



Split Air Conditioner

Owner's Manual
Residential Air Conditioners



Thank you for choosing Residential Air Conditioners, please read this owner's manual carefully before operation and retain it for future reference.

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This symbol stands for the items should be forbidden.



This symbol stands for the items should be followed.

Thank you for choosing Air-con split type air conditioner. For correct operation, please keep this manual well for future reference.

The graphs in this manual may be different from the actual product, please refer to the actual product.

◆ Notices for operation

Please read the following notices carefully before operation.

Caution

★When there is an abnormal phenomenon (such as burning smell), please turn off the power supply and then contact Air-con appointed maintenance center.



If the abnormal phenomenon is not eliminated in time, the unit may be damaged and may cause electric shock or fire hazards.

★Never operate the unit with wet hands.

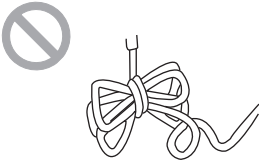


Otherwise, it may cause electric shock.

★Never destroy or cut the power cord. If the power cord is found to be broken, please ask a professional to repair.



★Please use professional wire in order to prevent fire hazards.



For the wire connection of function socket or movable socket, please do not use multifunctional socket or movable socket.

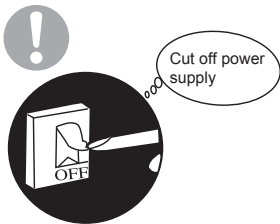
★Fluctuation of voltage in a certain range is allowed. Over-high voltage may stimulate the breakage of electric elements. Over-low voltage may stimulate vibration of compressor which will lead to breakage of the system.

★Never destroy the wire or use the wire with different specification.



Otherwise, it may cause electric shock or fire hazards.

★Turn off the unit and cut off the power supply before cleaning the unit in order to prevent electric shock or injury.



◆ Notices for operation



★Ground connection: connect to the ground reliably! Grounding wire should be connected to the appropriate grounding device of the building.

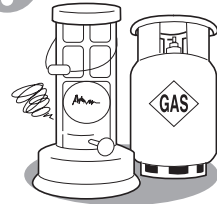


If the appropriate grounding device is not available, please ask a professional to install. Never connect the grounding wire to gas pipe, tap water pipe, blowdown pipe or other unreliable places considered by a professional.

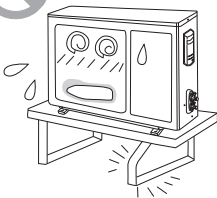
★Be sure to cut off the power supply when you don't use the air conditioner for a long time. Otherwise, the dusts may accumulate on it, which may cause overheating or fire hazards.



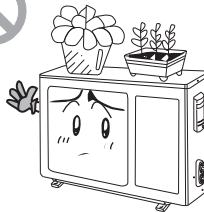
★Keep flammable spray and gas jar away from the outdoor unit for more than 1m. Otherwise, it may cause fire hazard or explosion.



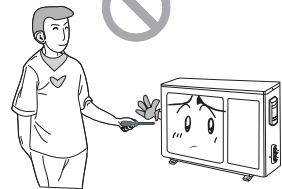
★Pay attention to check if the installation rack of outdoor is broken. If the broken rack is not repaired in time, the unit may fall down and cause injury.



★Never stand on the outdoor unit or place objects on it. Person or objects falling from the unit may cause injury.

