

# INSTALLATION MANUAL

This manual provides the procedures of installation to ensure a safe and good standard of operation for the air conditioner unit.

Special adjustment may be necessary to suit local requirements.

Before using your air conditioner, please read this instruction manual carefully and keep it for future reference.

## WALL MOUNTED CHILLED WATER FAN COIL UNIT

### MODEL

#### COOLING UNIT

##### Reference Model

WM10FW

WM15FW

WM20FW

WM25FW

##### Model

AWM10FW / MWM010FW / YWM10FW

AWM15FW / MWM015FW / YWM15FW

AWM20FW / MWM020FW / YWM20FW

AWM25FW / MWM025FW / YWM25FW

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## SAFETY PRECAUTIONS

Before installing the air conditioner unit, please read the following safety precautions carefully.

### **Warning**

- Installation and maintenance should be performed by qualified persons who are familiar with local code and regulation, and experienced with this type of appliance.
- All field wiring must be installed in accordance with the national wiring regulation.
- Ensure that the rated voltage of the unit corresponds to that of the name plate before commencing wiring work according to the wiring diagram.
- The unit must be GROUNDED to prevent possible hazards due to insulation failure.
- All electrical wiring must not touch the water piping or any moving parts of the fan motors.
- Confirm that the unit has been switched OFF before installing or servicing the unit.

## **IMPORTANT**

**DO NOT INSTALL OR USE THE AIR CONDITIONER UNIT IN A LAUNDRY ROOM.**

### **Caution**

**Please take note of the following important points when installing.**

- **Ensure that the drainage piping is connected properly.**



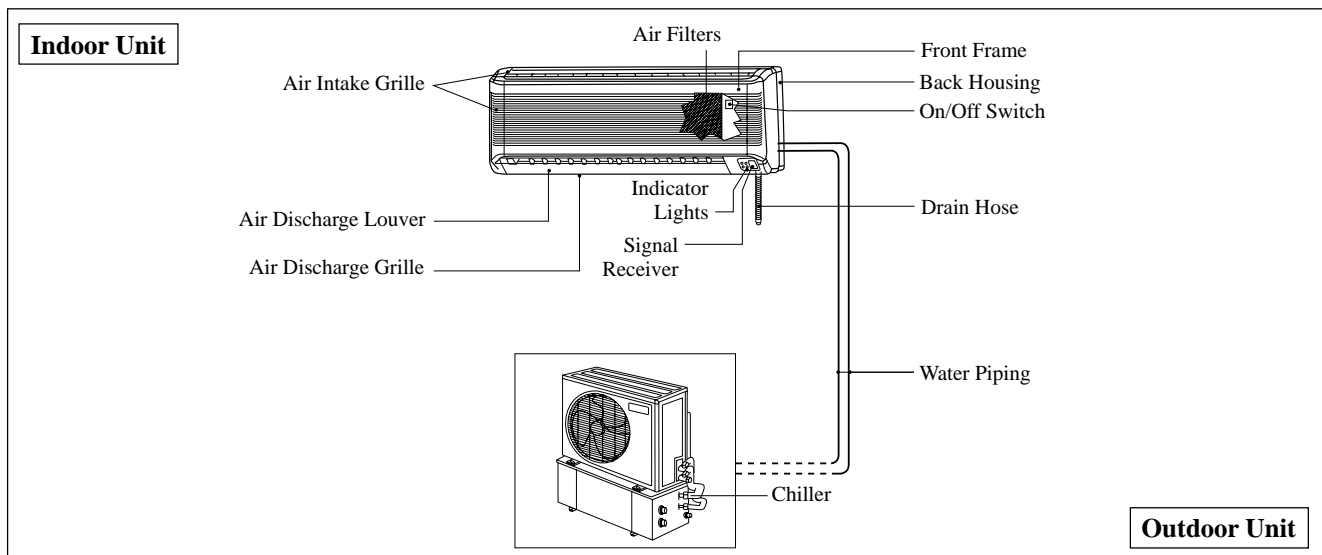
If the drainage piping is not connected properly, it may cause water leakage which will dampen the furniture.

