





19 SLEEP icon :

 is displayed by pressing the SLEEP button. Press this button again to clear the display.


20 TEMP icon:

Pressing TEMP button,  (set temperature),  (ambient temperature),  (outdoor ambient temperature) and blank is displayed circularly.


21 Up & down swing icon:

 is displayed when pressing the up & down swing button. Press this button again to clear the display.

22 LIGHT icon:

 is displayed by pressing the LIGHT button. Press LIGHT button again to clear the display.

23 LOCK icon:

 is displayed by pressing "+" and "-" buttons simultaneously. Press them again to clear the display.

24 SET TIME display:

After pressing TIMER button, ON or OFF will blink. This area will show the set time.

25 TURBO icon:

 is displayed when pressing the TURBO button. Press this button again to clear the display.

26 DIGITAL display:

This area will show the set temperature. In SAVE mode, "SE" will be displayed. During defrosting operation, "H1" will be displayed.

27 AIR icon:

 is displayed when pressing the AIR button. Press this button again to clear the display.

28 I FEEL icon:

 is displayed when pressing the I FEEL button. Press this button again to clear the display.

29 FAN SPEED display:

Press FAN button to select the desired fan speed setting (AUTO Low-Med-High). Your selection will be displayed in the LCD windows, except the AUTO fan speed.

30 HEALTH icon:

 is displayed when pressing the HEALTH button. Press this button again to clear the display.

31 X-FAN icon:

 is displayed when pressing the X-FAN button. Press this button again to clear the display.

1 ON/OFF:

Press this button to turn on the unit. Press this button again to turn off the unit.




2 -:

Press this button to decrease set temperature. Hold it down for above 2 seconds to rapidly decrease set temperature. In AUTO mode, set temperature is not adjustable.

3 +:

Press this button to increase set temperature. Hold it down for above 2 seconds to rapidly increase set temperature. In AUTO mode, set temperature is not adjustable.

4 FAN :

This button is used for setting Fan Speed in the sequence that goes from AUTO, , ,  to then back to Auto.



5 MODE :

Each time you press this button, a mode is selected in a sequence that goes from AUTO, COOL, DRY, FAN, and HEAT \*, as the following:



\*Note: Only for models with heating function.

After energization, AUTO mode is defaulted. In AUTO mode, the set temperature will not be displayed on the LCD, and the unit will automatically select the suitable operation mode in accordance with the room temperature to make indoor room comfortable.

**6 I FEEL:**

Press this button to turn on I FEEL function. The unit automatically adjust temperature according to the sensed temperature. Press this button again to cancel I FEEL function.



**7 **

Press this button to set HEALTH function ON or OFF. After the unit is turned on, it defaults to HEALTH function ON.

**8 **


Press this button to select AIR function ON or OFF.

**9 CLOCK :**

Pressing CLOCK button,  blinks. Within 5 seconds, pressing + or - button adjusts the present time. Holding down either button above 2 seconds increases or decreases the time by 1 minute every 0.5 second and then by 10 minutes every 0.5 second. During blinking after setting, press CLOCK button again to confirm the setting, and then  will be constantly displayed.

**10 TIMER ON :**

















Press this button to initiate the auto-ON timer. To cancel the auto-timer program, simply press this button again.

After pressing this button,  disappear sand " ON " blink s . 00:00 is displayed for ON time setting. Within 5 seconds, press + or - button to adjust the time value. Every press of either button changes the time setting by 1 minute. Holding down either button rapidly changes the time setting by 1 minute and then 10 minutes. Within 5 seconds after setting, press TIMER ON button to confirm.


**11 **

Press this button to set up & down swing angle, which circularly changes as below:




This remote controller is universal. If any command , or is sent out, , ,  the unit will carry out the command as   indicates the guide louver swings as:          

**12 X-FAN:**

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.

**13 TEMP:**

Press this button, could select displaying the indoor setting temperature or indoor ambient temperature. When the indoor unit firstly power on it will display the setting temperature, if the temperature's displaying status is changed from other status to "  ", displays the ambient temperature, 5s later or within 5s, it receives other remote control signal that will return to display the setting temperature. if the users haven't set up the temperature displaying status, that will display the setting temperature.

**14 TIMER OFF :**

Press this button to initiate the auto-off timer. To cancel the auto-timer program, simply press the button again. TIMER OFF setting is the same as TIMER ON.

**15 TURBO:**

Press this button to activate / deactivate the Turbo function which enables the unit to reach the preset temperature in the shortest time. In COOL mode, the unit will blow strong cooling air at super high fan speed. In HEAT mode, the unit will blow strong heating air at super high fan speed.



**16 SLEEP:**

Press this button to go into the SLEEP operation mode. Press it again to cancel this function. This function is available in COOL, HEAT (Only for models with heating function) or DRY mode to maintain the most comfortable temperature for you.

**17 LIGHT:**

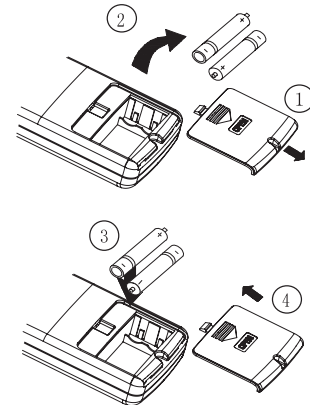
Press LIGHT button to turn on the display's light and press this button again to turn off the display's light. If the light is turned on,  is displayed. If the light is turned off,  disappears.

**18** Combination of "+" and "-" buttons: About lock

Press "+" and "-" buttons simultaneously to lock or unlock the keypad. If the remote controller is locked,  is displayed. In this case, pressing any button,  blinks three times.

**19** Combination of "MODE" and "-" buttons: About switch between Fahrenheit and Centigrade At unit OFF, press "MODE" and "-" buttons simultaneously to switch between  and .
**Replacement of Batteries**

1. Remove the battery cover plate from the rear of the remote controller.  
(As shown in the figure)
2. Take out the old batteries.
3. Insert two new AAA1.5V dry batteries, and pay attention to the polarity.
4. Reinstall the battery cover plate.



Sketch map for replacing batteries

**Notes:**

- When replacing the batteries, do not use old or different types of batteries, otherwise, it may cause malfunction.
- If the remote controller will not be used for a long time, please remove batteries to prevent batteries from leaking.
- The operation should be performed in its receiving range.
- It should be kept 1m away from the TV set or stereo sound sets.
- If the remote controller does not operate normally, please take the batteries out and reinsert them after 30 seconds. If it still can't operate properly, replace the batteries.

## 6.2 Description of Each Control Operation

### 1 Temperature Parameters

- ◆ Indoor preset temperature ( $T_{\text{preset}}$ )
- ◆ Indoor ambient temperature ( $T_{\text{amb}}$ )

### 2 Basic functions (The temperature in this manual is expressed by Centigrade. If Fahrenheit, is used, the switchover between them is $T_f = T_c \times 1.8 + 32$ .)

