

Owner's Manual



DUCTLESS SINGLE ZONE HEAT PUMP

19-16 SEER INVERTER
9000 to 24 000 BTU/hr

Models:
SED09KCH17S
SED12KCH17S
SED18KCH16S
SED24KCH19S

*Please read this owner's manual carefully
before operating the unit and keep it for future reference.*

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This appliance is not intended for use by people (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they are under the 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.

OPERATION NOTICES

EXPLANATION OF SYMBOLS



DANGER

Indicates a hazardous situation that, if not avoided, will result in serious injury or death.



WARNING

Indicates a hazardous situation that, if not avoided, could result in serious injury or death.



CAUTION

Indicates a hazardous situation that, if not avoided, may result in minor or moderate injury.

NOTICE

Indicates important but not hazard-related information, used to indicate risk of property damage.



Indicates a hazard and it is assigned to the signal words DANGER, WARNING or CAUTION.

PRECAUTIONS



WARNING

Operation and Maintenance

- This appliance can be used by people (including children of 8 years old and above) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, as long as they are under the supervision or instruction concerning use of the appliance by a person responsible for their safety.
- Children shall not play with the appliance.
- Cleaning and user maintenance shall not be made by children.
- Do not connect to multi-purpose socket. Otherwise, it may cause fire hazard.
- Disconnect power supply when cleaning. Otherwise, it may cause electric shock.
- If the power supply wire is damaged, it must be replaced by a qualified person in order to avoid a hazard.
- Do not wash 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.
- Maintenance must be performed by qualified person. Otherwise, it may cause personal injury or damage.
- Do not repair the appliance by yourself. It may cause electric shock or damage. Please contact a qualified person when you need to repair it.
- 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 control, otherwise it could damage the remote.
- When below phenomenon occurs, please turn off the appliance and disconnect power immediately, and then contact a qualified person for service:
 - There's abnormal sound during operation.
 - Circuit break trips off frequently.
 - The appliance gives off burning smell.
 - Indoor unit is leaking.
- If the appliance operates in an inappropriate environment or under abnormal conditions, it may cause malfunction, electric shock or fire hazard.
- When turning on or turning off the unit by emergency operation button, please press this button with an insulated object other than metal.
- Do not step on top panel of outdoor unit, or put on heavy objects. It may cause damage or personal injury.

PRECAUTIONS



WARNING

Wiring

- Installation must be performed by a qualified person. 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 breaker.
- Install a circuit breaker of adequate capacity only used for the system; otherwise, it may cause malfunction.
- An all-pole disconnection switch having a contact separation of at least 3 mm in all poles should be connected in fixed wiring.
- The appliance should be properly grounded. Incorrect grounding may cause electric shock.
- Make sure the power supply matches with the requirement of the appliance. Unstable power supply or incorrect wiring may cause malfunction of the unit, electric shock or fire hazard.
- Properly connect the live wire, neutral wire and grounding wire.
- Be sure to cut off the power supply before proceeding any work related to electricity and safety.
- Do not turn the power on before finishing installation.
- If the supply cord is damaged, it must be replaced by a qualified person in order to avoid problems.
- 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 a qualified person only.
- The heat pump is a first class electric appliance. It must be properly grounded with specialized grounding device by a qualified person. Please make sure it is always properly grounded, otherwise it may cause electric shock.
- The yellow-green wire in the appliance is the grounding wire, which can't be used for other purposes.
- The grounding resistance should comply with national electric safety regulations.
- All wires of indoor unit and outdoor unit should be connected by a qualified person.
- If the length of power connection wire is insufficient, please contact the dealer for a new one. Do not extend the wire yourself.

PRECAUTIONS



WARNING

Location

- If you need to relocate the appliance to another place, only a 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 a fence around the outdoor unit for safety purpose.
- Instructions for installation and use of this product are provided by the manufacturer.

WORKING TEMPERATURE RANGE

| | Indoor side DB/WB (°C / °F) | Outdoor side DB/WB (°C / °F) |
|--------------|-----------------------------|------------------------------|
| Max. cooling | 26.7/19.4 (80/66.9) | 46.1/23.9 (115/75) |
| Max. heating | 26.7/- (80/-) | 23.9/18.3 (75/64.9) |

NOTICE

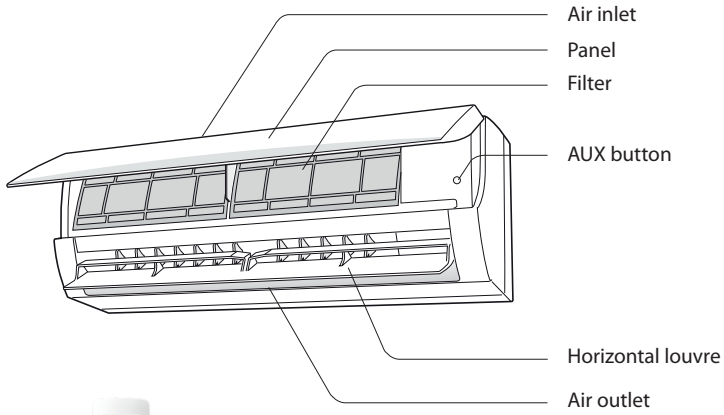
The operating temperature range (outdoor temperature) for cooling is -18°C (0°F)~46°C (115°F); for heating is -20°C (-4°F)~24 °C(75°F).