- **Ensure that the units panel is closed after service or installation.**



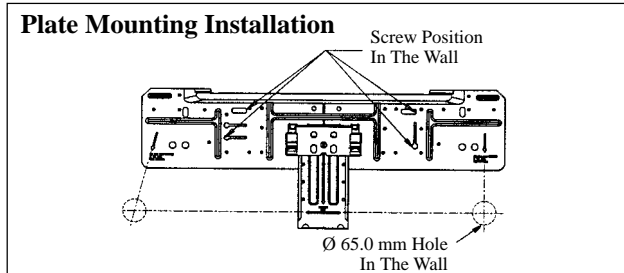
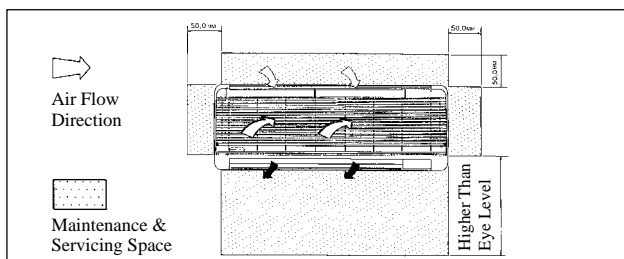
Unsecured panels will cause the unit to operate noisily.

## INSTALLATION DIAGRAM



## INSTALLATION OF THE INDOOR UNIT

The indoor unit must be installed in such a way so as to prevent short circuit of the cool discharged air with the hot return air. Please follow the installation clearance shown in the figure. Do not place the indoor unit where there could be direct sunlight shining on it. Also, this location must be suitable for piping and drainage, and be away from doors or windows.

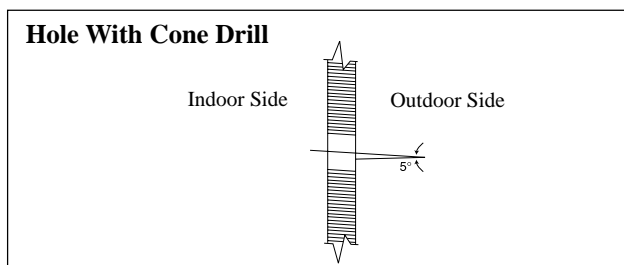


### Mounting Installation Plate

Ensure that the wall is strong enough to withstand the weight of the unit. Otherwise, it is necessary to reinforce the wall with plates, beams or pillars.

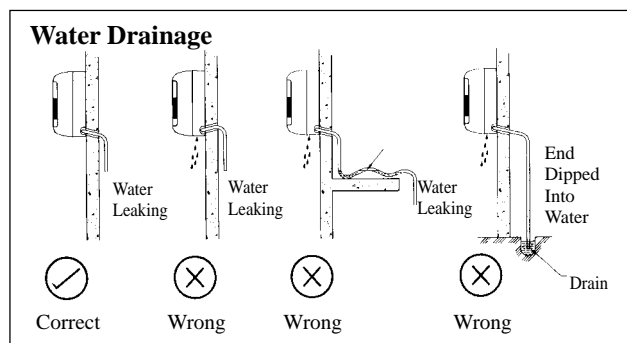
Use the level gauge for horizontal mounting, and fix it with 4 suitable screws.

In case the rear piping draws out, drill a hole 65mm in diameter with a cone drill, slightly lower on the outside wall (see figure).



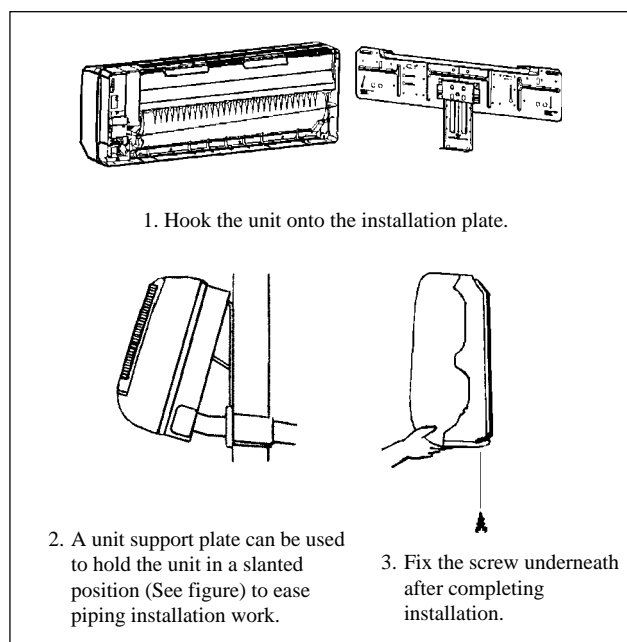
### Water Drainage Piping

The indoor drain pipe must be in a downward gradient for smooth drainage. Avoid situations that are likely to cause water to leak.



