



WEFC SERIES FLOOR CEILING Water Fan Coil Units INSTALLATION MANUAL

ENGLISH

- ✓ Read this Manual before the operation and keep it for reference.
- ✓ Read all safety precautions on the manual, improper use can cause serious injury.

Specification and performance data listed herein are subject to change without notice



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Environmental Technologies LLC.

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1 Operation Range

- (1) The operation pressure of the unit is no more than 1.6MPa. The entering water temperature for cooling shall be 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 60°C), otherwise the copper tube of the heat exchanger would be corroded.
- (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.

2 Notices for operation

- (1) 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.
- (2) Children should be supervised to ensure that they do not play with the appliance.
- (3) If the supply cord is damaged, it must be replaced by the manufacturer or its service agent or a similarly qualified person in order to avoid a hazard.
- (4) An all-pole disconnection switch having a contact separation of at least 3mm in all poles should be connected in fixed wiring.
- (5) The appliance shall be installed in accordance with national wiring regulations.

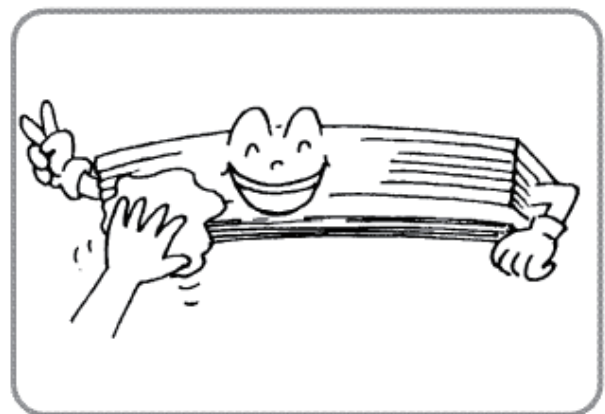
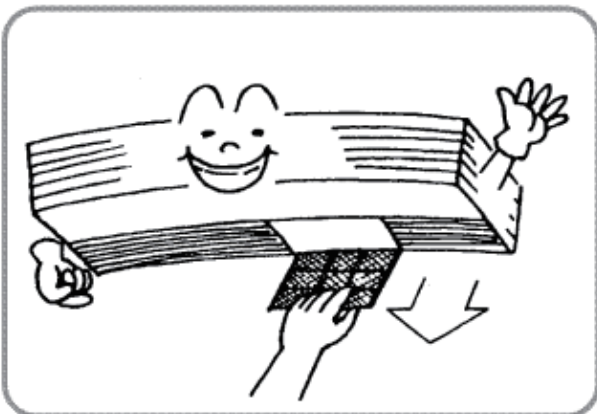
This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved.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

3 Operating Guide

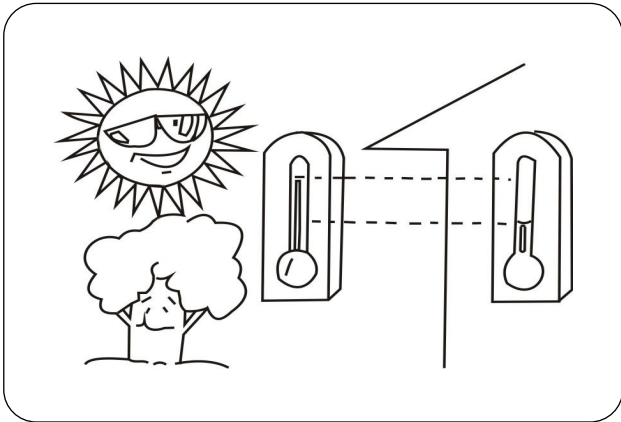
Only professional personnel could clean or replace the filter.

Before cleaning filter, the power must be cut off and wait until fan motor stops.

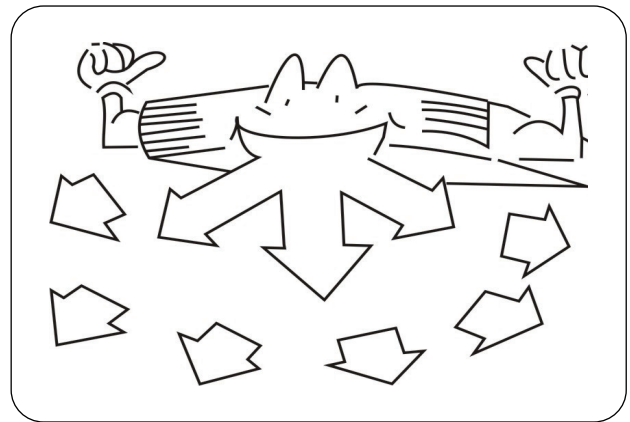
- Remove the air filter, clean it by a vacuum cleaner or if it is very dirty, wash it with soap water, then wipe off unit. It is completely dry before reinstallation.
- Clean the air conditioner and the remote control with a dry cloth or a vacuum cleaner. If a damp cloth is used, remove moisture by using a dry cloth afterward.



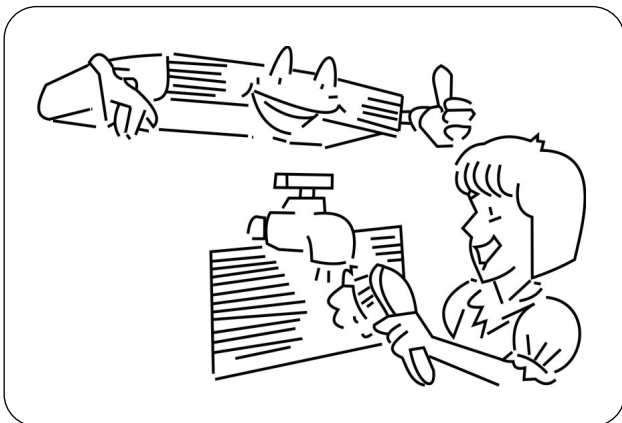
- The expected temperature should be set at a moderate level to avoid of unnecessary energy consumption.



