

A decorative floral pattern in the left margin of the grey header bar.

Split Air Conditioner

Installation manual


For air conditioners:

AWI/AWO-21HPR1 Delta

AWI/AWO-25HPR1 Delta

AWI/AWO-32HPR1 Delta

Thank you for choosing our air conditioner, please read this owner's manual carefully before operating the unit and keep it carefully for consultation

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◆ Installation service- 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. If the air conditioner has not plug, directly connect it into the fixed circuit, a breaker should be installed in the fixed circuit. all pole of this breaker should be switching off and the distance of the contact should be at least 3mm.

Basic Requirements For Installation Position

Install in the following place may cause malfunction. If it is unavoidable contact with service center please:

- Place where strong heat sources, vapors, flammable gas or volatile object are emitted
- Place where high-frequency waves are generated by radio equipment, welders and medical equipment.
- Place where a lot of salinities such as coast exists.
- Place where the oil (machine oil) is contained in the air.
- Place where a sulfured gas such as the hot spring zones is generated.
- Other place with special circumstance.

Indoor Unit Installation Position Selection

1. The air inlet and outlet vent should be far from the obstruction, make sure that the air can be blown through the whole room.
2. Select a position where the condensing water can be easily drained out, and the place is easily connected for outdoor unit.
3. Select a location where the children can not reach.
4. Can select the place where is strong enough to withstand the full weight and vibration of the unit. And will not increase the noise.
5. Be sure to leave enough space to allow access for routine maintenance. The height of the installed location should be 230 cm or more from the floor.
6. Select a place about 1m or more away from TVset or any other electric appliances.
7. Select a place where the filter can be easily taken out.
8. Make sure that the indoor unit installation should accord with installation dimension diagram requirements.

Outdoor Unit Installation Position Selection

1. Select a location from which noise and outflow air emitted by unit will not inconvenience neighbors, animals, plants.
2. Select a location where there should be sufficient ventilation.
3. Select a location where there should be no obstructions cover the inlet and outlet vent.
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 place, but do not expose under the direct sunlight or strong wind.
6. Make sure that the outdoor unit installation dimension should accord with installation dimension diagram, convenient for maintenance, repair.
7. The height difference of connecting the tubing within 5m, the length of connecting the tubing within 10m.
8. Select a place where it is out of reach for the children.
9. Select a place where will not block the passage and do not influence the city appearance.

◆ Notices for installation

Safety Requirements For Electric Appliances

1. The power supply should be used the rated voltage and AC exclusive circuit, the power cable diameter should be satisfied.
- 2 Don't drag the power cable emphatically.
- 3 It should be reliably earthed, and it should be connected to the special earth device, the installation work should be operated by the professional.
The air switch must have the functions of magnetic tripping and heat tripping, in order to protect the short circuit and overloading.
4. The min. distance from the unit and combustive surface is 1.5m.

Note:

- Make sure that the Live wire or Zero line as well as the earth wire in the family power socket can not be wrong connected, there should be reliable and no short circuit in the diagram.
- wrong connection may cause fire.

