avoid installation in laundry rooms

1. Select a location where the unit's noise and outflow air that is emitted will not affect neighbors.
2. The location should be well ventilated and dry, in which the outdoor unit won't be exposed directly to sunlight or strong wind.
3. The location should be able to withstand the weight of outdoor unit.
4. Make sure that the installation follows the requirement of installation dimension diagram.
5. Select a location that is out of reach for children, animals, or plants. If it is unavoidable, please add a fence for safety purpose.

Requirements for electric connection

Safety precaution

1. Electric safety regulations must be followed when installing the unit.
2. According to the local safety regulations, only use qualified power supply circuit and air switch.
3. Make sure the power supply matches with the requirement of air conditioner. Unstable power supply or incorrect wiring can cause malfunction. Please install the proper power supply cables before using the air conditioner.
4. Properly connect the live wire, neutral wire and ground wire of power socket.
5. Be sure to cut off the power supply before proceeding any work related to electricity and safety.
6. Do not power the unit on prior to completing installation.
7. If the supply cord is damaged, it must be replaced by the manufacturer, a service agent, or someone with similar qualification.
8. The temperature of the refrigerant circuit will be high. Please keep the 4 strand multi-conductor cable away from the copper tube.
9. This air conditioner must be installed in accordance with national wiring regulations.

Grounding requirement

1. This air conditioner is a first class electric appliance. It must be properly grounded in accordance with national requirements. Please make sure that it is effectively grounded, otherwise it may cause electric shock.
2. The yellow-green wire in air conditioner is a grounding wire, which can't be used for other purposes.
3. The grounding resistance should comply with national electric safety regulations.
4. The appliance must be positioned so that the plug is accessible.
5. An all-pole disconnection switch having a contact separation of at least 3mm in all poles should be connected in fixed wiring.
6. Including an air switch with suitable capacity is essential. Please note the following table. The air switch should include both magnet and heating buckle functions. It can protect the circuit-short and overload. (Caution: please do not use the fuse only for protecting the circuit)

Air-conditioner	Air switch capacity
09K or 12K	10A

Installation of outdoor unit

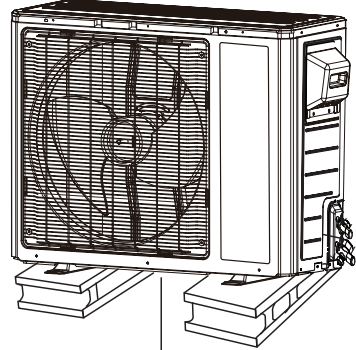
Step one: fix the support of outdoor unit

(select it according to the actual installation situation)

1. Select the installation location according to the house structure.
2. Fix the support of outdoor unit on the selected location with expansion screws.

Note:

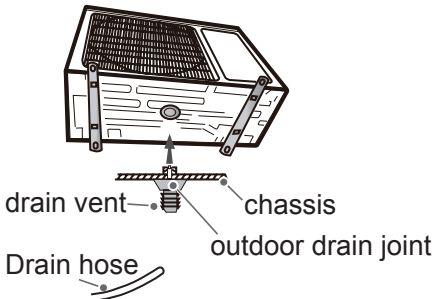
- Take sufficient protective measures when installing the outdoor unit.
- Make sure the support can withstand at least four times of the unit weight.
- The outdoor unit should be installed at least 3cm above the floor in order to install drain joint.
- For the unit with cooling capacity of 2300W ~5000W, 6 expansion screws are needed; for the unit with cooling capacity of 6000W ~8000W, 8 expansion screws are needed; for the unit with cooling capacity of 10000W ~16000W, 10 expansion screws are needed.



at least 3cm above the floor

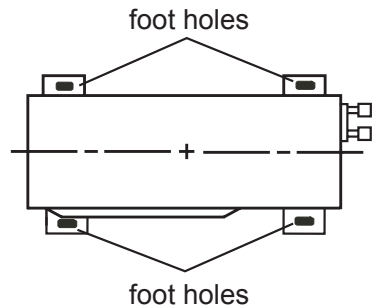
Step two: install drain joint (Only for cooling and heating unit)

1. Connect the outdoor drain joint into the hole on the chassis, as shown in the picture below.
2. Connect the drain hose into the drain vent.



