



**DELTA**

**51CA Series  
Water Fan Coil Cassette Type Air Conditioner**

# **INSTALLATION MANUAL**

**WARNING!**





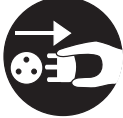

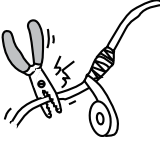



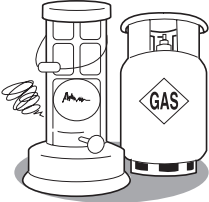


Read and follow all safety precautions in Instruction Manual - improper use can cause serious injury.

# Contents

1 Safety cautions.....	1
2 Notices for use.....	2
3 Name and function of parts.....	3
4 Name and function of each part.....	4
5 Name of the front panel .....	7
6 Installation of the unit.....	8
7 Drainage pipe.....	11
8 Connecting the pipes.....	13
9 Motorized valve.....	13
10 Electric wiring.....	16
11 Installation of the panel .....	17
12 Test operation.....	20
13 Care and maintenance.....	20
14 Parameters of the unit.....	24

## 1 Safety cautions


The figures in this manual may be different the material objects, please refer to the material objects .

<p> This symbol stands for the items should be forbidden.</p> <p> This symbol stands for the items should be followed.</p>		
<p> When the voltage is very high, the components would be easily damaged. When the voltage is very low, the electric components cannot work. The voltage should be stable; there shouldn't be big fluctuation.</p>	<p>  Be sure to pull out the power plug as the unit. not in use for a long time. Otherwise, the accumulated dusts may cause overheating or fire.</p>	<p>  Never splice the power cord or use an extended cord. It can cause overheating or fire.</p>
<p>  When a burning smell or smoke, please turn off the power supply and contact with the service center. 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 1m. It can cause a fire or explosion.</p>	<p>  Don't attempt to repair the air conditioner by yourself. The wrong repair will lead to an electric shock or fire, you contact the service center repair.</p>

### 1.1 Important notices

- (1) The unit installation must be done by qualified personnel according to the local rules and this manual.
- (2) The breaker should be installed in the fixed circuit. All pole of the breaker should be switched off and the distance of the contact should be at least 3mm.
- (3) Do not use the unit for laundryroom , bathroom and swimming-pool.
- (4) The motorized valve should be equipped with the unit. The motorized valve don't supply with the unit.

### 1.2 Safety requirements for electric appliances

- (1) The power supply should be used the rated voltage and AC excellusive 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 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 the unit and combustive surface is 1.5m.
-  Make sure that the Line 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.

## 1.3 Earthing requirements

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

## 1.4 Others

- (1) The connection method of unit and power cable as well as the interconnect method of each isolated component should refer to the circuit diagram stick on the unit.
- (2) The model of the blown fuse and rated value should refer to the silk-screen on the controller or fuse sleeve.
- (3) The appliance shall be installed in accordance with national wiring regulations.
- (4) This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
- (5) Children should be supervised to ensure that they do not play with the appliance.
- (6) After the field commissioning, the water discharge valves, gas release valves, and drain pipes shall be insulated properly, otherwise they if exposed directly in the air would lead to condensing and dewing.

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.

## 2 Notices for use

### 2.1 Working principle for cooling

#### **Principle:**

The unit absorbs the air from the indoors and sends it away through circulation of cooling water, so as to reduce indoor ambient temperature. Accordingly, the lower of temperature of the water is, the larger of cooling capacity of the unit.

## 2.2 Working principle for heating

### Principle:

Air circulation forced by the fan transfers the energy from hot water to the air indoors so as to increase indoor ambient temperature. Accordingly, the higher of temperature of the water is, the larger of heating capacity of the unit.

## 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 parts

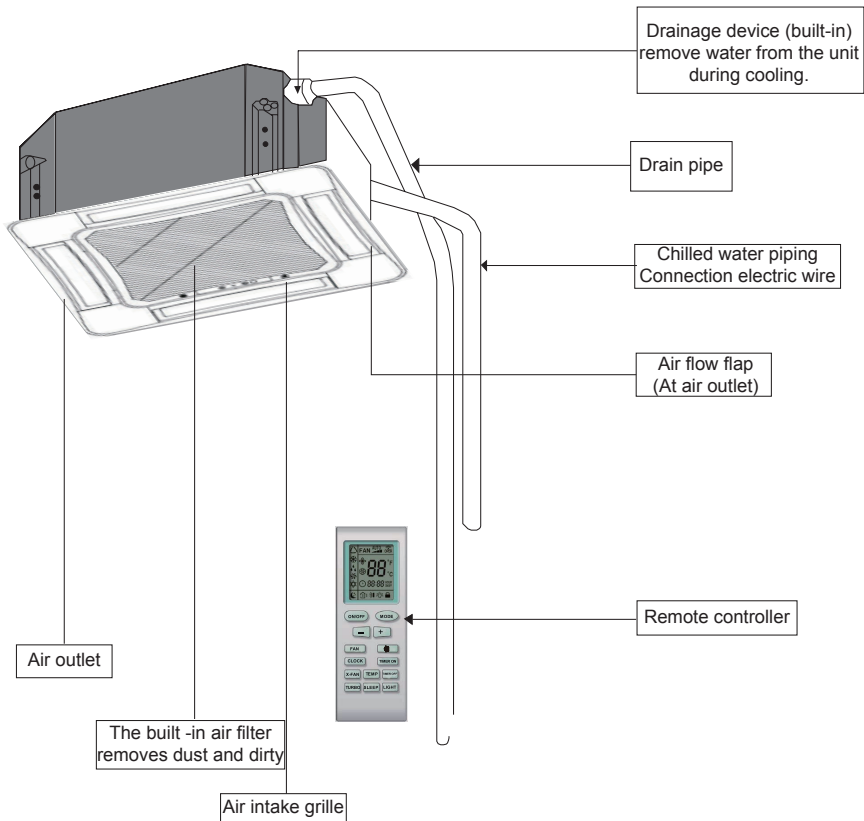


Fig.1

## 4 Name and function of each part

### 4.1 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.

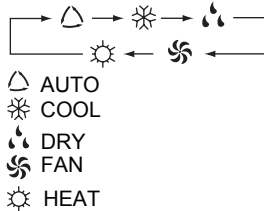
- **ON/OFF**

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) Auto mode is not available in this mode.



- **SLEEP**

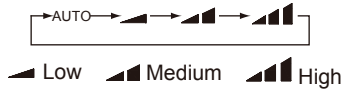
**SLEEP** button

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 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. The function is not available for this mode.

