

USER'S MANUAL

ELEMENT 2 SERIES

indoor unit

ASH-09AIE2, ASH-12AIE2
ASH-18AIE2, ASH-24AIE2



„Original instruction“

Precautions



WARNING

Operation and Maintenance

- 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.
- Do not connect air conditioner to multi-purpose socket. Otherwise, it may cause fire hazard.
- Do disconnect power supply when cleaning air conditioner. Otherwise, it may cause electric shock.
- 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.
- Do not wash the air conditioner with water to avoid electric shock.
- Do not spray water on indoor unit. It may cause electric shock or malfunction.
- After removing the filter, do not touch fins to avoid injury.
- Do not use fire or hair dryer to dry the filter to avoid deformation or fire hazard.

Precautions



WARNING

- Maintenance must be performed by qualified professionals. Otherwise, it may cause personal injury or damage.
- Do not repair air conditioner by yourself. It may cause electric shock or damage. Please contact dealer when you need to repair air conditioner.
- Do not extend fingers or objects into air inlet or air outlet. It may cause personal injury or damage.
- Do not block air outlet or air inlet. It may cause malfunction.
- Do not spill water on the remote controller, otherwise the remote controller may be broken.
- When below phenomenon occurs, please turn off air conditioner and disconnect power immediately, and then contact the dealer or qualified professionals for service.
 - Power cord is overheating or damaged.
 - There's abnormal sound during operation.
 - Circuit break trips off frequently.
 - Air conditioner gives off burning smell.
 - Indoor unit is leaking.
- If the air conditioner operates under abnormal conditions, it may cause malfunction, electric shock or fire hazard.
- When turning on or turning off the unit by emergency operation switch, please press this switch with an insulating object other than metal.
- Do not step on top panel of outdoor unit, or put heavy objects. It may cause damage or personal injury.

Precautions



Attachment

- Installation must be performed by qualified professionals. Otherwise, it may cause personal injury or damage.
- Must follow the electric safety regulations when installing the unit.
- According to the local safety regulations, use qualified power supply circuit and circuit break.
- Do install the circuit break. If not, it may cause malfunction.
- An all-pole disconnection switch having a contact separation of at least 3mm in all poles should be connected in fixed wiring.
- Including an circuit break with suitable capacity, please note the following table. Air switch should be included magnet buckle and heating buckle function, it can protect the circuit-short and overload.
- Air Conditioner should be properly grounded. Incorrect grounding may cause electric shock.
- Don't use unqualified power cord.
- Make sure the power supply matches with the requirement of air conditioner. Unstable power supply or incorrect wiring or malfunction. Please install proper power supply cables before using the air conditioner.
- Properly connect the live wire, neutral wire and grounding wire of power socket.
- Be sure to cut off the power supply before proceeding any work related to electricity and safety.

Precautions



WARNING

- Do not put through the power before finishing installation.
- 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.
- The temperature of refrigerant circuit will be high, please keep the interconnection cable away from the copper tube.
- The appliance shall be installed in accordance with national wiring regulations.
- Installation must be performed in accordance with the requirement of NEC and CEC by authorized personnel only.
- The air conditioner is the first class electric appliance. It must be properly grounding with specialized grounding device by a professional. Please make sure it is always grounded effectively, otherwise it may cause electric shock.
- The yellow-green wire in air conditioner is grounding wire, which can't be used for other purposes.
- The grounding resistance should comply with national electric safety regulations.
- The appliance must be positioned so that the plug is accessible.
- All wires of indoor unit and outdoor unit should be connected by a professional.
- If the length of power connection wire is insufficient, please contact the supplier for a new one. Avoid extending the wire by yourself.

Precautions



WARNING

- For the air conditioner with plug, the plug should be reachable after finishing installation.
- For the air conditioner without plug, an circuit break must be installed in the line.
- If you need to relocate the air conditioner to another place, only the qualified person can perform the work. Otherwise, it may cause personal injury or damage.
- Select a location which is out of reach for children and far away from animals or plants. If it is unavoidable, please add the fence for safety purpose.
- The indoor unit should be installed close to the wall.

Working temperature range

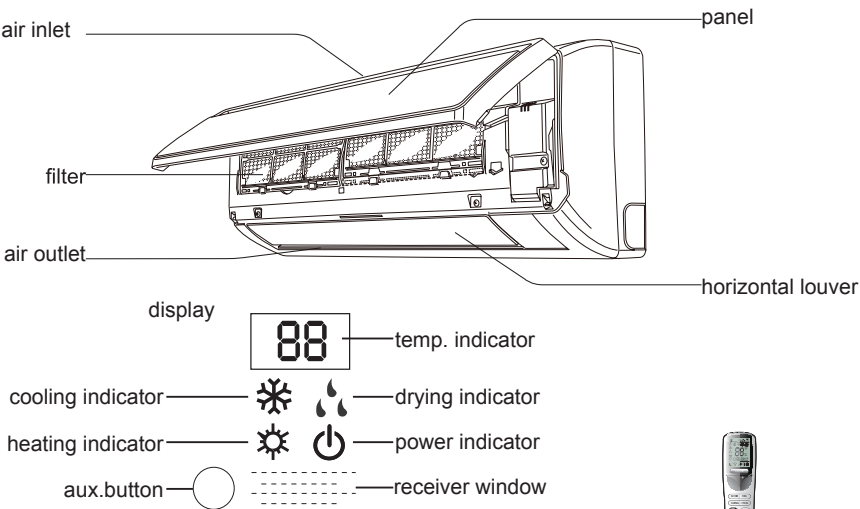
	Indoor side DB/WB(°C)	Outdoor side DB/WB(°C)
Maximum cooling	32/23	43/26
Maximum heating	27/-	24/18

NOTICE:

- The operating temperature range (outdoor temperature) for cooling is -15℃~43℃ ; The operating temperature range (outdoor temperature) for heating is -20℃~24℃ is -15℃~24℃ ; Heating temperature range for the model with electric heating belt for chassis is -20℃~24℃ .