Step three: fix outdoor unit

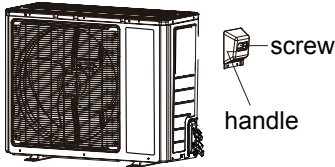
1. Place the outdoor unit on the support.
2. Fix the foot holes of outdoor unit with bolts.



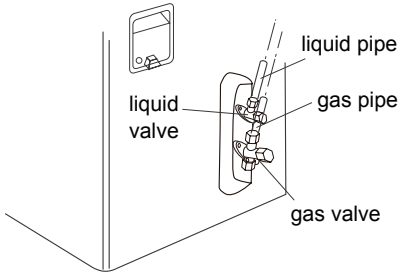
Installation of outdoor unit

Step four: connect indoor and outdoor pipes

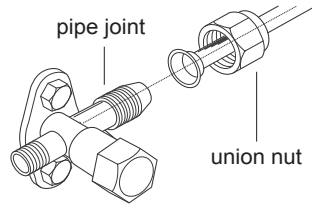
1. Remove the screw on the right handle of outdoor unit and then remove the handle.



2. Remove the screw cap of valve and aim the pipe joint at the bellmouth of the pipe.



3. Tighten the union nut by hand.

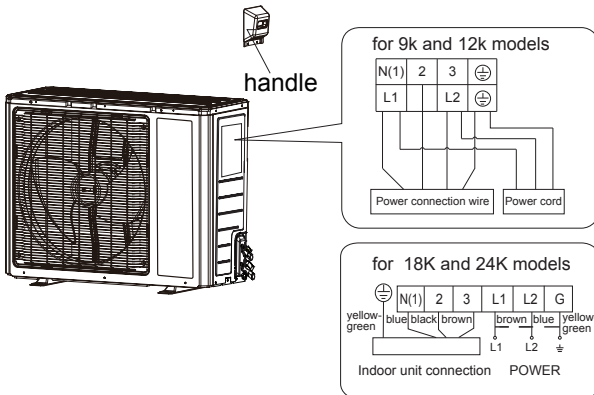


4. Tighten the union nut with torque wrench using the guidelines below:

Hex nut diameter	Tightening torque (ft-lbs)
Φ 1/4"	10~13
Φ 3/8"	25~30
Φ 1/2"	36~45
Φ 5/8"	50~60

Step five: connect outdoor electric wire

1. Remove the wire clip; connect the power connection wire and signal control wire (only for cooling and heating unit) to the wiring terminal according to the color.



Installation of outdoor unit

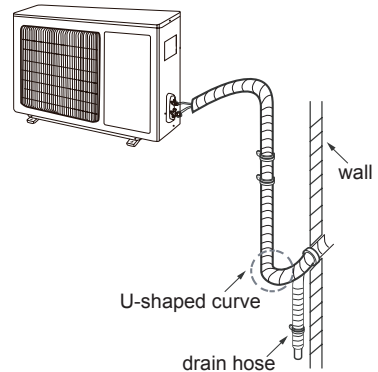
2. Fix the power connection wire and signal control wire with wire clip (only for cooling and heating unit).

Note:

- Never cut the power connection wire to prolong or shorten the distance.
- After tightening the screw, pull the power cord gently to check it is secure.