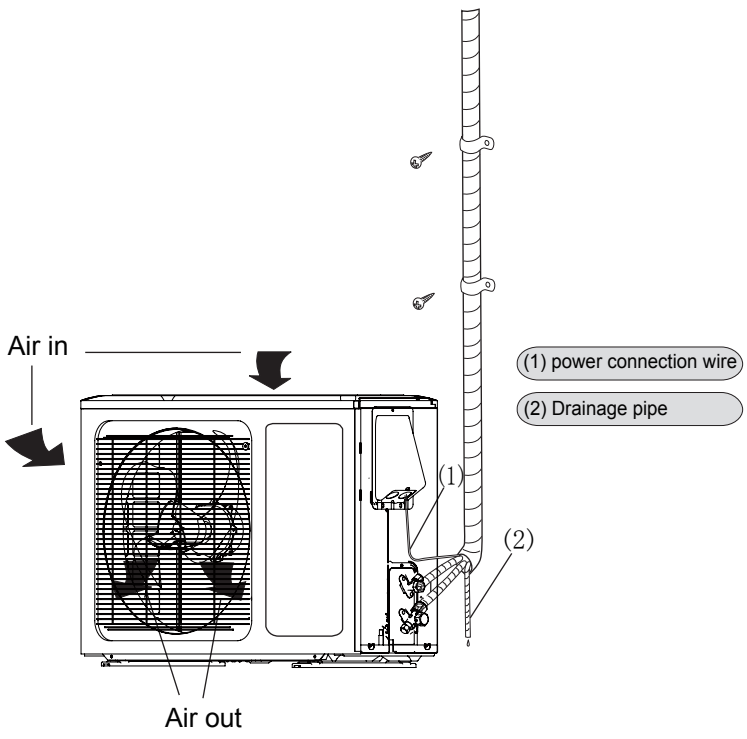


★Don't attempt to repair the air conditioner by yourself. Wrong repair may cause electric shock or fire hazard, so you should contact the appointed maintenance center to repair.



◆ Names of each part

Outdoor unit



◆ Clean and care

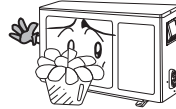


Caution

- Turn off the unit and cut off the power supply before cleaning. Or it may cause electric shock.
- Never wash the air conditioner with water because it can cause an electric shock.
- Volatile liquid (e.g. dilution agent or gasoline) will damage the air conditioner. (So wipe the units with a dry soft cloth or a cloth moistened with neutral detergent.)

Check before use

- ① Be sure that nothing obstructs the air inlet and outlet of outdoor unit.
- ② Check whether the grounding wire is properly connected.
- ③ Check whether the installation rack of the outdoor unit is broken or not. If broken, please contact the Air-con appointed maintenance center. If the outdoor unit is rusty, please paint the rusty place to prevent spreading.



Maintain after use

- ① Power off the unit.
- ② Clean the filter and indoor and outdoor units' bodies.
- ③ Clean the dusts and foreign objects of outdoor unit.
- ④ Check whether the installation rack of the outdoor unit is broken or not. If broken, please contact the Air-con appointed maintenance center. If the outdoor unit is rusty, please paint the rusty place to prevent spreading.
- ⑤ You can wrap the indoor and outdoor units with special protective cover to prevent rain and dusts getting into the unit.

◆ Notices for installation



Important notices

1. The unit installation work must be done by qualified personnel according to the local rules and this manual.
2. Contact Air-con appointed maintenance center before installation. If the unit is not installed by Air-con appointed maintenance center, the unit may not be repaired in time when there is a malfunction.
3. When moving the unit to other place, please contact Air-con appointed maintenance center.
4. Installation must be performed in accordance with the requirements of NEC and CEC by authorized personnel only.

Basic requirements for installation position

Installing in the following place may cause malfunction. If it is unavoidable, please contact Air-con appointed maintenance center:

1. The place with strong heat sources, vapors, flammable or explosive gas, or volatile objects spread in the air.
2. The place with high-frequency devices, such as welding machine, medical equipment, etc.
3. Place the unit near coast area.
4. The place with oil (machine oil) in the air.
5. The place with sulfured gas such as sulfured hot spring.
6. Other places with special circumstance.

Outdoor unit installation location selection

1. Select a location where noise and outflow air emitted by the unit will not affect neighbors, animals or plants.
2. Select a location with sufficient ventilation.
3. Select a location without obstructions which will affect air inlet and outlet.
4. The location should be able to withstand the full weight and vibration of the outdoor unit and permit safe installation.
5. Select a dry location but the unit will not be exposed under direct sunlight or strong wind.
6. Make sure that the outdoor unit installation dimension should follow installation dimension diagram for convenient maintenance.
7. The height difference of indoor and outdoor unit should be within 5m. The length of connection pipe should be within 10m.
8. Select a location which is out of reach for children.
9. Select a location where will not affect public passage and city appearance.