Once the unit is energized, the compressor shall never be restarted except 3mins interval at least. For the first energization, if the unit is at off status before power failure, the compressor can be restarted without 3-min delay. But if the unit is at on status before power failure, the compressor shall be restarted with 3mins delay. Once the compressor is started up, the compressor won't stop running within 6mins with the change of room temperature.

#### (1) Cooling mode

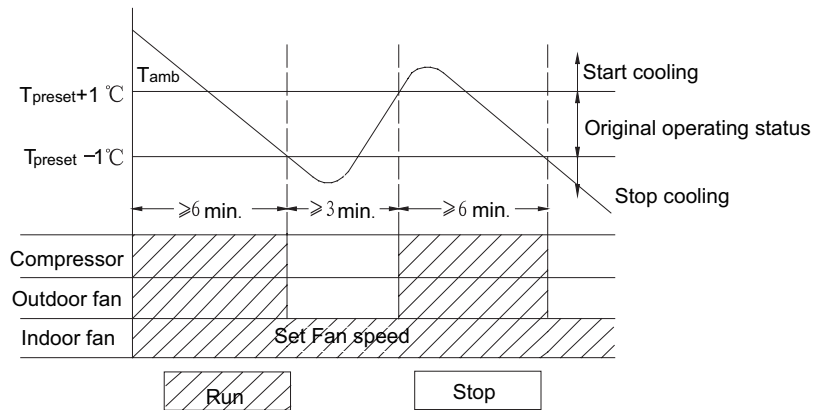
##### ① Cooling conditions and process

When  $T_{\text{amb}} \geq T_{\text{preset}} + 1^\circ\text{C}$ , the unit starts cooling operation. In this case, the compressor and the outdoor fan operate and the indoor fan operates at set speed.

When  $T_{\text{amb}} \leq T_{\text{preset}} - 1^\circ\text{C}$ , the compressor and the outdoor fan stop while the indoor fan at set speed.

When  $T_{\text{preset}} - 1^\circ\text{C} < T_{\text{amb}} < T_{\text{preset}} + 1^\circ\text{C}$ , the unit will maintain its previous running state.

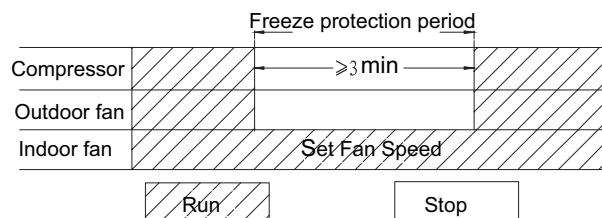
In cooling mode, the four-way valve is de-energized; temperature setting range is  $16 \sim 30^\circ\text{C}$ ; the indoor unit displays operation icon, cooling icon and set temperature.



##### ② Protection Functions

##### ◆ Freeze protection

If the system is under freeze protection, the compressor and the outdoor fan stop operation, and the indoor fan operates at set speed. If freeze protection is eliminated and the compressor has been out of operation for 3 minutes, the unit will resume its previous running state.



③Overcurrent Protection

If the system current exceeds the specified value, the complete unit will stop operation except for the indoor fan. After 3 minutes, if the overcurrent is eliminated, the complete unit will resume previous operation. If overcurrent protection occurs for 6 successive times, the complete unit will stop operation except for the indoor fan. In this case, you are expected to turn off the unit with the remote controller and then restart. During overcurrent protection, the indoor unit displays error code “E5”; the operation indicator blinks (OFF 3 seconds and blinks 5 times).

④High voltage protection

If the high voltage switch is cut off, the unit will enter high voltage protection, all the loads will be closed and all signals of buttons and remote controller will be shielded; if the high voltage protection is eliminated, the shield of signal will be canceled. In this case, you are expected to turn off the unit with the remote controller and then restart; during high voltage protection, the indoor unit displays error code “E1” and the operation indicator blinks (OFF 3 seconds and blinks once).

⑤Low voltage protection

The low voltage switch is cut off when the compressor does not operate; or the low voltage switch is detected cut off for twice during operating process and operating of compressor; the unit will enter low voltage protection and all the loads will be closed; In this case, you are expected to turn off the unit with the remote controller and then restart; during low voltage protection, the indoor unit displays error code “E3” and the operation indicator blinks (OFF 3 seconds and blinks three times).

(2)Dry Mode

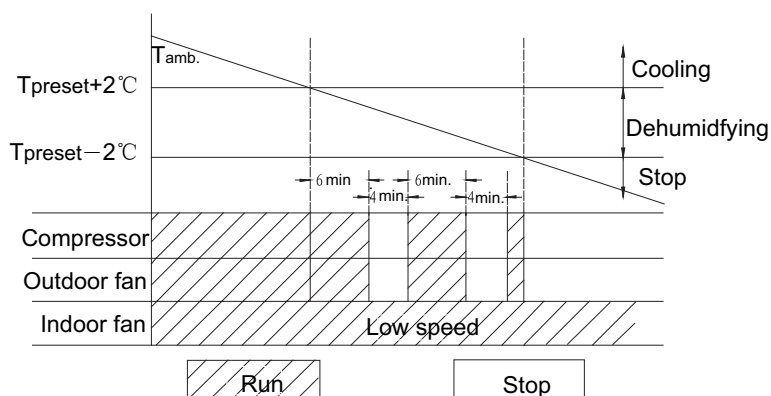
①Dry Conditions and Process

When  $T_{amb.} > T_{preset} + 2^{\circ}C$ , the unit will run in dry and cooling mode, in that case the compressor and outdoor fan will run and the indoor fan will run at low speed.

When  $T_{preset} - 2^{\circ}C \leq T_{amb.} \leq T_{preset} + 2^{\circ}C$ , the unit will run in dry mode, in that case, the indoor fan will run at low speed, the compressor and the outdoor fan will be stopped in 6 min. After 4 min, the compressor and the outdoor fan will be restarted. Dry process is cycled as the above.

When  $T_{amb.} < T_{preset} - 2^{\circ}C$ , the compressor and the outdoor fan will stop working and the indoor fan will run at low speed.

In this mode, the four-way valve is de-energized, and setting temperature range is between  $16 \sim 30^{\circ}C$ . The displayer will display running and drying icons and setting temperature.



②Protection

◆Freeze protection

If freeze protection of the system is detected in dry and cooling mode, the compressor and the outdoor fan will stop running and the indoor fan will run at low speed. When the freeze protection is released and the compressor has been stopped for 3 min, the complete unit will resume its previous running state. Upon the condition that the compressor runs for 6 min and stops for 4 min is met and freeze protection is detected, the compressor and the outdoor fan will stop running and the indoor fan will run at low speed. When the freeze protection is released and the compressor has been stopped for 4 min, the complete unit will resume its previous running state.

③Other protection

Other protections are the same as those in cooling mode.