PARTS NAME

NOTICE

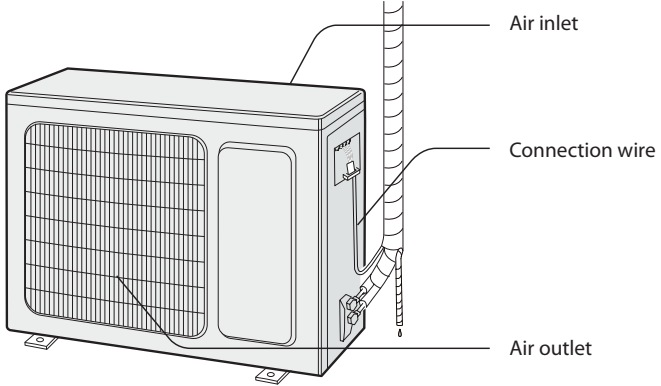
Actual product may be different from below graphics, please refer to actual product for reference purposes.

Indoor unit



Remote Controller

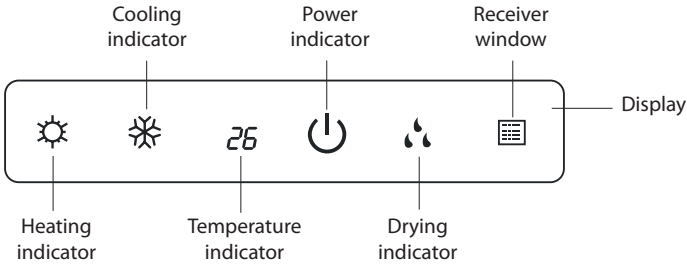
Outdoor unit



INDOOR UNIT SCREEN DISPLAY

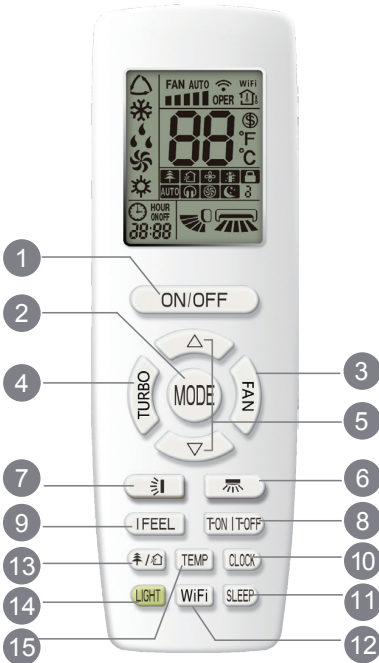
NOTICE

Actual product may be different from below graphics, please refer to actual product for reference purposes.



REMOTE CONTROL

Buttons on remote controller



- 1 ON/OFF button
- 2 MODE button
- 3 FAN button
- 4 TURBO button
- 5 ▲ / ▼ button
- 6 button
- 7 button
- 8 T-ON / T-OFF button
- 9 I FEEL button
- 10 CLOCK button
- 11 SLEEP button
- 12 WiFi button
- 13 button
- 14 LIGHT button
- 15 TEMP button

Introduction for icons on display screen

Operation mode

- Auto mode
- Cool mode
- Dry mode
- Fan mode
- Heat mode

Icons and Functions:

- Set fan speed (No fan speed. It's displayed only after turning it on.)
- Send signal
- WiFi { This is a general remote controller. Some models have this function while some do not. Please refer to the actual models.
- I feel
- Child lock
- Sleep mode
- Turbo mode
- Left & right swing
- Up & down swing
- Health mode
- Scavenging function
- X-FAN function

Other Labels:

- Clock
- T-ON / T-OFF
- Set time
- Quiet

Introduction for buttons on remote controller

Note:

- This is a general use remote controller, it could be used for the air conditioners with multifunction; For some function, which the model doesn't have, if press the corresponding button on the remote controller that the unit will keep the original running status.
- After putting through the power, the air conditioner will give out a sound. Operation indicator "⏻" is ON (red indicator, the colour is different for different models). After that, you can operate the air conditioner by using remote controller.
- Under on status, pressing the button on the remote controller, the signal icon "📶" on the display of remote controller will blink once and the air conditioner will give out a "di" sound, which means the signal has been sent to the air conditioner.
- As for the models with functions of WiFi or wired controller, the indoor unit must have been controlled by standard remote controller under auto mode first, and then the function of adjustable temperature under auto mode can be realized by APP or the wired controller.
- This remote controller can adjust the temperature under auto mode. When matching with the unit which is without the function of adjustable temperature under auto mode, the set temperature under auto mode may be invalid, or the displayed set temperature on the unit is not same as that on the remote controller under auto mode.

1 ON/OFF button

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

2 MODE button

Press this button to select your required operation mode.



- When selecting auto mode, air conditioner will operate automatically according to ex-factory setting. Press "FAN" button can adjust fan speed. Press "🌀" / "🌀" button can adjust fan blowing angle.
- After selecting cool mode, air conditioner will operate under cool mode. Cool indicator "❄️" on indoor unit is ON. (This indicator is not available for some models.) Press "▲" or "▼" button to adjust set temperature. Press "FAN" button to adjust fan speed. Press "🌀" / "🌀" button to adjust fan blowing angle.
- When selecting dry mode, the air conditioner operates at low speed under dry mode. Dry indicator "💧" on indoor unit is ON. (This indicator is not available for some models.) Under dry mode, fan speed can't be adjusted. Press "🌀" / "🌀" button to adjust fan blowing angle.