### Mount The Unit Onto The Installation Plate


Hook the indoor unit onto the upper portion of the installation plate (Engage the two hooks at the rear top of the indoor unit with the upper edge of the installation plate). Ensure that the hooks are properly seated on the installation plate by moving it to the left and right.



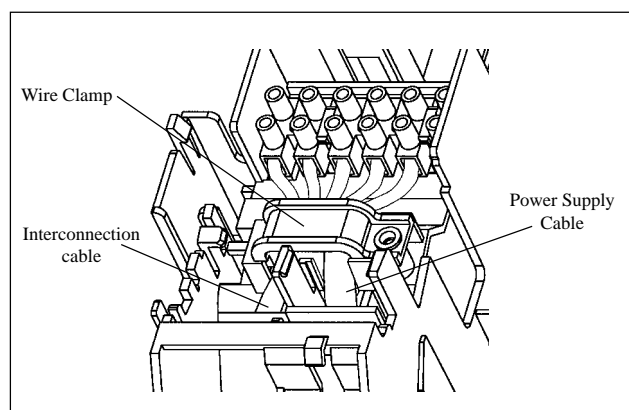
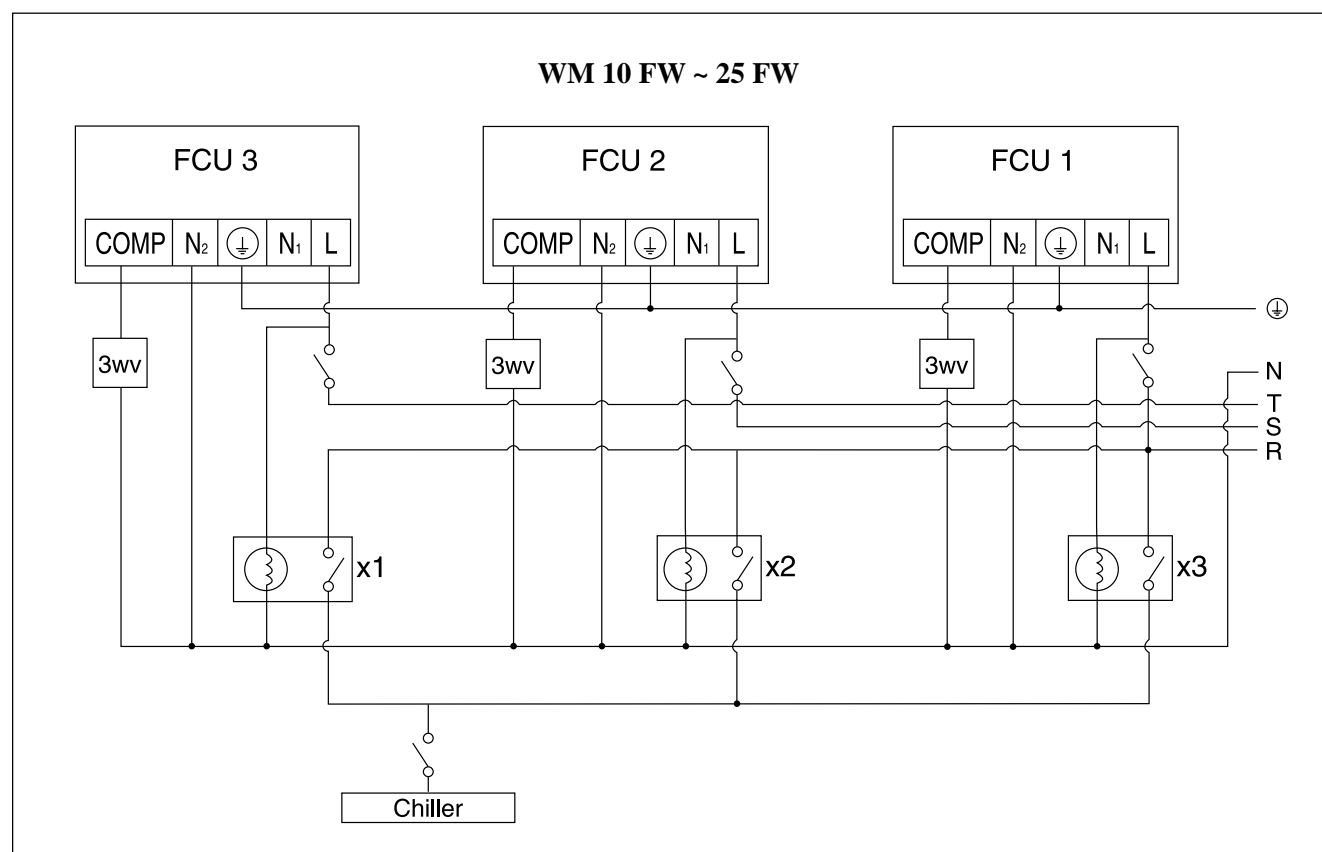
## ELECTRICAL WIRING CONNECTION