Earthing requirements

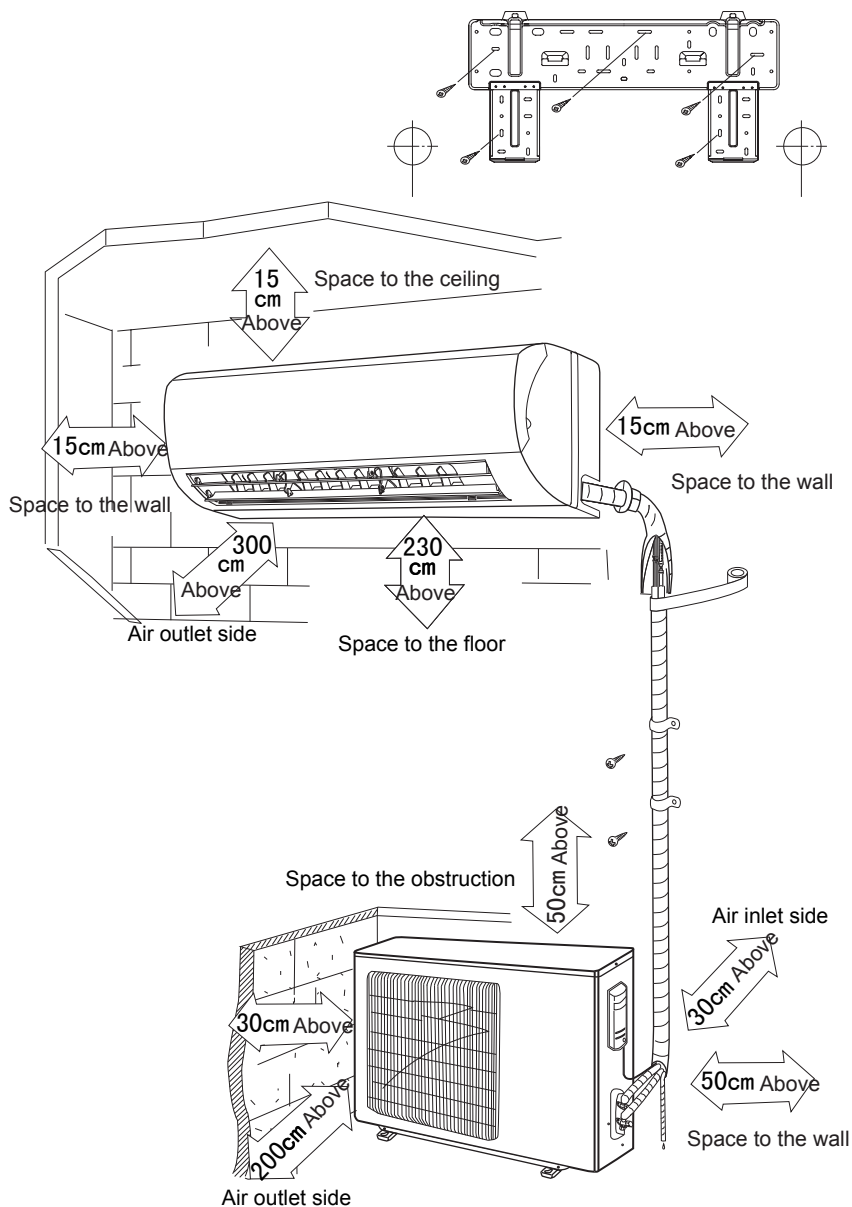
1. Air conditioner is type I electric appliance, thus please do conduct reliable earthing measure.
2. The yellow-green two-color wire in air conditioner is earthing wire and cannot be used for other propose. It cannot be cut off and be fix it by screw, otherwise it would cause electric shock.
3. The earth resistance should accord to the National Criterion.
4. The user power must offer the reliable earthing terminal. Please don't connect the earthing wire with the following place:
① Tap water pipe ② Gas pipe
③ Contamination pipe ④ Other places that professional personnel consider them unreliable.

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 blown fuse and rated value should refer to the silk-screen on the controller or fuse sleeve.
3. The appliance shall be installed in accordance with national wiring regulations.
4. This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
5. Children should be supervised to ensure that they do not play with the appliance.

◆ Installation dimension diagram

Installation dimension diagram



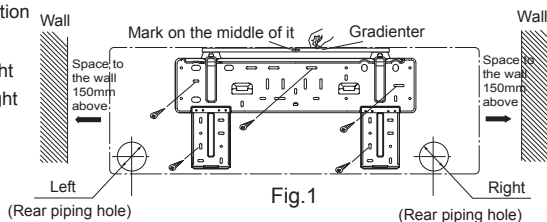
◆ Install indoor unit

Install the rear panel

1. Always mount the rear panel horizontally. As the water drainage pipe at the left, when adjusting the rear panel, this side should not be too high; the right side should be slightly high.