Introduction for buttons on remote controller

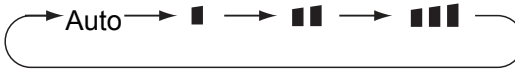
- When selecting fan mode, the air conditioner will only blow fan, no cooling and no heating. All indicators are OFF. Press "FAN" button to adjust fan speed. Press "☂" / "☂" button to adjust fan blowing angle.
- When selecting heating mode, the air conditioner operates under heat mode. Heat indicator "☀" on indoor unit is ON. (This indicator is not available for some models.) Press "▲" or "▼" button to adjust set temperature. Press "FAN" button to adjust fan speed. Press "☂" / "☂" button to adjust fan blowing angle. (Cooling only unit won't receive heating mode signal. If setting heat mode with remote controller, press ON/OFF button can't start up the unit).

Note:

- For preventing cold air, after starting up heating mode, indoor unit will delay 1~5 minutes to blow air (actual delay time is depend on indoor ambient temperature).
- Set temperature range from remote controller: 16~30°C (61-86°F);
Fan speed: auto, low speed, medium speed, high speed.
- Under auto mode, temperature can be displayed; Under auto mode, set temperature can be adjusted.

3 FAN button

Pressing this button can set fan speed circularly as: auto (AUTO), low(☂), medium (☂☂), high(☂☂☂).



Note:

- Under AUTO speed, air conditioner will select proper fan speed automatically according to ex-factory setting.
- It's Low fan speed under Dry mode.
- X-FAN function: Hold fan speed button for 2s in COOL or DRY mode, the icon "☂" is displayed and the indoor fan will continue operation for a few 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.
This function indicates that moisture on evaporator of indoor unit will be blowed after the unit is stopped to avoid mould.
 - Having set X-FAN function on: After turning off the unit by pressing ON/OFF button indoor fan will continue running for a few minutes. at low speed. In this period, Hold fan speed button for 2s to stop indoor fan directly.
 - Having set X-FAN function off: After turning off the unit by pressing ON/OFF button, the complete unit will be off directly.

4 TURBO button

Under COOL or HEAT mode, press this button to turn to quick COOL or quick HEAT mode. "☂" icon is displayed on remote controller. Press this button again

Introduction for buttons on remote controller

to exit turbo function and "⊞" icon will disappear.

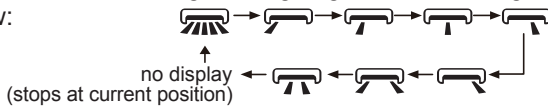
If start this function, the unit will run at super-high fan speed to cool or heat quickly so that the ambient temp. approaches the preset temp. as soon as possible.

5 ▲/ ▼ button



- Press "▲" or "▼" button once increase or decrease set temperature 1°C (°F). Holding "▲" or "▼" button, 2s later, set temperature on remote controller will change quickly. On releasing button after setting is finished, temperature indicator on indoor unit will change accordingly.
- When setting T-ON, T-OFF or CLOCK, press "▲" or "▼" (Refer to CLOCK, T-ON, T-OFF buttons).

6 button

Press this button can select left & right swing angle. Fan blow angle can be selected circularly as below:

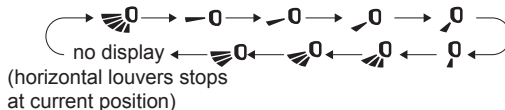












Note:

- Press this button continuously more than 2s, the main unit will swing back and forth from left to right, and then loosen the button, the unit will stop swinging and present position of guide louver will be kept immediately.
- Under swing left and right mode, when the status is switched from off to , if press this button again 2s later,  status will switch to off status directly; if press this button again within 2s, the change of swing status will also depend on the circulation sequence stated above.
- This function is applicable to partial of models.

7 button






Press this button can select up & down swing angle. Fan blow angle can be selected circularly as below:



- When selecting "  ", air conditioner is blowing fan automatically. Horizontal louver will automatically swing up & down at maximum angle.
- When selecting "  、  、  、  、  ", air conditioner is blowing fan at fixed position. Horizontal louver will stop at the fixed position.
- When selecting "  、  、  ", air conditioner is blowing fan at fixed angle. Horizontal louver will send air at the fixed angle.
- Hold "  " button above 2s to set your required swing angle. When reaching your required angle, release the button.









Introduction for buttons on remote controller

Note:









- "  ,  ,  " may not be available. When air conditioner receives this signal, the air conditioner will blow fan automatically.
- Press this button continuously more than 2s, the main unit will swing back and forth from up to down, and then loosen the button, the unit will stop swinging and present position of guide louver will be kept immediately.
- Under swing up and down mode when the status is switched from off to  , if press this button again 2s later,  status will switch to off status directly; if press this button again within 2s, the change of swing status will also depend on the circulation sequence stated above.

8 T-ON / T-OFF button

• T-ON button

"T-ON" button can set the time for timer on. After pressing this button, "  " icon disappears and the word "ON" on remote controller blinks. Press "  " or "  " button to adjust T-ON setting. After each pressing "  " or "  " button, T-ON setting will increase or decrease 1min. Hold "  " or "  " button, 2s later, the time will change quickly until reaching your required time. Press "T-ON" to confirm it. The word "ON" will stop blinking. "  " icon resumes displaying. Cancel T-ON: Under the condition that T-ON is started up, press "T-ON" button to cancel it.


