

USER MANUAL

# WALL MOUNTED FAN COILS

SF-51H, SF-68H, SF-85H





## User Notice

 This symbol stands for items should be forbidden.  This symbol stands for the items should be followed.

Thank you for choosing SINCLAIR fan coils, please read this owner's manual carefully before operation and keep it for future reference.

The products in this manual may be different from the real one, according to different models, some models have displayer and some models without displayer, the position and shape of the displayer please refer to the real one.

This appliance is not intended for use by persons (including children) with restricted 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.

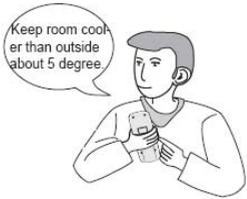
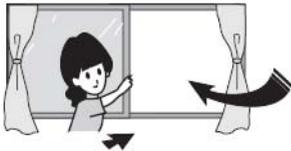
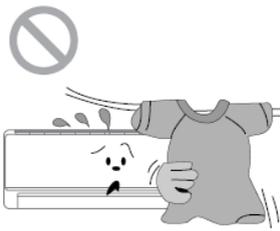
Children should be supervised to ensure that they do not play with the appliance.

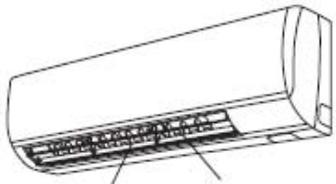
 Do not dispose this product as unsorted municipal waste. Collection of such waste separately for special treatments necessary.

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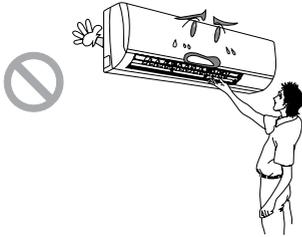
# 1. Notices for operation

<p>⚠Earth: The ground be connected!</p>  <p>If not, please ask the qualified person-nel to install. Furthermore, don't connect each wire to the gas pipe, water pipe, drainage pipe or any other improper places.</p>	<p>Be sure to pull out the power plug when not using the air codictionary for a long time.</p>  <p>Otherwise, the accumulated dust may cause fire or electric shock.</p>	<p>Select the most appropriate temprature.</p>  <p>It can preclude the electricity wasted.</p>
<p>Don't leave windows and doors open for a long time while operating the air conditioner.</p>  <p>It can decrease the airconditioning capacity.</p>	<p>Don't block the air intake or outlet vents of both the units.</p>  <p>It can decrease the air conditioning capacity or cause a malfunction.</p>	<p>Keep combustibile spray away from the units more than 1m.</p>  <p>It can cause a fire or explosion.</p>

<p>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.</p> 	<p>The airflow direction can be adjusted appropriately. At operating, adjust the vertical airflow direction by adjusting the louvers of upward/downward direction. And then, hold two ends of left and right louver to adjust the horizontal air-flow.</p>  <p>Louver of left/right direction      Louver of upward/downward direction</p>
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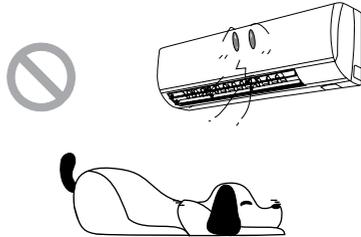
# Fan Coil Unit Wall Mounted Type

Don't insert your hands or stick into the air intake or outlet vents.

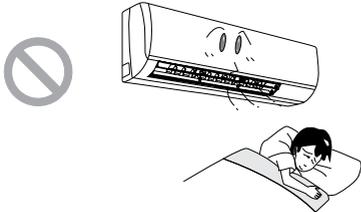


Otherwise it will cause accident.

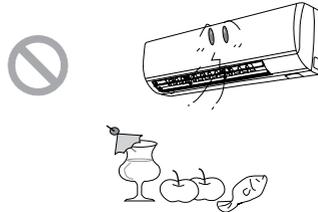
Don't blow the wind to animals and plants directly. It can cause a bad influence to them.



Don't apply the cold wind to the body for a long time.



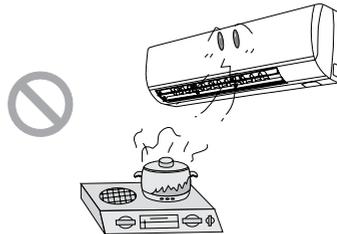
Don't use the air conditioner for other purposes, such as drying clothes, preserving foods, etc.



Splashing water on the air conditioner can cause an electric shock and malfunction.



Don't place a space heater near the air conditioner.



Or CO toxicosis may occur for incomplete burning.

## 2. Notices for use

### 2.1 Working principle for cooling

**Principle:**

- The unit absorbs energy from the air indoors and takes the energy away through circulation of cooling water, so as to reduce indoor ambient temperature. Accordingly, the cooler the water, the larger the cooling capacity.

### 2.2 Working principle for heating

**Principle:**

- Air circulation, which is forced by the fan, transfers the energy from hot. water to the air indoors so as to increase indoor ambient temperature.

- Accordingly, the hotter the water, the larger the heating capacity.

- Because heating capacity of such air circulation system is closely related to the temperature of hot water, if water temperature is not high enough, additional heating appliance is recommended to use together.