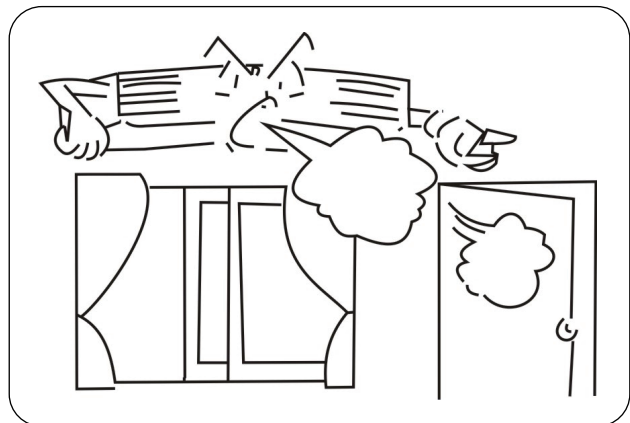
- Air flow direction will be changed by adjusting the louvers and flaps as shown, accordingly the air should be able to blow all over the room.



- Clean the air filter every week for higher efficiency by professional.



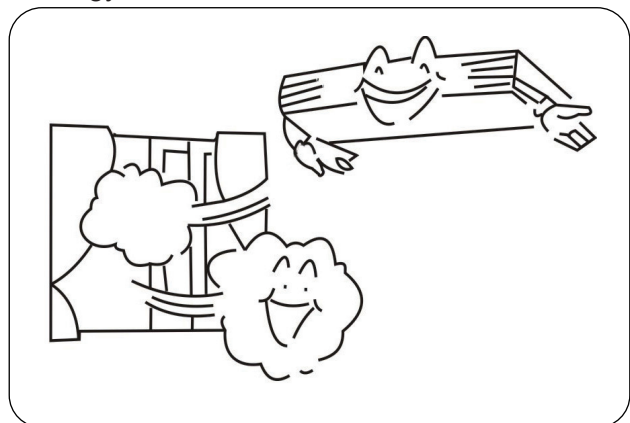
- Close the window and door while operating the unit for saving energy.



- Cover windows with a blind or a curtain to prevent heat source from sunlight when the unit is cooling, which helps to reduce energy consumption.

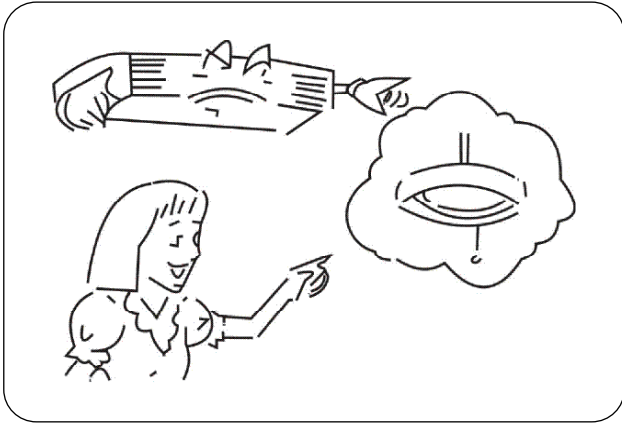


- In case of ineffective ventilation, open the window to ventilate room air occasionally, meanwhile, close the window timely for saving energy.

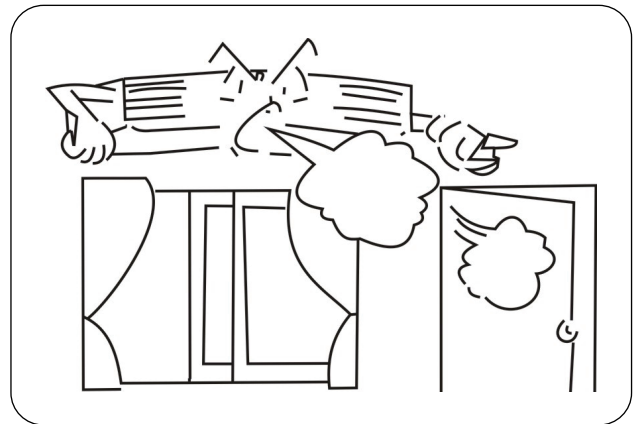
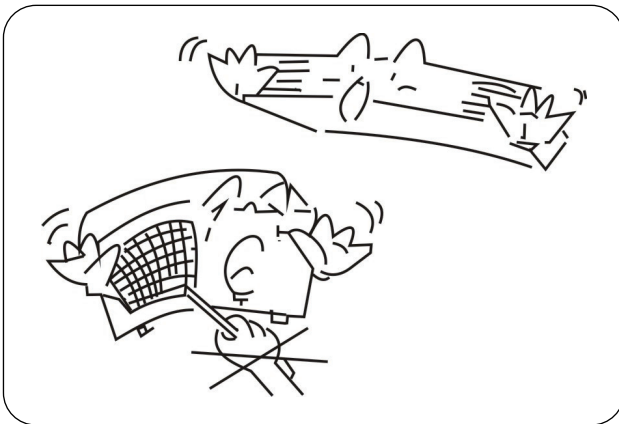