### Cooling unit

**IMPORTANT :** The figures shown in the table are for information purpose only. They should be checked and selected to comply with the local/national codes of regulations. This is also subject to the type of installation and conductors used.

Model	07 / 10 / 15	20 / 25
Voltage range	220V – 240V 1Ph / 50Hz + 	
Power supply cable size    mm <sup>2</sup>	1.5	2.5
Number of wire	3	3
Interconnection Cable size   mm <sup>2</sup>	1.5	2.5
Number of wire	3	3
Recommended Fuse        A	15	20

- All wires must be firmly connected.
- All wires must not touch the water piping, or any moving parts of the fan motor.
- The connecting wires between the indoor unit and the outdoor unit must be clamped on the wire clamps as shown in the figure.
- The power supply cord must be equivalent to H05RN-F (245IEC57) which is the minimum requirement.



## Water Piping Connection

The indoor unit is equipped with water outlet and inlet bare connection. There is an air-vent for air purging that is fitted at the outlet water header.

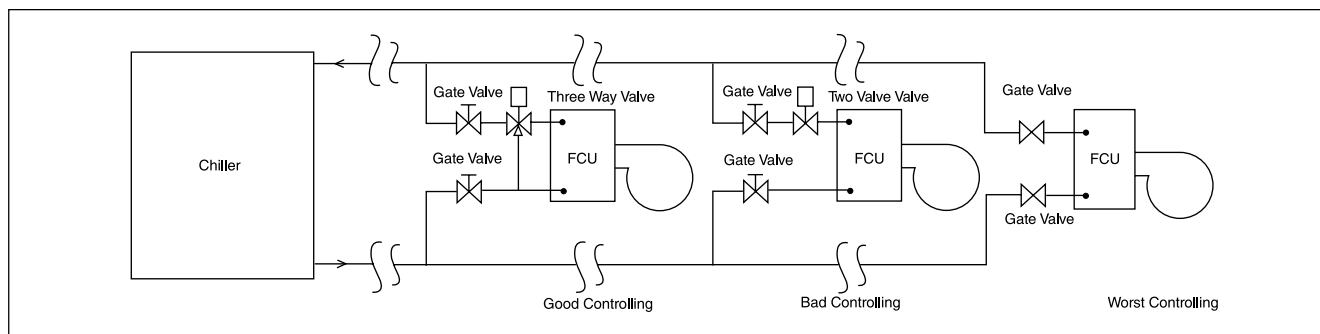
3 ways solenoid valve is required for cycling off or bypass the chilled water.

Black steel pipe, polyethrene pipe, PVC pipe and copper tube are recommended in field installation.

All types of piping and connection must be insulated by polyurethane (ARMAFLEX type or equivalent) to avoid condensation.

Do not use contaminated or damaged pipe and fitting for installation.