### 2.3 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.

### 2.4 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.

### 3. Name and function of each part

#### 3.1 The unit

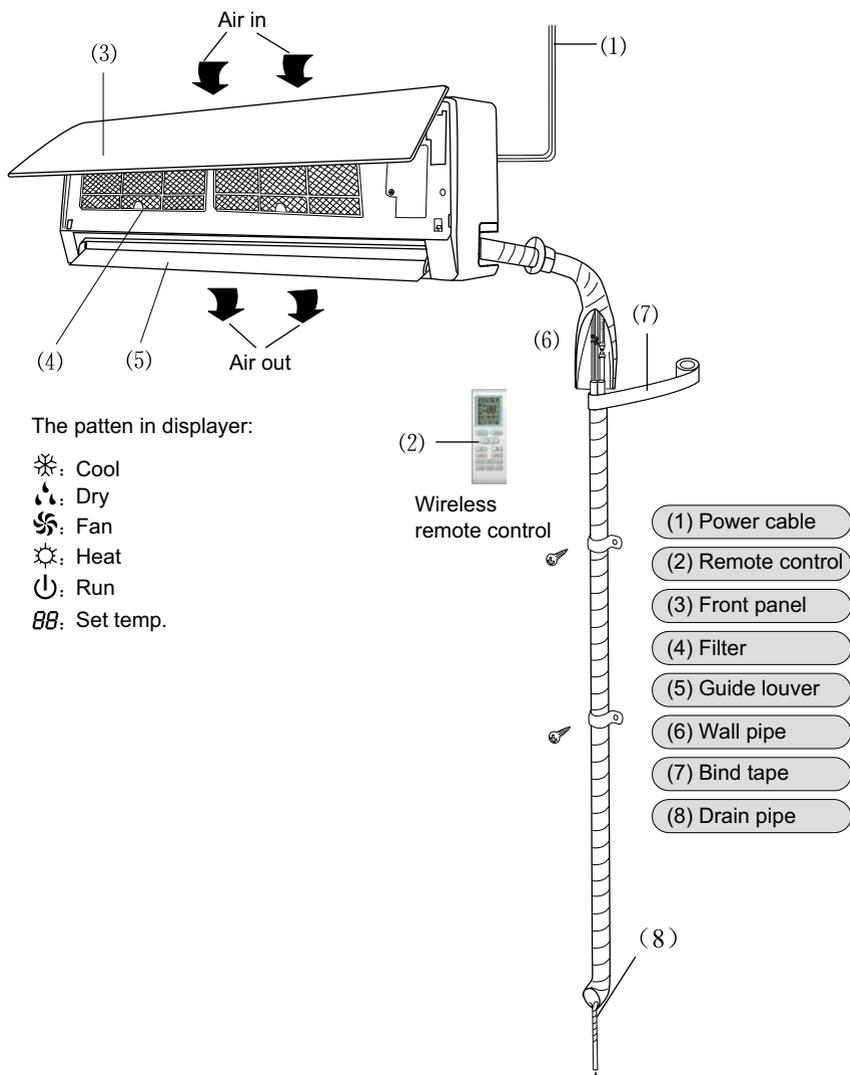


Fig.1

### 3.2 Operation of wireless remote control

**Note:** Be sure that there are no obstructions between receiver and remote control; Donot drop or throw the remote control; Don't let any liquid drop into the remote control or leave the remote control under the sunlight or place where is very hot.

- **ON/OFF**

Press **ON/OFF** button to turn on/off the unit. When the unit is turned off, the Timer, Sleep function will not be retained in memory, but the time will be retained and is still displaying.

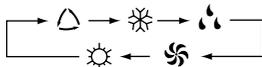
- **MODE**

**MODE** button

(1) Press this button, Auto, Cool, Dry, Fan Heat mode can be selected circularly.

(2) Under Cool mode, the initial value is 24°C(75°F) . Under Heat mode, the initial values 24°C(75°F).

(3) Auto mode is not available in this mode.



△ AUTO

❄ COOL

💧 DRY

🌀 FAN

☀ HEAT

- **SLEEP**

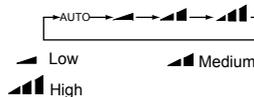
**SLEEP** button

Press this button to select Sleep On/Sleep Off. If power is on, Sleep Off is default. If the unit is turned off, the Sleep function setting will be not retained in memory. If Sleep function is on, the mark of Sleep will display. In this mode, the time of timer can be adjusted. Under Fan and Auto modes, this function is not available.

- **FAN**

**FAN** button

Press this button, Auto, Low, Medium, High-speed can be circularly selected. After powered on, Auto fan speed is default. Under Dehumidify mode, Low fan speed is default.



**Note:** Under the Dry mode, the fan speed isn't adjustable, low fan speed is default.

- **CLOCK**

**CLOCK** button

Press Clock button to set the time of clock. When ⌚ blinks and displays, you can set the time by pressing + or - button. If no button is pressed within 10 seconds the remote will revert back to the normal display. Press ⌚ again to accept the setting. If it is set the first time, 12:00 is the initial value. Note: If mark ⌚ displays on the LCD, it means it is the time of clock, if not, it is the time of timer.



- **LIGHT**

### LIGHT button

Press this button to select **LIGHT** On/Off in the displayer. When the **LIGHT** On is LIGHT button set, the mark  will be displayed and the indicator light in the displayer will be on. When the LIGHT Off is set, the mark  will disappear and the indicator light will be off.

### 3.3 Operation of wireless remote control

**Note:** This is a general remote control, it could be used for multiple types (functions) of air conditioners. For some models without the functions specified here, we preserve the right to not to inform exclusively.

- **X-FAN**

### X-FAN button

(1) Press this button to turn on/off the **X-FAN** function.

(2) The function is not available for this mode.

- **- button**

Presetting temperature can be decrease the temperature by 1 degree Celsius once. press and hold for more than two seconds so that we can change the temperature continuously. The minimum and maximum setting range of the temperature is 16 to 30 degree Celsius.

- **+ button**

Press this button increase the temperature by 1 degree Celsius once. Press and hold for more than two seconds so that we can change the temperature continuously. The minimum and maximum setting range of the temperature is 16 to 30 degree.

- **TEMP**

### TEMP button

Press this button to select the display of either indoor setting temperature or indoor ambient temperature. When the indoor unit powered on firstly, setting temperature display is default. Change status to  to display the ambient temperature. If received control signal in 5 seconds, the display temp. will revert back to setting temperature. When unit is off, indoor setting temperature display is default. Note: This function is only available for certain models.

- **TURBO**

### TURBO button

In Cool or Heat mode, press this button to turn on/off the Turbo function.

**Note:** This function is not available for this model.

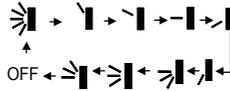


### 3.4 Operation of wireless remote control

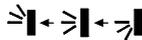
**Note:** This is a general remote control, it could be used for multiple types (functions) of air conditioners. For some models without the functions specified here, we preserve the right to not to inform exclusively.

- **SWING UP AND DOWN BUTTON**

Press this button to adjust swing angle, which circularly changes as below:



This is a general use remote control. If remote control shows the following three kinds of status that the swing status of main unit will be:



When the guide louver start to swing up and down, if turn off the Swing, the air guide louver will stop at current position.

➤ which indicates the guide louver swings up and down between the five positions.

- **TIMER ON BUTTON**

Press the **TIMER ON** button to set the timed On. Press +/- once to increase or decrease the minute by 1 minute. If pressed and held for 2 seconds, the minute will increase or decrease constantly by 1 minute. If held constantly for more than 5 seconds, the minute will begin to change in every 10 minutes. Press **TIMER ON** again to accept the setting and ON will show besides the time of clock meaning the setting succeeds. Press the **TIMER ON** again to cancel the setting.