 Precautions

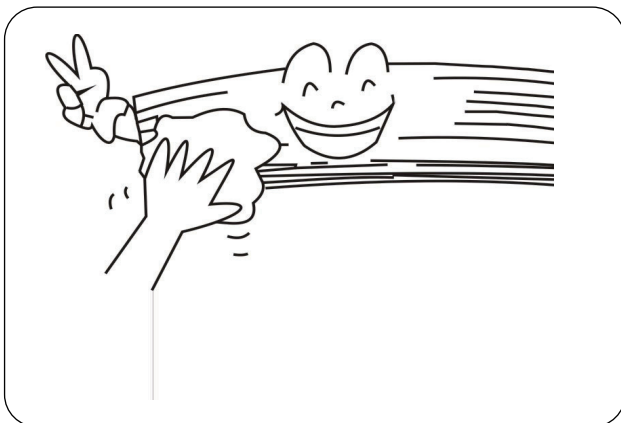
- If electric shock suddenly happens, turn off the unit. If the unit is not to be used for a long period, cut off the main power supply.
- Check electrical system (voltage and frequency). Use proper power supply indicated on the unit to operate the air conditioner and only fuses with specified capacity, Do not use pieces of wire instead of fuse.



- Do not insert objects into the air inlet or outlet when the air conditioner is running as it may cause damage or personal injury. Also pay special attention when children are around.
- Do not place any obstacles around the indoor and outdoor unit to avoid of inefficient performance or malfunction.



- Never expose infants, aged persons or patients directly to the air flow.
- Do not locate a heater or any other heat source close to the unit. The heat may deform plastic parts.



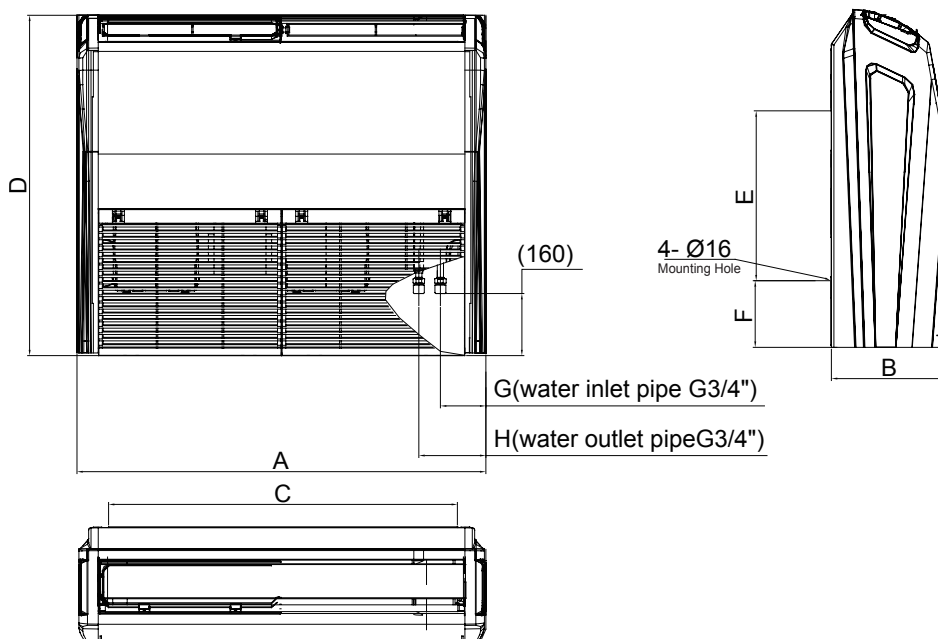
4 Trouble Shooting

- (1) Check the following before contacting the service man. You may find the solution to your problems.
- (2) After checking, if it still does not operate, please contact your local dealer.

Problem	Causes
No operation	Check if electrical wire is damaged & check if break or switch is still on. Check if the power supply is in order. Check if the timer switch is on or not.
The air conditioner runs but does not cool enough.	Check if the preset temperature is too high. Check if the sunlight shiner directly into the room. Check if the door and window are operates. Check if the there is anything obstructing the air discharge. Check if the exhaust fan still operates. Check if the air filter is dirty or clogged.
Vapor or mist fume coming out of the unit while running.	Hot air in the room mixes with cool air. This causes smoke fume.
Inoperative remote control.	Loosened or disconnected wire between the unit and the display. Check if the batteries are inserted in correct directions. Check if the batteries are exhausted or not.

5 Installation

5.1 Dimension



Unit: mm.

I.D.U. MODEL	A	B	C	D	E	F	G	H
WEFC002C2W-RWTN034	840	238	740	695	260	203	(130)	(215)
WEFC003C2W-RWTN051	840	238	740	695	260	203	(130)	(215)
WEFC004C2W-RWTN068	840	238	740	695	260	203	(130)	(215)
WEFC005C2W-RWTN085	840	238	740	695	260	203	(130)	(215)
WEFC006C2W-RWTN102	1300	188	1202	600	260	160	(106)	(172)
WEFC007C2W-RWTN136	1300	188	1202	600	260	160	(106)	(172)
WEFC010C2W-RWTN170	1590	238	1491	695	260	203	(97.5)	(178.5)
WEFC012C2W-RWTN204	1590	238	1491	695	260	203	(97.5)	(178.5)

Note: sizes in the brackets are just for reference.