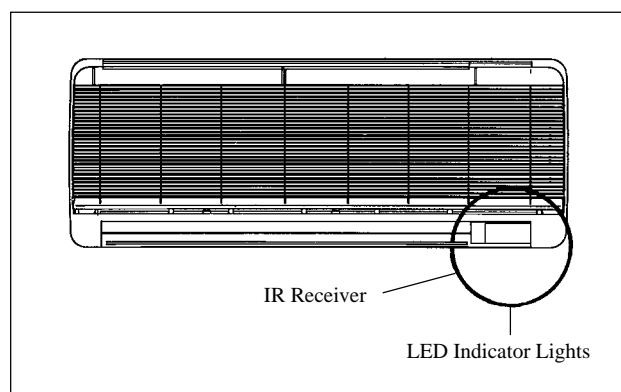
Some main fitting components are needed in the system to enhance the capacity and ease of service, such as gate valve, balancing valve, 2 ways or 3 ways solenoid valve, filter, strainer etc.



## INDICATOR LIGHTS

### IR Signal Receiver

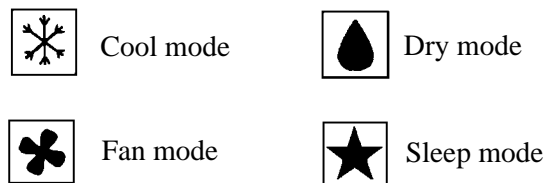
When an infrared remote control operating signal has been transmitted, the signal receiver on the indoor unit will make a <beep> sound to confirm acceptance of the signal transmission.



### Cooling Unit

The table shows the LED indicator lights for the air conditioner unit under normal operation and fault conditions. The LED indicator lights are located at the bottom right side of the air conditioner unit.

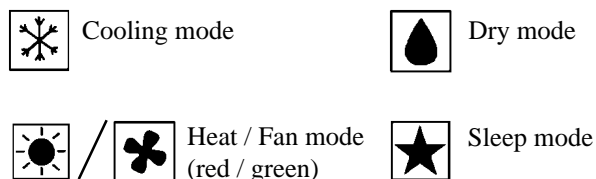
### LED Indicator Lights For Cooling Unit








### Heat Pump Unit

The table shows the LED indicator lights for the air conditioner unit under normal operation and fault conditions. The LED indicator lights are located at the bottom right side of the air conditioner unit.

### LED Indicator Lights For Heat Pump Unit



## LED Indicator Lights : Normal Operation And Fault Conditions For Cooling Unit

 Cool	 Dry	 Sleep	 Heat /  Fan	Operation / Fault Indication	Action
●	○	○/●	○	Cool mode	—
○	○	○/●	●	Heat mode	—
○	○	○	●	Fan mode	—
○	●	○	○	Dry mode	—
○	○	○	◐	Room sensor missing	—
○	○	◐	○	Pipe sensor missing	—

○ ON

○/● ON or OFF

◐ Blinking

\* Dry mode = Cool mode at low fan

## AIR CONDITIONER UNIT OPERATION

### Dry Mode

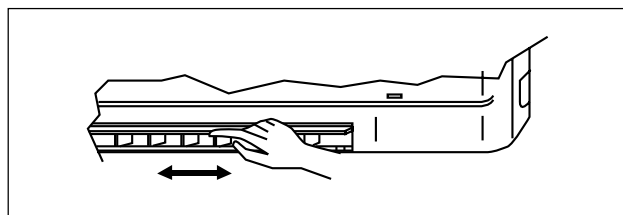
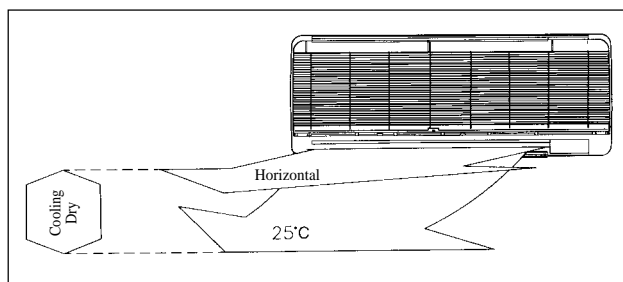
- When the air humidity is high, the unit can operate in dry mode. Press <MODE> button and choose <DRY>.
- If the room temperature is 2°C higher than the set temperature, the air conditioner will operate under cooling mode until it reaches within the 2°C range of difference compared to the set temperature before it converts to dry mode.
- If the room temperature is within the 2°C range of difference compared to the set temperature, it will directly operate under dry mode.
- The unit will operate at LOW speed under dry mode.