- **TIMER OFF BUTTON**

Press the **TIMER OFF** button to set the timed Off. The procedures are similar as above.



### 3.5 Operation of wireless remote control

#### 3.5.1 Guide for operation – General operation

(1) Press **SLEEP** button to set the sleep state.

(2) Press **TIME ON** and **TIME OFF** button to scheduled the unit **ON/OFF**

(3) Press **LIGHT** button to control on and off the indicator board. (This function maybe not available for some units).

#### 3.5.2 Guide for operation-Optional operation

(1) After powered on, press **ON/OFF** button, the unit will start to run.

(**Note:** When it is powered off , the guide louver of main unit will close automatically.)



(2) Press **MODE** button, select desired running mode ,or press **COOL** or **HEAT** mode to enter the corresponding operation directly.

(3) Press + or- button to set the desired temperature.

(4) Press **FAN** button to set fan speed from **AUTO**, **FAN** ,**LOW** **MID** and **HIGH**.

(5) Press+\_ button to select **SWING** mode.

### 3.5.3 Operation of wireless remote control

(1) Press +and - buttons simultaneously to lock or unlock the wireless remote control. If it is locked, the mark will display; when pressing any button, the mark  will blink for three times but the air conditioner has no despondence. If unlocked, the mark will disappear.

(2) Switch between Fahrenheit and Centigrade.

(3) When unit is under Off state, press **MODE** and – button simultaneously to switch between °C and °F .

### 3.6 Changing batteries and notices.

(1) Slightly to press the place with  , along the arrowhead direction to push the back cover of wireless remote control. (As show in figure)

(2) Take out the old batteries. (As show in figure)

(3) Insert two new AAA1.5V dry batteries, and pay attention to the polarity. (As show in figure).

(4) Attach the back cover of wireless remote control. (As show in figure)

#### NOTE:

- When changing the batteries, do not use the old or different batteries, otherwise, it can cause the malfunction of the wireless remote control.

- If the wireless remote control will not be used for a long time, please take them out, and don't let the leakage liquid damage the wireless remote control.

- The operation should be in its receiving range.

- It should be placed at where is 1m away from the TV set or stereo sound sets.

- If the wireless remote control can not operate normally, please take them out, after 30s later and reinsert, if they cannot normally run, please change them.

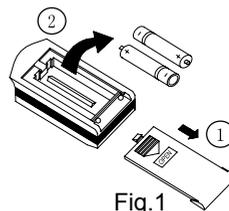


Fig.1

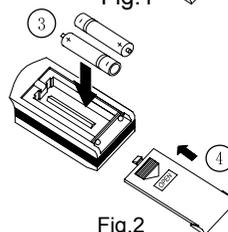


Fig.2

Sketch map for changing batteries

## 4. Wired Controller Operation (optional)

### 4.1 Notice before starting the unit.

(1) To ensure the heat exchanging, the air in the fan coil of the unit must be exhausted before using.

(2) Before starting the unit , make sure that the cable connection of the fan coil is correct and no sundries in the duct.

### 4.2 Wired Controller Operation

(1) DO NOT install the wired controller in the place water leakage.

(2) DO NOT knock , throw or frequently turn on/off the wired controll

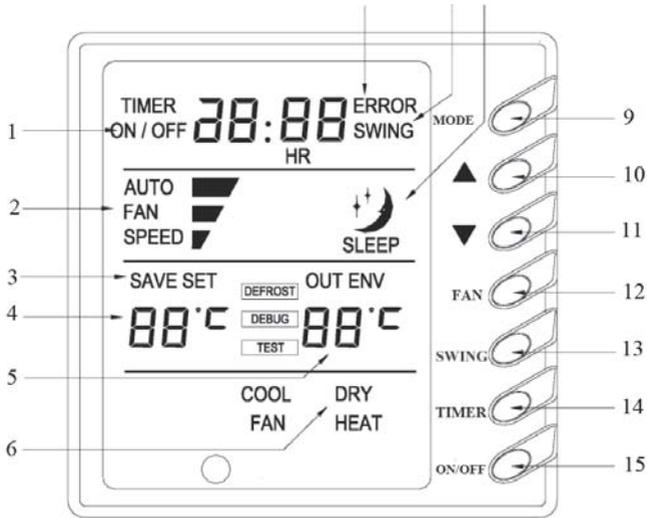


Fig.3

STRUCTURE OF EACH PARTS			
1	<b>TIMER ON/OFF</b>	9	<b>MODE</b> button
2	<b>FAN</b> display (Auto,High,Mid,Low)	10	Temp. Adjust(up)
3	Energy Saving display	11	Temp. Adjust(down)
4	<b>SET TEMP.</b>	12	<b>FAN</b> button
5	<b>ROOM TEMP.</b>	13	<b>SWING</b> button
6	<b>MODE</b> (Coo, Dry, Heat and Fan)	14	<b>TIME ON /OFF</b>
7	Malfunction display	15	<b>ON/OFF</b>
8	<b>SLEEP</b>	16	<b>SWING</b> display

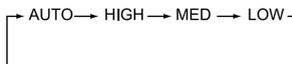
### 4.3 Wired Controller Operation

#### 4.3.1 ON/OFF

- (1) Press "**ON/OFF**" button this unit will start working.
- (2) Press "**ON/OFF**" button again, this unit will stop working.

#### 4.3.2 FAN

- (1) This fan runs at the following speed:



- (2) Dry mode: the fan speed will be automatically set to **LOW**.

#### 4.3.3 TEMP ADJUST

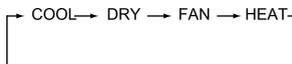
- (1) Press **TEMP ADJUST** key  
▲: Press it to increase the temp;  
▼: Press it to decrease the temp.  
(Press the key once to change the temp. by 1°C each time.)
- (2) The temp. range in each operation mode:  
**HEAT**-----16°C - 30°C ;  
**COOL**-----16°C - 30°C ;  
**DRY**-----16°C - 30°C ;  
**FAN**-----Can not set temp.

#### 4.3.4 SET SWING

- (1) Press the SWING button, the swing function will be active.
- (2) Press again to stop the swing function.