5.2 Selection of Installation location

- (1) Such a place where cool air can be distributed throughout room.
- (2) Such a place where condensation water is easily drained out.
- (3) Such a place that can handle the weight of the unit.
- (4) Such a place which has easy access for maintenance.
- (5) Such a place where is permitting easy connection with the chilling water pipe.
- (6) Such a place where is 1m or more away from other electric appliances such as television, audio device, etc.
- (7) Avoid a location where there is heat source, high humidity or inflammable gas.
- (8) Be sure that the installation conforms to the installation dimension diagram.
- (9) The space around the unit is adequate for ventilation(Refer to Fig.2).
- (10) The height of the installed location should be 2.3m or more from the floor.

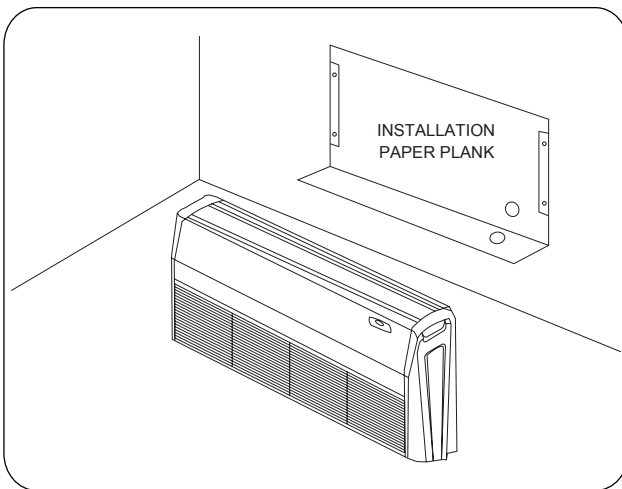


Fig.1

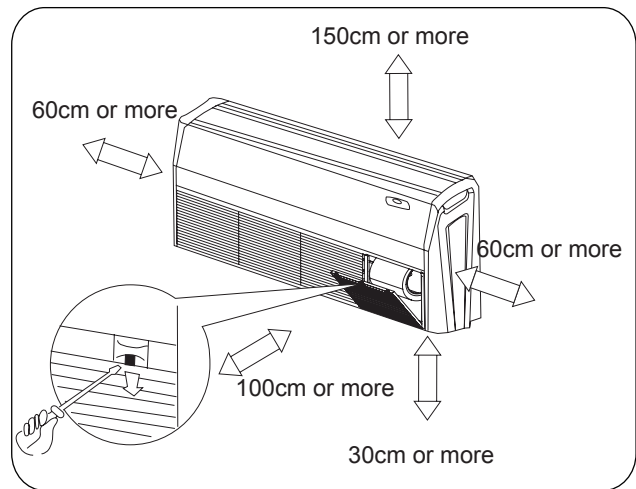


Fig.2

5.3 There are two types of installation

- ◆ Ceiling type
- ◆ Floor type

Each type is similar to the other as follows:

- (1) Determine the mounting position on ceiling or wall.
- (2) Remove the return grill, the side panel, and suspender from the unit as per procedure below. Press the fixing knob of the return grilles, the grilles will be opened wider and then pull it out from the unit.
 - 1) Remove the side panel fixing screw and pull to the front direction (arrow direction) to remove (Refer to Fig.3).
 - 2) Loosen two hanger bracket setting bolts (M8) on each side for less than 10mm. Remove two hanger bracket fixing bolts (M6) on the rear side. Detach the hanger bracket by pulling backward (Refer to Fig.5).
 - 3) set the suspension bolt (Use W3/8 or M10 size suspension bolts). Adjust the distance from the unit to the ceiling slab beforehand (Refer to Fig.4).
 - 4) Fix the hanger bracket to the suspension bolt.

Side panel fixing screw (M4.2)

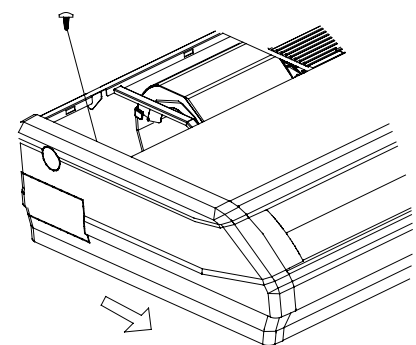


Fig.3

Make sure that extended suspension bolt from the ceiling stays inside the arrowed position. Readjust the hanger bracket when it is outside the arrowed position (Refer to Fig.6).

Suspension bolt stays inside the cap of the unit. Never remove the cap.

(5) Lift the unit and slide forward unit the dent (Refer it Fig.7).

(6) Screw tightly both hanger bracket setting bolts(M8) (Refer to Fig.5).

(7) Screw tightly both hanger bracket fixing bolts (M6) to prevent the movement of the unit (Refer to Fig.5).

(8) Adjust the unit height so that rear side of the drain pipe slightly inclines to improve drainage. Adjust the height by turning the nut with a spanner.

Insert the spanner from the hanger bracket opening (Refer to Fig.8).

Hanging installation

It is possible to install using inward facing hanger brackets by not removing the brackets from the indoor unit (Refer to.9).

Be sure to use only the specified accessories and parts for installation work.