- **X-FAN**

**X-FAN** button

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

Pressing X-FAN button in COOL or DRY mode, the icon is displayed and the indoor fan will continue operation for 10 minutes in order to dry the indoor unit even though you have turned off the unit. After energization, X-FAN OFF is defaulted. X-FAN is not available in AUTO, FAN or HEAT mode.

- **- button**

Pressing - button can 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 °C .

- **+ 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 °C .

- **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

- (1) In Cool or Heat mode, press this button to turn on/off the Turbo function.
- (2) The function is not available for this mode..

## 4.3 Operation of wireless remote control

- **SWING UP AND DOWN BUTTON**

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



This is a universal wireless remote controller; however, the unit covered in this manual is only of the simplified SWING function. As a result, when the wireless remote controller is energized initially with the unit under the OFF status, this simplified function should be set by pressing the + button and the SWING button simultaneously, with the symbol blinking twice. Then, after the unit is turned on, this function can be activated or deactivated simply by pressing the SWING button, with the displayed symbol indicating this function is on and without this displayed symbol indicating this function is off.

- **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.

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.

## 4.4 Operation of wireless remote control


### 4.4.1 Guide for operation – General operation

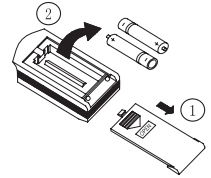
- (1) Press **SLEEP** button to set the sleep state.
- (2) Press **TIMER ON** and **TIMER OFF** button to scheduled the unit **ON/OFF**.
- (3) Press **LIGHT** button to control on and off the indicator board.(This function maybe not available for some units.)







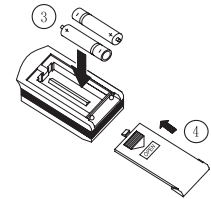
#### 4.4.2 Guide for operation-Optional operation

- (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 **AUTOFAN** , **LOW** , **MID** and **HIGH**.
- (5) Press  button to select **SWING** mode.




#### 4.4.3 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 response. 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 .



Sketch map for changing batteries

#### 4.5 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:

- ① The design of this unit conforms to the requirements of ISO5151 standard.
- ② The air volume is measured at the 0Pa external static pressure.
- ③ Cooling (heating) capacity stated above is measured under nominal working conditions corresponding to 0Pa external static pressure. The parameters are subject to change with the improvement of products, in which case the values on the nameplate will prevail.
- ④ This product must not be disposed together with the domestic waste but disposed at the authorized place for the recycling of electric and electronic appliances.

### 5 Name of the front panel

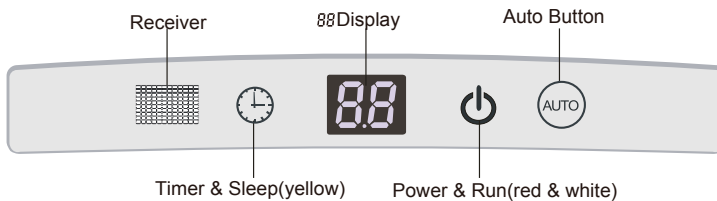


Fig. 2

#### 5.1 Instructions of the front panel

- (1) Timer & Sleep (yellow LED): it light when Timer or Sleep is on and goes out when Timer or Sleep is off.

# Cassette Type Fan Coil Unit

- (2) Power (red LED): it light when power is on and goes out when power is off.
- (3) Run (white LED): It light when the unit is on and goes out when the unit is off.
- (4) AUTO button :use for emergency operation.

When the wireless remote control is lost or damaged, please use the AUTO button. At this time, 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 over 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.

## 6 Installation of the unit

### 6.1 Selection the mounting position

- (1) Especially, the installation place is important for the unit because it is very difficult to move from place after the first installation.
- (2) Decide the mounting position together with the customer as Fig.3
- (3) The discharge direction can be selected as shown Fig.3.

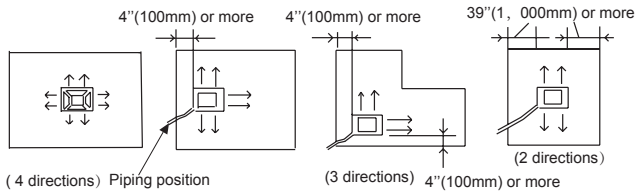


Fig.3

Since 2-way outlet as shown Fig.4 causes performance problems, do not set it.



Fig.4

### 6.2 Installation of the unit

- (1) Schematic diagram of installation (as Fig.5).

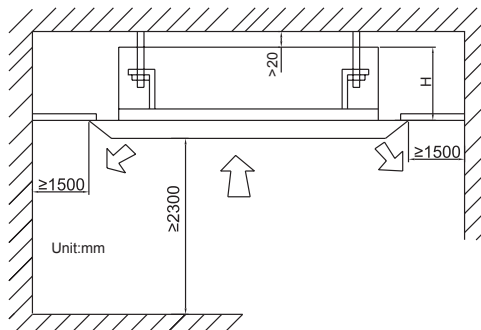


Fig.5

(2) Select install location of the unit

- 1) Obstruct should put away from the intake or outlet vent of the unit so that the airflow can be blown though all the room.
- 2) Make sure that the installation had accord with the requirement of the schematic diagram of installation spaces.
- 3) Select the place where can stand 4 times of the weight of the unit and would not increase the operating noise and oscillate.
- (3) The horizontally of the installation place should be guaranteed.
- (4) Select the place where is easy to drain out the condensate water.
- (5) Make sure that there are enough space for care and maintenance. Make sure that the height between the unit and ground is above 2300 mm.
- (6) When installing the suspender bolt, check if the install place can stand the weight 4 times of the unit's. If not, reinforce before installation.

❗ There will be lots of lampblack and dust stick on the fan, heat exchanger and water pump in dining room and kitchen, which would reduce the capacity of heat exchanger, lead water leakage and abnormal operation of the water pump.

The following treatment should be taken under this circumstance:

- (1) Ensure that the smoke trap above cooker has enough capacity to obviate lampblack to prevent the indraft of the lampblack by the unit.
- (2) Keep the unit far from the kitchen so that the lampblack would not be indraft by the unit.

❗ Important notice

To the good performance, the unit must be installed by professional personnel according with this instruction.