• T-OFF button

"T-OFF" button can set the time for timer off. After pressing this button, "  " icon disappears and the word "OFF" on remote controller blinks. Press "  " or "  " button to adjust T-OFF setting. After each pressing "  " or "  " button, T-OFF setting will increase or decrease 1min. Hold "  " or "  " button, 2s later, the time will change quickly until reaching your required time. Press "T-OFF" word "OFF" will stop blinking. "  " icon resumes displaying. Cancel T-OFF. Under the condition that T-OFF is started up, press "T-OFF" button to cancel it.

Note:

- Under on and off status, you can set T-OFF or T-ON simultaneously.
- Before setting T-ON or T-OFF, please adjust the clock time.
- After starting up T-ON or T-OFF, set the constant circulating valid. After that, air conditioner will be turned on or turned off according to setting time. ON/OFF button has no effect on setting. If you don't need this function, please use remote controller to cancel it.

9 I FEEL button

Press this button to start I FEEL function and "  " will be displayed on the remote controller. After this function is set, the remote controller will send the detected

Introduction for buttons on remote controller

ambient temperature to the controller and the unit will automatically adjust the indoor temperature according to the detected temperature. Press this button again to close I FEEL function and "🌡️" will disappear.

- Please put the remote controller near user when this function is set. Do not put the remote controller near the object of high temperature or low temperature in order to avoid detecting inaccurate ambient temperature. When I FEEL function is turned on, the remote controller should be put within the area where indoor unit can receive the signal sent by the remote controller.

10 CLOCK button

Press this button to set clock time. "🕒" icon on remote controller will blink. Press "▲" or "▼" button within 5s to set clock time. Each pressing of "▲" or "▼" button, clock time will increase or decrease 1 minute. If hold "▲" or "▼" button, 2s later, time will change quickly. Release this button when reaching your required time. Press "CLOCK" button to confirm the time. "🕒" icon stops blinking.

Note:

- Clock time adopts 24-hour mode.
- The interval between two operations can't exceeds 5s. Otherwise, remote controller will quit setting status. Operation for T-ON/T-OFF is the same.

11 SLEEP button

Under COOL, or HEAT mode, press this button to start up sleep function. "🌙" icon is displayed on remote controller. Press this button again to cancel sleep function and "🌙" icon will disappear. After powered on, Sleep Off is defaulted. After the unit is turned off, the Sleep function is canceled.

In this mode, set temperature will be adjusted with the change of time. Under Fan-DRY and Auto modes, this function is not available.

12 WiFi button

When WiFi function is turned on, "WiFi" icon will be displayed on the remote controller; when WiFi function is turned off, "WiFi" icon will disappear.

How to turn on WiFi: Press "WiFi" button to turn on WiFi function.

How to turn off WiFi: Hold "WiFi" button for 5s to turn off WiFi function.

Under off status, press "MODE" and "WiFi" buttons simultaneously for 1s, WiFi module will restore factory settings.

- This function is only available for some models.

13 🏠/🌿 button

Press this button to achieve the on and off of health 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 health and

Introduction for buttons on remote controller

scavenging functions simultaneously; LCD displays "🏠" and "🌳". Press this button for the third time to quit health and scavenging functions simultaneously. Press the button for the fourth time to start health function; LCD display "🌳". Press this button again to repeat the operation above.

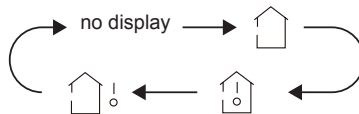
- This function is applicable to partial of models.

14 LIGHT button

Press this button to turn off display light on indoor unit. "💡" icon on remote controller disappears. Press this button again to turn on display light. "💡" icon is displayed.

15 TEMP button

By pressing this button, you can see indoor set temperature, indoor ambient temperature or outdoor ambient temperature on indoor unit's display. The setting on remote controller is selected circularly as below:



- When selecting "🏠" or no display with remote controller, temperature indicator on indoor unit displays set temperature.
- When selecting "🏠🌡️" with remote controller, temperature indicator on indoor unit displays indoor ambient temperature.
- When selecting "🏠🌡️🏠" with remote controller, temperature indicator on indoor unit displays outdoor ambient temperature.

Note:

- Outdoor temperature display is not available for some models. At that time, indoor unit receives "🏠🌡️" signal, while it displays indoor set temperature.
- It's defaulted to display set temperature when turning on the unit. There is no display in the remote controller.
- Only for the models whose indoor unit has dual-8 display.
- When selecting displaying of indoor or outdoor ambient temperature, indoor temperature indicator displays corresponding temperature and automatically turn to display set temperature after three or five seconds.

Function introduction for combination buttons

Energy-saving function

Under cooling mode, press "TEMP" and "CLOCK" buttons simultaneously to start up or turn off energy-saving function. When energy-saving function is started up, "SE" will be shown on remote controller, and air conditioner will adjust the set temperature automatically according to ex-factory setting to reach to the best energy-saving effect. Press "TEMP" and "CLOCK" buttons simultaneously again to exit energy-saving function.

Note:

- Under energy-saving function, fan speed is defaulted at auto speed and it can't be adjusted.
- Under energy-saving function, set temperature can't be adjusted. Press "TURBO" button and the remote controller won't send signal.
- Sleep function and energy-saving function can't operate at the same time. If energy-saving function has been set under cooling mode, press sleep button will cancel energy-saving function. If sleep function has been set under cooling mode, start up the energy-saving function will cancel sleep function.