#### 4.3.5 SET MODE

Every time press this key to change the operation mode in order of:



- (1) In "**COOL**" mode, **COOL** key will be lighted and set temp. must be lower than temp. If set temp. is higher than room temp. , this unit won't run in **COOL** mode and only fan can operate.
- (2) In "**DRY**" mode, **DRY** key will be lighted and internal fan will work at high speed within a certain temp. range. This mode is more efficient than **DRY** function in **COOL** mode and it can save the energy.
- (3) In "**HEAT**" mode , **HEAT** key will be lighted. Set temp. must be higher than the room temp. ; If set temp. is lower than the room temp., this unit won't run the **HEAT** mode.
- (4) In "**FAN**" mode , **FAN** key will be lighted. In the meantime. The room temp. can't be adjust , but it will be shown on the LCD of the controller.

#### 4.3.6 SET TIMER

Starting time can be set in **OFF** mode and stopping time can be set in **ON** mode. Press the **TIMER** button to set timer, press the ▲ button (or the ▼ button) once, set time will be raised (or reduced) by 0.5h, then press **TIMER** button again to confirmThe range of set time is 0.5h~24h.

#### 4.3.7 Energy Saving Setting (Fig.4).

(1) In the status of **OFF**, press the button **FAN** and **▼** simultaneously for 5seconds, the **SAVE** menu will appear and comes to the energy saving settings of cooling and dry (showing **SAVE + COOL**, for the first time of setting, the initial temperature is 26);then press **MODE** button, it changes to energy saving setting of heating mode (showing **SAVE + HEAT**, for the time of setting, the initial temperature is 20 °C ); The upper limit temp. is set at the **SET TEMP.**, the lower temp. limit is set at the **ROOM TEMP.** , press **ON/OFF** button to switch over the upper/lower temp. limit setting, press **▲** and **▼** to adjust the temperature(the range is 16~30 °C ). After finishing the setting ,press **FAN** and **▼** simultaneously again for 5 seconds, and exit the **SAVE** menu.

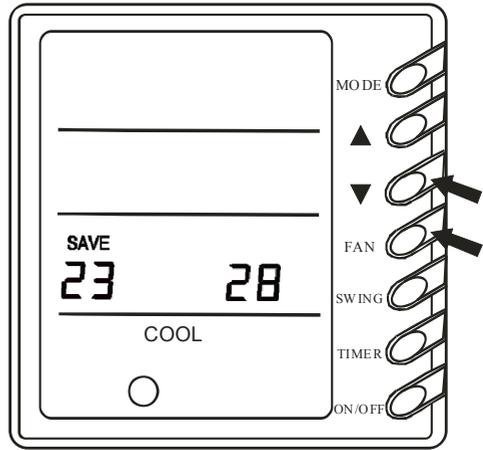


Fig.4

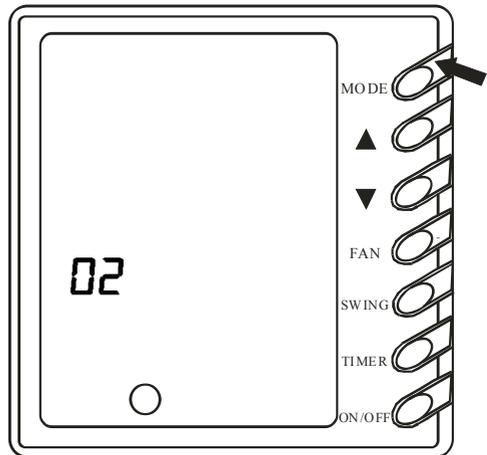
(2) After the operation above ,**SAVE** will be display on the liquid crystal panel, then neither the remote controller nor the wired controller the user use to set the temperature, the **SET TEMP.** will not exceed the range that has been set. For example, in the Fig.2 we set temp. range from 23 °C to 28 °C ,then the user can only adjust the temp. between 23°C and 28°C by the remote controller or the wired controller.

(3) If the upper limit is the same with the lower limit that the system can only run at this temperature.

(4) To cancel the energy saving, press the button of **FAN** and **▼** simultaneously for 5 seconds in the status of **OFF**, but temp. limit will be keep until next time to set the energy saving function.

(5) After the power cut, the energy saving function will still be store in memory.

**NOTE:** The upper limit can not be lower than the lower limit, or else the system will default the higher one to be upper limit, if there is no operation in 20 seconds, the **SAVE** menu will automatically shut down.



Fiig.5

#### 4.3.8 Memory function (Fig.5)

Press the **MODE** button for 10 seconds in the **OFF** status, the memory function can be switch over., If "01" is showed, it means the memory function is on, or else if "02" is showed, it means the memory function is off. Press **ON/OFF** button to exit. If there is no operation is 20 seconds, the memory function menu will be shut of and the present setting will be stored.

4.3.9 Malfunction display (Fig.6)

If there is a malfunction during the operation code will be showed. It means evaporator sensor malfunction is Fig4.

The meaning of other error codes is as below:

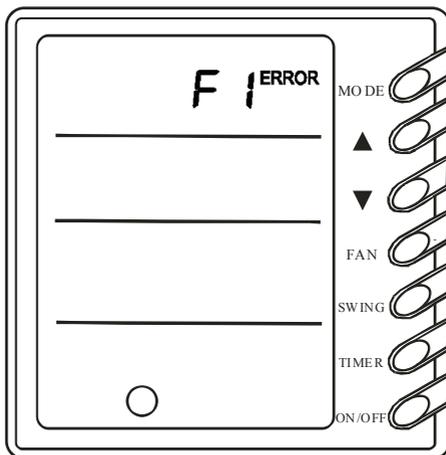


Fig.6

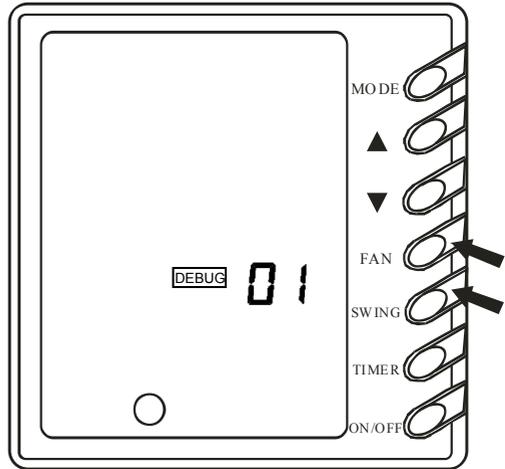
Code	Error
E0	Pump malfunction
E6	Communication malfunction
E9	Full-water Protection
F0	Indoor unit sensor malfunction
F1	Evaporator sensor malfunction
F5	Wired controller sensor malfunction
EH	Auxiliary electric heater malfunction

**Note:**

If the wired remote controller shows the error code “EH”, please cut off the power and find the professional to fix the problem.