(3) Heating mode (cooling only unit is not available)

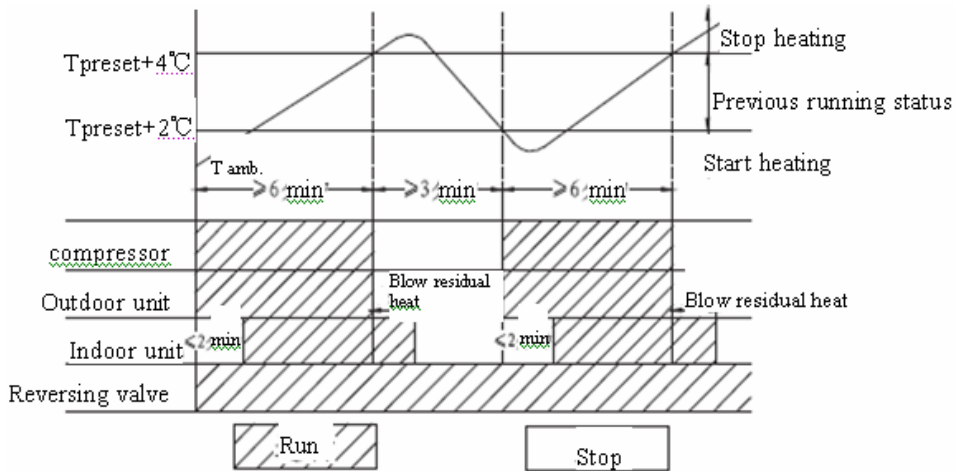
① Heating conditions and process

When  $T_{amb.} \leq T_{preset} + 2^{\circ}C$ , the unit will run in heating mode, in that case, the four-way valve, the compressor and the outdoor fan will run simultaneously. The indoor fan will delay at most 2mins to run. The indoor fan will run 2 mins delayed at most.

When  $T_{amb.} \geq T_{preset} + 4^{\circ}C$ , the compressor and the outdoor fan will stop and the four-way valve will remain energized (keep energizing) and the indoor fan will blow residual heat.

When  $T_{preset} + 2^{\circ}C < T_{amb.} < T_{preset} + 4^{\circ}C$ , the unit will maintain its previous running state.

Under this mode, the four-way valve is energized, and setting temperature range is  $16 \sim 30^{\circ}C$ . The displayer will display running and heating icons and setting temperature.



② Defrosting Conditions and Process

The unit with intelligent defrosting function can defrost according to frosting conditions. Dual8 displays H1.

③ Protection Function

◆ High Temp Resistance Protection

If it is detected that the evaporator tube temperature is superheating, the outdoor fan will stop working. When the tube temperature resumes to normal condition, the outdoor fan will resume running.

If the outdoor ambient temperature is above  $16^{\circ}C$  when the compressor starts running, the outdoor fan starts running after 2min of the start-up of compressor.

◆ Noise Silencing Protection

If the unit is stopped by pressing ON/OFF or during switchover of modes, the reversing valve will be stopped after 2 min.

When the unit is first energized, the reversing valve starts after 20s of the start-up of compressor.

④ Overcurrent protection, high voltage protection, low voltage protection, discharge protection

Overcurrent protection is then same as the overcurrent protection in cooling mode.

(4) Fan mode

In this mode, indoor fan runs at setting speed, and the compressor, the outdoor fan, the four-way valve and the electric heating tube will stop running.

In this mode, temperature setting range is  $16 \sim 30^{\circ}C$ . Displayer displays running icons and the setting temperature.

(5) Auto Mode

In this mode, the air conditioner will automatically select its running mode (cooling, heating or fan) with the change of ambient temperature. The displayer will display the running icons, actual running mode icon and setting temperature. Protection functions are the same as those in any other mode.

### 3 Other Control

#### (1) Timer function

The mainboard combines general timer and clock timer functions. Timer functions are selected by equipping remote controller with different functions.

##### ① General Timer:

Timer ON can be set under off state of unit. If timer ON reaches, the controller will run under previous setting mode. Timing interval is 0.5hr and the setting range is 0.5-24hr.

Timer OFF can be set under on state of unit. If timer OFF reaches, the unit is turned off. Timing interval is 0.5hr within the range of 0.5-24hr.

##### ② Clock Timer:

If timer on is set under running state of unit, the system will continue running. If timer on is set under off state of unit, the system will run in presetting mode when timer on reaches.

If timer off is set under off state of unit, the system will keep standby state. If timer off is set under on state of unit, the system will stop running when timer off reaches.

##### Timer Change:

If the system is under timer state, the unit can be turned on/off by ON/OFF button of remote controller. Timing can also be reset and then the system runs according to the final setting.

If timer on and timer off is set at the same time under running state of system, the system will keep present running state till timer off reaches and then it will stop running.

If timer on and timer off are set at the same time under off state of system, the system will keep stopping till timer on reaches and then it will start running.

In the future, the system will run in presetting mode when timer on reaches and stop when timer off reaches every day. If timer on and timer off have the same setting, timer off is prevails.

#### (2) Auto Button

If press this button, the system will run in auto mode, and the indoor fan motor will run at auto speed; meanwhile, the swing motor will be running. Repress this button to turn off the unit.

#### (3) Buzzer

When the controller is energized or receives any command or signal from the buttons or the remote controller, the buzzer will give out a beep.

#### (4) Sleep Function

Choose the sleeping curve according to the preset temperature.

#### (5) Dry Function

This function can be set in cooling or dry mode.

#### (6) Automatic Control of Fan Speed

In this mode, the indoor fan will automatically select high, medium or low speed with the change of ambient temperature.

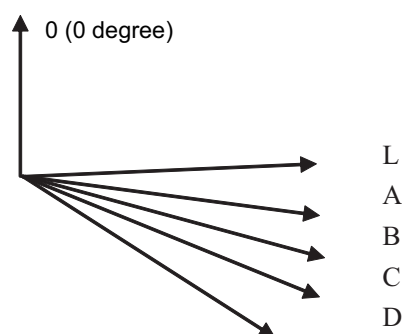
#### (7) Up & Down Swing

After energization, up & down swing motor will rotate guide louver anticlockwise to position 0 to close air outlet.

After turning on the unit, if swing function has not been set, up & down guide louver will clockwise turn to position D in heating mode, or clockwise turn to level position L in other modes.

If the unit is turned on with swing function setting, the guide louver will swing between W and D. There are 7 kinds of swing states of guide louver: There are position L, A, B, C, D, and it swings and stops between L and D ( angle between L and D is equiangular). Upon stop of unit, the guide louver will close to position O. Swing action is valid only when swing command is set and indoor fan is running.

Note: If the position is set between L and B, A and C or B and D by remote controller, the guide louver will swing between L and D.



### (8) Display

#### ① Running icon and Mode icon

Upon energization, the unit will display all icons. Under standby state, running indicating icon is displayed in red. If the unit is started by remote controller, running indicating icon gives off light; Meanwhile, the present setting running mode icon will be displayed (mode LED: cooling, heating and dry mode). If the light button is turned off, all icons display will be closed.

