



Fan Coil Unit Wall Mounted Type

Owner's Manual(Original instructions)

Commercial or Household Air Conditioners

Model:

AWI-20HW1D
AWI-25HW1D
AWI-36HW1D
AWI-42HW1D

Thank you for choosing Commercial or Household Air Conditioners.
Please read this owner's manual carefully before operation and retain it for future reference.

User Notice

This appliance is intended to be used by expert or trained users in shops, in light industry and on farms, or for commercial or household use by lay persons.

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

- 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).
- ③ The place near coast area.
- ④ The place with oil or fumes in the air.
- ⑤ The place with sulfured gas.
- ⑥ Other places with special circumstances.
- ⑦ Do not use the unit in the immediate surroundings of a laundry, a bath, a shower or a swimming pool.

DISPOSAL: This marking indicates that this product should not be disposed with other household wastes throughout the EU. To prevent possible harm to the environment or human health from uncontrolled waste disposal, recycle it responsibly to promote the sustainable reuse of material resources. To return your used device, please use the return and collection systems or contact the retailer where the product was purchased. They can take this product for environmental safe recycling.


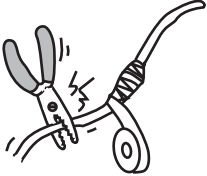
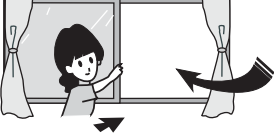
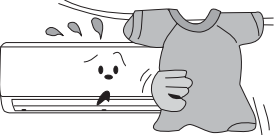

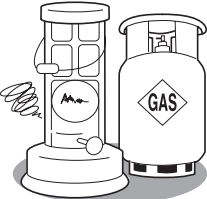
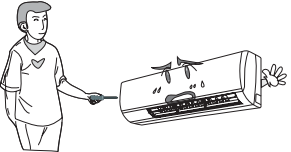


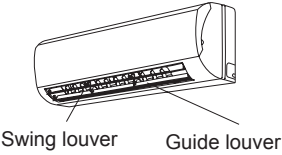
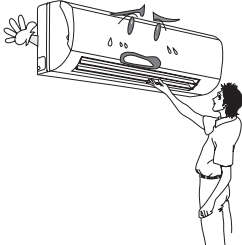
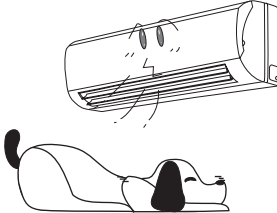
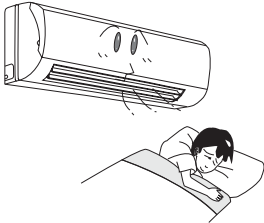
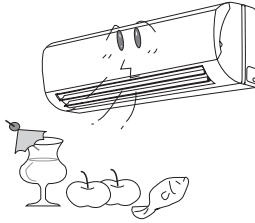
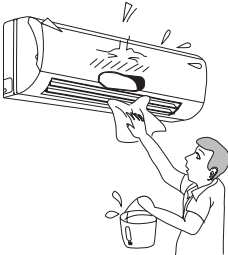
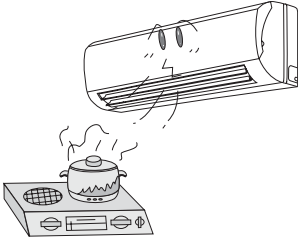
This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.

Contents

1. Notices for operation	1
2. Name and function of each part	3
3. Operation Range	3
4. Additional function	4
5. Care and Cleaning.....	4
6. Troubleshooting	5
7. Notices for installation	7
8. Installation dimension diagram	9
9. Install the unit	10
10. Install the connection pipe	11
11. External water pipe connection sketch	12
12. Check after installation and test operation	13