#### 4.3.10 Sensor setting (Fig.7)

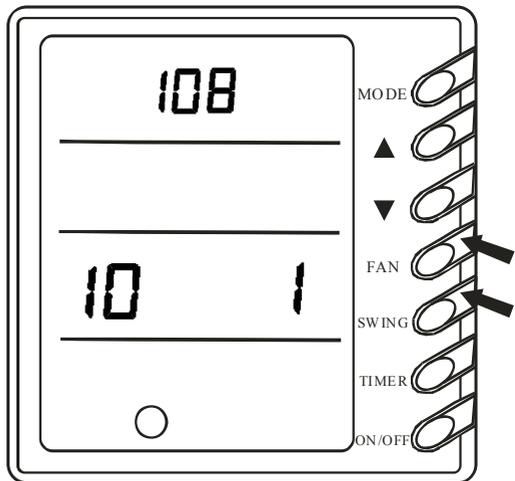
Press the **"FAN+SWING"** button for 10 seconds in the **"OFF"** status to enter the sensor setting menu. A code will be displayed on the **"ROOM TEMP."** **"01"** means the indoor unit sensor, and **"02"** means the wired controller sensor, press **"▲"** and **"▼"** to chose the sensor. If there is no operation in 20 seconds, the system will exit this menu and the present setting will be saved, or else press **"ON/OFF"** button to save and exit.



Fiig.7

#### 4.3.11 System parameters display (Fig.8)

Press **"FAN+SWING"** for 10 seconds while the system is **ON** to enter the system parameters displa interface. The temperature of the water valve, pump and surface cooler in the system. The temperature of the surface cooler is display at **"TIMER"** the two position value display at **"TEMP.SET"** means **"Valve 1"** and **"Valve 2"**, the status of the pump displays at **"ROOM TEMP."** and **"1"** means **ON** while **"2"** means **OFF**. Press **ON/OFF** button to exit or else the system will automatically exit after 30 minutes.



Fiig.8

4.3.12 Button lock function (Fig.9)

Press the “▲” + “▼” button for 5 seconds, “EE” will appear at **ROOM TEMP** and the buttons will be locked.

Presses the “▲” + “▼” button for 5 seconds again, the button locked function will be canceled.

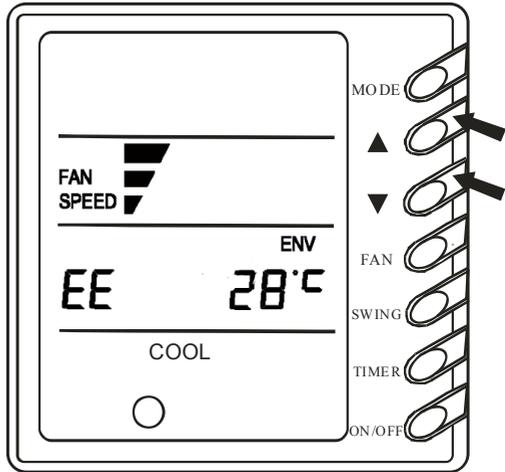


Fig.9

4.3.13 Monitoring of the wired controllers

The wired controllers can be monitored by a connected centralized controller or long-distance monitor.

- While a centralized controller is connected (Fig.10)

A centralized controller can monitor all the wired controllers and disable them. When the wired controllers are rocked by the centralized controller, the button of the wired controller and the remote controller are all locked, and “CC” will appear at the **ROOM TEMP** location.

The lock function can also be disabled by the centralized controller.

After a power cut off, the locked function will be disabled.

- While a long-distance monitor is connected

When a long-distance monitor connects with the wired controller, the long-distance monitor not only can make a real-time control of the velocity\ temperature\ mode\ **ON/OFF** of the wired controllers, but also can disable some or all of the functions of the wired controllers.

If all the functions of the wired controllers are locked, the buttons of the wired controller and the remote controller are all disable, and the code “CC” will display at the **ROOM TEMP** location. If one or some of the functions are locked, the other functions still work, and nothing will display on the panel.

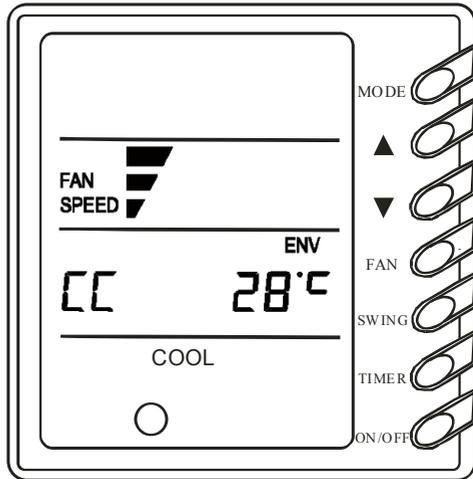


Fig.10

When the functions are locked, the lock function can only be canceled by the long-distance monitor or by pressing **MODE+▼** for 5 seconds. The lock function can be kept in the memory after the power-off.

#### 4.3.14 Set the address code of the wired controller (Fig.11)

(1) An address code of long-distance monitoring can be set to the wired controller and the main-board.

(2) Press **MODE+▲** for 5 seconds in the **OFF** status to enter the address-writing menu.(Fig.10), then the present address code will flickeringly display at the **TIMER** location (the default code is 0), and **"DEBUG"** will also flickeringly display at the same time. Press **▲ + ▼** to choose the address code with the range of 1~2999. Press **ON/OFF** to confirm, then if the address code stop flickering, it means the code of the wired controller is successfully written; if **"DEBUG"** stop flickering that means the code of the mainboard is successfully written.

(3) If there is no operation within 20 seconds, the menu will automatically exit, or else press the button **"MODE+▲"** for 5 seconds to exit.

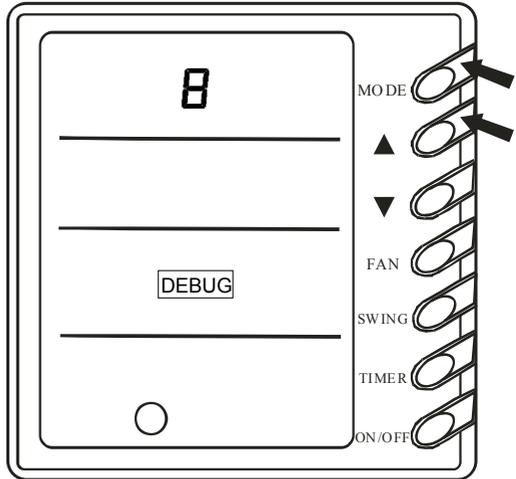


Fig.11

## 5. Emergency operation

### 5.1 Indicator light control of the displayer

When sleeping at night, the user can get the indicator light off.