Parts Name

Indoor Unit



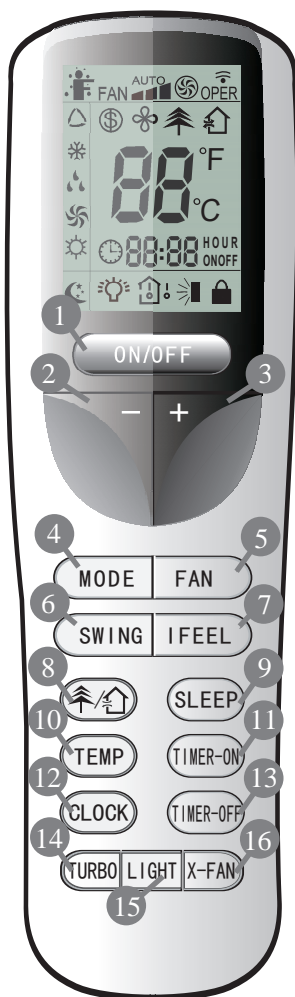
remote controller

(Display content or position may be different from above graphics, please refer to actual products)

NOTICE:

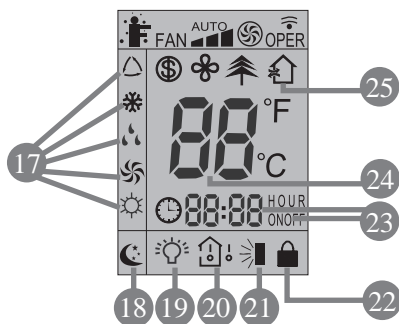
Actual product may be different from above graphics, please refer to actual products.

◆ Operation of Remote Controller



- 1 ON/OFF**
Press it to start or stop operation.
- 2 -** : Press it to decrease temperature setting.
- 3 +** : Press it to increase temperature setting.
- 4 MODE**
Press it to select operation mode (AUTO/COOL/DRY/FAN/HEAT).
- 5 FAN**
Press it to set fan speed.
- 6 SWING**
Press it set swing angle.
- 7 I FEEL**
- 8**
Press it to set HEALTH or AIR function.
- 9 SLEEP**
- 10 TEMP**
- 11 TIMER ON**
Press it to set auto-on timer.
- 12 CLOCK**
Press it set clock.
- 13 TIMER OFF**
Press it to set auto-off timer.
- 14 TURBO**
- 15 LIGHT**
Press it to turn on/off the light.
- 16 X-FAN**

◆ Operation of Remote Controller



17 MODE icon:

If MODE button is pressed, current operation mode icon \triangle (AUTO), \ast (COOL), flame (DRY), fan (FAN) or sun (HEAT only for heat pump models) will show.

18 SLEEP icon :

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

19 LIGHT icon:

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

20 TEMP icon:

Pressing TEMP button, house with plus (set temperature), $\text{house with plus and up arrow}$ (indoor ambient temperature) $\text{house with plus and down arrow}$ (outdoor ambient temperature) and blank is displayed circularly.

21 Up & down swing icon:

$\text{fan with up and down arrows}$ is displayed when pressing the up & down swing down button. Press this button again to clear the display.

22 LOCK icon:

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

23 SET TIME display:

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

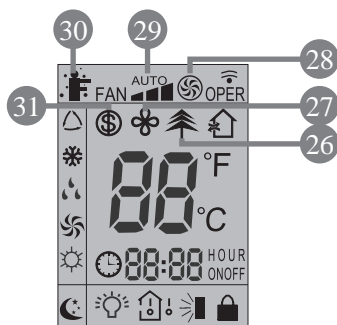
24 DIGITAL display:

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

25 AIR icon:

$\text{house with plus and up arrow}$ is displayed when pressing the AIR button. Press this button again to clear the display.

◆ Operation of Remote Controller



26 HEALTH icon:

👤 is displayed when pressing the HEALTH 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.

27 X-FAN icon:

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

30 I FEEL icon:

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

28 TURBO icon:

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

31 8°C Heating icon:

💵 is displayed when Pressing “TEMP” and “CLOCK” simultaneously in Heat mode.

◆ Operation of Remote Controller

Remote Controller Description

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. Holding it down above 2 seconds rapidly decreases set temperature. In AUTO mode, set temperature is not adjustable.

3 + :

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

4 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:

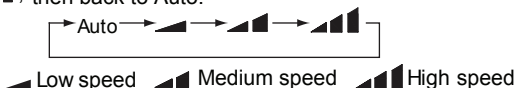
AUTO ► COOL ► DRY ► FAN ► HEAT *

*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. (As for cooling only unit, it won't have any action when it receives the signal of heating operation.)

5 FAN:





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



6 SWING:

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:

7 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.

8 /


Press this button to achieve the on and off of healthy and scavenging functions in operation status. Press this button for the first time to start scavenging function; LCD displays "". Press the button for the second time to start healthy and scavenging functions simultaneously; LCD displays "" and "". Press this button for the third time to quit healthy and scavenging functions simultaneously. Press the button for the fourth time to start healthy function; LCD display "". Press this button again to repeat the operation above. (This function is applicable to partial of models)

◆ Operation of Remote Controller

9 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.

10 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. (This function is applicable to partial of models)

11 TIMER ON :

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

After press of this button,  disappears and "ON "blinks .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.

12 CLOCK :

Press CLOCK button,  blinking. 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.



13 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.


14 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.

15 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.



16 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.

◆ Operation of Remote Controller

17 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.

18 Combination of "MODE" and "-" buttons : About switch between Fahrenheit and centigrade

At unit OFF, press "MODE" and "-" buttons simultaneously to switch between °C and °F.

19 Combination of "TEMP" and "CLOCK" buttons : About Energy-saving Function

Press "TEMP" and "CLOCK" simultaneously in COOL mode to start energy-saving function. Nixie tube on the remote controller displays "SE". Repeat the operation to quit the function.

20 Combination of "TEMP" and "CLOCK" buttons : About 8 °C Heating Function

Press "TEMP" and "CLOCK" simultaneously in HEAT mode to start 8 °C Heating Function. Nixie tube on the remote controller displays "8" and a selected temperature of "8 °C". (46°F if Fahrenheit is adopted). Repeat the operation to quit the function.

21 About Back-lighting Function

The unit lights for 4s when energizing for the first time, and 3s for later press.

★ About HEALTH function(COLD PLASMA)

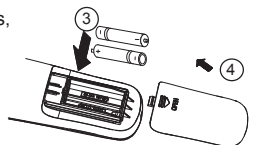
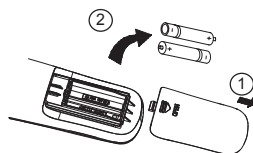
Turn on the unit, start up the fan (Breezing and X-FAN are excluded) and press HEALTH button on remote controller to start health function (If there is not HEALTH button on remote controller, the unit defaults health function ON.)

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.

★ Notes:

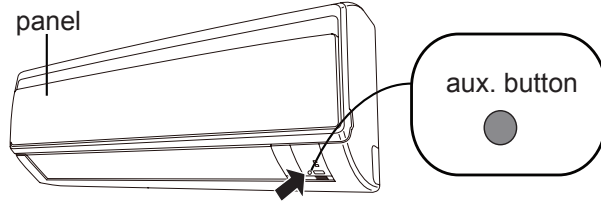
- When replacing the batteries, do not use old or different types of batteries, otherwise, it may cause malfunction.
- If the remote controller will not be used for a long time, please remove batteries to prevent batteries from leaking.
- The operation should be performed in its receiving range.
- It 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.