### 6.3 Dimension of ceiling opening and location of the hoisting screw(as Fig.6)

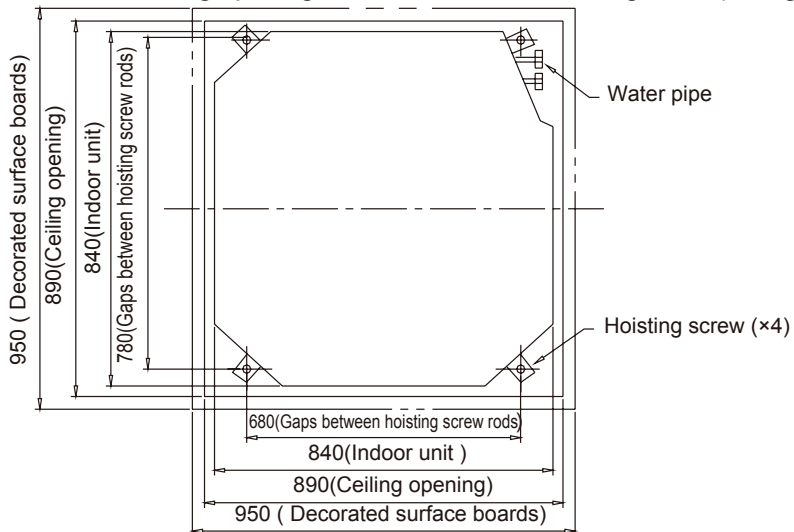


Fig.6

51CA04C22-085DWT, 51CA06C22-10DWT, 51CA08C22-125DWT,  
51CA10-140DWT, 51CA12C22-160DWY, 51CA14C22-180DWT, 51CA16C22-200DWT

# Cassette Type Fan Coil Unit

The drilling of holes in the ceiling must be done by the professional personnel.

❗ The overlapping sections of the ceiling and the decorated surface boards should be maintained at no less than 20mm(as Fig.7).

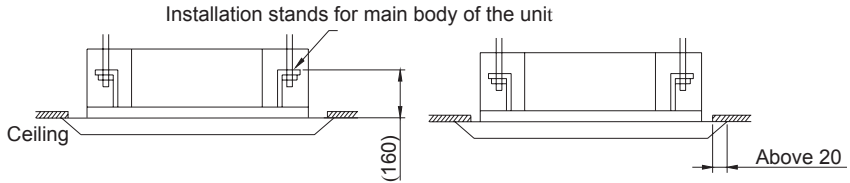


Fig.7

## 6.4 Main body of hoisting unit

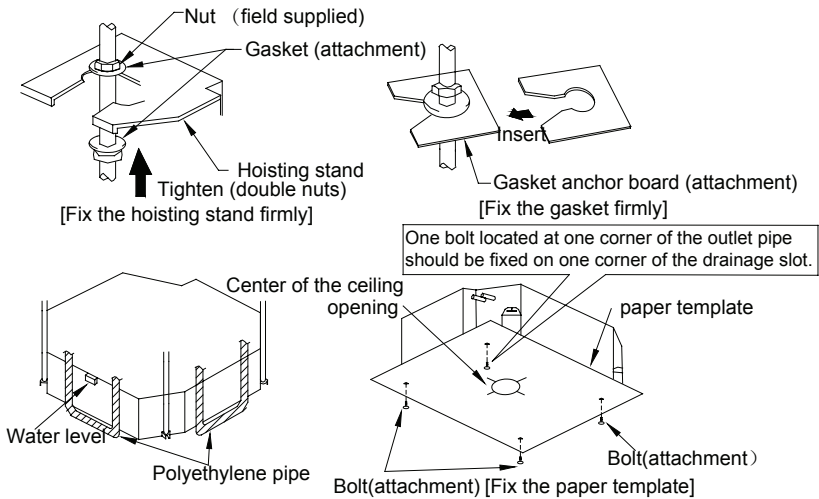


Fig.8

(1) The primary step for the unit.

When attach the hoisting stand on hoisting screw, do use nut and gasket individually at the upper and lower of the hoisting stand to fix it. The use of gasket anchor board can prevent gasket break off.

(2) Use install cardboard (as Fig.8).

1) The central mark of the ceiling opening is marked on the install cardboard.

2) Install the install cardboard on the unit by bolt, and fix the angle of the drainage pipe at the outlet vent by bolt.

(3) Adjust the unit to the suitable install place(as Fig.8).

(4) Check if the unit is horizontal(as Fig.8).

Inner drainage pump and bobber switch are included in the unit, check if 4 angle of every unit are horizontal by water level. (If the unit is slant toward the opposite of the coagulate water flow, there may be malfunction of the bobber switch and lead water drop.)

(5) Backout the gasket anchor board used to prevent gasket break off and tighten the nut on it.

(6) Backout the install cardboard.

❗ Please do tighten the nuts and bolts to prevent air conditioner break.

## 7 Drainage pipe

### 7.1 Installation of drainage pipe

- (1) The diameter of the drainage pipe should be equal or bigger than to the diameter of the connecting pipe tube. The outer diameter of pipe size is 35mm (FP-(85~200)XD(S,M)/B-T).
- (2) Keep the drainage pipe short and sloping downwards at a gradient of at least 1/100 to prevent air pockets from forming(as Fig.9).
- (3) If the drainage hose cannot be sufficiently set on a slope, add a drainage raising pipe.
- (4) To keep the drainage hose from sagging, keep space between hanging hooks at 1~1.5m(as Fig.9).

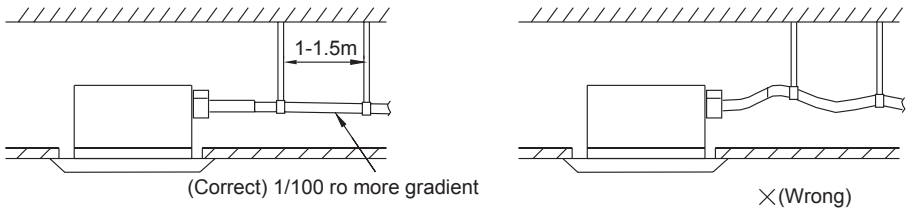


Fig.9

- (5) Use the attached drainage hose and clamp. Insert the drainage hose into the drainage socket up to the grey tape(as Fig.10).
- (6) Tighten the clamp until the screw head is less than 4 mm from the hose(as Fig.10).
- (7) Wrap the big sealing pad around clamp of the drainage hose to insulate.
- (8) Insulate the drainage hose inside the room.

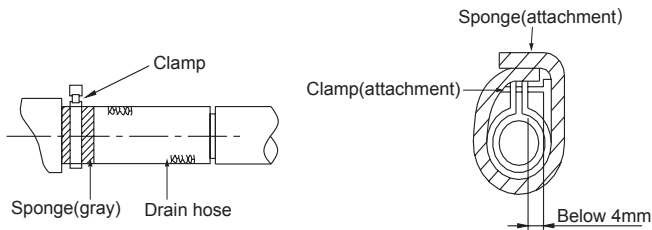


Fig.10

#### ⚠ Precutions for drainage raising pipe

- (1) Install the drainage raising pipe at a height of less than 280 mm(as Fig.11).
- (2) Install the drainage raising pipe at a right angle to the unit and no more than 300 mm from the unit.