1. Notices for operation

<p>! ★ When the voltage is very high, the components would be easily damaged, when the voltage is very low, the electric components cannot work.</p>	<p>⊘ ★ Be sure to pull out the power plug as the FCU not in use for a long time. Otherwise, the accumulated dusts that may cause over heating or fire.</p> 	<p>⊘ ★ Never splice the power cord or use an extended cord.</p>  <p>It can cause overheating or fire.</p>
<p>⊘ ★ Don't leave windows and doors open for a long time while operating the FCU. It can decrease the FCU capacity.</p> 	<p>⊘ ★ Don't block the air intake of the FCU. It can decrease the FCU capacity or cause a malfunction.</p> 	<p>! ★ The power supply must adopt the special circuit that with air switch protection and assure it has enough capacity. The unit will be turned on or off according to your requirement automatically, please do not turn on or turn off the unit frequently, other-wise disadvantage effect may be caused to the unit.</p>
<p>! ★ When having a burning smell or smoke, please turn off the power supply and contact with the service center.</p>  <p>If the abnormality still exists, the unit may be damaged, and may cause electric shock or fire.</p>	<p>⊘ ★ Keep combustible spray away from the units more than 1.5m.</p>  <p>It can cause a fire or explosion</p>	<p>⊘ ★ Don't attempt to repair the air conditioner by yourself.</p>  <p>The wrong repair will lead to an electric shock or fire, so you should contact the service center to repair.</p>

<p>!★ Please don't cut off or damage the power cords and control cords. If they are damaged, please ask the qualified personnel to change them.</p>	<p>!★ To adjust the airflow direction appropriately. When operating the unit, to adjust the vertical and lateral airflow direction by use of remote controller.</p>  <p>Swing louver Guide louver</p>
<p>⊘★ Don't insert your hands or stick into the air intake or outlet vents.</p> 	<p>⊘★ Don't blow the wind to animals and plants directly. It can cause a bad influence to them.</p> 
<p>⊘★ Don't apply the cold wind to the body for a long time. It can cause the health problems.</p> 	<p>⊘★ Don't use the FCU for other purposes, such as drying clothes, preserving foods, etc.</p> 
<p>⊘★ Splashing water on the FCU can cause an electric shock and malfunction.</p> 	<p>⊘★ Don't place a space heater near the FCU.</p> 

2. Name and function of each part

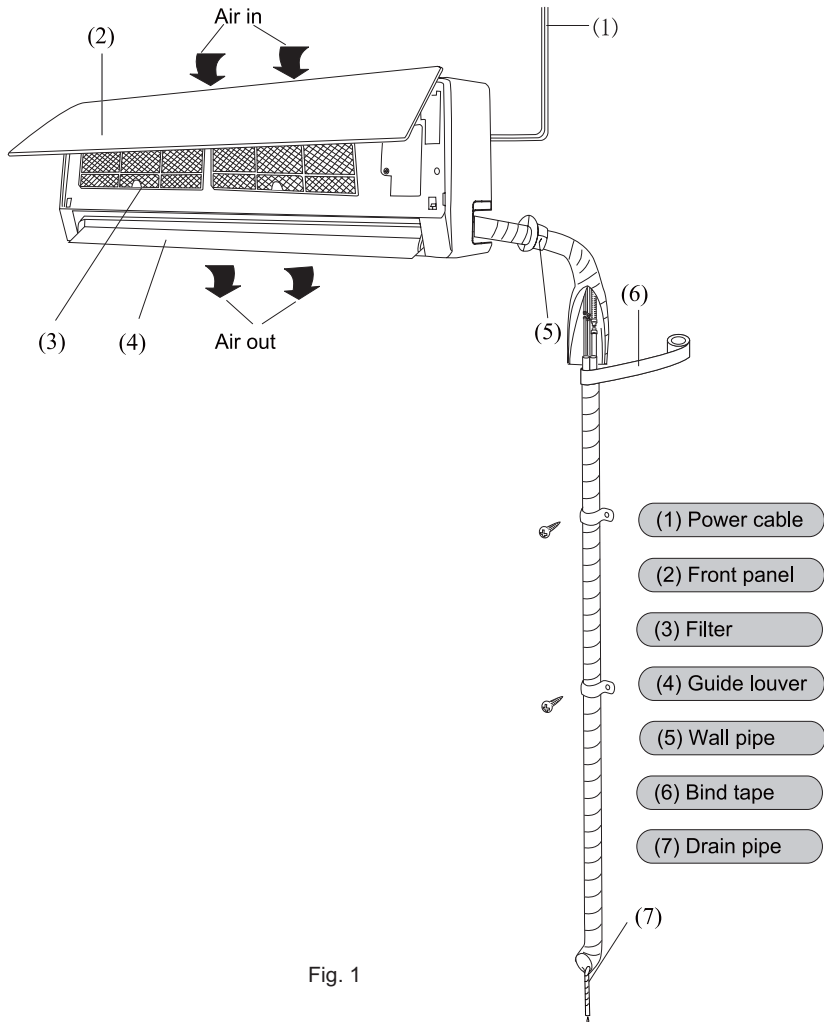


Fig. 1

3. Operation Range

(1) The operation pressure of the unit is no more than 1.6MPa. The entering water temperature for cooling shall be not lower than 5°C, otherwise condensate would be caused on the unit. The entering water temperature for heating shall be not more than 70°C (normally 50°C), otherwise the FCU would be damaged.