◆ Notices for installation

Electric safety requirements

1. The power supply should be of rated voltage and AC exclusive circuit. The diameter of power cable should me the requirement.
2. The voltage for normal operation should within 90%~110% of 208~230V.
3. Don't pull the power cable forcibly.
4. The unit should be reliably grounded and it should be connected to the appropriate grounding device of the building. The installation work should be done by the professional. There should be sufficient electric leakage protection switch and air switch in fixed circuit. The air switch must have the functions of magnetic tripping and heat tripping in order to protect the short circuit and overloading.
5. The minimum distance from the unit and flammable surface is 1.5m.
6. There should be a circuit breaker in fixed circuit. The circuit breaker is with all-pole disconnection and the off-contact distance should be more than 3mm.

Grounding requirements

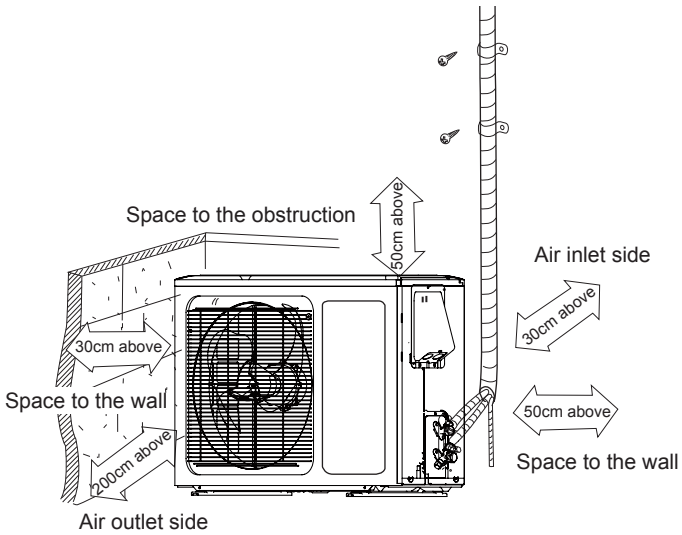
1. Air conditioner is type I electric appliance, thus please adopt reliable grounding measures.
2. The yellow-green wire in air conditioner is grounding wire and cannot be used for other propose. It can't be cut off and be fixed by tapping screw. Otherwise it will cause electric shock.
3. The power supply must have reliable grounding terminal. Please don't connect the grounding wire to the following places:
 - ① gas pipe
 - ② tap water pipe
 - ③ blowdown pipe
 - ④ other unreliable places considered by a professional

Others

1. The connection method of unit and power cable as well as the interconnect method of each isolated component should refer to the circuit diagram stick on the unit.
2. The model of the fuse and rated value should refer to the silk-printed indication on the controller or fuse sleeve.
3. The external static pressure in testing point should be 0MPa.

◆ Installation dimension diagram

Installation dimension diagram



◆ Install outdoor unit

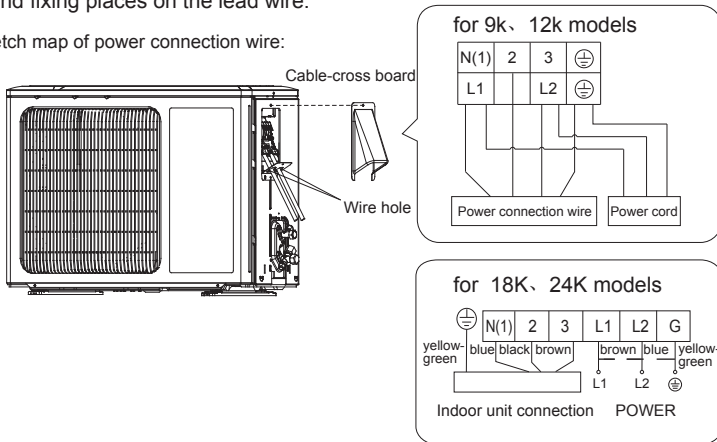
Electric wiring

1. Remove the cable-cross board of outdoor right side plate.
2. Put the power connection wire and power cord through the wire hole.
3. Take off the wire clamp. Connect the power connection wire and power cord to the terminal and then fix them. Wiring should be coherent with the indoor unit.
4. Fix the power connection wire and power cord with wire clamp.
5. Ensure if the wires have been fixed well.
6. Install the cable-cross board.