Sketch map for replacing batteries

Emergency operation

If remote controller is lost or damaged, please use auxiliary button to turn on or turn off the air conditioner. The operation in details are as below: As shown in the fig. press aux. button to turn on or turn off the air conditioner. When the air conditioner is turned on, it will operate under auto mode.



WARNING:

Use insulated object to press the auto button

Clean and Maintenance

WARNING

- Turn off the air conditioner and disconnect the power before cleaning the air conditioner to avoid electric shock.
- Do not wash the air conditioner with water to avoid electric shock.
- Do not use volatile liquid to clean the air conditioner.

Clean surface of indoor unit

When the surface of indoor unit is dirty, it is recommended to use a soft dry cloth or wet cloth to wipe it.

NOTICE:

- Do not remove the panel when cleaning it.

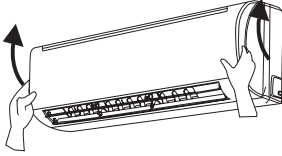
Clean and Maintenance

Clean filter

1

Open panel

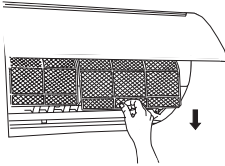
Pull out the panel to a certain angle as shown in the fig.



2

Remove filter

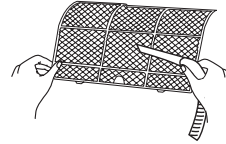
Remove the filter as indicated in the fig.



3

Clean filter

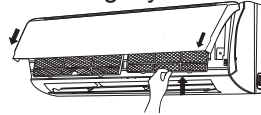
- Use dust catcher or water to clean the filter.
- When the filter is very dirty, use the water (below 45°C) to clean it, and then put it in a shady and cool place to dry.



4

Install filter

Install the filter and then close the panel cover tightly.

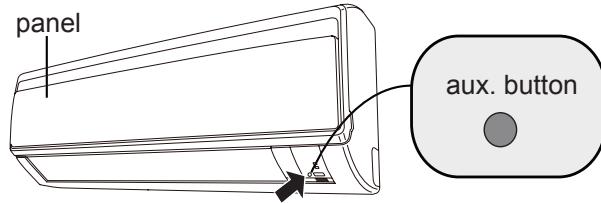


WARNING

- The filter should be cleaned every three months. If there is much dust in the operation environment, clean frequency can be increased.
- After removing the filter, do not touch fins to avoid injury.
- Do not use fire or hair dryer to dry the filter to avoid deformation or fire hazard.

Emergency operation

If remote controller is lost or damaged, please use auxiliary button to turn on or turn off the air conditioner. The operation in details are as below: As shown in the fig. press aux. button to turn on or turn off the air conditioner. When the air conditioner is turned on, it will operate under auto mode.



WARNING:

Use insulated object to press the auto button

Clean and Maintenance

WARNING

- Turn off the air conditioner and disconnect the power before cleaning the air conditioner to avoid electric shock.
- Do not wash the air conditioner with water to avoid electric shock.
- Do not use volatile liquid to clean the air conditioner.

Clean surface of indoor unit

When the surface of indoor unit is dirty, it is recommended to use a soft dry cloth or wet cloth to wipe it.

NOTICE:

- Do not remove the panel when cleaning it.

Malfunction analysis

General phenomenon analysis

Please check below items before asking for maintenance. If the malfunction still can't be eliminated, please contact local dealer or qualified professionals.

Phenomenon	Check items	Solution
Indoor unit can't receive remote controller's signal or remote controller has no action.	<ul style="list-style-type: none"> Whether it's interfered severely (such as static electricity, stable voltage)? 	<ul style="list-style-type: none"> Pull out the plug. Reinsert the plug after about 3min, and then turn on the unit again.
	<ul style="list-style-type: none"> Whether remote controller is within the signal receiving range? 	<ul style="list-style-type: none"> Signal receiving range is 8m.
	<ul style="list-style-type: none"> Whether there are obstacles? 	<ul style="list-style-type: none"> Remove obstacles.
	<ul style="list-style-type: none"> Whether remote controller is pointing at the receiving window? 	<ul style="list-style-type: none"> Select proper angle and point the remote controller at the receiving window on indoor unit.
	<ul style="list-style-type: none"> Is sensitivity of remote controller low; fuzzy display and no display? 	<ul style="list-style-type: none"> Check the batteries. If the power of batteries is too low, please replace them.
	<ul style="list-style-type: none"> No display when operating remote controller? 	<ul style="list-style-type: none"> Check whether remote controller appears to be damaged. If yes, replace it.
	<ul style="list-style-type: none"> Fluorescent lamp in room? 	<ul style="list-style-type: none"> Take the remote controller close to indoor unit. Turn off the fluorescent lamp and then try it again.
No air emitted from indoor unit	<ul style="list-style-type: none"> Air inlet or air outlet of indoor unit is blocked? 	<ul style="list-style-type: none"> Eliminate obstacles.
	<ul style="list-style-type: none"> Under heating mode, indoor temperature is reached to set temperature? 	<ul style="list-style-type: none"> After reaching to set temperature, indoor unit will stop blowing out air.
	<ul style="list-style-type: none"> Heating mode is turned on just now? 	<ul style="list-style-type: none"> In order to prevent blowing out cold air, indoor unit will be started after delaying for several minutes, which is a normal phenomenon.

Malfunction analysis

Phenomenon	Check items	Solution
Air conditioner can't operate	• Power failure?	• Wait until power recovery.
	• Is plug loose?	• Reinsert the plug.
	• Circuit break trips off or fuse is burnt out?	• Ask professional to replace circuit break or fuse.
	• Wiring has malfunction?	• Ask professional to replace it.
	• Unit has restarted immediately after stopping operation?	• Wait for 3min, and then turn on the unit again.
	• Whether the function setting for remote controller is correct?	• Reset the function.
Mist is emitted from indoor unit's air outlet	• Indoor temperature and humidity is high?	• Because indoor air is cooled rapidly. After a while, indoor temperature and humidity will be decrease and mist will disappear.
Set temperature can't be adjusted	• Unit is operating under auto mode?	• Temperature can't be adjusted under auto mode. Please switch the operation mode if you need to adjust temperature.
	• Your required temperature exceeds the set temperature range?	• Set temperature range: 16°C ~30°C .
Cooling (heating) effect is not good.	• Voltage is too low?	• Wait until the voltage resumes normal.
	• Filter is dirty?	• Clean the filter.
	• Set temperature is in proper range?	• Adjust temperature to proper range.
	• Door and window are open?	• Close door and window.