2. Fix the rear panel on the selected location

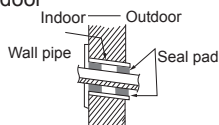
3. Be sure that the rear panel has been fixed firmly enough to withstand the weight of an adult of 60kg, furthermore, the weight should be evenly shared by each screw.



Install the piping hole

1. Make the piping hole in the wall at a slight downward slant to the outdoor side.

2. Insert the piping-hole sleeve into the hole to prevent the connection piping and wiring from being damaged when passing through the hole.

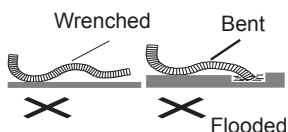


Install the water drainage pipe

1. For well draining, the drain hose should be placed at a downward slant.

2. Do not wrench or bend the drain hose or flood its end by water.

3. When the long drainage hose passing through indoor, should wrap the insulation materials.



Connect indoor and outdoor electric wires

1. Open the front panel upwardly.

2. Screw off the fixing screw of cover plate and screw off cover plate.

3. Put the power connection cable through the back of indoor unit wire hole and take it out.

4. All the wiring should be connected according to the circuit diagram on the unit.

5. Put the power connection cable the section, which with sheath into wire groove, and cover the cover plate, screw on the fixing screw, tighten the connection wire.

6. Cover the front panel cover.

7. For the cooling and heating unit, signal control wire can be passed through the connection of connector and indoor unit, and use the wire clip that is under the body case, tighten the signal control wire.

◆ Install indoor unit

NOTE:

When connecting the electric wire if the wire length is not enough, please contact with the authorized service shop to buy a exclusive electric wire that is long enough and the joint on the wire are not allowed.

- The electric wiring must be correctly connected, wrong connection may cause spare parts malfunction.
- Tighten the terminal screw in order to prevent loose.
- After tighten the screw, slightly pull the wire and confirm whether is it firm or not.
- If the earth wire is wrong connection, that may cause electric shock.
- The cover plate must be fixed, and tighten the connection wire, if it is poor installed, that the dust, moisture may enter in or the connection terminal will be affected by outside force, and will cause fire or electric shock.
- Leakage circuit-breaker and air switch of correct capacity must be installed.

Install the indoor unit

- The piping can be lead out from right, right rear, left, left rear.
1. When routing the piping and wiring from the left or right side of indoor unit, cut off the tailings from the chassis in necessary (show in Fig.2)
 - (1).Cut off the tailings 1 when routing the wiring only;
 - (2).Cut off the tailings 1 and tailings 2 when routing both the wiring and piping.(or 1,2,3);
 2. Take out the piping from body case, wrap the piping electric wire, water pipe with tape and put them through the piping hole (As show in Fig. 3)
 3. Hang the mounting slots of the indoor unit on the upper tabs of the rear panel and check if it is firm enough. (As show in Fig.4)

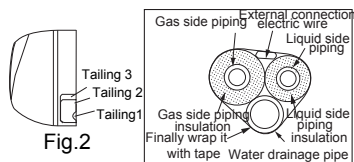


Fig.2

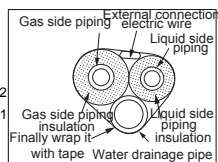


Fig.3

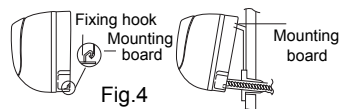
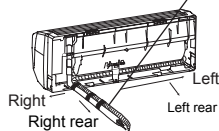
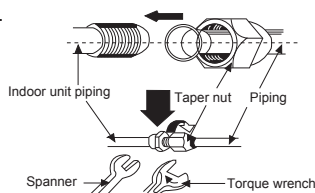


Fig.4

Install the connection pipe

1. Align the center of the piping flare with the relevant valve.
2. Screw in the flare nut by hand and then tighten the nut with spanner and torque wrench refer to the following.
Tightening torque table

Hex nut diameter	Tightening torque (N · m)
Φ6	15~20
Φ 9.52	31~35
Φ 12	50~55
Φ 16	60~65
Φ 19	70~75



NOTE: Firstly connect the connection pipe to indoor unit, then to outdoor unit; pay attention to the piping bending, do not damage the connection pipe; the joint nut couldn't tighten too much, otherwise it may cause leakage.