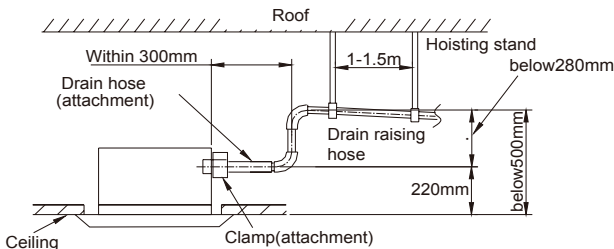


Fig.11

Instruction The slant gradient of the attached drain hose should be within 75mm so that the drain hole doesn't has to endure the unnecessary outside force(as Fig.12).

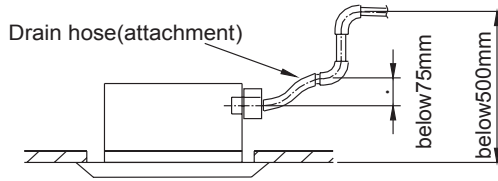


Fig.12

Please install the drain hose according to the following process if several drain hoses join together(as Fig. 13).

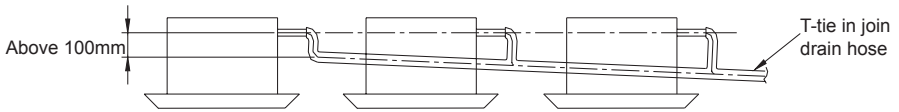


Fig.13

- ❗ The incline of attached drain hose ① should be 75 mm or less, so that the drainage socket does not have to stand additional force.
- ❗ Select converging drainage pipes whose gauge is suitable for the operating capacity of the unit.

## 7.2 Check drainage water flows smoothly

After finishing installation, check if drainage water flows smoothly. Add approximately 600cc of water to the drainage through Test holet or inspection hole slowly and check drainage flow(as Fig.14).

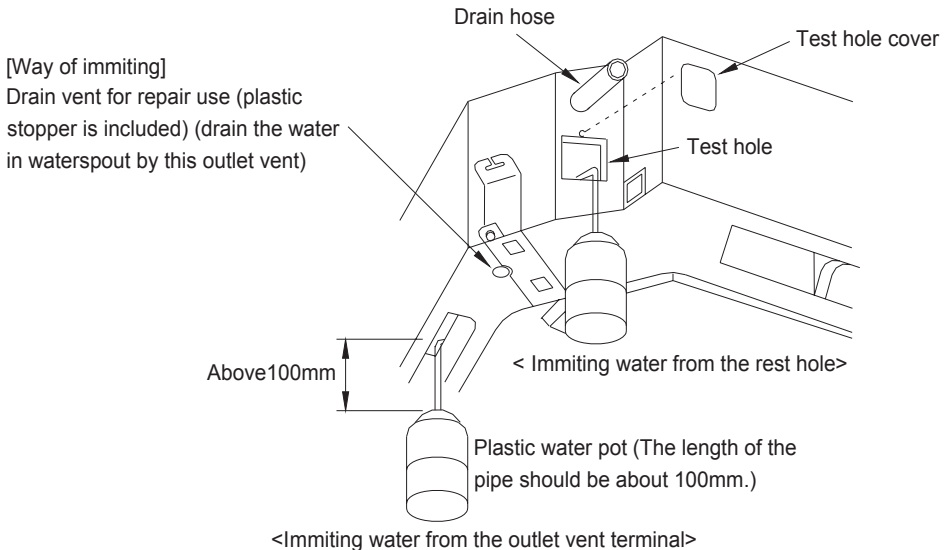


Fig.14

## 8 Connecting the pipes

⚠ Be sure to use both a spanner and wrench together as shown in the figure when connecting or disconnecting pipes to/from the unit.

- (1) The pipe of water-in/out is pipe thread G3/4". The surface of thread should be enlaced by the two or three trap (as Fig.15~16).
- (2) After the water-in/out pipe and water-out pipe is connected tightly, start the water pump, and ther, check its airproof performance.
- (3) Insulate it as shown in the figur below.

Use sealing pad to wrap the water-in/out : pipe and the insulation .

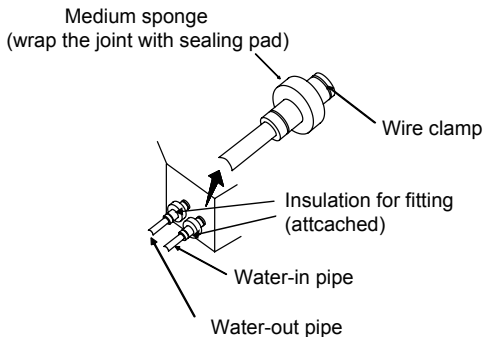


Fig.15

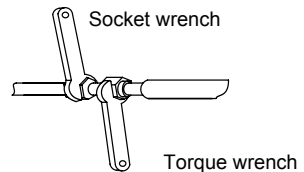


Fig.16

## 9 Motorized valve

- ⚠ All units must be equipped with a motorized valve .
- ⚠ There would be a water flood risk for some units without motorized valves .
- ⚠ 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.
- ⚠ The unit don't supply with the motorized valve. All uses buy it themselves for their units .

### 9.1 Technical and operational Instructions

⚠ The mtorized valve used for the unit could be 3-way or 2-way .The real used for it should agree with the tatol air conditioner system.

⚠ The figures in this manual may be different with the material objects, please refer to the material objects in the unit's fixed and used.

The working principle of the mtorized valve is as Fig.17

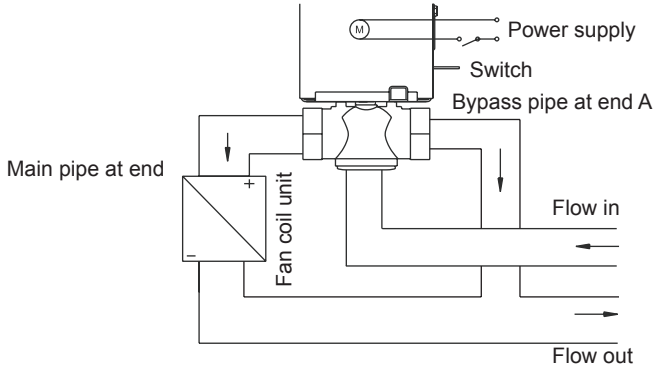


Fig.17

When to manually start the valve, please carefully push the manual haft to the outside, and when the haft is ever the slot, then softly push it down and then the valve is in the open condition ,when to push the haft upward, the valve will return to its position at the help of its own spring .At this time, the valve is now in normal condition again.