(2) The ambient temperature range for cooling is 16-40°C and 10-35°C for heating. The relative humidity is equal or less than 95%.

(3) It is a kind of comfort air conditioning unit, not applicable to be used under the locations with special requirements on corrosive, inflammable gas or heavy smog (like, kitchen), otherwise, the unit would fail to run properly or its service life would be shortened.

4. Additional function

4.1 Anti-cool-wind function

In order to ensure comfort of the users, under circumstances such as the heat mode just starts or the unit runs heat mode under low water temperature, the fan will stop running to prevent the chilled wind blowing out.

4.2 Anti-heat-wind function

In order to ensure comfort of the users, under circumstances such as the cool mode just starts or the unit runs cool mode under hot water temperature, the fan will stop running to prevent the hot wind blowing out.

4.3 Emergency Operation

When the wireless remote control is lost or damaged, please use the AUTO button. At this time, sketch map for changing batteries cassette type fan coil unit 9 the unit will operated as follow:

(1)At operation: When the unit stop , pressed AUTO button over 5 seconds,the unit run.

(2)At stopping: When the unit is running, pressed AUTO button and overrun 5 seconds,the unit stop.

(3)When the unit is running, pressed AUTO button less than 5 seconds. The unit select from COOL, DRY, FAN, HEAT,COOL modes automatically.

Open the front panel, the manual switch is on the edge as Fig.2.

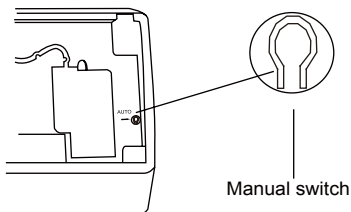


Fig.2

5. Care and Cleaning

⚠ Caution

(1) Turn power off and pull out the power plug before cleaning air conditioner, or it may cause electric shock.

(2) Never sprinkle water on the unit for cleaning because it can cause an electric shock.

(3) Volatile liquid (e.g. thinner or gasoline) will damage the air conditioner. (So wipe the units with a dry soft cloth, or a cloth slightly moistened with water or cleanser.)

5.1 Clean the front panel

When cleaning the front panel, please dip the cloth into the water temperature of 45°C below, then to dry the cloth and wipe the dirty part.

5.2 Clean the air filter (Recommended once every three months)

Note: If dust is much more around the air conditioner, the air filters should be cleaned many times. After taking off the filter, don't touch the fin of the unit, in order to avoid hurt your fingers.

- Take down the air filter

At the slot of surface panel to open an angle, pull the air filter downward and take it out, please see the Fig. 3(a, b).

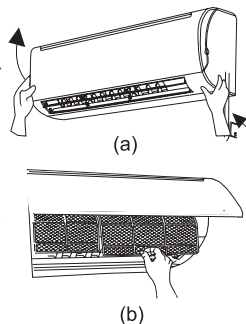


Fig.3

- Clean the air filter

To clean the dust adhering to the filters, you can either use a vacuum cleaner, or wash them with warm water the water with the neutral detergent (below 45℃), and dry it in the shade.

Note: Never use water above 45 ℃ to clean, or it can cause deformation or discoloration. Never parch it by fire, or can cause a fire or deformation.

- Reinstall the air filter

Reinsert the filters along the direction of arrowhead, and then to cover the cover and clasp it.

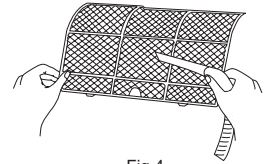


Fig.4

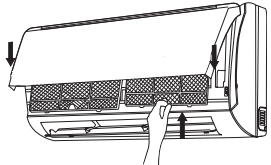


Fig.5

5.3 Clean and care

5.3.1 Check before use




- (1) Be sure that nothing obstructs the air outlet and intake vents.
- (2) Check that whether ground wire is properly connected or not.