NOTE:

- Wrong wiring may cause malfunction of some electrical parts.
- After the wire has been fixed, ensure there is free space between the connection and fixing places on the lead wire.

Sketch map of power connection wire:



◆ Install outdoor unit

Air purging

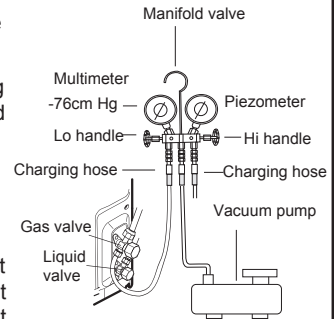
● Air purging method:

Air purging method	Length of connection pipe	Refrigerant charging amount
Use vacuum pump	Not longer than 7.5m	Nameplate value
	7.5~20m	Nameplate value +20g/m (for 9k、12k、18k cool and heat type) Nameplate value +15g/m (for 18k、24k cool type) Nameplate value +50g/m (for 24k cool and heat type) add 15g/20g/50g of refrigerant for additional 1m of pipe length

● Use vacuum pump

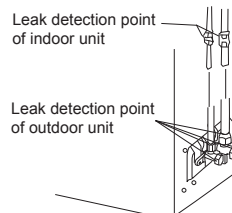
(Note: R410A refrigerant special vacuum pump should be applied for R410A unit.)

1. Connect the charging hose of manifold valve to charging port of low-pressure valve. Both high-pressure valve and low-pressure valve must be tighten up).
2. Connect joint of charging hose to vacuum pump.
3. Fully open Lo (low pressure) handle of manifold valve and start the vacuum pump for vacuum pumping.
4. Usually the vacuum pumping time of 2600W AC is about 15min. The vacuum pumping time of 5000W AC is about 20min. The vacuum pumping time of 7200W AC is about 30min. Make sure the pressure is $-1.0 \times 10^5 \text{pa}$ (-76cmHg). When vacuum pumping is finished, close Lo (low pressure) handle of manifold valve completely to stop the vacuum pump.
5. Maintain the pressure for a while after finishing vacuum pumping to see if there is leakage of the system. Usually the pressure maintenance time of the air conditioner above 5000W is 5min and the pressure maintenance time of the air conditioner below 5000W is 3min. During pressure maintenance period, the rebound of pressure should not exceed 0.005Mpa (0.05kg).
6. After finishing vacuum pumping, open the liquid valve slightly to release air in order to balance the system pressure and present air inlet when removing the hose. Fully open high-pressure valve and low-pressure valve after removing the hose.
7. Tighten bonnets of high-pressure valve, low-pressure valve and charging port.



Leakage test

Apply soap water to check whether the joints are leaky. Leak detector can also be applied for leakage test.



◆ Testing operation and check after installation

Checking items after installation

Items to be checked	Possible malfunction
Has it 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 sufficient?	It may cause condensation and water dripping.
Is water drainage well?	It may cause condensation and water dripping.
Is the voltage of power supply is in accordance with the rated voltage marked on the nameplate?	It may cause malfunction or damaging the parts.
Is the electric wiring and piping connection installed correctly?	It may cause malfunction or damaging the parts.
Is the unit grounded securely?	It may cause electric leakage.
Does the power cord follow the specification?	It may cause malfunction or damaging the parts.
Is there any obstruction in the air inlet and outlet?	It may cause insufficient cooling (heating) capacity.
Have the length of connection pipe and refrigerant charging amount been recorded?	The refrigerant charging amount is not accurate.

Test operation

1. Preparation of testing operation

- (1) Do not switch on power before installation is finished completely.
- (2) Electric wiring must be connected correctly and securely.
- (3) Cut-off valves of the connection pipes should be opened.
- (4) All the impurities such as scraps and thrums must be cleared from the unit.

2. Test operation method

- (1) Put through the power, press "ON/OFF" button on the remote controller to start the operation.
- (2) Press "MODE" button to select the COOL, HEAT (not available for cooling only unit) and FAN to check whether the operation is normal or not.



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