#### ② Dual-8 Display

After starting the unit for the first time, the nixie tube will display present setting temperature in default (16-30°C) the nixie tube will default to display the preset temperature. When displaying setting temperature signal is received, the nixie tube will display setting temp. If displaying ambient temperature signal is received, the nixie tube will display present indoor ambient temperature. If other states are set by remote controller, the display will keep previous. If remote controller receives valid signal during displaying ambient temperature, ambient temperature will be displayed after setting temperature is displayed for 5s. F1 is displayed for ambient temperature sensor malfunction, F2 for tube temp sensor malfunction of indoor unit and C5 for jumper cap has malfunction. Some models: The remote controller will display present setting temp when this display is set. The controller will display ambient temp for 5s and then setting temp only when indoor ambient temp displaying state is switched from other displaying states by remote controller.

### (9) Power-off memory

Memory content includes mode, up&down swing, light, setting temp and setting fan speed.

## 4. Special functions

### (1) I Feel function

When I FEEL command is received, the controller will operate according to the ambient temperature sent by the remote controller (For defrosting and cold blow prevention, the unit operates according to the ambient temperature sensed by the air conditioner). The remote controller will regularly send ambient temperature data to the controller. When the data has not been received for a long time, the unit will operate according to the temperature sensed by the air conditioner. If I FEEL function is not selected, the ambient temperature will be that sensed by the air conditioner. I FEEL function is not to be memorized.



## 7. Installation Manual

### 7.1 Notices for installation

#### ! Caution

- 1.The unit should be installed only by authorized service center according to local or government regulations and in compliance with this manual.
- 2.Before installing, please contact with local authorized maintenance center. If the unit is not installed by the authorized service center, the malfunction may not be solved due to inconvenient contact between the user and the service personnel.
- 3.When removing the unit to the other place, please firstly contact with the local authorized service center.
- 4.Warning: Before obtaining access to terminals, all supply circuits must be disconnected.
- 5.For appliances with type Y attachment, the instructions shall contain the substance of the following. If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.
- 6.The appliance must be positioned so that the plug is accessible.
- 7.The temperature of refrigerant line will be high; please keep the interconnection cable away from the copper tube.
8. The instructions shall state the substance of the following:  
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.  
Children should be supervised to ensure that they do not play with the appliance.

#### 7.1.1 Installation Site Instructions

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

- strong heat sources, vapours, flammable gas or volatile liquids are emitted.
- high-frequency electro-magnetic waves are generated by radio equipment, welders and medical equipment.
- salt-laden air prevails (such as close to coastal areas).
- the air is contaminated with industrial vapours and oils.
- the air contains sulphures gas such as in hot spring zones.
- corrosion or poor air quality exists.

#### 7.1.2 Installation Site of Indoor Unit

- 1.The air inlet and outlet should be away from the obstructions. Ensure the air can be blown through the whole room.
- 2.Select a site where the condensate can be easily drained out, and where it is easily connected to outdoor unit.
- 3.Select a place where it is out of reach of children.
- 4.Select a place where the wall is strong enough to withstand the full weight and vibration of the unit.
- 5.Be sure to leave enough space to allow access for routine maintenance. The installation site should be 250cm or more above the floor.
- 6.Select a place about 1m or more away from TV set or any other electric appliance.
- 7.Select a place where the filter can be easily taken out.
- 8.Make sure that the indoor unit is installed in accordance with installation dimension instructions.
- 9.Do not use the unit in the laundry or by swimming pool etc.

#### 7.1.3 Installation Site of Outdoor Unit

1. Select a site where noise and outflow air emitted by the unit will not annoy neighbors.
2. S elect a site where there is sufficient ventilation.
3. Select a site where there is no obstruction blocking the inlet and outlet.
4. The site should be able to withstand the full weight and vibration.
5. Select a dry place, but do not expose under the direct sunlight or strong wind.
6. Make sure that the outdoor unit installation dimension should accord with installation dimension diagram, convenient for maintenance, repair.
7. The height difference of connecting the tubing within 10m, the length of connecting the tubing within 30m.
8. Select a place where it is out of reach for the children.
9. Select a place where the unit does not have negative impact on pedestrians or on the city.

### **7.1.4 Safety Precautions for Electric Appliances**

1. A dedicated power supply circuit should be used in accordance with local electrical safety regulations.
2. Don't drag the power cord with excessive force.
3. The unit should be reliably earthed and connected to an exclusive earth device by the professionals.
4. The air switch must have the functions of magnetic tripping and heat tripping to prevent short circuit and overload.
5. The minimum distance between the unit and combustible surface is 1.5m.
6. The appliance shall be installed in accordance with national wiring regulations.
7. An all-pole disconnection switch with a contact separation of at least 3mm in all poles should be connected in fixed wiring.