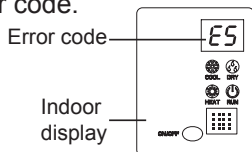
Malfunction analysis

Phenomenon	Check items	Solution
Odours are emitted	<ul style="list-style-type: none"> Whether there's odour source, such as furniture and cigarette, etc. 	<ul style="list-style-type: none"> Eliminate the odour source. Clean the filter.
Air conditioner operates normally suddenly	<ul style="list-style-type: none"> Whether there's interference, such as thunder, wireless devices, etc. 	<ul style="list-style-type: none"> Disconnect power, put back power, and then turn on the unit again.
Outdoor unit has vapor	<ul style="list-style-type: none"> Heating mode is turned on? 	<ul style="list-style-type: none"> During defrosting under heating mode, it may generate vapor, which is a normal phenomenon.
"Water flowing" noise	<ul style="list-style-type: none"> Air conditioner is turned on or turned off just now? 	<ul style="list-style-type: none"> The noise is the sound of refrigerant flowing inside the unit, which is a normal phenomenon.
Cracking noise	<ul style="list-style-type: none"> Air conditioner is turned on or turned off just now? 	<ul style="list-style-type: none"> This is the sound of friction caused by expansion and/or contraction of panel or other parts due to the change of temperature.

Malfunction analysis

Error Code

- When air conditioner status is abnormal, temperature indicator on indoor unit will blink to display corresponding error code. Please refer to below list for identification of error code.



Above indicator diagram is only for reference. Please refer to actual product for the actual indicator and position.

Below listed error codes are only part error codes. Please refer to error code list in service manual for more information.

Error code	Troubleshooting
Heating indicator ON 10s OFF 0.5s	Means defrosting status. It's the normal phenomenon.
C5: Malfunction of connector jumper	Check if the connector jumper contacts properly. If the PCB is to be replaced, please take off the old for the new PCB.
F1: Malfunction of indoor ambient temperature sensor	Check if indoor room temperature sensor is connected properly.
F2: Malfunction of evaporator temperature sensor	Check if the evaporator temperature is connected properly.
H6: Indoor fan block	Check if the terminal of the indoor motor is connected properly. Replace the fan motor or the indoor board if disabled.
E5	Please contact qualified professionals for service.
E8	Please contact qualified professionals for service.
U8	Please contact qualified professionals for service.
Defrosting or oil return mode	It is normal. The indicating lamp in heat mode will wink 0.5s and light 10s.

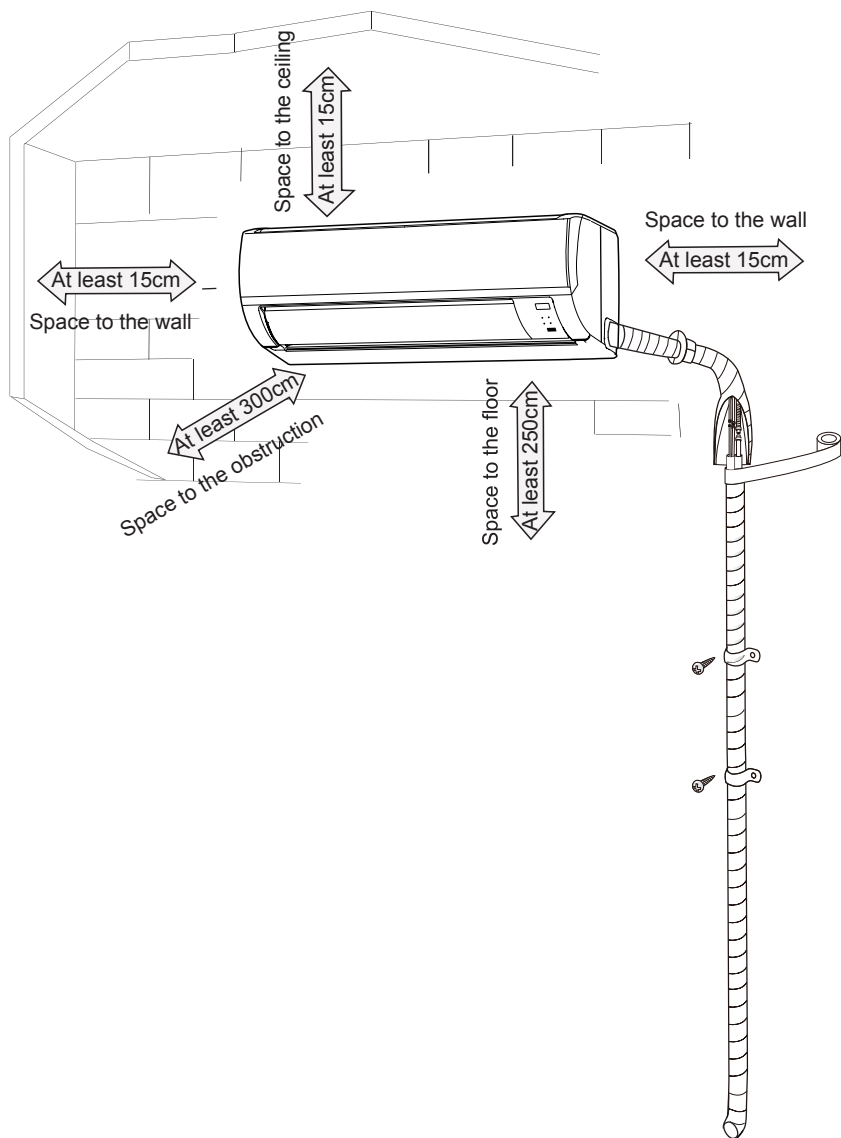
Note: If there're other error codes, please contact qualified professionals for service.



WARNING

- When below phenomenon occurs, please turn off air conditioner and disconnect power immediately, and then contact the dealer or qualified professionals for service.
 - Power cord is overheating or damaged.
 - There's abnormal sound during operation.
 - Circuit break trips off frequently.
 - Air conditioner gives off burning smell.
 - Indoor unit is leaking.
- Do not repair or refit the air conditioner by yourself.
- If the air conditioner operates under abnormal conditions, it may cause malfunction, electric shock or fire hazard.

Installation dimension diagram



Tools for installation

1 Level meter	2 Screw driver	3 Impact drill
4 Drill head	5 Pipe expander	6 Torque wrench
7 Open-end wrench	8 Pipe cutter	9 Leakage detector
10 Vacuum pump	11 Pressure meter	12 Universal meter
13 Inner hexagon spanner		14 Measuring tape

Note:

- Please contact the local agent for installation.
- Don't use unqualified power cord.