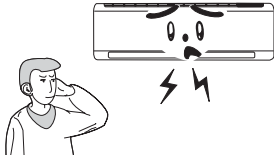
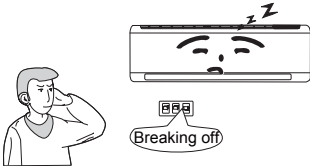
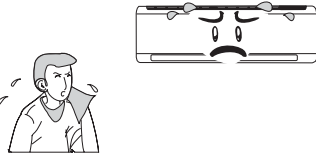
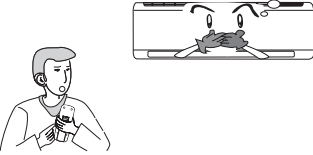
5.3.2 Maintain after use


- (1) Turn main power off.
- (2) Clean the filter and the FCU.

6. Troubleshooting

! CAUTION: The FCU is not expected to be serviced by users. Incorrect repair may cause electric shock or fire, so please contact an authorized service center for professional service. The following checks prior to contact may save your time and money.

Phenomenon	Troubleshooting
<p>The unit does not operate:</p> 	<ul style="list-style-type: none"> • Blow of fuse or breaker • Power cut • Don't connect with power • Low batteries of wireless remote controller • Wireless remote controller exceed remote control area
<p>Odours are emitted:</p> 	<ul style="list-style-type: none"> • Some odours may be emitted from the FCU. This is the result of room smells (such as furniture, tobacco, ect.) which have been taken into the FCU. • Consult authorized service center for cleaning if the odours still exist.
<p>Mist is emitted in COOL mode</p> 	<ul style="list-style-type: none"> • During cooling operation, a thin mist may be seen emitted from the FCU due to high room temperature and humidity. After a period of time, the mist will disappear with the decrease of room temperature and humidity.

<p>Cracking noise:</p> 	<ul style="list-style-type: none"> • This is the sound of friction caused by expansion and/or contraction of panel or other parts due to the change of temperature.
<p>The unit can not be started up:</p> 	<ul style="list-style-type: none"> • Is the power cut off? • Is the power plug loose? (If applicable) • Is the circuit protection device tripped off? • Is voltage higher or lower?(Tested by professionals) • Is the TIMER correctly used?
<p>Cooling/Heating effect is poor:</p> 	<ul style="list-style-type: none"> • Is temperature setting appropriate? • Is the inlet or outlet blocked? • Is the filter dirty? • Is the window or the door open? • Is low fan speed set? • Are there heat sources in the room?
<p>Remote controller is not available:</p> 	<ul style="list-style-type: none"> • Check if there is magnetic or electrical interference near the unit that may affecting operation of the controller. In this case, pull the plug out and reinsert it. • Is the remote controller within its operating range or obstructed? Check the condition of the batteries and replace them if necessary. • Check if the remote controller is damaged.
<p>Water leakage of FCU.</p>	<ul style="list-style-type: none"> • The humidity is high. • Condensate overflows. • Drain hose is loose.
<p>Noise from FCU.</p>	<ul style="list-style-type: none"> • The noise emitted when the fan is switching on or off.
<p>FCU can not blow air:</p>	<ul style="list-style-type: none"> • In HEAT mode, when the temperature of FCU heat exchanger is very low, air flow is stopped in order to prevent cold air. • In COOL mode, when the temperature of FCU heat exchanger is very high, air flow is stopped in order to prevent hot air.
<p>Moisture on air outlet :</p>	<ul style="list-style-type: none"> • If the unit operates at high humidity for a long time, moisture will be generated on the air outlet grill and then drip off.
<p>C5:Malfunction of connector jumper:</p>	<ul style="list-style-type: none"> • Check if the connector jumper contacts properly. If the PCB is to be replaced, please take off the old for the new PCB.

F0:Malfunction of the ambient temperature sensor	<ul style="list-style-type: none"> ● Check if the room temperature sensor is connected properly
F1:Malfunction of evaporator temperature sensor	<ul style="list-style-type: none"> ● Check if the evaporator temperature is connected properly.
 If any one of the following situations occurs, immediately stop all operations, cut off the power supply, and contact the authorized personnel.	

- There is harsh sound during operation.
- Strong odours are emitted during operation.
- Water is leaking from the unit.
- The air switch or protection switch often trips.
- Water or other liquid is splashed into the unit.
- Power cord and power plug is overheating.



Stop operation and cut off the power supply.

7. Notices for installation

(1) The unit should be installed only by authorized service center according to local or government regulations and in compliance with this manual.

(2) Before installing, please contact with local authorized maintenance center. If the unit is not installed by the authorized service center, the malfunction may not be solved due to inconvenient contact between the user and the service personnel.

(3) When removing the unit to the other place, please firstly contact with the local authorized service center.

(4) Before obtaining access to terminals, all supply circuits must be disconnected.