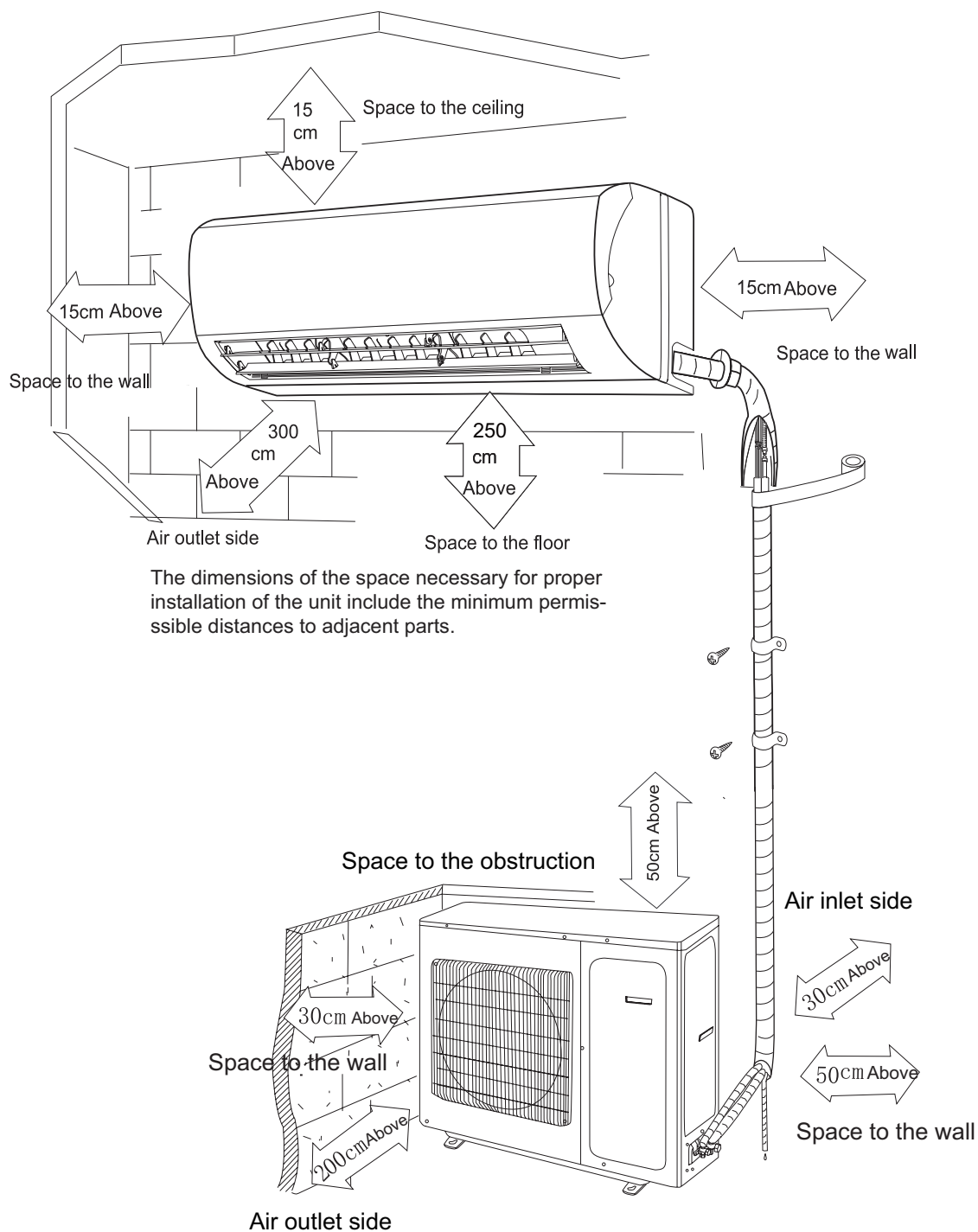
**Note:**

- Make sure the live wire, neutral wire and earth wire in the family power socket are properly connected. There should be reliable circuit in the diagram.
- Inadequate or incorrect electrical connections may cause electric shock or fire.

### **7.1.5 Earthing requirements**

1. Air conditioner is type I electric appliance, thus please do conduct reliable earthing measure.
2. The yellow-green two-color wire in air conditioner is earthing wire and cannot be used for other propose. It cannot be cut off and be fix it by screw, otherwise it would cause electric shock.
3. The earth resistance should accord to the National Criterion.
4. The power must have reliable earthing terminal. Please do not connect the earthing wire with the following:
  - ① Water pipe.
  - ② Gas pipe.
  - ③ Contamination pipe.
  - ④ Other places that professional personnel consider them unreliable.
5. The model and rated values of fuses should accord with the silk print on fuse cover or related PCB.

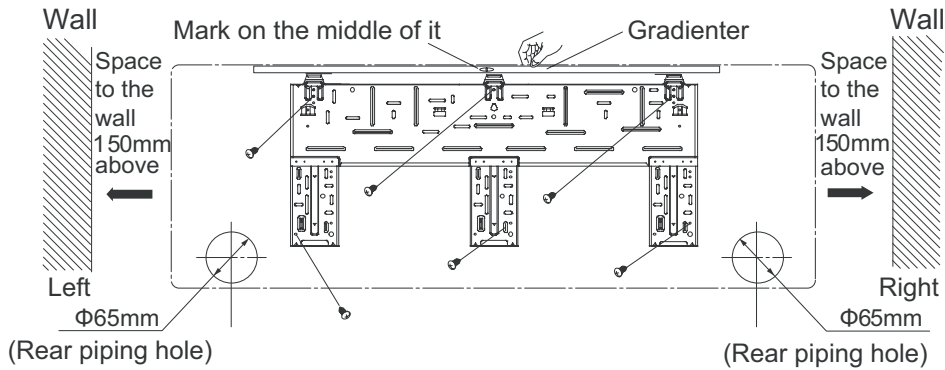
## 7.2 Installation Drawing



## 7.3 Install indoor unit

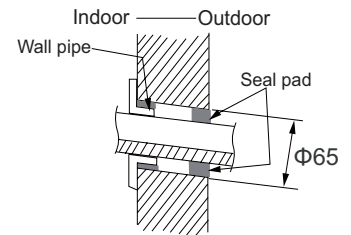
### 7.3.1 Installation of Mounting Plate

1. Mounting plate should be installed horizontally. As the water tray's outlet for the indoor unit is two-way type, during installation, the indoor unit should slightly slant to water tray's outlet for smooth drainage of condensate.
2. Fix the mounting plate on the wall with screws.
3. Be sure that the mounting plate has been fixed firmly enough to withstand about 60 kg. Meanwhile, the weight should be evenly shared by each screw.



### 7.3.2 Drill Piping Hole

1. Slant the piping hole ( $\Phi 65$ ) on the wall slightly downward to the outdoor side.
2. Insert the piping-hole sleeve into the hole to prevent the connection piping and wiring from being damaged when passing through the hole.

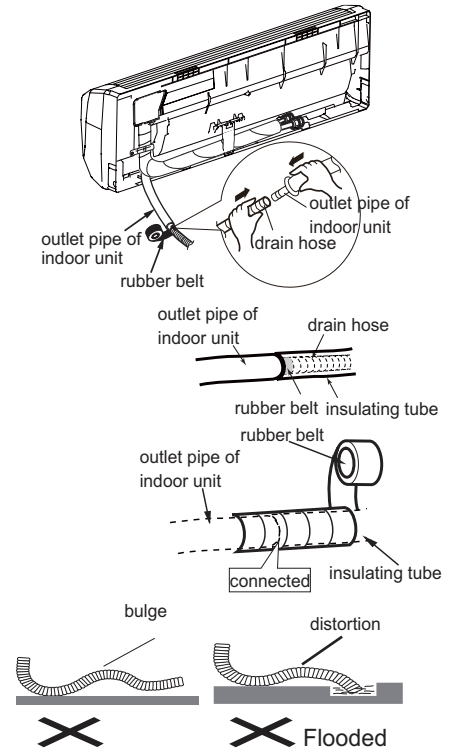


### 7.3.3 Installation of Drain Hose

1. Connect the drain hose to the outlet pipe of the indoor unit. Bind the joint with rubber belt.

2. Put the drain hose into insulating tube.

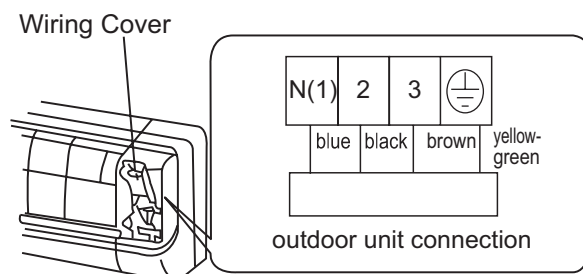
3. Wrap the insulating tube with wide rubber belt to prevent the shift of insulating tube. Slant the drain hose downward slightly for smooth drainage of condensate.



Note: The insulating tube should be connected reliably with the sleeve outside the outlet pipe. The drain hose should be slanted downward slightly, without distortion, bulge or fluctuation. Do not put the outlet in the water.

### 7.3.4 Connecting Indoor and Outdoor Electric Wires

1. Open the front panel upwardly.
2. Screw off the fixing screw of cover plate and screw off cover plate.
3. Put the power connection cable through the back of indoor unit wire hole and take it out.
4. All the wiring should be connected according to the circuit diagram on the unit.
5. Put the power connection cable the section, which with sheath into wire groove, and cover the cover plate, screw on the fixing screw, tighten the connection wire.
6. Cover the front panel cover.