### Fan Speed And Rated Cooling Capacity

- The rated cooling capacity is provided at the maximum fan speed.
- The cooling capacity is lower when the unit is operating at MEDIUM and LOW fan speed.

### Horizontal Air Flow Control

- For more effective air circulation, you can manually adjust the air discharge grille to the left or right.
- During cool mode operation and dry mode operation, do not direct the air discharge louver downwards for too long. If operating continues in this way, condensation may occur on the louver, thus resulting in drippings.



## STANDARD OPERATING CONDITIONS

### Cooling Unit

Temperature	Ts °C	Th °C
Minimum indoor temperature	19.4	13.9
Maximum indoor temperature	26.7	19.4
Minimum outdoor temperature	19.4	13.9
Maximum outdoor temperature	46	24

Ts: Dry bulb temperature.  
Th: Wet bulb temperature.

## OPTIONAL : ELECTROSTATIC FILTER

### Dual Action Electrostatic Air Purifying And Deodorizing Filter Media And Filter Frame

#### Action 1- Electrostatic Air Purifying Filter

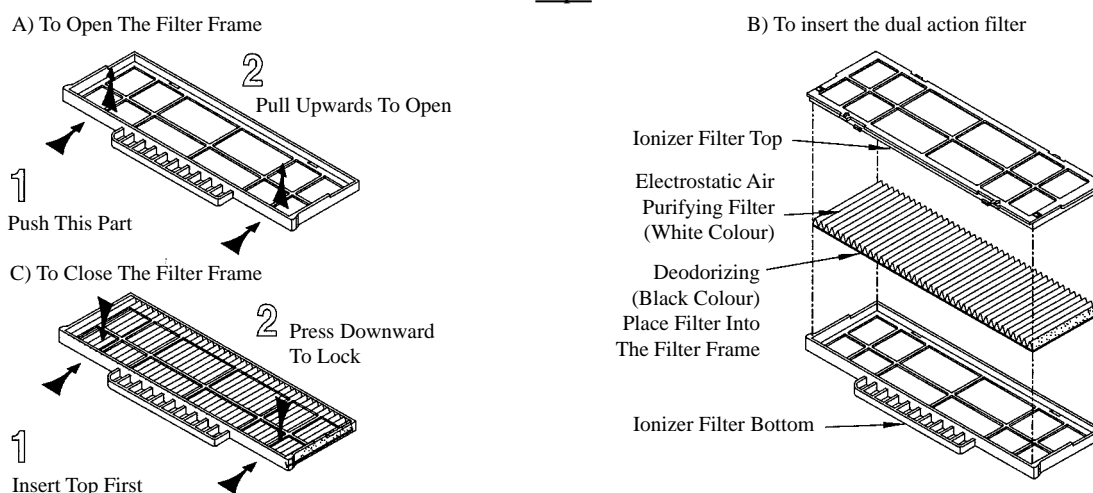
Removes microscopic dust, smoke and small invisible particles to keep the room air clean with pre-charged electrostatic polypropylene filter.

#### Action 2- Deodorizing Filter

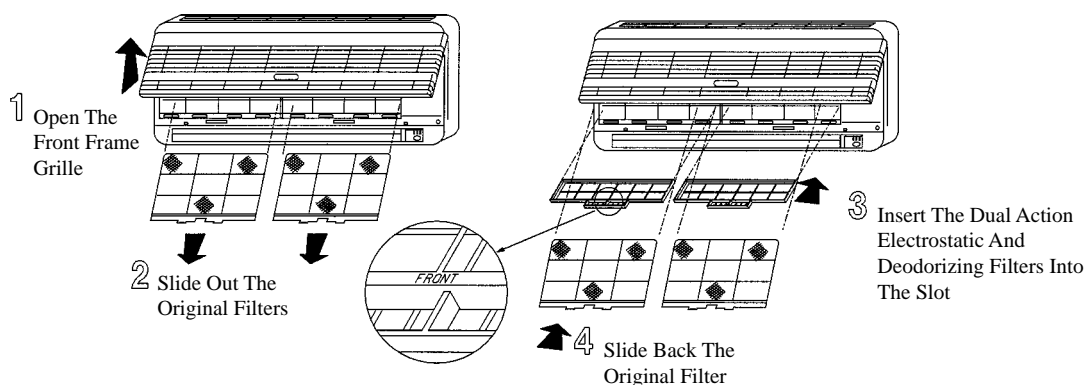
Removes unwanted smells and odors in the air and keeps the room air fresh with activated carbon filter.