(1) Get the displayer indicator light on: When setting the light function, the mark 8 will display on the remote controller screen by pressing this button. In which case, the displayer indicator light will be on if the AC receives this signal.

(2) Get the displayer indicator light off: If cancel the light function, the mark 8 will disappear on the remote controller screen by pressing this button. In which case, the displayer indicator light will be off if the AC receives this signal.

### 5.2 Emergency operation

If the wireless remote control is lost or broken, please use the manual switch button. The unit will run at the mode which was setted before turned off, but the temperature and fan speed cannot be changed.

Open the front panel, the manual switch is on the edge as Fig.12.

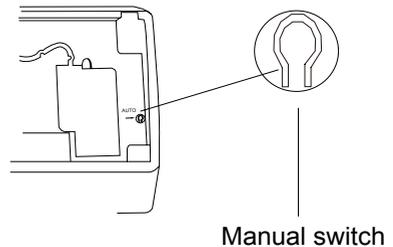


Fig.12

### 5.3 Clean and care

#### **Caution**

- Turn power off and pull out the power plug before cleaning air conditioner, or it may cause electric shock.
- Never sprinkle water on the unit for cleaning because it can cause an electric shock.
- 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.)

#### 5.3.1 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.

**Note:** Please do not to immerse the front panel in water, due to there are microcomputer components and circuit diagrams on the front panel.

#### 5.3.2 Clean the air filter (Recommended once every three months)

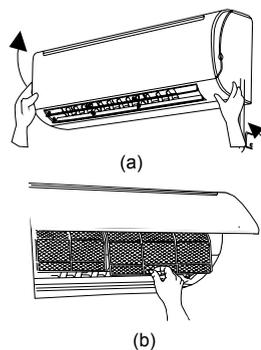
**Note:** If dust is much more around the air conditioner, the air filters should be cleaned many times. After taking off the filter, don't touch the fin of indoor unit, in order to avoid hurt your fingers.

##### • **Take down the air filter**

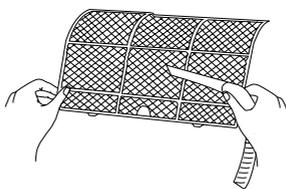
At the slot of surface panel to open an angle, pull the air filter downward and take it out, please see the Fig.13(a, b).

##### • **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 should below 45 °C degree), and dry it in the shade.



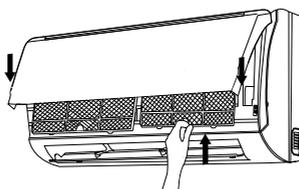
Fiig.13



**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.

##### • **Insert the air filter**

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



## 5.4 Clean and care

- **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.
3. Check that whether the batteries of air conditioner are changer or not.

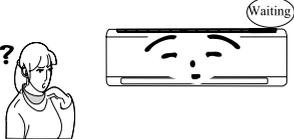
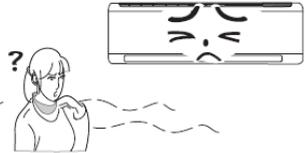
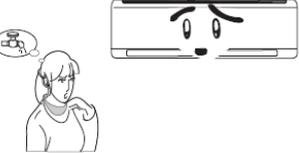
- **Maintain after use**

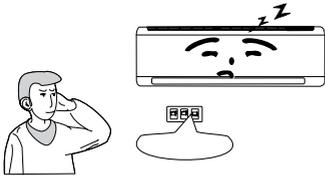
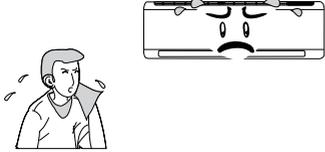
1. Turn main power off.
2. Clean the filter and the unit body.

## 6. Troubleshooting

### ⚠ CAUTION

Don't attempt to repair the air conditioner by yourself, it can cause an electric shock or fire. Please check the following items before asking for repair, it can save your time and money.

Phenomenon	Troubleshooting
<p>Not operate immediately when the air conditioner is restarted.</p> 	<p>Once the air conditioner is stopped, it will not operate in approximately 3 minutes to protect itself.</p>
<p>There's unusual smell blowing from the outlet after operation is started.</p> 	<p>The unit has no peculiar smell by itself. If has, that is due to the smell accumulated in the ambient. Solution method: Cleaning the filter. If problem still has, so need to clean air conditioner. (Please contact with the authorized maintenance center.)</p>
<p>Sound of water flow can be heard during the operation.</p> 	<p>The air conditioner is started, when it is running, or the unit is stopped, sometimes there is swoosh or gurgle, the sound is due to refrigerant flowing they are not malfunctions.</p>
<p>In COOL mode, sometimes the mist emitted from the air outlet vent.</p> 	<p>When the indoor temperature and humidity are very high, this phenomenon would happen. This is caused by the room air is swiftly cooled down. After running for a while, indoor temperature and humidity will fall down, the mist will die away.</p>
<p>Creaking noise can be heard when start or stop the unit.</p> 	<p>This is caused by the deformation of plastic due to the changes of temperature.</p>

<p>The unit can not run.</p> 	<p>Is Temp. setting suitable?                  Were inlet and outlet vents obstructed?                  Is filter dirty?                  Are the windows and doors closed?                  Did Fan speed set at low speed?                  Is there any heat sources in the room?</p>
<p>Cooling(Heating) efficiency is not good.</p> 	<p>The unit is interfered by abnormal or frequent functions switchover occasionally the controller cannot operate. At this time, you need to pull out of the plug, and reinsert it.                  Is it in its receiving range? Or obstructed? To check the voltage in wireless remote control inside is charged, otherwise to replace the batteries.                  Whether the wireless remote control is damaged.</p>
<p>Wireless remote control is not available.</p>	<p>The air humidity is on the high side.                  Condensing water over flowed.                  The connection position of the unit drainage pipe is loosed.</p>
<p>If water leakage in the room.</p>	<p>The sound of fan relay is switching on or off.                  When the unit turn off. That is due to the water flowed to the reverse direction.</p>
<p>The unit cannot deliver air.</p>	<p>In <b>HEAT</b> mode, when the temperature of the heat exchanger is very low, that will stop deliver air in order to prevent cool air.                  In <b>COOL</b> mode, when the temperature of the heat exchanger is very high, that will stop deliver air in order to prevent hot air.                  In dehumidifying mode, sometimes indoor fan will stop, in order to avoid condensing water be vaporized again, restrain temperature rising.</p>
<p>Noise from the unit emitted.</p>	<p>If unit is running under the high humidity for a long time, the moisture will be condensed on the air outlet grill and drip off.</p>

## 7. Notices for installation

### 7.1 Important Notices❶

1. The unit installation work must be done by qualified personnel according to the local rules and this manual.

2. Before installing, please contact with local authorized maintenance center, if unit is not installed by the authorized maintenance center, the malfunction may not solved, due to discommodious contacts.