8°C heating function

Under heating mode, press "TEMP" and "CLOCK" buttons simultaneously to start up or turn off 8°C heating function. When this function is started up, "8°C" and "8°C" will be shown on remote controller, and the air conditioner keep the heating status at 8°C. Press "TEMP" and "CLOCK" buttons simultaneously again to exit 8°C heating function.

Note:

- Under 8°C heating function, fan speed is defaulted at auto speed and it can't be adjusted.
- Under 8°C heating function, set temperature can't be adjusted. Press "TURBO" button and the remote controller won't send signal.
- Sleep function and 8°C heating function can't operate at the same time. If 8°C heating function has been set under heating mode, press sleep button will cancel 8°C heating function. If sleep function has been set under heating mode, start up the 8°C heating function will cancel sleep function.
- Under °F temperature display, the remote controller will display 46 °F heating.

Child lock function

Press "▲" and "▼" simultaneously to turn on or turn off child lock function. When child lock function is on, "🔒" icon is displayed on remote controller. If you operate the remote controller, the "🔒" icon will blink three times without sending signal to the unit.

Temperature display switchover function

Under OFF status, press "▼" and "MODE" buttons simultaneously to switch temperature display between °C and °F.

Replacement of batteries in remote controller

1. Lift the cover along the direction of arrow (as shown in Fig 1 ①).
2. Take out the original batteries (as shown in Fig 1 ②).
3. Place two 7# (AAA 1.5V) dry batteries, and make sure the position of “+” polar and “-” polar is correct (as shown in Fig 2 ③).
4. Reinstall the cover (as shown in Fig 2 ④).

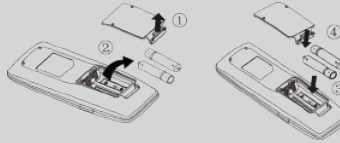


Fig.1

Fig.2

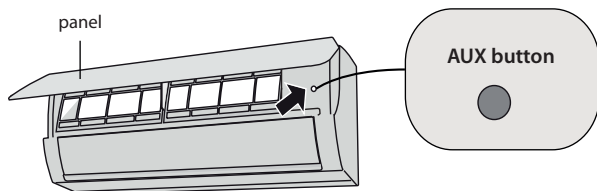
NOTICE

- During operation, point the remote control signal sender at the receiving window on indoor unit.
- The distance between signal sender and receiving window should be no more than 8m, and there should be no obstacles between them.
- Signal may be interfered easily in the room where there is fluorescent lamp or wireless telephone; remote controller should be close to indoor unit during operation.
- Replace new batteries of the same model when replacement is required.
- When you don't use remote controller for a long time, please take out the batteries.
- If the display on remote controller is fuzzy or there's no display, please replace batteries.

EMERGENCY OPERATION

If the remote control is lost or damaged, please use AUX button to turn on or turn off the appliance. As illustrated, open the panel, press the AUX button to turn on or turn off the device.

When it is turned on, it will operate under AUTO mode.



WARNING

Use insulated object other than metal to press the AUX button.

MAINTENANCE

CLEANING AND MAINTENANCE



WARNING

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

Cleaning the surface of indoor unit

- When the surface of indoor unit is dirty, it is recommended to use a soft dry cloth or lightly moistened with water to wipe it.
- Do not use liquid or corrosive detergent clean the appliance and do not splash water or other liquid onto it, otherwise, it may damage the plastic components, even cause electric shock.

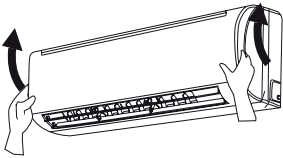
NOTICE

Do not remove the panel when cleaning it.

Clean filter

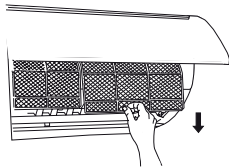
1. Open panel

Open the panel into a certain angle as illustrated (less than 60°, do not force the panel).



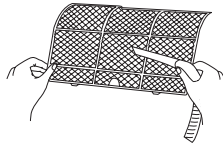
2. Remove filter

Remove the filter as illustrated.



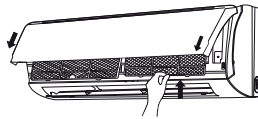
3. Clean filter

Use a vacuum or water to clean the filter. When the filter is very dirty, use 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 the unit operates in a highly dusty environment, cleaning frequency should be increased.
- After removing the filter, do not touch fins to avoid injury or damage the unit.
- Do not use fire or hair dryer to dry the filter to avoid deformation or fire hazard.

Checking before usage

1. Check that air inlets and air outlets are not blocked.
2. Check if circuit breaker and connection are in good condition.
3. Check that filters are clean.
4. Check that drainage pipe is not damaged or blocked.

Checking after usage

1. Disconnect power supply.
2. Clean filters and indoor unit panel.

Notice for recovery

1. Many packing materials are recyclable. Please dispose of them in appropriate recycling bin.
2. If you want to get rid of the device, please contact a local recycling center for the correct disposal method.