#### How To Install

##### Step 1



##### Step 2



### ! Caution

1. The electrostatic air purifying and deodorizing filter should be replaced once every 6 months or when the filter changes color to brownish, whichever is sooner.
2. Used dusty filters should be disposed and shouldn't be reused, even if it has been cleaned and washed.
3. The filter is a consumable part which you can purchase from your air conditioner dealer.
4. Use the new filter immediately once it has been taken out from its sealed packing. Do not unpack the new filter too early before it is actually used as this may decrease its deodorizing effect.

## ⚠ Warning

- **Disconnect from the main power supply before servicing the air conditioner unit.**
- **DO NOT pull out the power cord when the power is ON. This may cause serious electrical shocks which may result in fire hazards.**

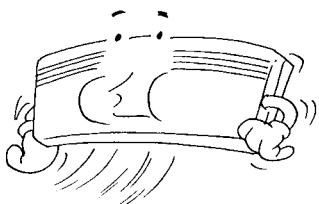
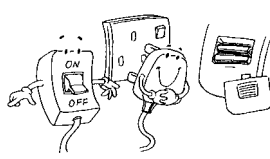
### SERVICE AND MAINTENANCE

Service Parts	Maintenance Procedures	Period
<b>Indoor air filter</b>	<ol style="list-style-type: none"> <li>1. Remove any dust adhering to the filter by using a vacuum cleaner or wash in lukewarm water (below 40°C) with a neutral cleaning detergent.</li> <li>2. Rinse the filter well and dry before placing it back onto the unit.</li> <li>3. Do not use gasoline, volatile substances or chemicals to clean the filter.</li> </ol>	<p>At least once every 2 weeks.</p> <p>More frequently if necessary.</p>
<b>Indoor unit</b>	<ol style="list-style-type: none"> <li>1. Clean any dirt or dust on the grille or panel by wiping it with a soft cloth soaked in lukewarm water (below 40°C) and a neutral detergent solution.</li> <li>2. Do not use gasoline, volatile substances or chemicals to clean the indoor unit.</li> </ol>	<p>At least once every 2 weeks.</p> <p>More frequently if necessary.</p>

## ⚠ Caution

Do not operate any heating apparatus too close to the air conditioner unit. This may cause the plastic panel to melt or deform as a result of the excessive heat.

### When The Unit Is Not To Be Used For An Extended Long Period Of Time

<p>Operate the unit for 2 hours with the following setting.</p> <p>Operating mode : cool Temperature : 30°C</p>		<p>Remove the power plug.</p> <p>If you are using an independent electric circuit for your unit, cut off the circuit.</p> <p>Remove the batteries in the remote control.</p>	
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### TROUBLE SHOOTING

**If any malfunction of the air conditioner unit is noted, immediately switch off the power supply to the unit. Check the following fault conditions and causes for some simple trouble shooting tips.**

Fault	Causes / Action
1. The air conditioner unit does not operate.	<ul style="list-style-type: none"> <li>– Power failure, or the fuse needs to be replaced.</li> <li>– The power plug is disconnected.</li> <li>– If the fault persist after all these verifications, please contact the air conditioner unit installer.</li> </ul>
2. The air flow is too low.	<ul style="list-style-type: none"> <li>– The air filter is dirty.</li> <li>– The doors or windows are open.</li> <li>– The air suction and discharge are clogged.</li> <li>– The regulated temperature is not high enough.</li> </ul>
3. Discharge air flow has bad odor.	<ul style="list-style-type: none"> <li>– Odors may be caused by cigarettes, smoke particles, perfume etc. which might have adhered onto the coil.</li> </ul>
4. Condensation on the front air grille of the indoor unit.	<ul style="list-style-type: none"> <li>– This is caused by air humidity after an extended long period of operation.</li> <li>– The set temperature is too low, increase the temperature setting and operate the unit at high fan speed.</li> </ul>
5. Water flowing out from the air conditioner unit.	<ul style="list-style-type: none"> <li>– Switch off unit and call dealer.</li> </ul>

**If the fault persists, please call your local dealer / serviceman.**