(5) If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.

(6) The appliance must be positioned so that the plug is accessible.

(7) **Warning:** Disconnect the power supply during service and when replacing parts. If that the removal of the plug is foreseen, check the unit with a electroprobe to ensure the plug remains removed. If this is not possible, turn off the supply circuits.

7.1 Installation Site Instructions

Proper installation site is vital for correct and efficient operation of the unit. Avoid the following sites where:

(1) strong heat sources, vapours, flammable gas or volatile liquids are emitted.

(2) high-frequency electro-magnetic waves are generated by radio equipment, welders and medical equipment.

(3) salt-laden air prevails (such as close to coastal areas).

(4) the air is contaminated with industrial vapours and oils. the air contains sulphures gas such as in hot spring zones.

(5) corrosion or poor air quality exists.

7.2 Installation Site of the FCU

(1) The air inlet and outlet should be away from the obstructions. Ensure the air can be blown through the whole room.

(2) Select a site where the condensate can be easily drained out.

(3) Select a place where it is out of reach of children.

(4) Select a place where the wall is strong enough to withstand the full weight and vibration of

the unit.

(5) Be sure to leave enough space to allow access for routine maintenance. The installation site should be 250cm or more above the floor.

(6) Select a place about 1m or more away from TV set or any other electric appliance.

(7) Select a place where the filter can be easily taken out.

(8) Make sure that the FCU is installed in accordance with installation dimension instructions.

(9) Do not use the unit in the laundry or by swimming pool etc.

7.3 Safety Precautions for Electric Appliances

(1) A dedicated power supply circuit should be used in accordance with local electrical safety regulations.

(2) Don't drag the power cord with excessive force.

(3) The unit should be reliably earthed and connected to an exclusive earth device by the professionals.

(4) The air switch must have the functions of magnetic tripping and heat tripping to prevent short circuit and overload.

(5) The minimum distance between the unit and combustive surface is 1.5m.

(6) The appliance shall be installed in accordance with national wiring regulations.

(7) An all-pole disconnection switch with a contact separation of at least 3mm in all poles should be connected in fixed wiring.

Note:

- Make sure the live wire, neutral wire and earth wire in the family power socket are properly connected. There should be reliable circuit in the diagram.

- Inadequate or incorrect electrical connections may cause electric shock or fire.

7.4 Earthing Requirements

(1) The FCU is type I electric appliance. Please ensure that the unit is reliably earthed.

(2) The yellow-green wire in air conditioner is the earthing wire which can not be used for other purposes. Improper earthing may cause electric shock.

(3) The earth resistance should accord to the national criterion.

(4) The power must have reliable earthing terminal. Please do not connect the earthing wire with the following:

① Water pipe ② Gas pipe ③ Contamination pipe ④ Other place that professional personnel consider is unreliable

(5) The model and rated values of fuses should accord with the silk print on fuse cover or related PCB.

7.5 Connection of the electric wire

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.

① The electric wiring must be correctly connected, wrong connection may cause spare parts malfunction.

② Tighten the terminal screw in order to prevent loose.

③ After tighten the screw, slight pull the wire and confirm whether is it firm or not.

④ If the earth wire is wrong connection, that may cause electric shock.

⑤ 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.