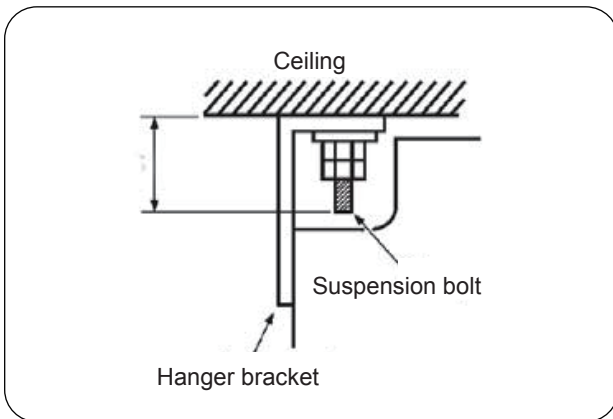


Fig.4

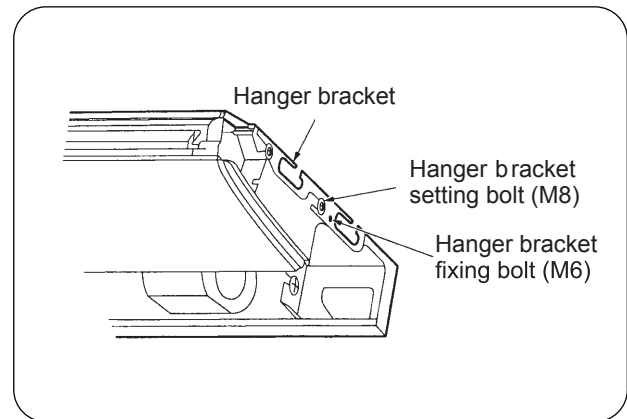


Fig.5

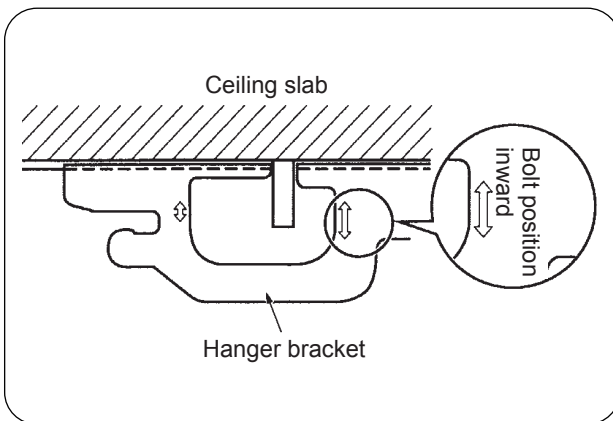


Fig.6

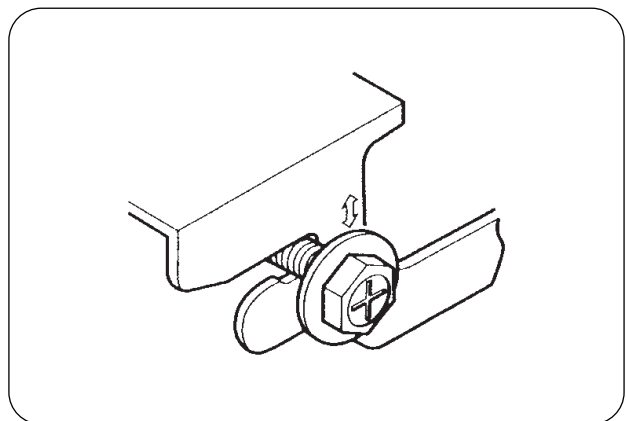


Fig.7

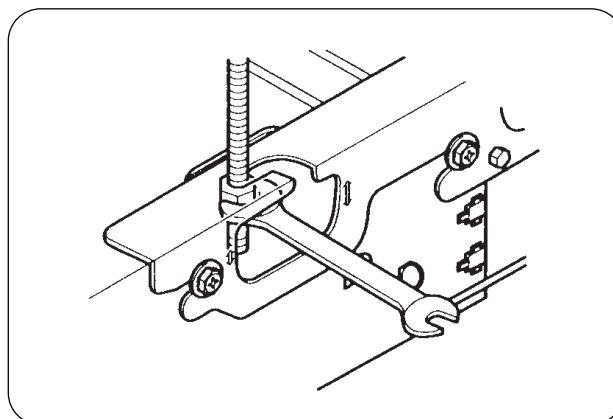


Fig.8

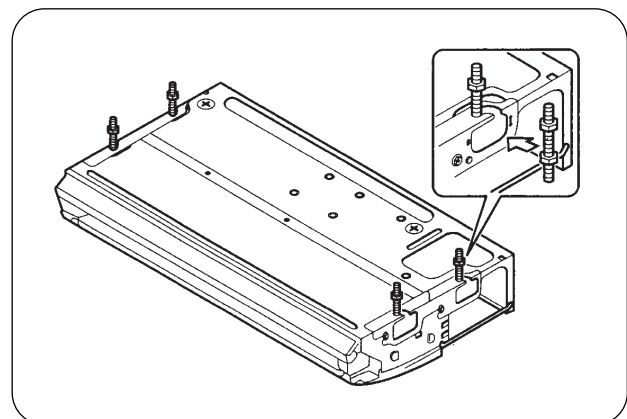


Fig.9

5.4 Electrical wiring

- (1) Open the surface panel.
- (2) Remove the electrical box cover.
- (3) Route the power connection cord from the back of the indoor unit and pull it toward the front through the wiring hole for connection.
- (4) Connect the wires of the power connection cord and valve connection cord as circuit diagram.
- (5) Reassemble the electrical box cover.
- (6) Recover the surface panel.
- (7) The 3*0.75mm² power cable is recommended for the user. The specifications of the power cable listed in the table above are applied to the conduit-guarded multi-wire copper cable (like, YJV XLPE insulated power cable) used at 40 °C and resistible to 90 °C(see GB/T 16895.15). If the working condition changes, they should be modified according to the related national standard.