3. When removing the unit to the other place, please firstly contact with the authorized Maintenance Center in the local area.

### 7.2 Basic Requirements For Installation Position

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

(1) Place where strong heat sources, vapors, flammable gas or volatile object are emitted.

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

(3) Place where a lot of salinities such as coast exists.

(4) Place where the oil (machine oil) is contained in the air.

(5) Place where a sulfured gas such as the hot spring zones is generated.

(6) Other place with special circumstance.

### 7.3 The 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.

(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 250cm or more from the floor.

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

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

(8) Make sure that the unit installation should accord with installation dimension diagram requirements.

(9) Do not use the unit in the immediate surroundings of a laundry a bath a shower or a swimming pool.

### 7.4 Safety Requirements For Electric Appliances

(1) The power supply 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.

(5) The appliance shall be installed in accordance with notional wiring regulations.

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

**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.

## 7.5 Ground requirements

(1) Air conditioner is type I electric appliance, thus please do conduct reliable grounding measure.

(2) The yellow-green two-color wire in air conditioner is ground wire and cannot be used for other purpose. Cut off and fixed by screw as grounded is not permissible, otherwise is would cause serious damage.

(3) The earth resistance should follow the local code.

(4) The power source must offer reliable grounding terminal. Make sure not to connect the ground wire with the following:

① Tap water pipe. ② Gas pipe. ③ Contamination pipe. ④ Other places that professional personnel consider unreliable.

(5) The type and rated values of fuse is justified according to the silk print on the fuse or PCB.

## 8. Installation dimension diagram

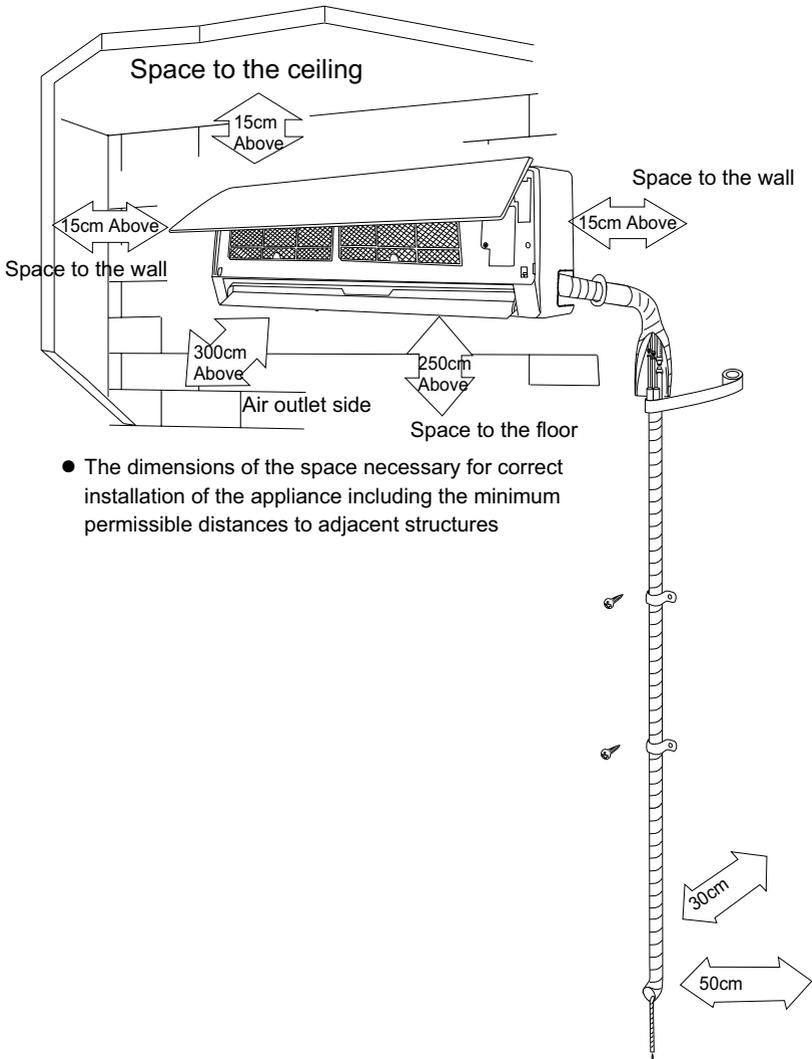
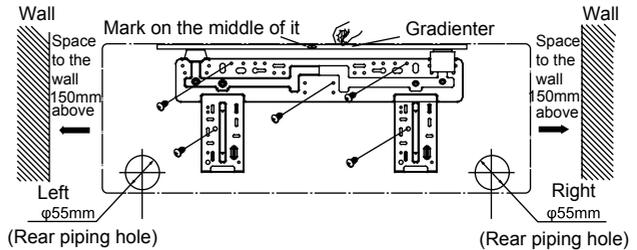


Fig.14

## 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 taking 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.



Fiig.15

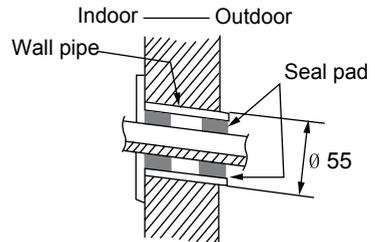
(2) Fix the rear panel on the wall with screws. (Where is pre-covered with plastic granula)

(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 ( $\Phi 55$ ) 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.

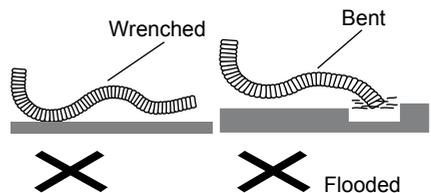


### 9.3 Install the water drain pipe

(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.



#### 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, slight 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.