8. Installation dimension diagram

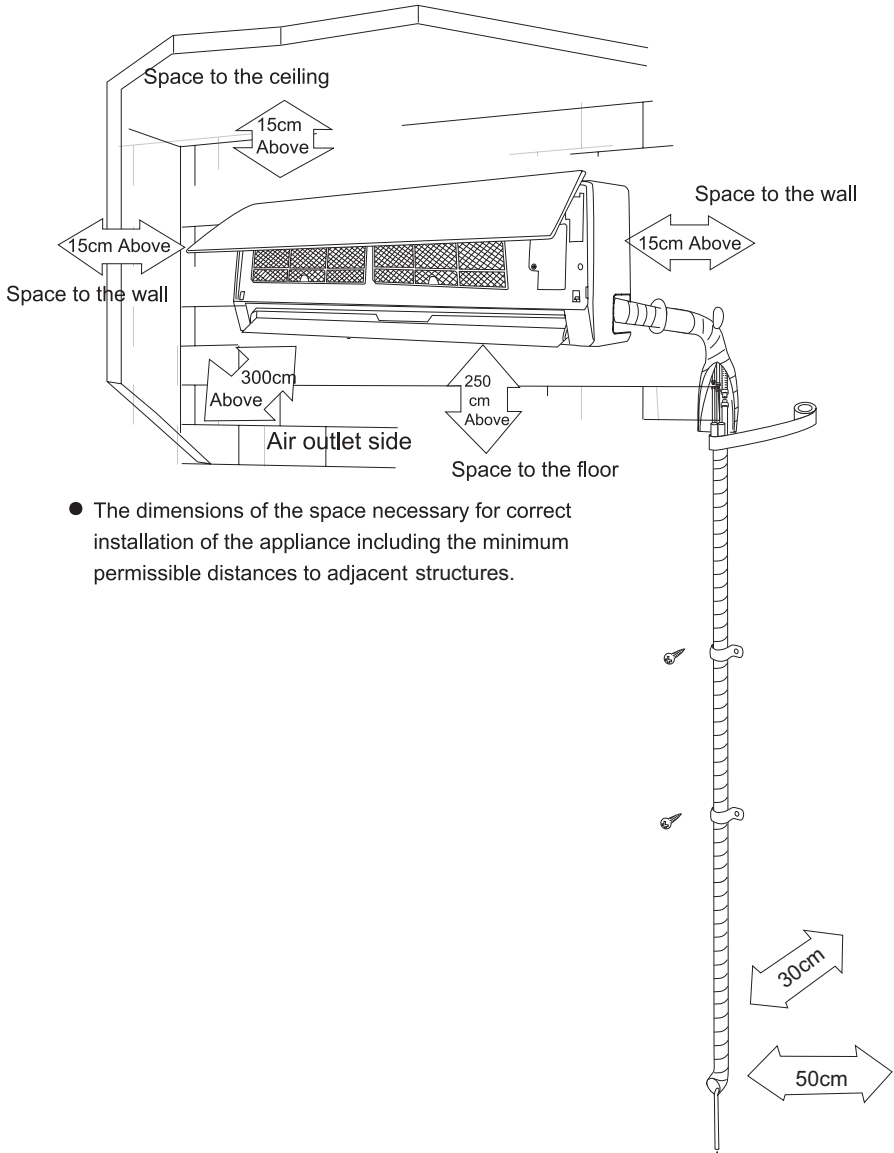
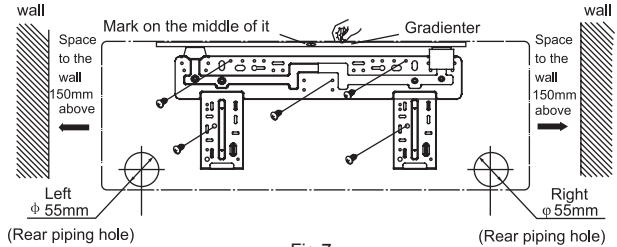


Fig.6

9. Install the unit

9.1 Install the rear panel

(1) Always mount the rear panel horizontally. Due to the water tray of the unit has been adopted the both-way drainage design, the outlet of water tray should be adjusted slightly down when installing, that is to take the outlet of the water tray as the center of a circle, the included angle between the evaporator and level should be 0 or more, that is good for condensing water drainage.



- (2) Fix the rear panel on the wall with screws. (Where is pre-covered with plastic granula)
- (3) Be sure that the rear panel has been fixed firmly enough to withstand the weight of an adult of 60kg, further more, the weight should be evenly shared by each screw.

9.2 Install the piping hole

- (1) Make the piping hole (Φ55) 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 from being damaged when passing through the hole.

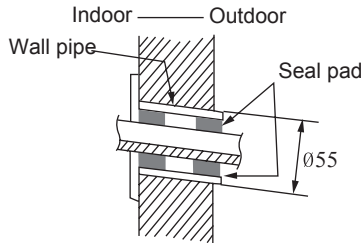


Fig. 8

9.3 Install the water drain 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.

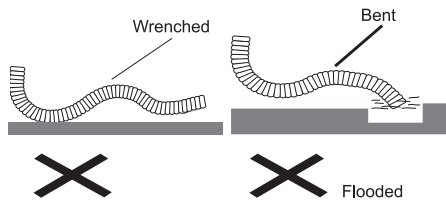


Fig. 9

9.4 The piping can be lead out from left, left rear.

(1) When routing the piping and wiring from the left side of the unit, cut off the tailings from the chassis in necessary(Show in Fig.10)

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.