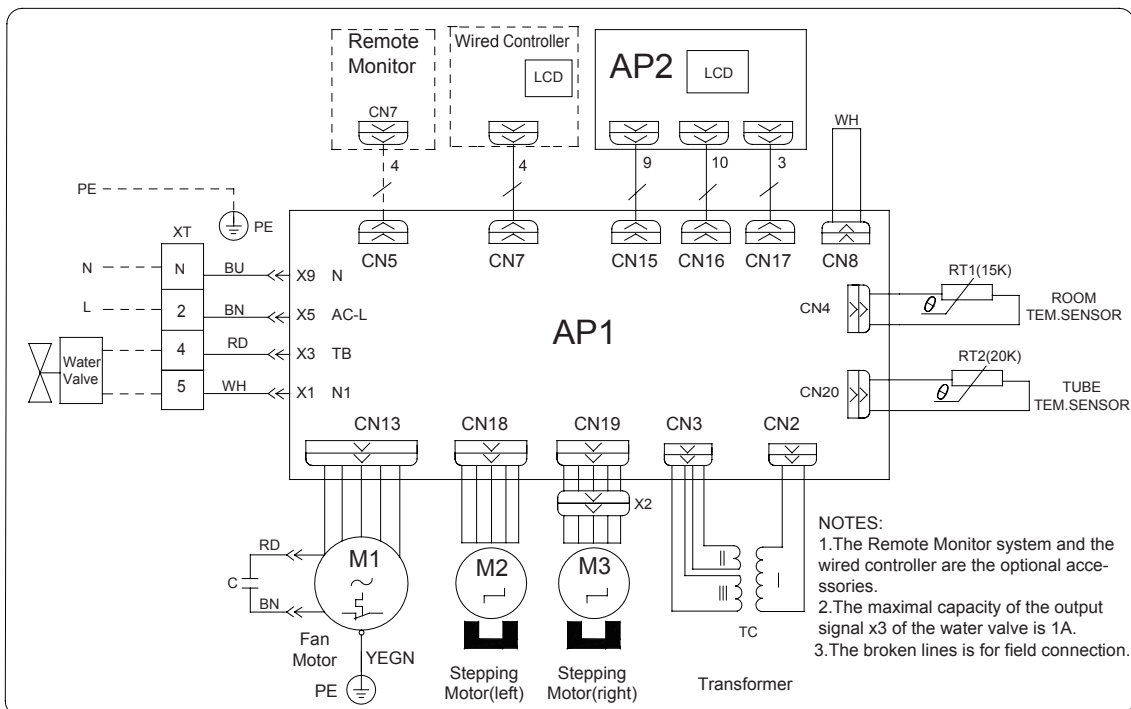
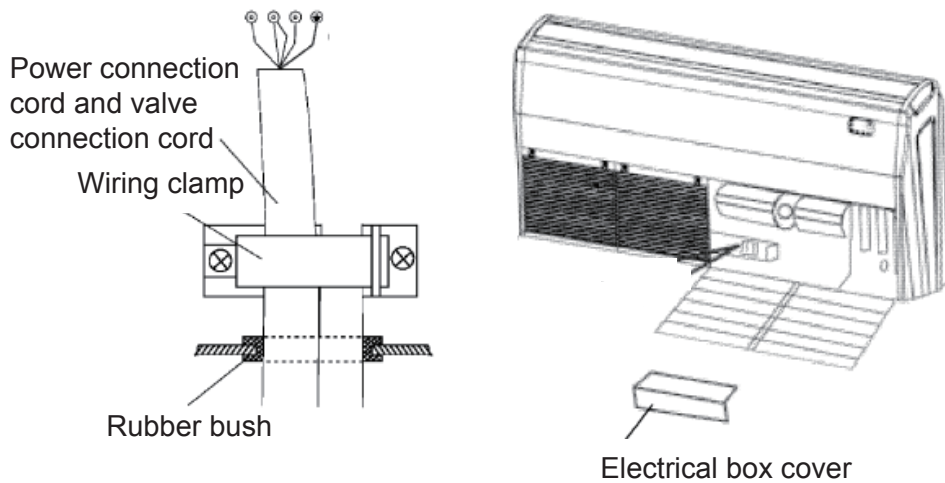