MALFUNCTION

MALFUNCTION ANALYSIS

Please check below items before asking for servicing. If the malfunction still cannot be eliminated, please contact a qualified person.

| Phenomenon | Items to check | Solution |
|---|---|---|
| Indoor unit cannot receive remote control signal or remote control does not work. | Is there severe interferences (such as static electricity, unstable voltage)? | Cut the power supply off and put the power back after about 3 minutes, and then turn on the unit again. |
| | Is the remote control within the signal receiving distance? | Signal receiving distance is 26.25 ft. (8 m). |
| | Is there any obstacle between the unit and the remote control? | Remove obstacles. |
| | Is the remote control pointing at the receiving window of the indoor unit? | Select proper angle and point the remote control at the receiving window on indoor unit. |
| | Is the remote control display fuzzy or there is no display at all ? | Check the batteries. If the battery charge level is too low, please replace them. |
| | No display when operating the remote control? | Check if remote control is damaged. If so, replace it. |
| | Are there fluorescent lamps in the room? | Bring the remote control close to the indoor unit. Turn off the fluorescent lamps and then try it again. |
| No air flow from indoor unit. | Are air inlet or air outlet of indoor unit blocked? | Eliminate obstacles. |
| | Under heating mode, has indoor temperature reached set temperature? | After reaching set temperature, indoor unit will stop blowing out air. |
| | Has the heating mode been just turned on? | In heating mode, in order to prevent blowing out cold air, indoor unit will start a few minutes after the unit has been turned on, which is normal. |
| Appliance cannot operate. | Is there a power failure? | Wait until power resumes. |
| | Circuit break trips off? | Ask a qualified person to replace circuit break or replace wiring. |
| | Has the unit been turned on immediately after being turned off? | Wait for 3 minutes, and then turn on the unit again. |
| | Are the function setting on the remote control correct? | Reset the functions |
| Indoor unit display screen doesn't work | Is the "LIGHT" function deactivated? | Press the "LIGHT" button on the remote control to light the indoor unit display screen. |

| Phenomenon | Items to check | Solution |
|--|---|---|
| Mist is emitted from indoor unit air outlet. | Are indoor temperature and humidity level high? | This is because indoor air is cooled rapidly. After a while, indoor temperature and humidity level will decrease and mist will disappear. |
| Set temperature cannot be adjusted. | Is the unit operating under AUTO mode? | Temperature cannot be adjusted under AUTO mode. Please switch the operation mode if you need to adjust temperature. |
| | Does your required temperature exceed the set temperature range? | Set temperature range: 16 °C to 30 °C (61 °F to 86 °F). |
| Air cooling (heating) is not efficient. | Is voltage too low? | Wait until the voltage comes back to normal. |
| | Is filter dirty? | Clean the filter. |
| | Is the set temperature in proper range? | Adjust temperature within proper range. |
| | Are doors and windows open? | Close doors and windows. |
| Odours are emitted. | Is there an odour source in the room, such as furniture or cigarette. | Eliminate the odour source. |
| | Is the heat exchanger dirty? | Have it cleaned by a specialist. |
| | Is the filter dirty? | Clean the filter. |
| Appliance suddenly operates abnormally. | There may be interferences, such as thunder, wireless devices, etc. | Cut the power supply off and put the power back. Then turn on the unit again. |
| Outdoor unit emits vapor. | Is the unit in heating mode? | During defrosting under heating mode, it may produce vapor, which is normal. |
| Water flowing noise. | Has the air conditioner just been turned on and off? | The noise is the sound of refrigerant flowing inside the unit, which is normal. |
| Cracking noise. | Has the air conditioner just been turned on and off? | This is the sound of friction caused by expansion and/or contraction of panel or other parts due to temperature changes. |

ERROR CODES

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

| Error code | What to do? |
|------------|---|
| C5 | Please contact a qualified person for service. |
| E5 | It can be eliminated after restarting the unit. If not, please a qualified person for service. |
| E6 | It can be eliminated after restarting the unit. If not, please contact a qualified person for service. |
| E8 | It can be eliminated after restarting the unit. If not, please contact a qualified person for service. |
| F0 | It can be eliminated by disconnecting power at the main panel. Wait 10 minutes before energizing. If the error code remains, please contact a qualified person for service. |
| F1 | Please contact a qualified person for service. |
| F2 | Please contact a qualified person for service. |
| H6 | It can be eliminated after restarting the unit. If not, please contact a qualified person for service. |
| U8 | It can be eliminated after restarting the unit. If not, please contact a qualified person for service. |

Note: If there are other error codes, please contact a qualified person for service.



WARNING

When below phenomenon occurs, please turn off the unit and disconnect power immediately, then contact a qualified person for service:

- There is an unusual sound during operation.
- Circuit break trips off frequently.
- Device generates a burning smell.
- Indoor unit is leaking.