Step six: neaten the pipes

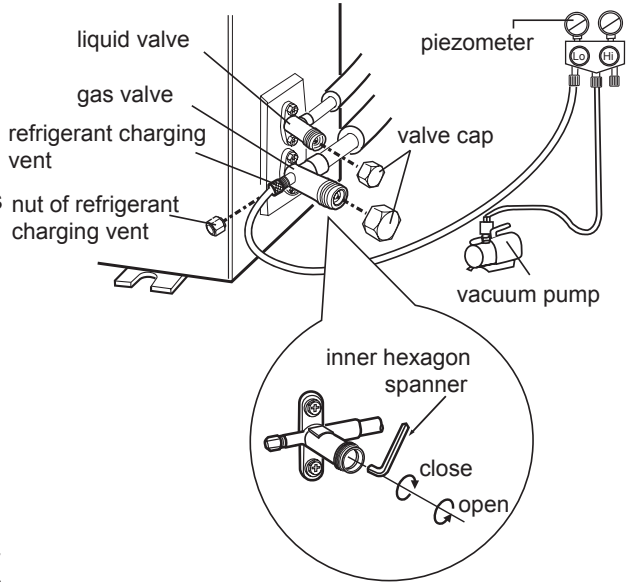
1. The pipes should be placed along the wall, bent reasonably and hidden if possible. Min. semi-diameter of bending the pipe is 10cm.
2. If the outdoor unit is higher than the wall hole, you must set a U-shaped curve in the pipe before pipe goes into the room, in order to prevent rain from getting into the room.



Vacuum pumping

Use vacuum pump

1. Remove the valve caps on the liquid valve and gas valve and the nut of refrigerant charging vent.
2. Connect the charging hose of piezometer to the refrigerant charging vent of gas valve and then connect the other charging hose to the vacuum pump.
3. Open the piezometer completely and operate for 10-15min to check if the pressure of piezometer remains in -0.1MPa .
4. Close the vacuum pump and maintain this status for 1-2min to check if the pressure of piezometer remains in -0.1MPa . If the pressure decreases, there may be leakage.
5. Remove the piezometer, open the valve core of liquid valve and gas valve completely with inner hexagon spanner.
6. Tighten the screw caps of valves and refrigerant charging vent.



Leakage detection

1. With leakage detector:
Check if there is leakage with leakage detector.
2. With soap water:
If leakage detector is not available, please use soap water for leakage detection. Apply soap water at the suspected position and keep the soap water for more than 3 min. If there are air bubbles coming out of this position, there's a leakage.

Check after installation

- Check according to the following requirement after finishing installation.

Items to be checked	Possible malfunction
Has the unit been installed firmly?	The unit may drop, shake, or emit noise.
Have you done the refrigerant leakage test?	It may cause insufficient cooling (heating) capacity.
Is heat insulation of pipeline sufficient?	It may cause condensation and water dripping.
Is water drained well?	It may cause condensation and water dripping.
Is the voltage of power supply according to the voltage marked on the nameplate?	It may cause malfunction or damage.
Is the electric wiring and pipeline installed correctly?	They may cause malfunction or damage to the parts.
Is the unit grounded securely?	It may cause unit malfunction.
Does the power cord follow the specification?	It may cause malfunction or damage.
Is there any obstruction in the air inlet and outlet?	It may cause insufficient cooling (heating) capacity.
The dust and sundries caused during installation are removed?	It may cause malfunction or damage.
The gas valve and liquid valve of connection pipe are open completely?	It may cause insufficient cooling (heating) capacity.

Test operation

1. Preparation of test operation

- The client approves the air conditioner.
- Specify the important notes for air conditioner to the client.

2. Method of test operation

- Put through the power, press ON/OFF button on the remote controller to start operation.
- Press MODE button to select AUTO, COOL, DRY, FAN and HEAT to check whether the operation is normal or not.
- If the ambient temperature is lower than 5 F, the air conditioner can't start cooling.

Configuration of connection pipe

1. Standard length of connection pipe
 - 15, 25, 35, and 50 feet.
2. Min. length of connection pipe is 10 feet.
3. Max. length of connection pipe and max. high difference.

Cooling capacity	Max length of connection pipe	Max height difference	Cooling capacity	Max length of connection pipe	Max height difference
5000Btu/h (1465W)	15	5	24000Btu/h (7032W)	25	10
7000Btu/h (2051W)	15	5	28000Btu/h (8204W)	30	10
9000Btu/h (2637W)	15	5	36000Btu/h (10548W)	30	20
12000Btu/h (3516W)	20	10	42000Btu/h (12306W)	30	20
18000Btu/h (5274W)	25	10	48000Btu/h (14064W)	30	20

4. The additional refrigerant oil and refrigerant charging required after prolonging connection pipe
 - After the length of connection pipe is prolonged for 32.8 feet at the basis of standard length, you should add 5ml of refrigerant oil for each additional 16.4 feet of connection pipe.
 - The calculation method of additional refrigerant charging amount (on the basis of liquid pipe):

Additional refrigerant charging amount = prolonged length of liquid pipe × additional refrigerant charging amount per meter
 - When the length of connection pipe is above 16.4 feet, add refrigerant according to the prolonged length of liquid pipe. The additional refrigerant charging amount per meter is different according to the diameter of liquid pipe. See the following sheet.