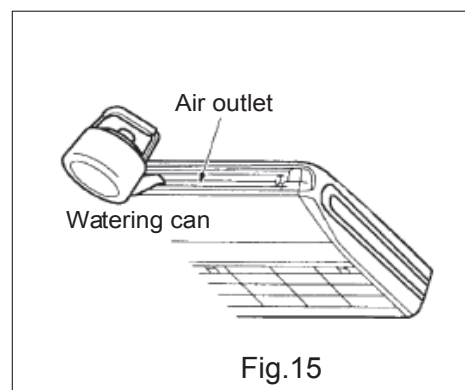
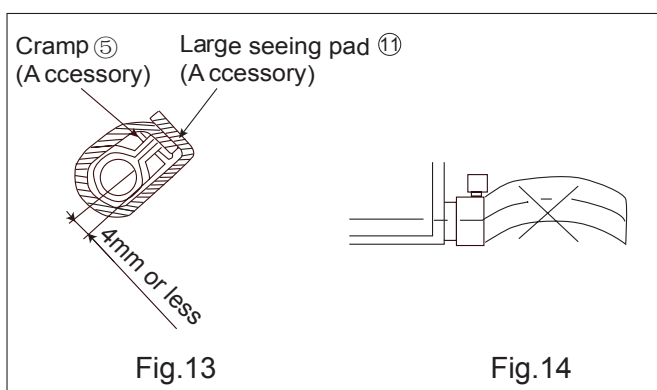
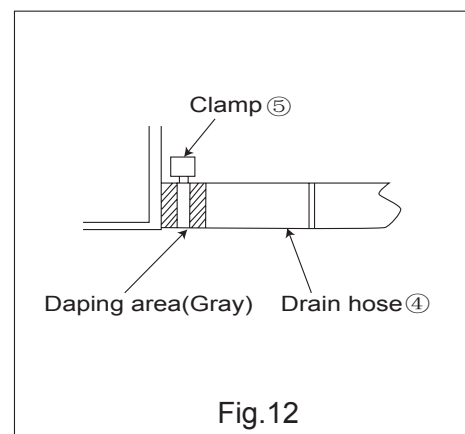
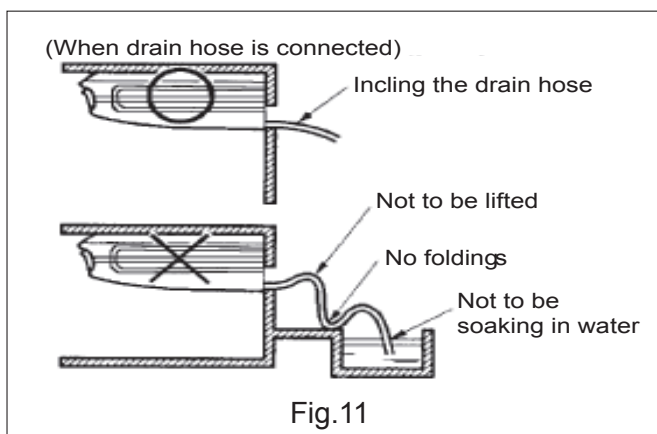
Fig.10

6 Drain Piping Work

 CAUTION	Make sure the drain flows out.
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Drain piping

- (1) The drain pipe outlet direction can be chosen from either the right rear or right.
- (2) The diameter of the drain pipe should be equal to or greater than the diameter of the connecting pipe (Vinyl tube: pipe size:20 mm; outer dimension:26 mm).
- (3) Keep the drain pipe short and incline downwards at a gradient of at least 1/100 to prevent air pockets (Refer to Fig.11).
- (4) Use the attached drain hose ④ and clamp ⑤. Insert the drain hose completely into the drain socket. Tighten the clamp within the range of gray tape until the screw head is less than 4 mm from the hose (Refer to Fig.12,13).
- (5) Wrap the attached sealing pad OD over the clamp and drain hose to insulate. (Refer to Fig.13)
- (6) No folding of drain hose inside the unit (Refer to Fig.14).
- (7) Confirm that smooth drainage is achieved after the piping work.
- (8) Pour 600cc of water into the drain pan from the air outlet for confirming drainage (Refer to Fig.15).



7 Motorized valve

7.1 Installation

- (1) The installation of the motorized valve should be done according as Fig.16. Firstly connect one end of the tube joint with the water inlet tube of the unit, then connect the other end with the motorized valve, and lastly connect the motorized valve with the flare nut . During the installation, both the torque wrench and the spanner should be used and the moment of torque should be within 90 N.m. Besides, a secure connection should be guaranteed.

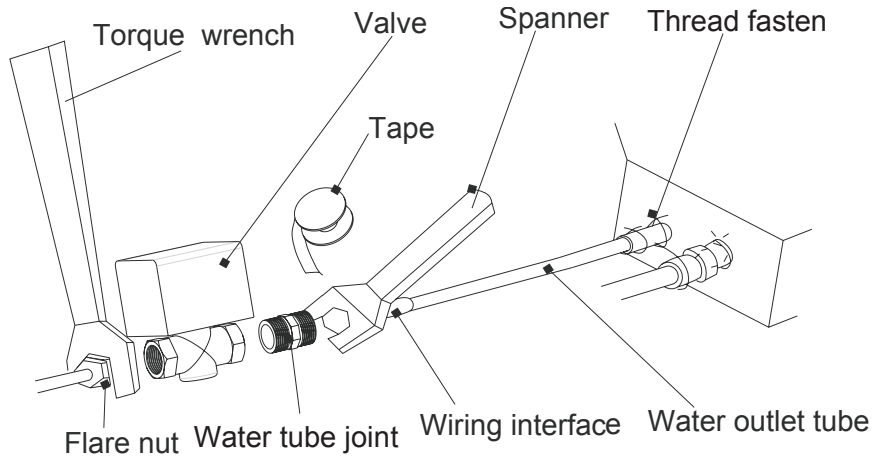


Fig.16

- (2) Both the tube joint and the motorized valve are G3/4" threaded. Prior to the connection, it is recommended to wrap the tacky tape on the thread for two or three cycles for better sealing effects
- (3) After the tube joint, motorized valve, water inlet tube, water outlet tube are connected reliably, start the water pump of the outdoor unit to check if they leak or not.
- (4) What should be done lastly is wrapping sponge around the motorized valve and the tube for heat insulation.