## 9.2 Installation

- (1) The installation of the motorized valve should be done according as Fig.18. 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.

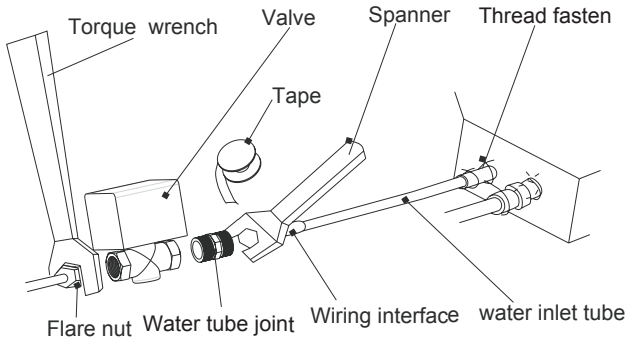


Fig.18

- (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.



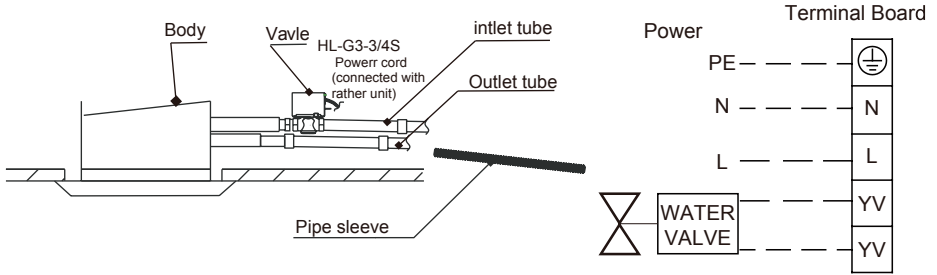


Fig.19

### 9.3 Electric wiring

The electric wiring of the valve should be according with the Fig.25

⊘ 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.20).

Water valve wire  
Water tube  
Sponge

Fig.20

Ⓜ 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.21).

Water valve wire  
PVC pipe sleeve  
Water tube  
Sponge

Fig.21

⊘ 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.22).

Fig.22

Ⓜ The right way is placing the valve core in the proper position and letting the leading wire pointing at the unit(as Fig.23).

Fig.23

Sponge

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.24).

Fig.24

## 10 Electric wiring

- ❗ Before obtaining access to terminals, all supply circuits must be disconnected.
- ❗ All field supplied parts and materials must conform to local laws and regulations.
- ❗ For wiring must be performed by skilled technician.
- ❗ A circuit breaker capable of shutting down power supply to the entire system and which have at least 3mm contact separation in each jole must be install in the fixed wiring.
- ❗ Earth properly.
- ❗ Waring must conform to national laws and regulations.
- ❗ The fixed wiring must be installed with a protector with not more than 30 mA leakage current.
- ❗ If the supply cord is damaged, it must be replaced by the manufactory or its service agents or a similarty qualified pcrson in order to avoid a hazard.
- ❗ After the installation of the water tube and motorized valve is finished, connect the wire of the motorized valve to the unit shown as Fig.19.

### 10.1 Wiring of unit and the controller

❗ the "WIRING DIAGRAM" in the manual is reference. The correct wiring should agree with the "WIRING DIAGRAM "on controller box of the unit.

1) Remove the control box lid (1). Pull the wires inside through rubber bush I and wiring according to the " WIRING DIAGRAM ", then tighten it with clamp.After wiring, tighten it with clamp and fix the control box lid(1).(2) (as Fig.25~26).

2) When the wiring is completed, take a careful check and then start the water pump and unit to see if the motorized valve works normally.

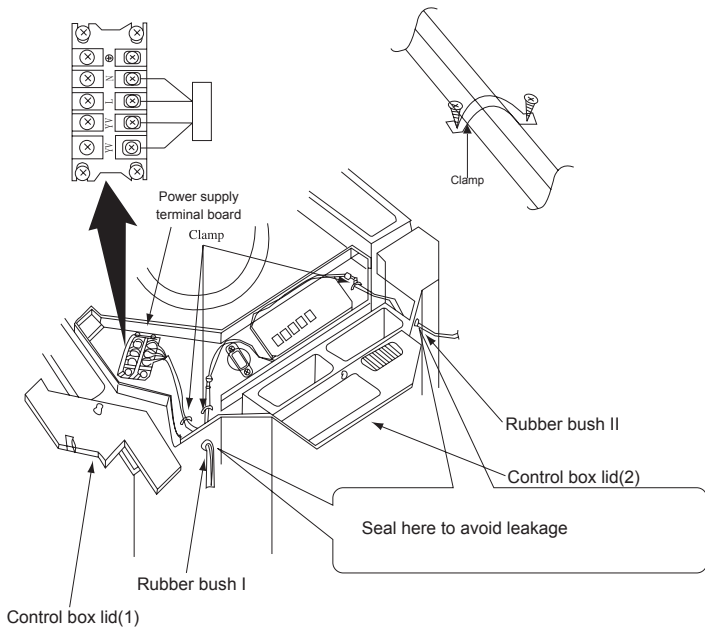


Fig.25

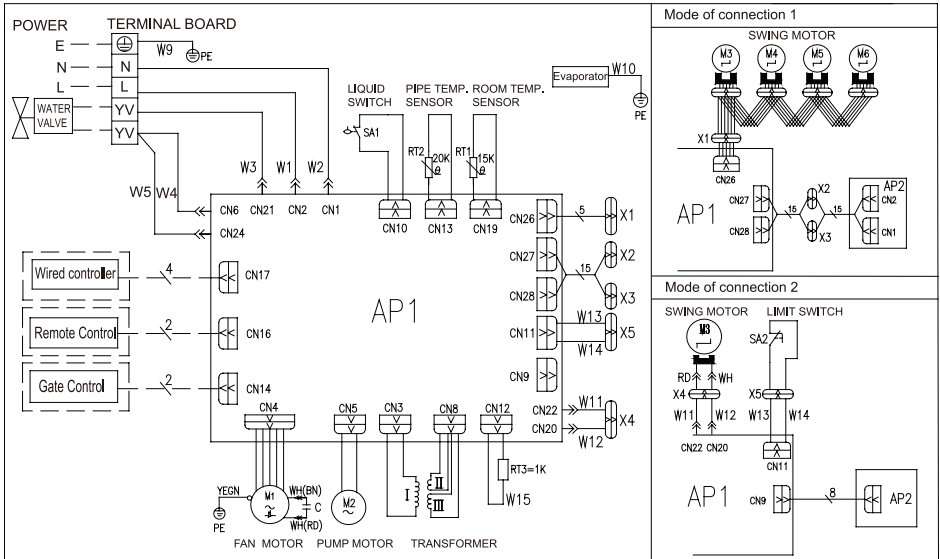


Fig.26

**Attention:**

The Wired controller, Remote control system and Gate control system are the optional accessories.