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.16)

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.17)

(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.18)

(4) The height of the installed location should be 2.5m or more from the floor.

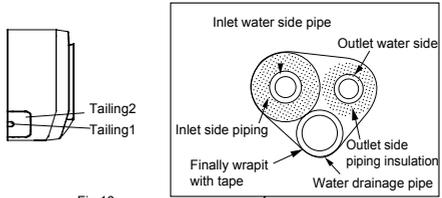


Fig.16

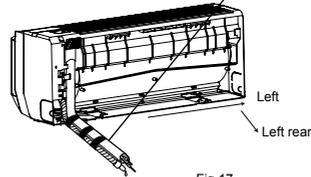


Fig.17

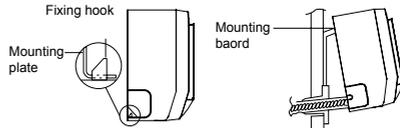


Fig.18

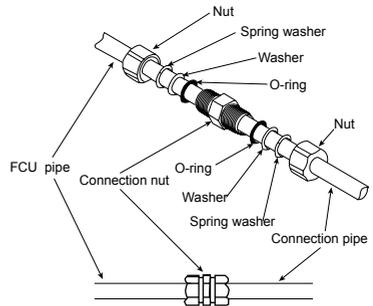
10. Install the connection pipe

(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.

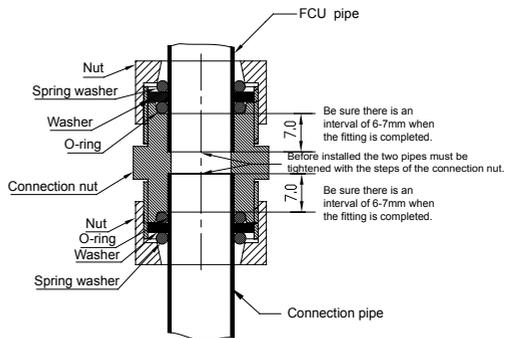
(3) Screw in the pipe nut by hand and then tighten the nut with spanner and torque wrench refer to the following.

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



Hex nut diameter	Tightening torque(N·m)
Φ6	15~20
Φ9.52	31~35
Φ12	50~55
Φ16	60~65
Φ19	70~75

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.



## 11. External water pipe connection sketch

### 11.1 Pipe connections sketch

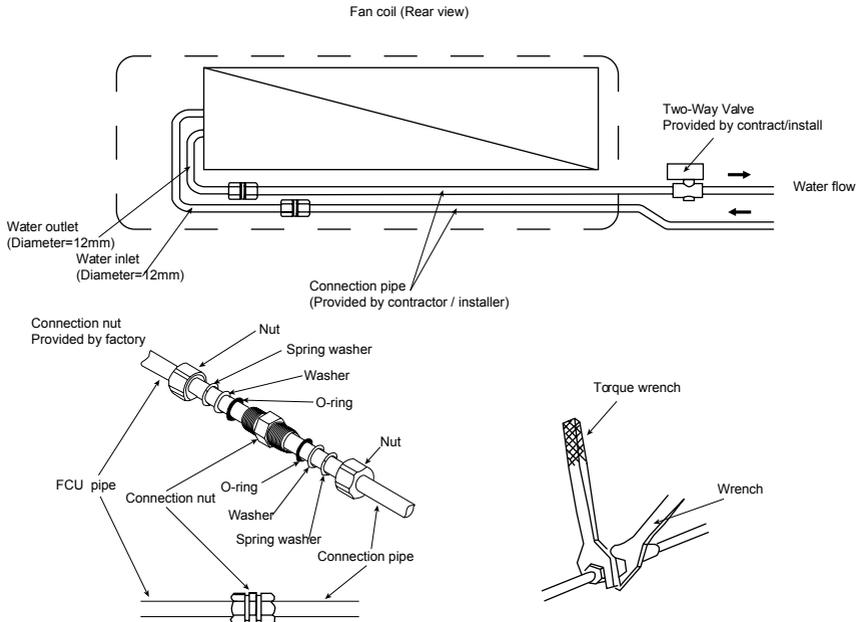


Fig.19

### 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:**

- The pipe must be wrapped by heat insulation material to prevent condensing water drips.
- 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.
- It is prohibited to put the valve core upside down.
- Power supply of motorized valve is 230 V, using 24 V motorized valve can lead to its destruction.

## 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

#### 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.

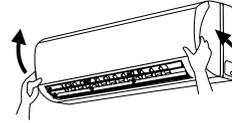
#### 12.1.2 Test operation method

- (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.

## 12.2 Installation and Maintenance of Healthy Filter

- 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.20)



(2) Mount the healthy filter onto the air filter, (as shown in Fig.21). If the air filter cannot be installed, please mount the healthy filter on the front case. (as shown in Fig.22)

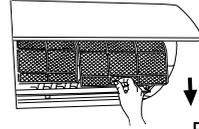


Fig. 20

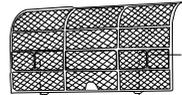
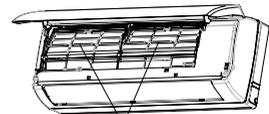


Fig. 21

Air filter

Healthy filter

(3) Mount the air filter properly along the arrow direction in Fig.23, and then close the panel cover.



Healthy filter Fig. 22

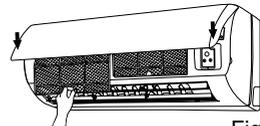


Fig. 23

## 12.3 Mount the air filter properly along the arrow

direction in Fig.d, and then close the panel cover.

### 12.3.1 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.

### 12.3.2 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.

## **Take-back of electrical waste**

### **Information for Users to Disposal of electrical and electronic equipment (private households)**

Icon on the product or in the accompanying documentation means that used electric or electronic products must not be disposed together with domestic waste. For the correct disposal of the product hand it over to a place for take-back, where it is collected free of charge. By correct disposal of the product you can help to preserve valuable natural resources and help in preventing potential negative impacts to environment and human health, which could be consequence of incorrect disposal of waste. Ask for more details from local authorities, nearest collection point, in Waste Acts of respective country, in the Czech Republic in Act no. 185/2001 Coll., in the wording of later regulations. In case of incorrect disposal of this waste, a fine can be imposed according to national regulations.



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London W1F 7LD, UK**

#### **Supplier and technical support:**

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**612 00 Brno**

**Czech Republic**

**[www.nepa.cz](http://www.nepa.cz)**

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**+420 800 100 285**