Selection of installation location

<p>Basic requirement</p> <p>Installing the unit in the following places may cause malfunction. If it is unavoidable, please consult the local dealer:</p> <ol style="list-style-type: none"> 1. The place with strong heat sources, vapors, flammable or explosive gas, or volatile objects spread in the air. 2. The place with high-frequency devices (such as welding machine, medical equipment). 3. The place near coast area. 4. The place with oil or fumes in the air. 5. The place with sulfured gas. 6. Other places with special circumstances. 7. The appliance shall not be installed in the laundry. 	<p>Indoor unit</p> <ol style="list-style-type: none"> 1. There should be no obstruction near air inlet and air outlet. 2. Select a location where the condensation water can be dispersed easily and won't affect other people. 3. Select a location which is convenient to connect the outdoor unit and near the power socket. 4. Select a location which is out of reach for children. 5. The location should be able to withstand the weight of indoor unit and won't increase noise and vibration. 6. The appliance must be installed 2.5m above floor. 7. Don't install the indoor unit right above the electric appliance. 8. Please try your best to keep away from fluorescent lamp.
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Requirements for electric connection

Safety precaution

1. Must follow the electric safety regulations when installing the unit.
2. According to the local safety regulations, use qualified power supply circuit and circuit break.
3. Make sure the power supply matches with the requirement of air conditioner. Unstable power supply or incorrect wiring or malfunction. Please install proper power supply cables before using the air conditioner.
4. Properly connect the live wire, neutral wire and grounding wire of power socket.
5. Be sure to cut off the power supply before proceeding any work related to electricity and safety.
6. Do not put through the power before finishing installation.
7. 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.
8. The temperature of refrigerant circuit will be high, please keep the interconnection cable away from the copper tube.
9. The appliance shall be installed in accordance with national wiring regulations.
10. Installation must be performed in accordance with the requirement of NEC and CEC by authorized personnel only.

Grounding requirement

1. The air conditioner is the first class electric appliance. It must be properly grounding with specialized grounding device by a professional. Please make sure it is always grounded effectively, otherwise it may cause electric shock.
2. The yellow-green wire in air conditioner is grounding wire, which can't be used for other purposes.
3. The grounding resistance should comply with national electric safety regulations.
4. The appliance must be positioned so that the plug is accessible.
5. An all-pole disconnection switch having a contact separation of at least 3mm in all poles should be connected in fixed wiring.
6. Including an circuit break with suitable capacity, please note the following table. Circuit break should be included magnet buckle and heating buckle function, it can protect the circuit-short and overload. (Caution: please do not use the fuse only for protect the circuit)

Installation of indoor unit

Step one: choosing installation location

Recommend the installation location to the client and then confirm it with the client.

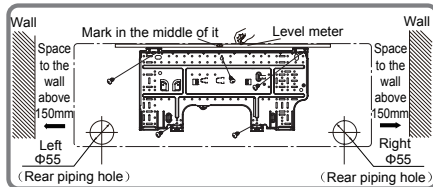
Step two: install wall-mounting frame

1. Hang the wall-mounting frame on the wall; adjust it in horizontal position with the level meter and then point out the screw fixing holes on the wall.
 2. Drill the screw fixing holes on the wall with impact drill (the specification of drill head should be the same as the plastic expansion particle) and then fill the plastic expansion particles in the holes.
 3. Fix the wall-mounting frame on the wall with tapping screws (ST4.2X25TA) and then check if the frame is firmly installed by pulling the frame. If the plastic expansion particle is loose, please drill another fixing hole nearby.
-

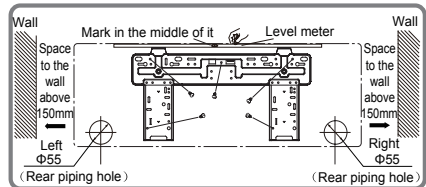
Step three: open piping hole

1. Choose the position of piping hole according to the direction of outlet pipe. The position of piping hole should be a little lower than the wall-mounted frame, shown as below.

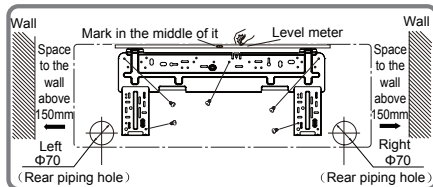
07、09、12K



18K



24K

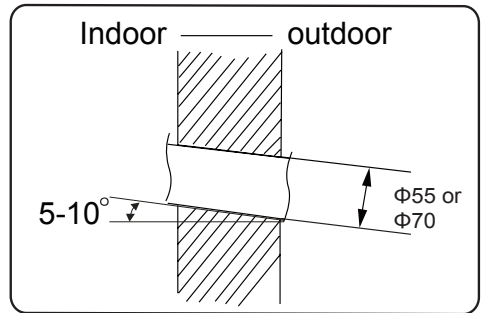


2. Open a piping hole with the diameter of $\Phi 55/70$ on the selected outlet pipe position. In order to drain smoothly, slant the piping hole on the wall slightly downward to the outdoor side with the gradient of $5-10^\circ$.

Installation of indoor unit

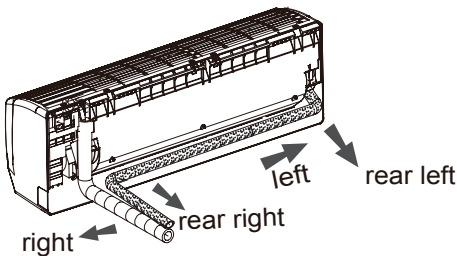
Note:

- Pay attention to dust prevention and take relevant safety measures when opening the hole.
- The plastic expansion particles are not provided and should be bought locally.

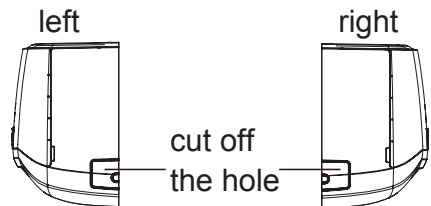


Step four: outlet pipe

1. The pipe can be led out in the direction of right, rear right, left or rear left.

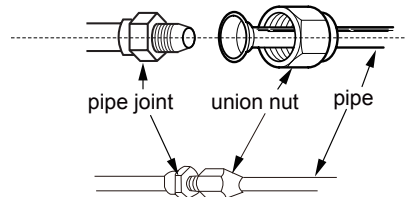


2. When select leading out the pipe from left or right, please cut off the corresponding hole on the bottom case.



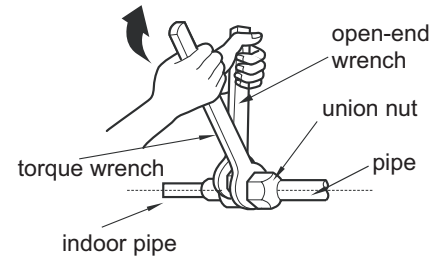
Step five: connect the pipe of indoor unit

1. Aim the pipe joint at the corresponding bellmouth.
2. Pretightening the union nut with hand.



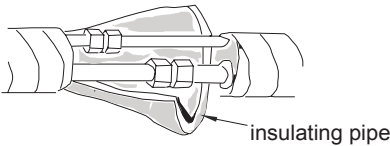
3. Adjust the torque force by referring to the following sheet. Place the open-end wrench on the pipe joint and place the torque wrench on the union nut. Tighten the union nut with torque wrench.