◆ Install outdoor unit

Electric Wiring

1. Disassemble handle of right side plate or front side plate of outdoor unit.
2. Take off wire clamp, connect and fix power connect cord to terminal of line bank. Wiring should fit that of indoor unit.
3. Fix the power connection cable with wire clamp, for cooling and heating unit, then use the wire clamp to fix the signal control wire, then connect the corresponding connector.
4. Ensure if wire has been fixed well.
5. Install handle or front side plate.

NOTE:

- Wrong wiring may cause spare parts malfunction.
- After the cable fixed, make sure there should be a free space between the connection and fixing place on the lead wire.

Air purging and leakage test

● Air purging and leakage test

1. Connect charging hose of manifold valve to charge end of low pressure valve (both high/low pressure valves must be tightly shut).
2. Connect joint of charging hose to vacuum pump.
3. Fully open handle handle of Lo manifold valve.
4. Open the vacuum pump to evacuate. At the beginning, slightly loosen joint nut of low pressure valve to check if there is air coming inside. (If noise of vacuum pump has been changed, the reading of multimeter is 0) Then tighten the nut.
5. Keep evacuating for more than 15mins and make sure the reading of multi-meter is $-1.0 \times 10^5 \text{pa}$ (-76cmHg).
6. Fully open high/low pressure valves.
7. Remove charging hose from charging end of low pressure valve.
8. Tighten bonnet of low-pressure valve. (As shown in Fig.5)

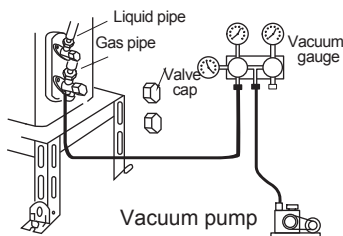


Fig. 5

◆ Install outdoor unit

● Leak hunting

Use soap water or leak hunting meter to check whether the joints is leak.

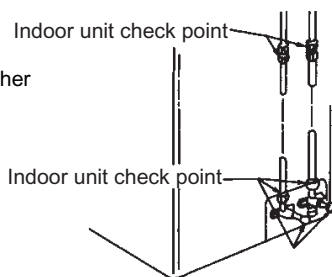
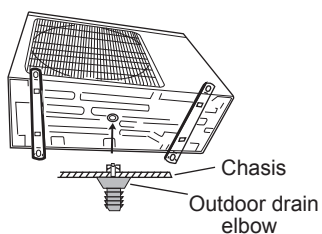


Fig.6

Outdoor condensation drainage (Heat pump type only)

When the unit is heating, the condensing water and defrosting water can be drained out reliably through the drain hose.

Installation: Install the outdoor drain elbow in $\varnothing 25$ hole on the base plate, and joint the drain hose to the elbow, so that the wastewater formed in the outdoor unit can be drained out to a proper place.



◆ Check after installation and test operation

Check after installation

Items to be checked	Possible malfunction
Has it been fixed 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 dripping.
Is water drainage well?	It may cause condensation and dripping.
Is the voltage in accordance with the rated voltage marked on the nameplate?	It may cause electric malfunction or damage the part.
Is the electric wiring and piping connection installed correctly and securely?	It may cause electric malfunction or damage the part.
Has the unit been connected to a secure earth connection?	It may cause electrical leakage.
Is the power cord specified?	It may cause electric malfunction or damage the part
Is the inlet and outlet been covered?	It may cause insufficient cooling(heating) capacity.
Has the length of connection pipes and refrigerant capacity been recorded?	The refrigerant capacity is not accurate.

Test Operation

1. Before test 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) Switch on power, press "ON/OFF" button on the wireless remote control to start the operation.
- (2) Press MODE button, to select the COOL, HEAT, FAN to check whether the operation is normal or not.