Configuration of connection pipe

Additional refrigerant charging amount for R22, R407C, R410A and R134a

Diameter of connection pipe		Outdoor unit throttle	
Liquid pipe(Inch)	Gas pipe(Inch)	Cooling only(g/m)	Cooling and heating(g/m)
Φ1/4"	Φ3/8 or Φ1/2"	15	20
Φ1/4" or Φ3/8"	Φ5/8" or Φ3/4"	15	50
Φ1/2"	Φ3/4" or Φ7/8"	30	120
Φ5/8"	Φ1 or Φ1 1/4"	60	120
Φ3/4"	—	250	250
Φ7/8"	—	350	350

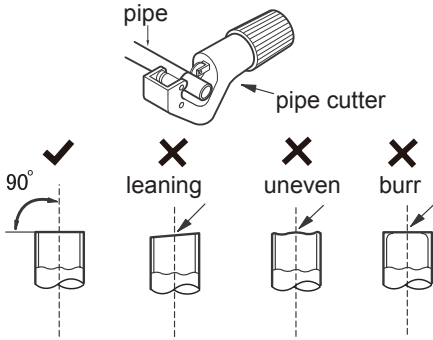
Pipe expanding method

Note:

Improper pipe expanding is the main cause of refrigerant leakage. Please expand the pipe according to the following steps:

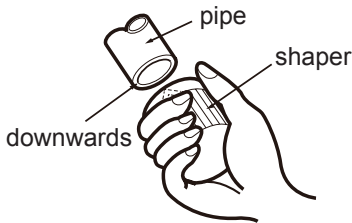
A: Cut the pipe

- Confirm the pipe length according to the distance of indoor unit and outdoor unit.
- Cut the required pipe with pipe cutter.



B: Remove the burrs

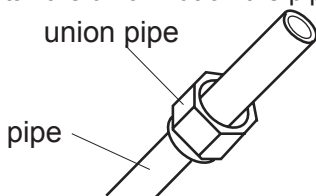
- Remove the burrs with shaper and prevent the burrs from getting into the pipe.



C: Put on suitable insulating pipe

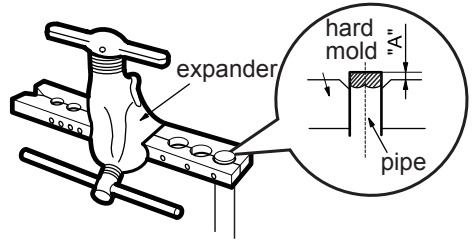
D: Put on the union nut

- Remove the union nut on the indoor connection pipe and outdoor valve; install the union nut on the pipe.



E: Expand the port

- Expand the port with expander.



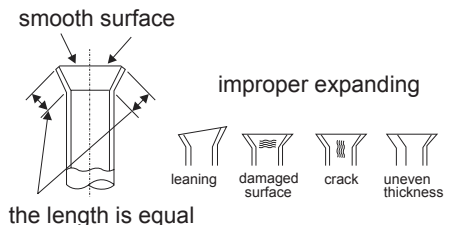
Note:

- "A" is different according to the diameter, please refer to the sheet below:

Outer diameter (mm)	A(mm)	
	Max	Min
Φ6 - 6.35(1/4")	1.3	0.7
Φ9.52(3/8")	1.6	1.0
Φ12-12.7(1/2")	1.8	1.0
Φ15.8-16(5/8")	2.4	2.2

F: Inspection

- Check the quality of expanding port. If there is any blemish, expand the port again according to the steps above.





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