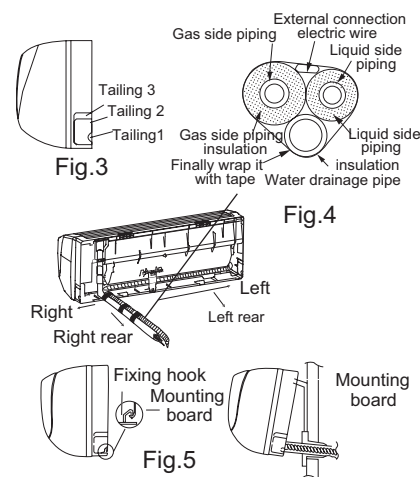
#### NOTE:

All wires between indoor and outdoor units must be connected by the qualified electric contractor.

- Electric wires must be connected correctly. Improper connection may cause malfunction.
- Tighten the terminal screws securely.
- After tightening the screws, pull the wire slightly to confirm whether it's firm or not.
- Make sure that the electric connections are earthed properly to prevent electric shock.
- Make sure that all wiring connections are secure and the cover plates are reinstalled properly. Poor installation may cause fire or electric shock.

### 7.3.5 Installation of Indoor Unit

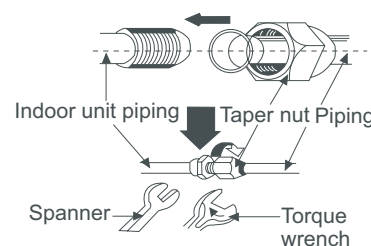
- The piping can be output from right, right rear, left or left rear.
1. When routing the piping and wiring from the left or right side of indoor unit, cut off the tailings from the chassis when necessary (As shown in Fig.3)
    - (1) Cut off tailing 1 when routing the wiring only;
    - (2) Cut off tailing 1 and tailing 2 when routing both the wiring and piping.
  2. Take out the piping from body case; wrap the piping, power cords, drain hose with the tape and then make them pass through the piping hole. (As shown in Fig.4)
  3. Hang the mounting slots of the indoor unit on the upper hooks of the mounting plate and check if it is firm enough. (As shown in Fig.5)
  4. The installation site should be 250cm or more above the floor.



### 7.3.6 Installation of Connection Pipe

1. Align the center of the piping flare with the relevant valve.
2. Screw in the flare nut by hand and then tighten thenut with spanner and torque wrench referring to the following:

Hex nut diameter	Tightening torque(N·m)
Φ6	15~20
Φ 9.52	31~35
Φ 12	50~55
Φ 16	60~65
Φ 19	70~75



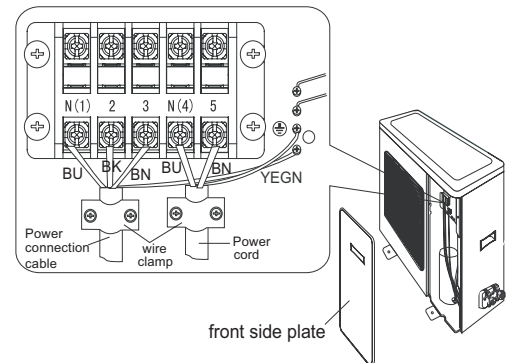
#### NOTE:

Connect the connection pipe to indoor unit at first and then to outdoor unit. Handle piping bending with care. Do not damage the connection pipe. Ensure that the joint nut is tightened firmly, otherwise, it may cause leakage.

## 7.4 Install outdoor unit

### 7.4.1 Electric Wiring

1. Remove front side plate of outdoor unit.
2. Take off wire clamp, connect and fix power cord and power connection cable to terminal of line bank. Wiring should fit that of indoor unit.
3. Fix the power connection cable with wire clamp, then use the wire clamp to fix the power cord.
4. Ensure if wire has been fixed well.
5. Reinstall front side plate.



**NOTE:**

- Wrong wiring may cause spare parts malfunction.
- After the cable fixed, make sure there should be a free space between the connection and fixing place on the lead wire.

### 7.4.2 Air Purging and Leakage Test

1. Connect charging hose of manifold valve to charge end of low pressure valve (both high/low pressure valves must be tightly shut).
2. Connect joint of charging hose to vacuum pump.
3. Fully open the handle of Lo manifold valve.
4. Open the vacuum pump for vacuumization. At the beginning, slightly loosen joint nut of low pressure valve to check if there is air coming inside (If noise of vacuum pump has been changed, the reading of multimeter is 0). Then tighten the nut.
5. Keep evacuating for more than 15mins and make sure the reading of multi-meter is  $-1.0 \times 10^5$  pa (-76cmHg).
6. Fully open high/low pressure valves.
7. Remove charging hose from charging end of low pressure valve.
8. Tighten bonnet of low-pressure valve. (As shown in Fig.5)

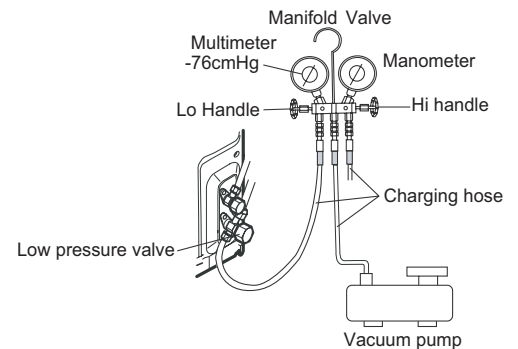
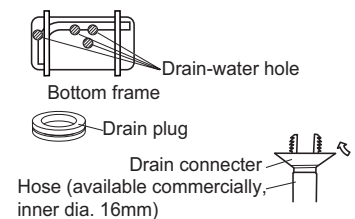


Fig.5

### 7.4.3 Outdoor Condensate Drainage (only for Heat pump unit)

During heating operation, the condensate and defrosting water should be drained out reliably through the drain hose. Install the outdoor drain connector in a  $\varnothing 25$  hole on the base plate and attach the drain hose to the connector so that the waste water formed in the outdoor unit can be drained out. The hole diameter 25 must be plugged.

Whether to plug other holes will be determined by the dealers according to actual conditions.



## 7.5 Check after Installation and Test Operation

### 7.5.1 Check after installation

Items to be checked	Possible malfunction
Has the unit been fixed firmly?	The unit may drop, shake or emit noise.
Have you done the refrigerant leakage test?	It may cause insufficient cooling(heating)
Is thermal insulation sufficient?	It may cause condensation.
Is water drainage satisfactory?	It may cause water leakage.
Is the voltage in accordance with the rated voltage marked on the nameplate?	It may cause electric malfunction or damage the unit.
Is the electric wiring or piping connection installed correctly and securely?	It may cause electric malfunction or damage the parts.
Has the unit been securely earthed?	It may cause electrical leakage.
Is the power cord specified?	It may cause electric malfunction or damage the parts.
Is the inlet or outlet blocked?	It may cause insufficient cooling(heating)
Is the length of connection pipes and refrigerant capacity recorded?	The refrigerant capacity is not accurate.

### 7.5.2 Operation Test

#### 1. Before Operation Test

- (1) Do not switch on power before installation is finished completely.
- (2) Electric wiring must be connected correctly and securely.
- (3) Cut-off valves of the connection pipes should be opened.
- (4) All the impurities such as scraps and thrums must be cleared from the unit.