Installation of indoor unit



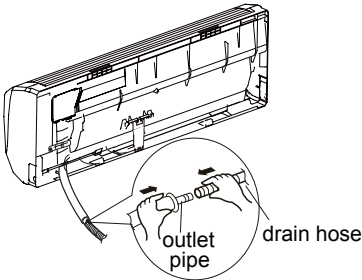
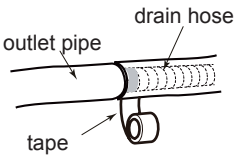
Hex nut diameter	Tightening torque (N·m)
Φ 6	15~20
Φ 9.52	30~40
Φ 12	45~55
Φ 16	60~65
Φ 19	70~75

4. Wrap the indoor pipe and joint of connection pipe with insulating pipe, and then wrap it with tape.



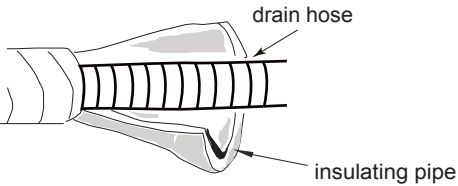
Step six: install drain hose

1. Connect the drain hose to the outlet pipe of indoor unit.
2. Bind the joint with tape.



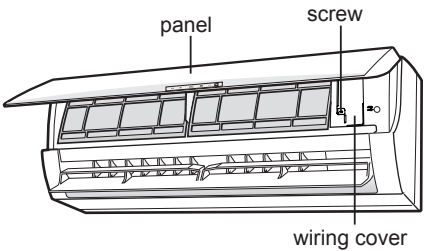
Note:

- Add insulating pipe in the indoor drain hose in order to prevent condensation.
- The plastic expansion particles are not provided.



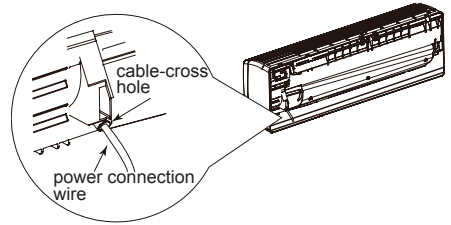
Step seven: connect wire of indoor unit

1. Open the panel, remove the screw on the wiring cover and then take down the cover.

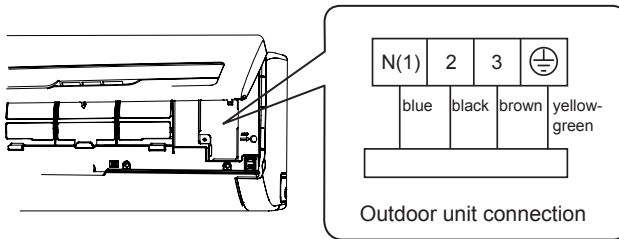


Installation of indoor unit

2. Make the power connection wire go through the cable-cross hole at the back of indoor unit and then pull it out from the front side.



3. Remove the wire clip; connect the power connection wire to the wiring terminal according to the color; tighten the screw and then fix the power connection wire with wire clip.



4. Put wiring cover back and then tighten the screw.
5. Close the panel.

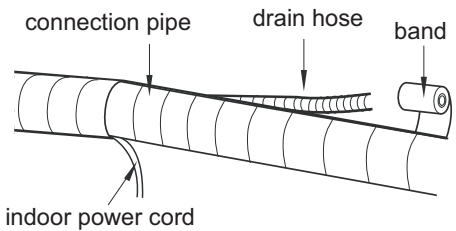
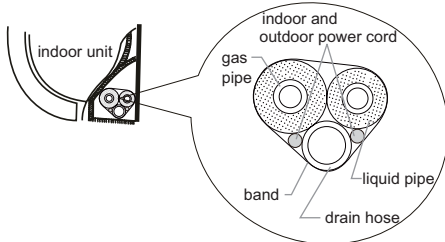
Note:

- All wires of indoor unit and outdoor unit should be connected by a professional.
- If the length of power connection wire is insufficient, please contact the supplier for a new one. Avoid extending the wire by yourself.
- For the air conditioner with plug, the plug should be reachable after finishing installation.
- For the air conditioner without plug, an circuit break must be installed in the line. The air switch should be all-pole parting and the contact parting distance should be more than 3mm.

Installation of indoor unit

Step eight: bind up pipe

1. Bind up the connection pipe, power cord and drain hose with the band.



indoor power cord

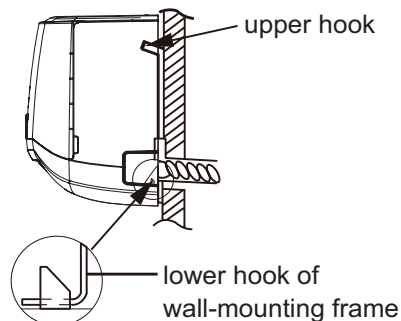
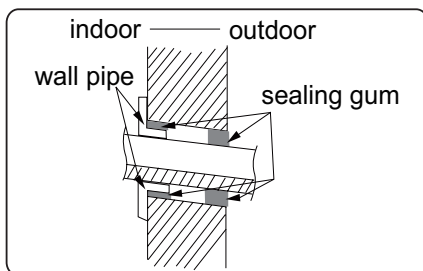
3. Bind them evenly.
4. The liquid pipe and gas pipe should be bound separately at the end.

Note:

- The power cord and control wire can't be crossed or winding.
- The drain hose should be bound at the bottom.

Step nine: hang the indoor unit

1. Put the bound pipes in the wall pipe and then make them pass through the wall hole.
2. Hang the indoor unit on the wall-mounting frame.
3. Stuff the gap between pipes and wall hole with sealing gum.
4. Fix the wall pipe.
5. Check if the indoor unit is installed firmly and closed to the wall.



Note:

- Do not bend the drain hose too excessively in order to prevent blocking.

Check after installation

- Check according to the following requirement after finishing installation.