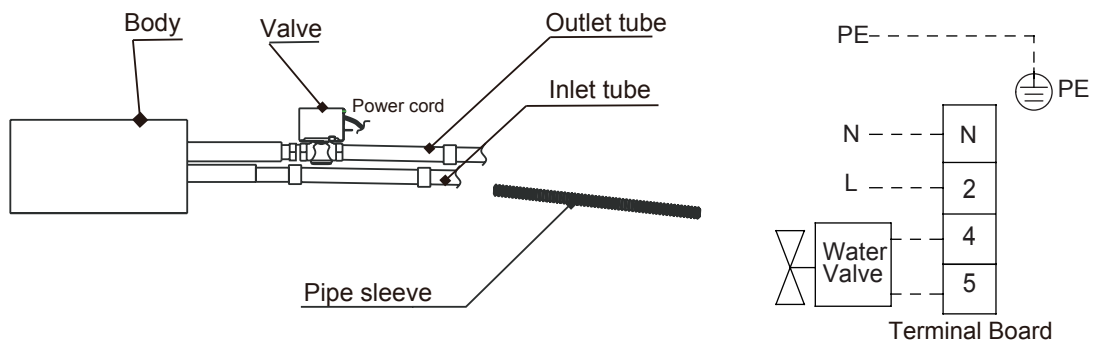
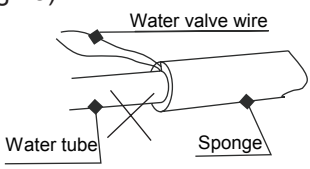
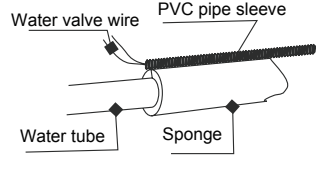
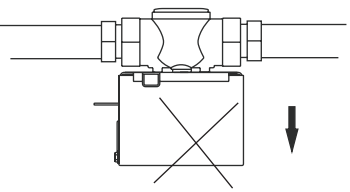
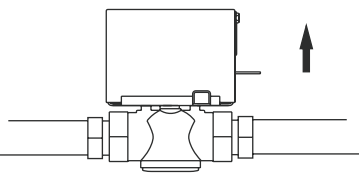
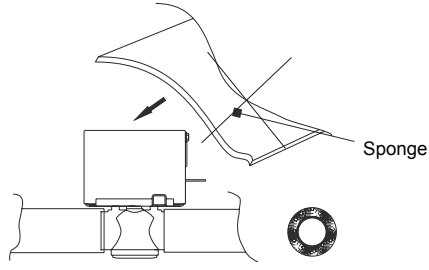


Fig.17

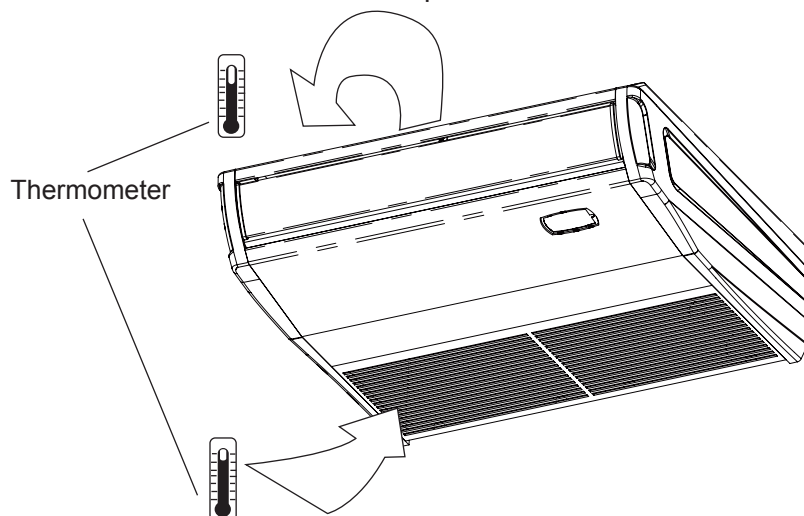
7.2 Electric wiring

The electric wiring of the valve should be according with the Fig.10

<p>⊘ 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(as Fig.18).</p>  <p>Fig.18</p>	<p>Ⓢ The right way is letting the water valve wire go through the pipe sleeve and then binding the sponge and pipe sleeve up(as Fig.19).</p>  <p>Fig.19</p>
<p>⊘ It is prohibited to put the valve core upside down, as this would allow the condensate water to enter or damage the valve core and even form a short circuit which would result in a fire hazard(as Fig.20).</p>  <p>Fig.20</p>	<p>Ⓢ The right way is placing the valve core in the proper position and letting the leading wire pointing at the unit(as Fig.21).</p>  <p>Fig.21</p>
 <p>Fig.22</p> <p>It is prohibited to wrap the whole valve with sponge, as this would affect the heat diffusion of the valve core and probably pose a fire hazard(as Fig.22).</p>	

8 Evaluation of the Performance

- (1) Check electric main wire's voltage.
- (2) Use a thermometer to measure cool air temperature both inlet side and outlet side.
- (3) The difference between in-air and out-air temperature should not be less than 8°C .



- (4) The unit has Auto-restart function, it can remember the running model before power-broken.

9 Check after Installation

Items to be checked	Possible malfunction	Situation
Has it been fixed firmly?	The unit may drop, shake or emit noise.	
Is heat insulation sufficient?	It may cause condensation and dripping.	
Does the insulation sufficient?	It may cause condensation and draping.	
Is the voltage in accordance with the rated voltage marked on the nameplate?	It may cause electric malfunction or damage the part.	
Is the electrical 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 eclectic malfunction or damage the part.	
Has the inlet and outlet been covered?	It may cause insufficient cooling or heating capacity.	