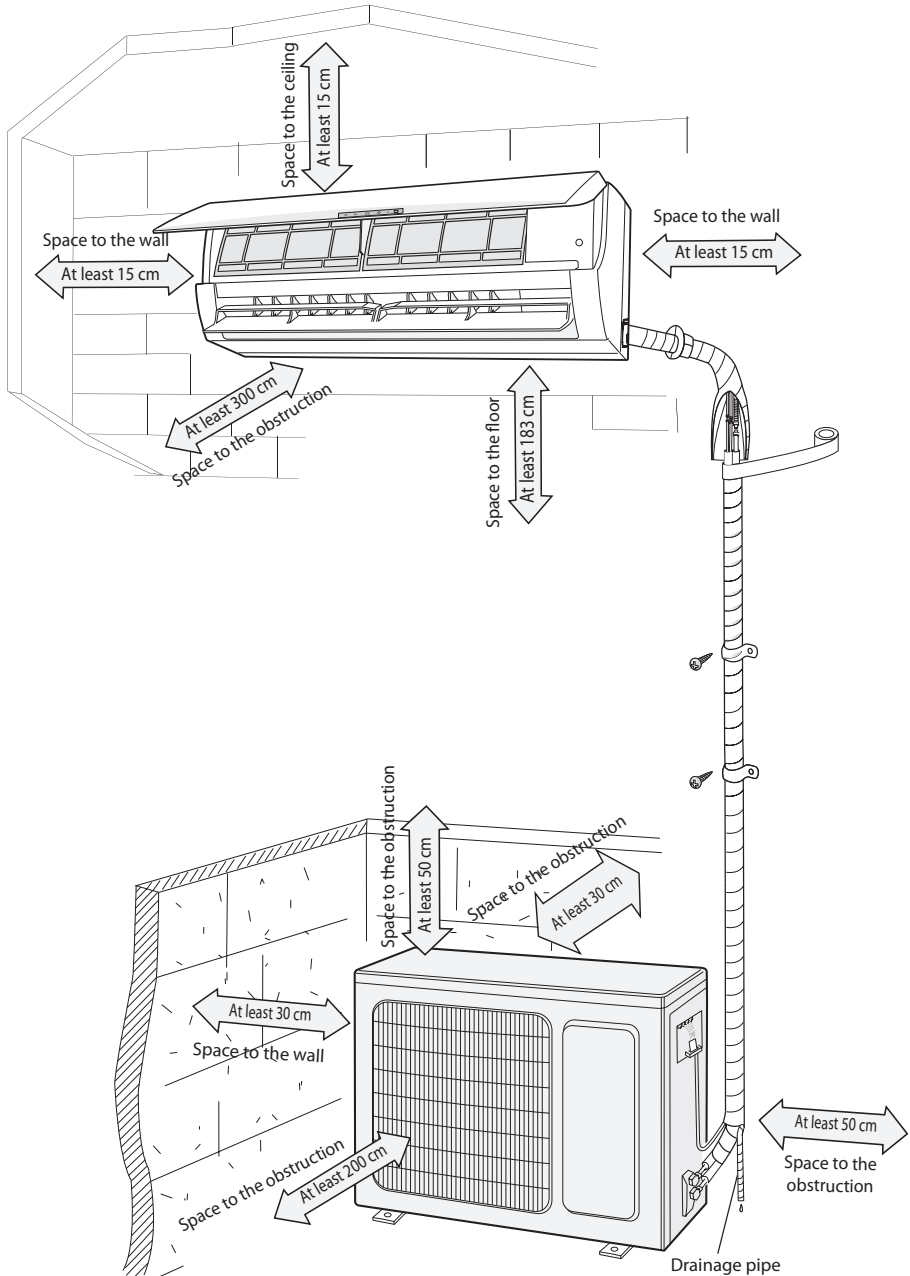


CAUTION

- Do not repair or refit the appliance by yourself.
- If the appliance operates under abnormal conditions, it may damage the unit, cause electric shock or fire hazard.

PREPARATION BEFORE INSTALLATION

REQUIRED INSTALLATION CLEARANCE DISTANCES DIAGRAM



TOOLS REQUIRED FOR INSTALLATION

- Level meter
- Screwdrivers
- Impact drill
- Drill head
- Pipe expander
- Torque wrench
- Open-end wrench
- Pipe cutter
- Leakage detector
- Vacuum pump
- Manometer
- Multimeter
- Inner hexagon spanner
- Measuring tape

NOTICE

Contact a qualified person for installation.

SELECTION OF INSTALLATION LOCATION

Basic requirements

Installing the unit in the following places may cause malfunction. If it is unavoidable, please consult a qualified person:

- A place with strong heat sources, vapors, flammable or explosive gas or volatile objects spread in the air.
- A place with high-frequency devices (such as welding machine, medical equipment).
- A place near coastal regions.
- A place with oil or fumes in the air.
- A place with sulphurous gas.
- Other places with special environment.
- In a laundry room, near a bath, shower or swimming pool.

Indoor unit

- There should be no obstruction near air inlet and air outlet.
- Select a location where the condensation water can be dispersed easily and will not affect people.
- Select a location which is convenient to connect the outdoor unit and which is the closest possible to the power supply.
- Select a location which is out of reach for children.
- The location should be able to withstand the weight of indoor unit and will not increase noise and vibration.
- Make sure that the installation follows the requirement of clearance distance diagram.
- Do not install the indoor unit right above an electric appliance.
- Please try your best to keep the unit away from fluorescent lamps.

Outdoor unit

- Select a location where the noise and outflow air emitted by the outdoor unit will not affect neighborhood.
- The location should be well ventilated and dry, where the outdoor unit won't be exposed directly to sunlight or strong wind.
- The location should be able to withstand the weight of outdoor unit.
- Make sure that the installation follows the requirement of clearance distance diagram.
- Select a location which is out of reach for children and far away from animals or plants. If it is unavoidable, please add a fence for safety purpose.
- Do not install the outdoor unit opposite to an air outlet. Eg.: dryer outlet, kitchen hood, etc.

REQUIREMENTS FOR ELECTRICAL CONNECTION**Safety precautions**

- Must follow the electric safety regulations when installing the unit.
- According to the local safety regulations, use qualified power supply circuit and circuit break.
- Make sure the power supply matches with the requirement of the device. Unstable power supply or incorrect wiring may cause malfunction and damage the unit or fire hazard.
- Properly connect the live wire, neutral wire and grounding wire.
- Cut off the power supply before proceeding any work related to electricity.
- Do not put through the power before finishing installation.
- 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.