Items to be checked	Possible malfunction
Has the unit been installed firmly?	The unit may drop, shake or emit noise.
Have you done the refrigerant leakage test?	It may cause insufficient cooling (heating) capacity.
Is heat insulation of pipeline sufficient?	It may cause condensation and water dripping.
Is water drained well?	It may cause condensation and water dripping.
Is the voltage of power supply according to the voltage marked on the nameplate?	It may cause malfunction or damaging the parts.
Is electric wiring and pipeline installed correctly?	It may cause malfunction or damaging the parts.
Is the unit grounded securely?	It may cause electric leakage.
Does the power cord follow the specification?	It may cause malfunction or damaging the parts.
Is there any obstruction in the air inlet and outlet?	It may cause insufficient cooling (heating) capacity.
The dust and sundries caused during installation are removed?	It may cause malfunction or damaging the parts.
The gas valve and liquid valve of connection pipe are open completely?	It may cause insufficient cooling (heating) capacity.

Test operation

1. Preparation of test operation

- The client approves the air conditioner.
- Specify the important notes for air conditioner to the client.

2. Method of test operation

- Put through the power, press ON/OFF button on the remote controller to start operation.
- Press MODE button to select AUTO, COOL, DRY, FAN and HEAT to check whether the operation is normal or not.
- If the ambient temperature is lower than 16°C , the air conditioner can't start cooling.

Configuration of connection pipe

- Standard length of connection pipe
 - 5m, 7.5m, 8m.
- Min. length of connection pipe is 3m.
- Max. length of connection pipe and max. high difference.

Cooling capacity	Max length of connection pipe	Max height difference	Cooling capacity	Max length of connection pipe	Max height difference
5000Btu/h (1465W)	15	5	24000Btu/h (7032W)	25	10
7000Btu/h (2051W)	15	5	28000Btu/h (8204W)	30	10
9000Btu/h (2637W)	15	5	36000Btu/h (10548W)	30	20
12000Btu/h (3516W)	20	10	42000Btu/h (12306W)	30	20
18000Btu/h (5274W)	25	10	48000Btu/h (14064W)	30	20

- The additional refrigerant oil and refrigerant charging required after prolonging connection pipe
 - After the length of connection pipe is prolonged for 10m at the basis of standard length, you should add 5ml of refrigerant oil for each additional 5m of connection pipe.
 - The calculation method of additional refrigerant charging amount (on the basis of liquid pipe):

Additional refrigerant charging amount = prolonged length of liquid pipe × additional refrigerant charging amount per meter
 - Basing on the length of standard pipe, add refrigerant according to the requirement as shown in the table. The additional refrigerant charging amount per meter is different according to the diameter of liquid pipe. See the following sheet.

Configuration of connection pipe

Additional refrigerant charging amount for R410A and R134a

Diameter of connection pipe		Outdoor unit throttle	
Liquid pipe(mm)	Gas pipe(mm)	Cooling only(g/m)	Cooling and heating(g/m)
Φ6	Φ9.52 or Φ12	15	20
Φ6 or Φ9.52	Φ16 or Φ19	15	50
Φ12	Φ19 or Φ22.2	30	120
Φ16	Φ25.4 or Φ31.8	60	120
Φ19	—	250	250
Φ22.2	—	350	350

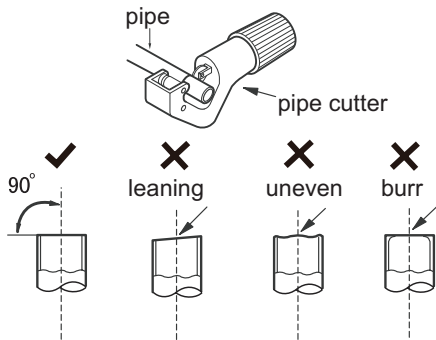
Pipe expanding method

Note:

Improper pipe expanding is the main cause of refrigerant leakage. Please expand the pipe according to the following steps:

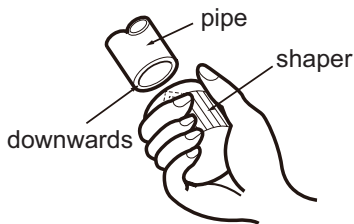
A: Cut the pipe

- Confirm the pipe length according to the distance of indoor unit and outdoor unit.
- Cut the required pipe with pipe cutter.



B: Remove the burrs

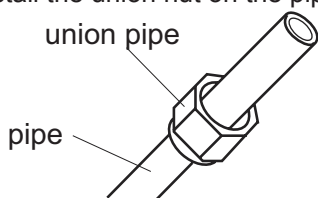
- Remove the burrs with shaper and prevent the burrs from getting into the pipe.



C: Put on suitable insulating pipe

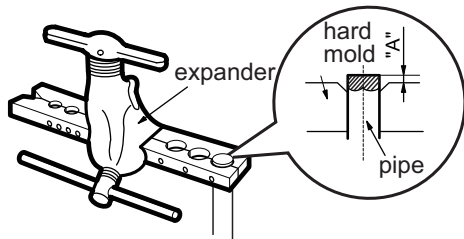
D: Put on the union nut

- Remove the union nut on the indoor connection pipe and outdoor valve; install the union nut on the pipe.



E: Expand the port

- Expand the port with expander.



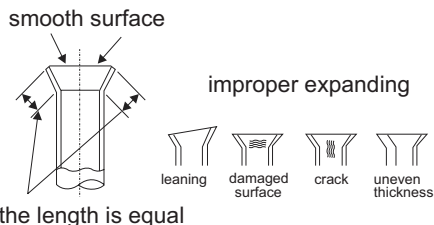
Note:

- "A" is different according to the diameter, please refer to the sheet below:

Outer diameter (mm)	A(mm)	
	Max	Min
Φ6 - 6.35(1/4")	1.3	0.7
Φ9.52(3/8")	1.6	1.0
Φ12-12.7(1/2")	1.8	1.0
Φ15.8-16(5/8")	2.4	2.2

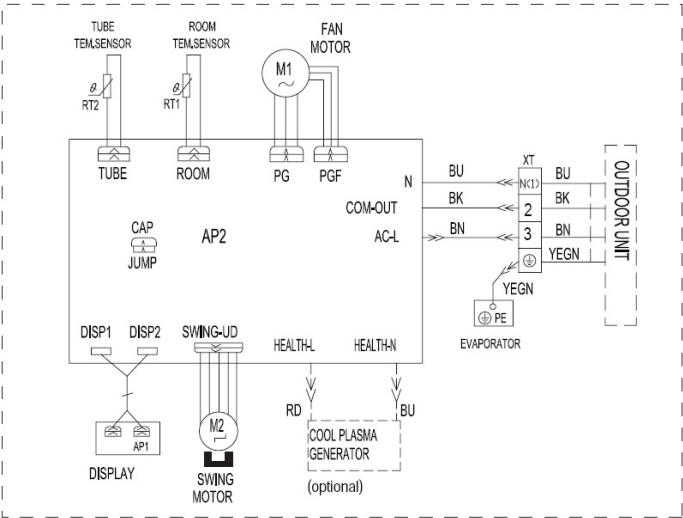
F: Inspection

- Check the quality of expanding port. If there is any blemish, expand the port again according to the steps above.