The maximal capacity of the output signal CN6 or CN24 of the water valve is 5A.

The broken lines is for field connection.

## 11 Installation of the panel

Note: The FCUs can be equipped with T01 or TB03 panel.

- (1) Set the panel to the unit body by matching the position of the swing flap motor of the decoration panel to the piping position of the panel to the piping position of the unit as shown in Fig.27.
- (2) Install the decoration panel.
  - 1) Hang the latch, which is located on the opposite side of the swing flap motor on the panel, temporarily to the book of the unit. (2 positions)
  - 2) Temporarily hang the remaining 2 latches to books on the sides of the unit. (be careful not to let the swing motor lead wire get caught in the sealing material.)
  - 3) Screw all 4 hexagon head screws located right beneath the latches in approximately 15 mm. (panel will rise)
  - 4) Adjust the panel by turning it to the arrowed direction in Fig.28 so that the ceiling opening is completely covered.
  - 5) Tighten the screws until the thickness of the sealing material between the panel and the unit body is reduced to 5~8 mm.

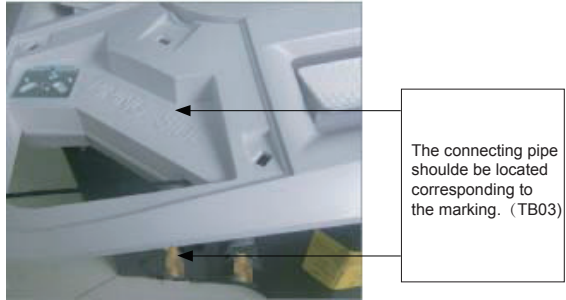


Fig.27

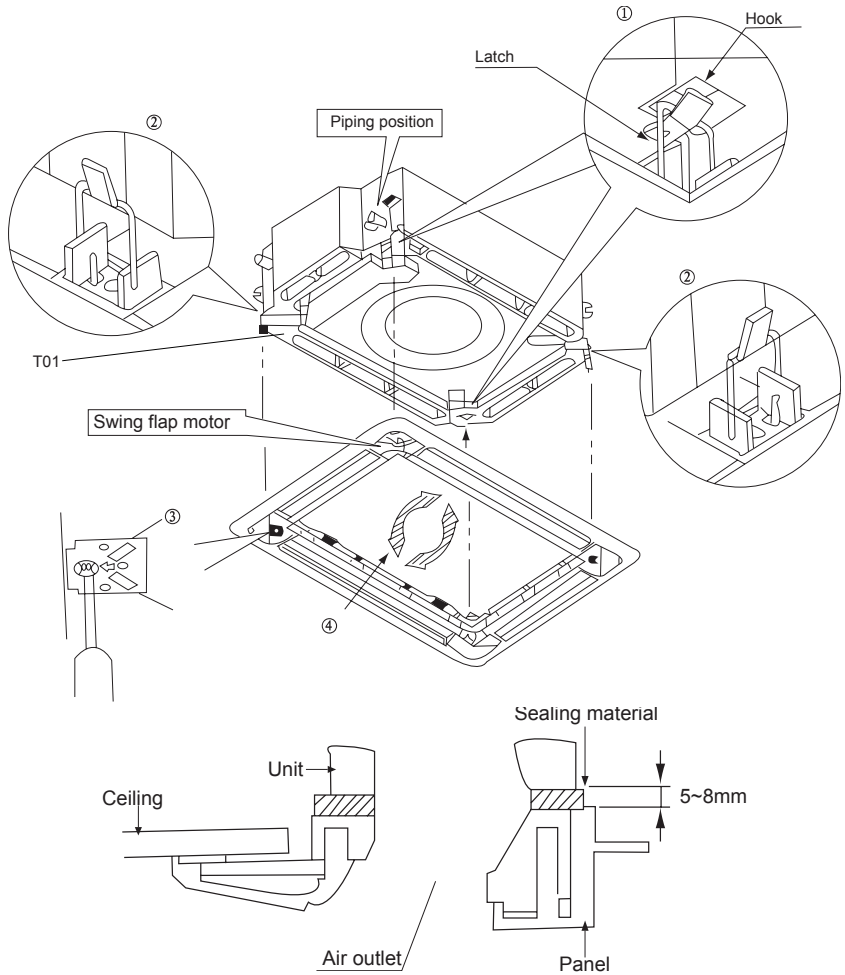


Fig.28

(1) Improper screwing of the screws may cause the troubles shown in Fig.29.

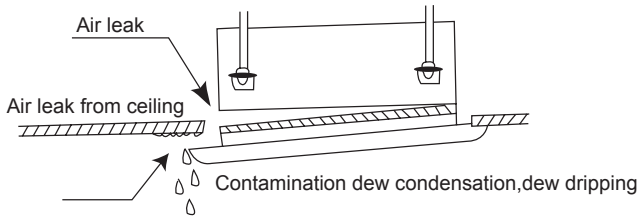


Fig.29

(2) If gap is still left between the ceiling and the panel after screwing the screws, readjust height of the indoor unit body. (Refer to Fig.30)

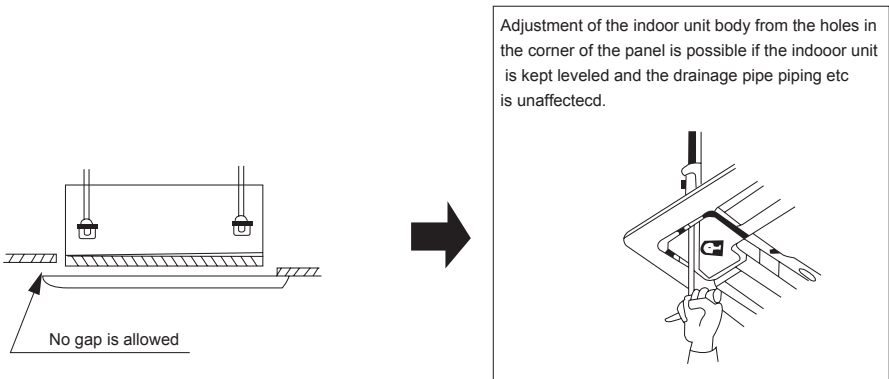


Fig.30

After fixing, be sure no gap left between the ceiling and the panel.

(3) Wiring of the decoration panel.