(2) Take out the piping from body case, wrap the piping electric wire, water pipe with tape and pull them through the piping hole (As show in Fig.11)

(3) Hange the mounting slots of the FCU on the upper tabs of the rear panel and check if it is firm enough.(As show in Fig.12)

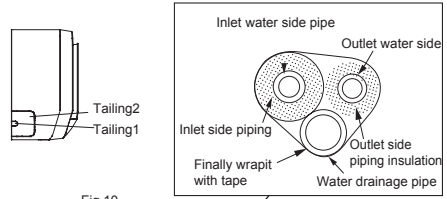


Fig.10

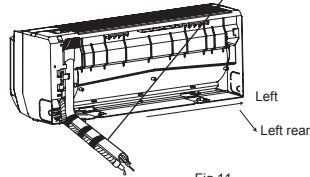


Fig.11

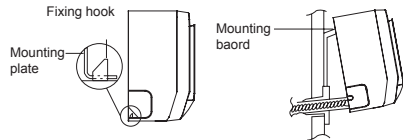


Fig.12

10. Install the connection pipe

(1) Align the center of the piping pipe with the relevant valve.

(2) Place the nut, spring washer, washer, O-ring cross the pipe sequentially, and keep them tightly close to each other with a distance of 6-7mm from the O-ring to the pipe end.

(3) Screw in the pipe nut by hand and then tighten the nut with spanner.

(4) If supplied by the manufacturer, the connection pipe shall be installed in place so as to guarantee the reliable connection.

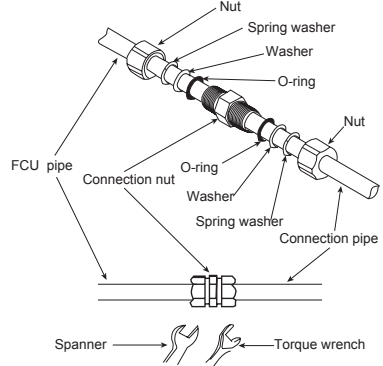


Fig.13

Note: Firstly connect the connection pipe to the FCU pipe, then to the connection pipe; 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.

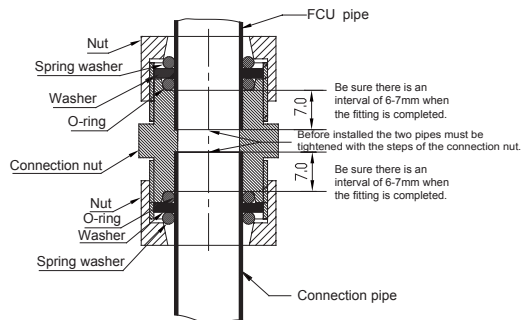


Fig.14

11. External water pipe connection sketch

11.1 Pipe connection sketch

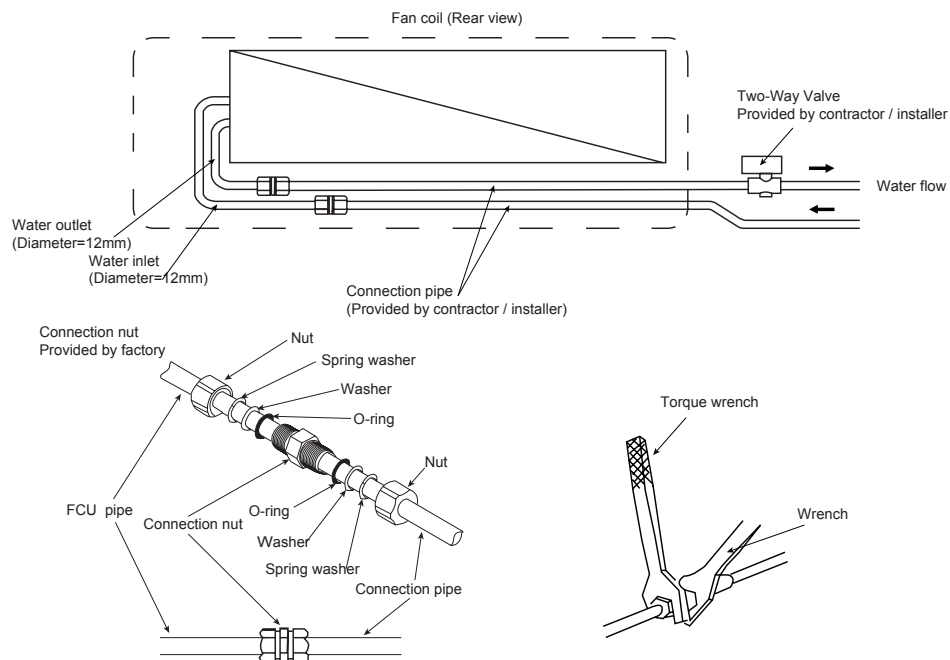


Fig.15

11.2 Motorized Valve

All units must be equipped with a motorized valve because of the following main reasons.