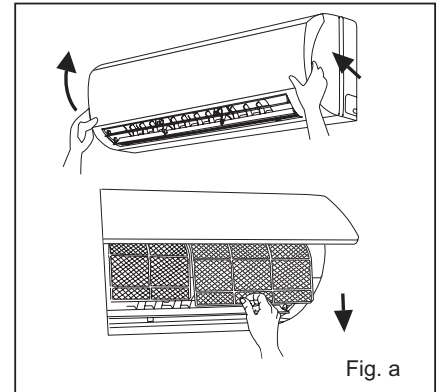
#### 2. Operation Test Method

- (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.

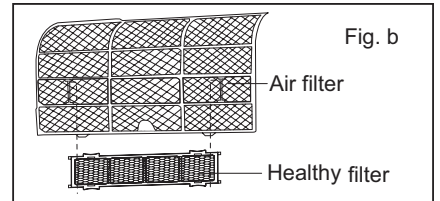
## 7.6 Installation and Maintenance of Healthy Filter

### 7.6.1 Installation of Healthy Filter

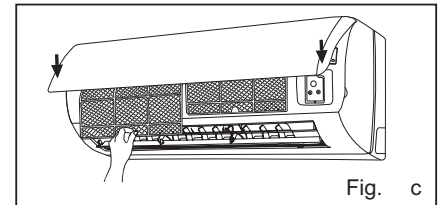
1. Lift up the front panel from its two ends, as shown by the arrow direction, and then remove the air filter. (as shown in Fig.a)



2. Attach the healthy filter onto the air filter, (as shown in Fig.b).



3. Install the air filter properly along the arrow direction in Fig.c, and then close the panel .



### 7.6.2 Cleaning and Maintenance

Remove the healthy filter and reinstall it after cleaning according to the installation instruction. Do not use brush or hard objects to clean the filter. After cleaning, be sure to dry it in the shade.

### 7.6.3 Service Life

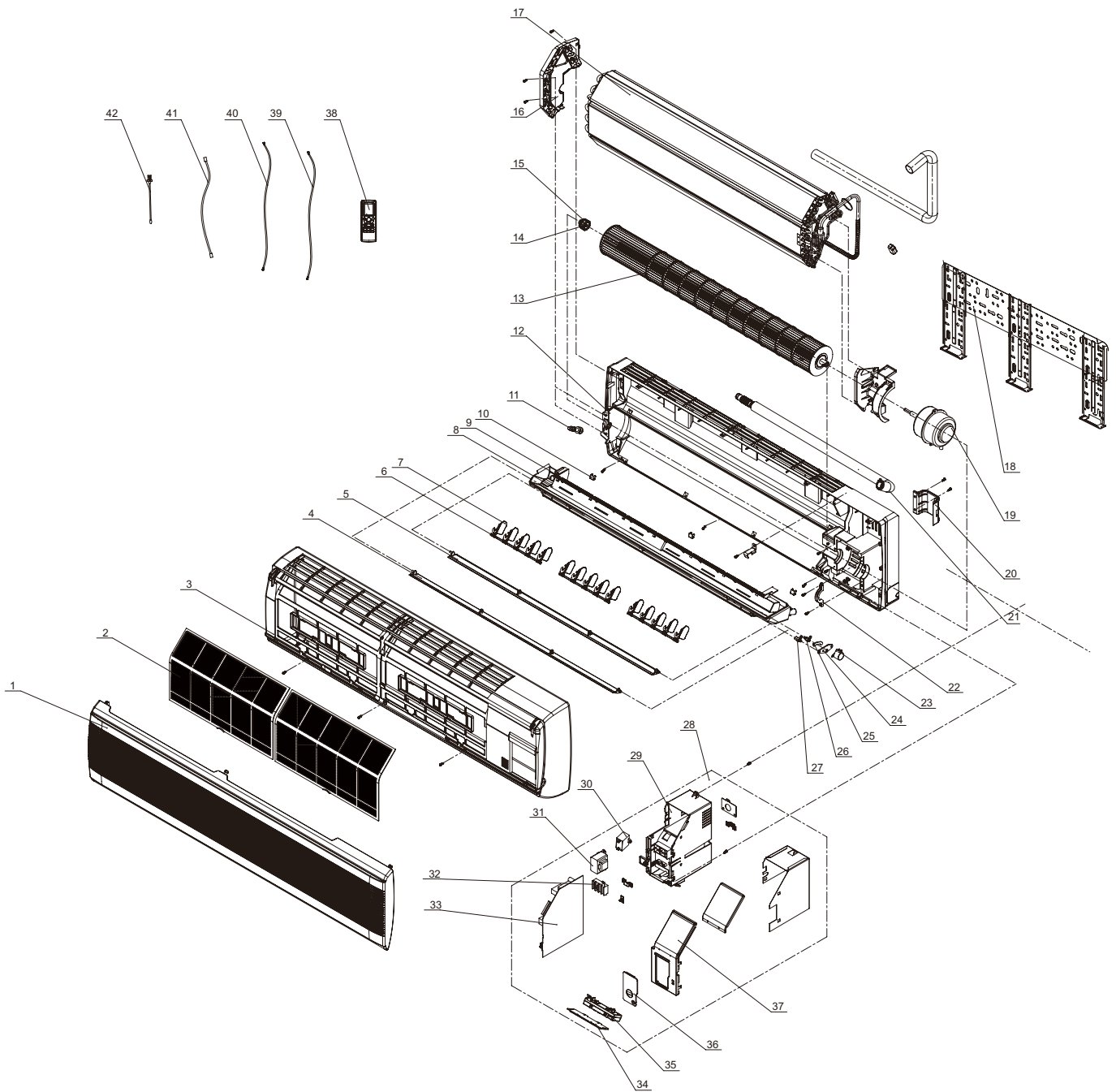
The general service life for the healthy filter is about one year under normal condition. As for silver ion filter, it is ineffective when its surface becomes black (green).

- This supplementary instruction is provided for reference to the unit with healthy filter. If the graphics provided herein are different from the actual product, please refer to the actual product. The quantity of healthy filters is based on the actual delivery.