- 1) Connect the joints for display on the panel to the main board.
- 2) Connect the joints for swing flap motor lead wire installed on the panel. (Refer to Fig.31)

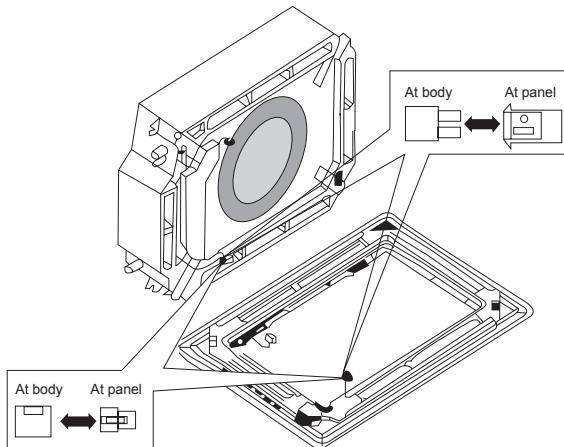


Fig.31

## 12 Test operation

### 12.1 Prepare for test

- (1) Do not turn on the power switch before all installation is finished.
- (2) Connect wires correctly and firmly.
- (3) Remove all dust.
- (4) Using the tool screws down the valve pin, as follow Fig 32.

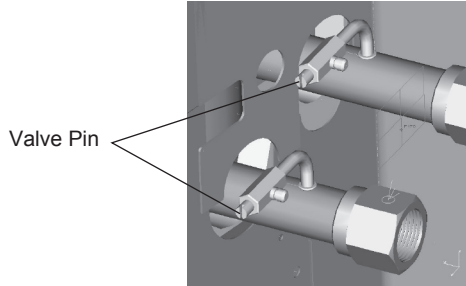


Fig 32

### 12.2 Testing

- (1) Turn on the power switch and press ON/OFF button of the remote controller.
- (2) Press MODE button select COOL, HEAT, FAN, etc to test whether it operates normally.
- (3) For the following items, take special care during construction and check after installation is finished.

Items to check.	If not properly done, what is likely to happen.	Check
Is the unit fixed firmly? Is the unit fully insulated?	The unit may drop, vibrate or make noise. Condensate water may drip.	
Does drainage flow smoothly. Does the power supply voltage correspond to that shown on the nameplate?	Condensate water may drip. The unit may malfunction or the components burn out.	
Are wiring and piping correct?	The unit may malfunction or the components burn out.	
Is the unit safely grounded? Is wiring size according to specifications?	Risk of electric leakage. The unit may malfunction or the components burn out.	

## 13 Care and maintenance

- ⚠ Pull out power plug before plug cleaning.
- ⚠ Do not splash water directly to the unit.
- ⚠ The three air cleaner is optional.

How to clean the air filter

1) Open the grill of the unit (TB03)(as Fig.33~35).

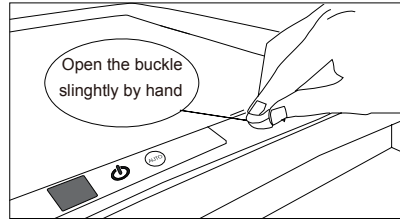


Fig.33

Loosen the screw under the buckle with a screw driver.

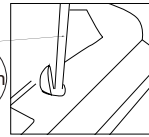


Fig.34

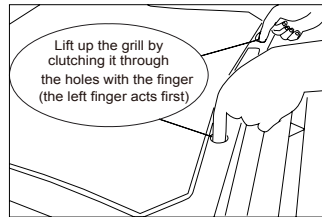


Fig.35

1) Open the grill of the unit(T01) (as Fig.36)

Open the suction grille Slide both knobs simultaneously as shown and then pull them downward slowly.

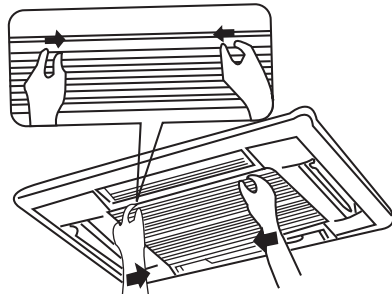
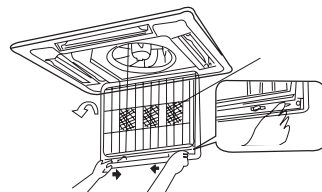
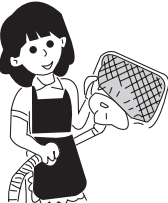
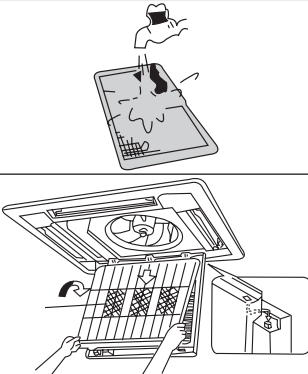


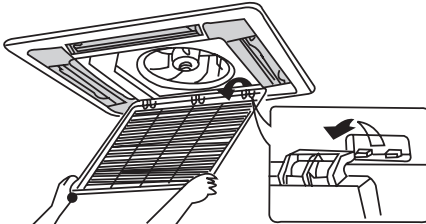

Fig.36

2). Remove the air filters.  
Slide knobs on the back of the suction grille.  
Outward and remove the air filter.  
Then remove three air cleaners on it.



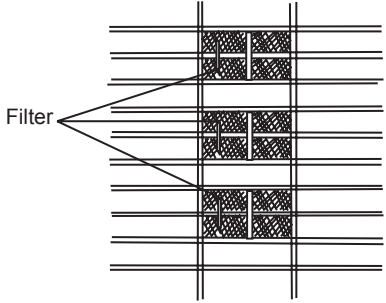
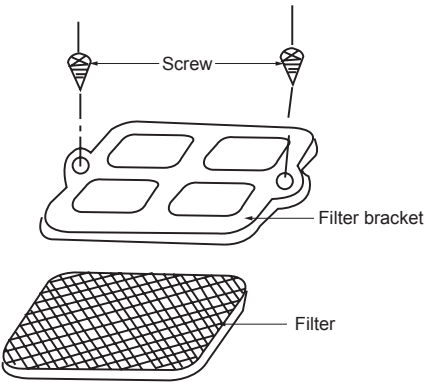
# Cassette Type Fan Coil Unit

<p>3) Clean the air filter.</p> <p>Use vacuum or wash the air filter with water when the air filter is very dirty, use neutral detergent and water. Let the filter dry naturally at shady place.</p> <ul style="list-style-type: none"> <li>⊘ Do not clean with Hot water.</li> <li>⊘ Do not dry over fire.</li> <li>⊘ Do not run the air conditioner without the air filter.</li> <li>⊘ The suction grille must be opened by skilled personnel.</li> </ul>	
<p>4) Fix the air filters</p> <p>Fix three air cleaner on the air and then fix the air filter to the suction grille by hanging it to the project portion above suction grille. Set air filter by sliding the knob the back of the suction grille inward.</p>	
<p>5) Shut the suction grille.</p>	<p>Refer to step 1.</p>