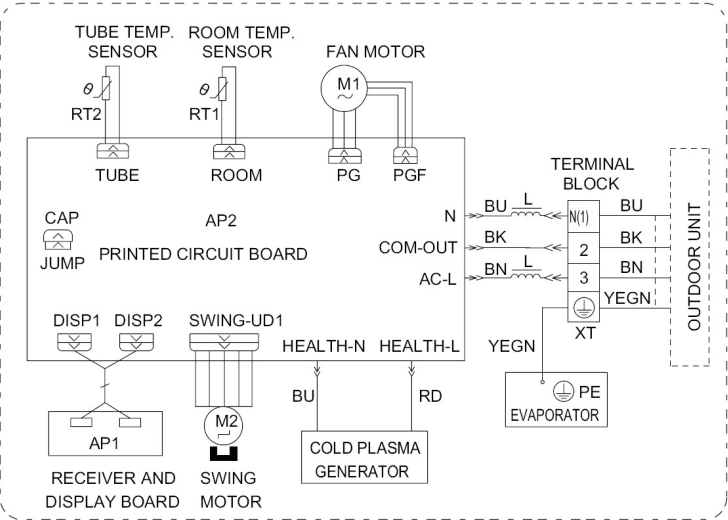


ELECTRIC SCHEMATIC DIAGRAM

ASH-09AIE2 indoor / ASH-12AIE2 indoor



ASH-18AIE2 indoor / ASH-24AIE2 indoor



RATING LABEL


SPLIT AIR CONDITIONER
INDOOR UNIT

Model	ASH-09AIE2
Rated Voltage	220-240V~
Rated Frequency	50Hz
Cooling Capacity	2600W
Heating Capacity	2800W
Air Flow Volume	600m³/h
Sound Pressure Level(H)	38dB(A)
Weight	8kg
Manufactured Date	

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SPLIT AIR CONDITIONER
INDOOR UNIT

Model	ASH-12AIE2
Rated Voltage	220-240V~
Rated Frequency	50Hz
Cooling Capacity	3500W
Heating Capacity	3800W
Air Flow Volume	680m³/h
Sound Pressure Level(H)	39dB(A)
Weight	9kg
Manufactured Date	

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SPLIT AIR CONDITIONER
INDOOR UNIT

Model	ASH-18AIE2
Rated Voltage	220-240V~
Rated Frequency	50Hz
Cooling Capacity	5275W
Heating Capacity	5570W
Air Flow Volume	800m³/h
Sound Pressure Level(H)	40dB(A)
Weight	12kg
Manufactured Date	

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SPLIT AIR CONDITIONER
INDOOR UNIT

Model	ASH-24AIM2 PT
Rated Voltage	220-240V~
Rated Frequency	50Hz
Cooling Capacity	6450W
Heating Capacity	7000W
Air Flow Volume	1000m³/h
Sound Pressure Level(H)	47dB(A)
Weight	15kg
Manufactured Date	

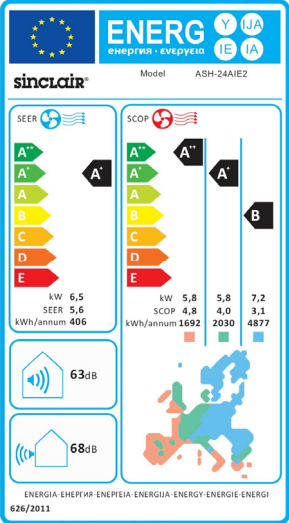
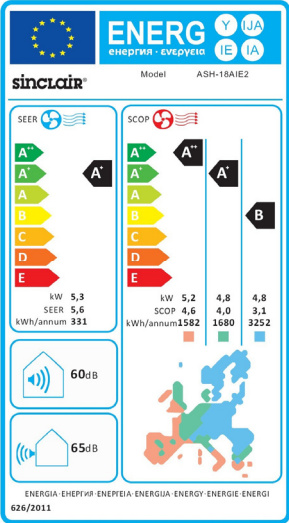
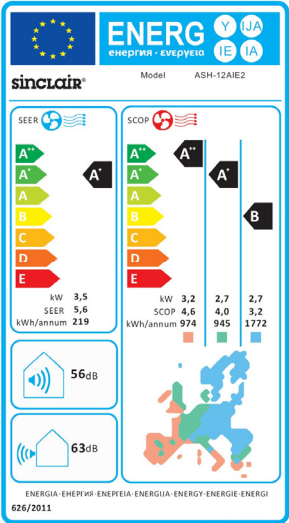
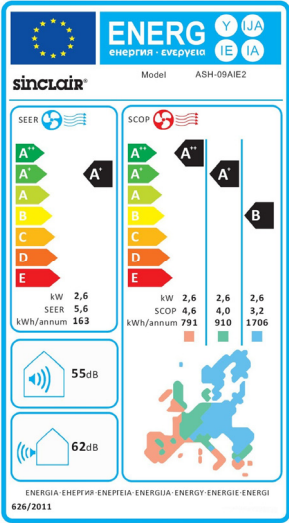
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ENERGY LABEL



NOTE CONCERNING PROTECTION OF ENVIRONMENT



This product must not be disposed of via normal household waste after its service life, but must be taken to a collection station for the recycling of electrical and electronic devices. The symbol on the product, the operating instructions or the packaging indicate such disposal procedures. The materials are recyclable in accordance with their respective symbols. By means of re-use, material recycling or any other form of recycling old appliances you are making an important contribution to the protection of our environment. Please ask your local council where your nearest disposal station is located.

INFORMATION CONCERNING USED REFRIGERANT MEDIUM

This unit is containing fluorinated gases included in the Kyoto protocol. The maintenance and the liquidation must be carried out by qualified personnel.

Type of refrigerant: R410A

The composition of the cooling medium R410A: (50% HFC-32, 50% HFC-125)

The quantity of the refrigerant: please see the unit label.

The value GWP: 2088

GWP = Global Warming Potential

In case of quality problem or other please contact your local supplier or authorized service center.

Emergency number: 112

PRODUCER

Producer: SINCLAIR CORPORATION Ltd., 1-4 Argyll St., London W1F 7LD, UK,
www.sinclair-eu.com

This product was manufactured in China (Made in China).

REPRESENTATIVE, TECHNICAL SUPPORT

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