## 8. Exploded Views and Parts List

### 8.1 Indoor Unit

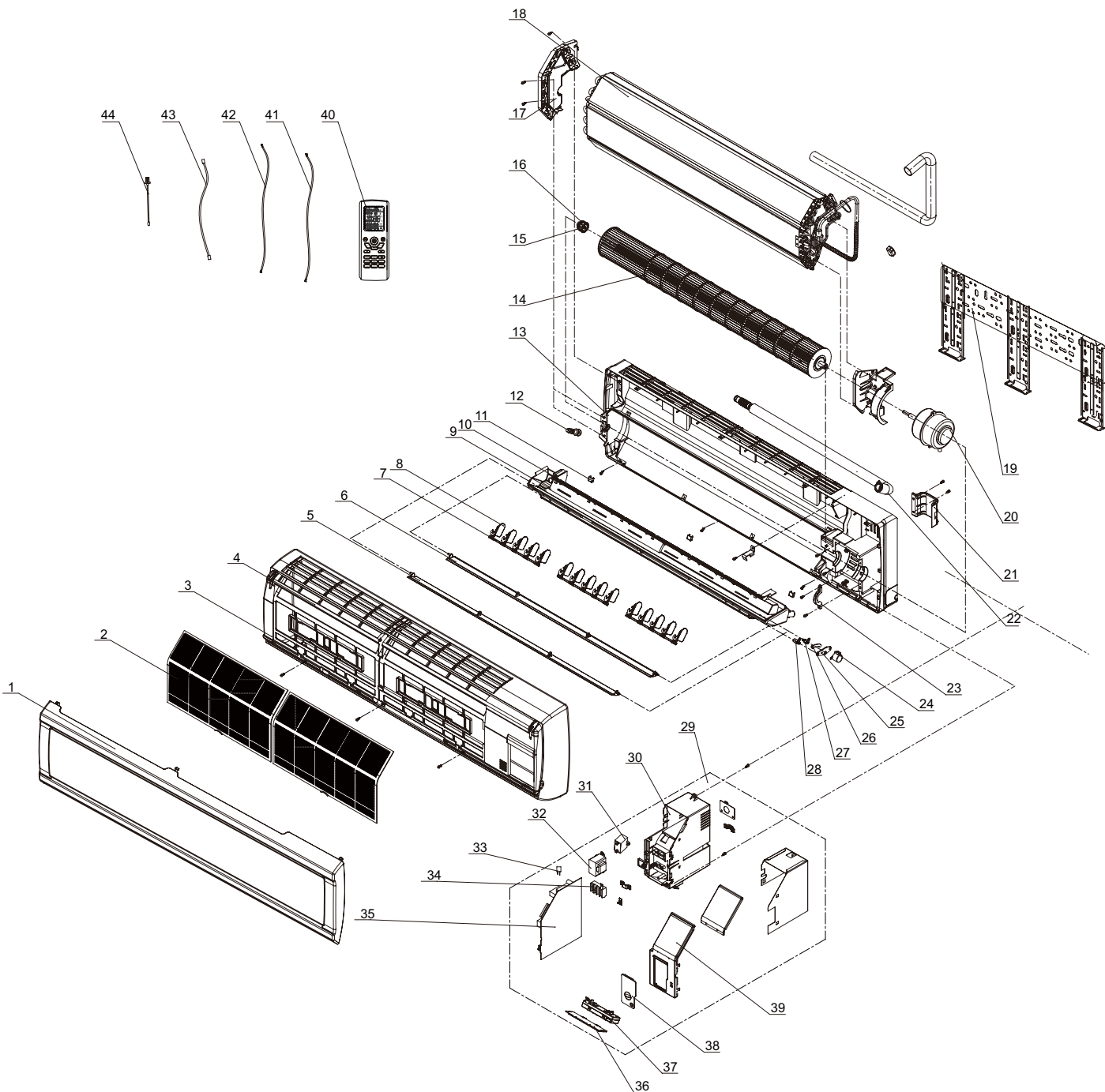


**Exploded Views and Parts list**

No.	Description	Part Code	Qty
		GWHN28FANK1A1A/I	
		Product Code	
1	Front Panel	20002375	1
2	Filter Sub-Assy	11122051	2
3	Front Case Sub-Assy	20002923	1
4	Upper Guide Louver	10512062	1
5	Lower guide louver	10512063	1
6	Connecting Rod of Swing Louver	10582040	3
7	Air Louver	10512110	15
8	Water Tray	20182043	1
9	Air Guider System in Water Tray Assy	101020162	1
10	Screw Cover	242520053	3
11	Rubber Plug (Water Tray)	76712012	1
12	Rear Case Sub-Assy	22202092	1
13	Cross Flow Fan	10352420	1
14	O-Gasket sub-assy of Bearing	76512051	1
15	Axile Bush	10542704	6
16	Left Evaporator Support	24212041	1
17	Evaporator Assy	01002930	1
18	Wall Mounting Frame	01252398	1
19	Fan Motor	150121052	1
20	Pipe Clamp	26112071	1
21	Drainage hose	0523001403	1
22	Motor Fixed Clip	26112069	1
23	Step Motor	1521210701	1
24	Press plate	26112070	1
25	Crank-guide	10582041	1
26	Lower crank	10562005	1
27	Upper Crank	10562004	1
28	Electric Box Assy	2010240627	1
29	Electric Box	20102250	1
30	Capacitor CBB61	33010737	1
31	Transformer	43110236	1
32	Terminal Board	42011233	1
33	Main Board	30135256	1
34	Remote Control Display Window	22432129	1
35	Receiver Board	30042029	1
36	Electric Box Cover	20102252	1
37	Electric Box Cover	20112044S	1
38	Remote Controller	30510049	1
39	Connecting Cable	40020318	1
40	Connecting Cable	400205235	1
41	Tube Sensor	390000591	1
42	Ambient Temperature Sensor	390000451	1

The data above are subject to change without notice.

Model GWCN28FANK1A1A (CA152N0441)



**Exploded Views and Parts list**

No.	Description	Part Code	Qty
		GWCN28FANK1A1A/I	
		Product Code	
1	Front Panel	20002698	1
2	Filter Sub-Assy	11122051	2
3	Front Case Sub-assy	20002923	1
4	Front Case	20002370	1
5	Upper Guide Louver	10512062	1
6	Lower Guide Louver	10512063	1
7	Connecting Rod of Swing Louver	10582040	3
8	Air Louver	10512110	15
9	Water Tray	20182043	1
10	Air Guider System in Water Tray Assy	101020162	1
11	Screw Cover	242520053	3
12	Rubber Plug (Water Tray)	76712012	1
13	Rear Case Sub-Assy	22202092	1
14	Cross Flow Fan	10352420	1
15	O-Gasket sub-assy of Bearing	76512051	1
16	Axile Bush	10542704	6
17	Left Evaporator Support	24212041	1
18	Evaporator Assy	01002930	1
19	Wall Mounting Frame	01252398	1
20	Fan Motor	150121052	1
21	Pipe Clamp	26112071	1
22	Drainage Hose	0523001403	1
23	Motor Fixed Clip	26112069	1
24	Step Motor	1521210701	1
25	Press Plate(Crank)	26112070	1
26	Crank-guide	10582041	1
27	Lower crank	10562005	1
28	Upper Crank	10562004	1
29	Electric Box Assy	2010240628	1
30	Electric Box	20102250	1
31	Capacitor CBB61	33010737	1
32	Transformer	43110236	1
33	XY Capacitor	33020201	1
34	Terminal Board	42011233	1
35	Main Board	30135255	1
36	Remote Control Display Window	22432129	1
37	Receiver Board	30042029	1
38	Electric Box Cover	20102252	1
39	Electric Box Cover	20112044S	1
40	Remote Controller	30510049	1
41	Connecting Cable	400205405	1
42	Connecting Cable	400205235	1
43	Tube Sensor	390000591	1
44	Ambient Temperature Sensor	390000451	1

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