How to clean the suction grille	
<p>1) Open the suction grille.</p>	<p>See step 1 of "How to clean the air filter".</p>
<p>2) Remove the air filters.</p>	<p>See step 2 of "How to clean the air filter".</p>
<p>3) Remove the suction grille.</p> <p>Open the suction grille at 45° and then lift.</p>	
<p>4) Wash with water.</p> <p>When the suction grille is very dirty ,use soft brush and neutral detergent. Shake off water and dry in a shady place.</p> <ul style="list-style-type: none"> <li>⊘ Do not wash with hot water.</li> </ul>	
<p>5) Fix the suction grille.</p>	<p>Refer to step 3.</p>
<p>6) Fix the air filter.</p>	<p>See step4 of "How to clean the air filter".</p>
<p>7) Close the suction grille.</p>	<p>Refer to step 1.</p>



Changing air cleaner

1) Open the suction grille.	See step 1 of "How to clean the air filter".
2) Remove the air cleaner.	
3) Take off packing bag and put in new static electricity fiber filter, then fix them on the bracket filter.	
4) Fix the air filter	See step 4 of "How to clean the air filter".
Air cleaner functions and service cycle time	
<p>Absorbs bad smell in air such as carbon monoxide carbon dioxide, benzyl, gasoline and so on.</p> <p>Absorbs harmful objects bigger than 1.0 um in air such as dust, germ, virus and so on.</p> <p>It can be used for about half a year to one year.</p>	

## 14 Parameters of the unit

Model	51CA04C27-085DWT	51CA06C27-102DWT	51CA08C27-125DWT	51CA10C27-140DWT
Cooling capacity(W)	4500	5000	6000	8000
Heating capacity(W)	5600	6500	7800	9000
Air flow(m <sup>3</sup> /h)	800	1020	1180	1400
Noise(dB(A))	39	49	43	50
Power supply	220-240V~50Hz	220-240V~50Hz	220-240V~50Hz	220-240V~50Hz
Anti-electric shock protect type	I	I	I	I
Main unit outline dimension(mm) (W×D×H)	840×840×190	840×840×190	840×840×240	840×840×240
T01 panel outline dimension (mm)(W×D×H)	950×950×60	950×950×60	950×950×60	950×950×60
TB03 panel outline dimension(mm) (W×D×H)	950×950×85	950×950×85	950×950×85	950×950×85

Model	51CA12C27-160DTW	51CA14C27-180DTW	51CA16C27-200DTW
Cooling capacity(W)	8700	9500	13000
Heating capacity(W)	10000	11000	14600
Air flow(m <sup>3</sup> /h)	1550	1800	2000
Noise(dB(A))	51	50	55
Power supply	220-240V~50Hz	220-240V~50Hz	220-240V~50Hz
Anti-electric shock protect type	I	I	I
Main unit outline dimension(mm) (W×D×H)	840×840×240	840×840×320	840×840×320
T01 panel outline dimension(mm) (W×D×H)	950×950×60	950×950×60	950×950×60
TB03 panel outline dimension(mm) (W×D×H)	950×950×85	950×950×85	950×950×85

- (1) The FCU designed for installation indoor. The environmental temperature is from 5°C to 43°C, water working temperature is from 7°C to 60°C.
- (2) The temperature exchange efficiency and enthalpy exchange efficiency are tested under these testing conditions as below:
  - 1) Cooling capacity: air: DB: 27°C, WB: 19°C, water temperature: intake: 7°C, outlet: 12°C.
  - 2) Heating capacity: air: DB: 21°C, Water temperature: intake: 50, outlet: 40°C.
  - 3) freeze-up: air: DB: 27°C, WB: 24°C, water temperature: intake: 6°C, outlet: 10°C.
  - 4) Sound power level according to ISO 5151. Sound pressure level are calculated at the below of air-outlet 1m and 1m distance. The noise are tested before leaving factory.
- (3) Parameter data of specification aren't subject to change with the actual data on the nameplate.

Model	51CA04C22-085DWT	51CA06C22-102DWT	51CA08C22-125DWT	51CA10C22-140DWT
Cooling capacity(W)	4600	5400	6300	8000
Heating capacity(W)	7800	9000	10000	12000
Air flow(m <sup>3</sup> /h)	780	1020	1130	1350
Noise(dB(A))	39	49	43	48
Power supply	208-230V~ 60Hz	208-230V~ 60Hz	208-230V~ 60Hz	208-230V~ 60Hz
Anti-electric shock protect type	I	I	I	I
Main unit outline dimension(mm) (W×D×H)	840×840×190	840×840×190	840×840×240	840×840×240
T01 panel outline dimension(mm)(W×D×H)	950×950×60	950×950×60	950×950×60	950×950×60
TB03 panel outline dimension(mm)(W×D×H)	950×950×85	950×950×85	950×950×85	950×950×85

Model	51CA12C22-160DTW	51CA14C22-180DTW	51CA16C22-200DTW
Cooling capacity(W)	9000	10000	13000
Heating capacity(W)	14000	16000	19000
Air flow(m <sup>3</sup> /h)	1550	1800	2000
Noise (dB(A))	51	50	55
Power supply	208-230V~ 60Hz	208-230V~ 60Hz	208-230V~ 60Hz
Anti-electric shock protect type	I	I	I
Main unit outline dimension(mm) (W×D×H)	840×840×240	840×840×320	840×840×320
T01 panel outline dimension(mm)(W×D×H)	950×950×60	950×950×60	950×950×60
TB03 panel outline dimension(mm)(W×D×H)	950×950×85	950×950×85	950×950×85

- (1) The FCU designed for installation indoor. The environmental temperature is from 5°C to 43°C, water working temperature is from 7°C to 60°C;
- (2) The temperature exchange efficiency and enthalpy exchange efficiency are tested under these testing conditions as below:
  - 1) Cooling capacity: air: DB: 27°C, WB: 19.5°C, water temperature: intake: 7°C, outlet: 12°C.
  - 2) Heating capacity: air: DB: 21°C, Water temperature: intake 60°C, the water-flow volume is same as Cooling capacity.
  - 3) Freeze-up: air : DB: 27°C, WB: 24°C, water temperature: intake: 6°C, outlet: 9°C.
  - 4) Sound power level according to ISO 5151. Sound pressure level are calculated at the below of air-outlet 1m and 1m distance. The noise are tested before leaving factory.
- (3) Parameter data of specification aren't subject to change with the actual data on the nameplate.

Thank you for Choosing



---

[www.delta-dct.com](http://www.delta-dct.com)