(1) There would be a water flood risk for some units without motorized valves in the event that they stop under the cooling conditions.

(2) Under the cooling and heating conditions, energy loss would happen to the chilled water and hot water.

Note:

- ① The pipe must be wrapped by heat insulation material to prevent condensing water drips.
- ② It is prohibited to bind directly the water valve wire and sponge up with the copper tube, as there would be probably a short circuit or even electric leakage. The right way is letting the water valve wire go through the pipe sleeve and then binding the sponge and pipe sleeve.
- ③ It is prohibited to put the valve core upside down.

11.3 The way of operating vent valve

When necessary to operating the vent valve, the steps should operate as follow:

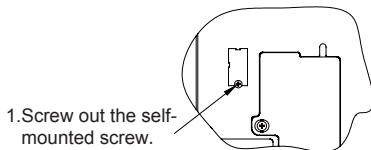


Fig.16

1.Screw out the self-mounted screw.

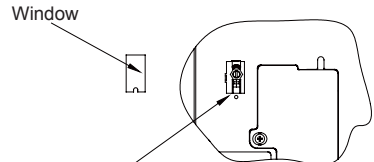


Fig.17

2.Remove the window cautiously.

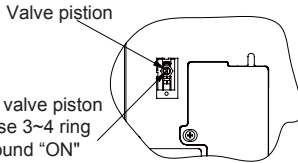


Fig.18

3.Screw out the valve piston counter-clockwise 3~4 ring cautiously. (around "ON" direction in the window)

4.Run the FCU

After running,fit in the parts as follow.

(1)Screw the valve piston clockwise properly before operation. (around "OFF" direction in the window)

(2)Reinstall the window.

(3)screw the self-mounted screw.

12. 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 water 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.

12.1 Test Operation(wireless remoter controller)

12.1 .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) All the impurities such as scraps and thrums must be cleared from the unit.

12.1 .2 Test method

- (1) Switch on power, pressing "ON/OFF" button on the wireless remote control to start the test mode.
- (2) Press TURBO button no less than 3 times during 5 seconds. The FCU run at test mode.
- (3) Using the controller,the FCU can select the COOL, HEAT, FAN, DRY to check whether the operation is normal or not.
- (4) Leave test mode to pressing "ON/OFF" button on the controller.
- (5) During 5 minute,the FCU would leave test mode automatically without pressing any button.
- (6) Switch off the FCU, pressing "ON/OFF" button on the controller.

12.2 Installation and Maintenance of Healthy Filter (optional)

● Installation Instructions

(1)Forcibly pull the panel for a specific angle from the two ends of the front panel according to the arrow direction. Then pull the air filter downwards to remove it. (See Fig.19)

(2)Mount the healthy filter onto the air filter,(as shown in Fig.20). If the air filter cannot be installed,please mount the healthy filter on the front case. (as shown in Fig.21)

(3)Mount the air filter properly along the arrow direction in Fig.22, and then close the panel cover.

● Cleaning and Maintenance.

Take out the healthy filter before cleaning and reinstall it after cleaning according to the installation instruction. Pay special attention that silver ion filter can't be cleaned with water, while active carbon, photocatalyst, low temperature conversion (LTC) catalyst, formaldehyde eliminator, catechin or mite killing filter can, but can't with brush or hard things. Dry it in the shade or sun after cleaning, but not by wiping.

● Service Life

(1) The healthy filter commonly has its usage lifetime for one year under normal condition. As for silver ion filter, it is invalid when its surface becomes black (green).

(2) This supplementary instruction is provided for reference to the unit with healthy filter. If the graphics provided herein is different from the physical goods, the latter one shall prevail. The quantity of healthy filters shall be based on the actual delivery.

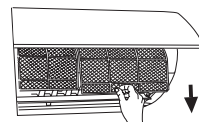


Fig.19

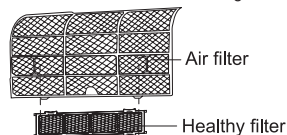


Fig.20



Fig.21

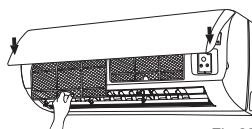


Fig.22



66129923450