Grounding requirements

- The heat pump is a first class electric appliance. It must be properly grounded by a qualified person with specialized grounding device. Please make sure it is always grounded effectively, otherwise it may cause electric shock.
- The yellow-green wire in the appliance is the grounding wire, which cannot be used for other purposes.
- The grounding resistance should comply with national electric safety regulations.
- An all-pole disconnect switch having a contact separation of at least 3mm in all poles should be connected in fixed wiring.

INSTALLATION

INSTALLATION OF INDOOR UNIT

Step 1: Choosing installation location

- Recommend the installation location to the customer and then confirm it with the customer.

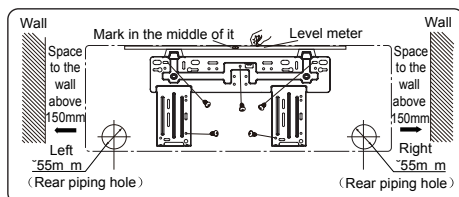
Step 2: Install wall-mounting frame

- 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.
- Drill the screw fixing holes on the wall with the impact drill (the drill head specification should be the same as the plastic anchor) and then put the plastic anchors in the holes.
- 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 a plastic anchor is loose, drill another fixing hole nearby.

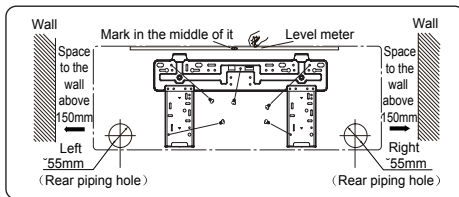
Step 3: Open piping hole

- 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-mounting frame, as shown below.

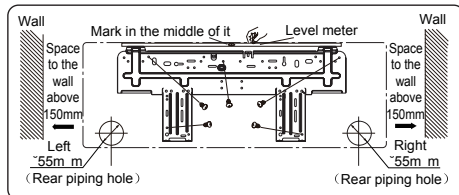
9K



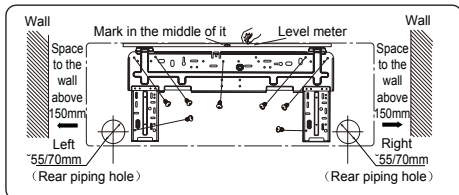
12K



18K



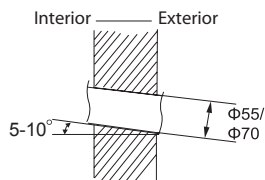
24K



- Open a piping hole with a diameter of $\Phi 55$ mm or $\Phi 70$ mm depending on selected outlet pipe. In order to drain efficiently, slant the piping hole on the wall slightly downward to the outdoor side with a gradient of 5° to 10° .

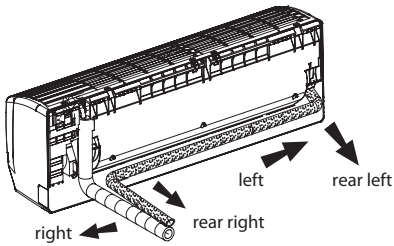
NOTES:

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

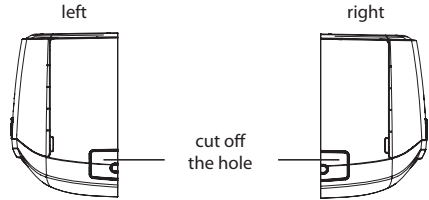


Step 4: Outlet pipe

- The pipe can be led out to the right, rear right, left or rear left.

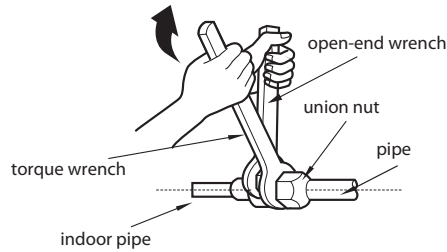
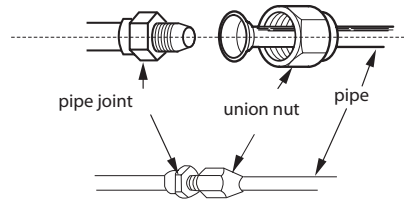


- When direction of the pipe has been selected, please cut off the corresponding hole on the bottom case.



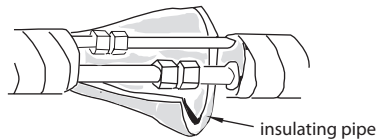
Step 5: Connect the pipe of indoor unit

- Aim the pipe joint at the corresponding bell mouth.
- Pre-tighten the union nut with hand.
- 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. Adjust the torque force by referring to the following table.



| 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 |

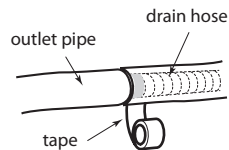
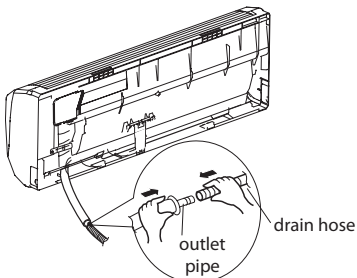
- Wrap the indoor pipe and joint of connection pipe with insulating pipe, and then wrap it with tape.



Step 6: Install drain hose

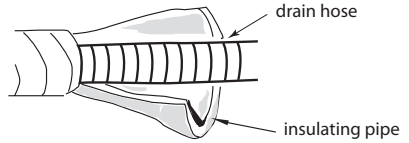
- Connect the drain hose to the outlet pipe of indoor unit.

- Bind the joint with tape.

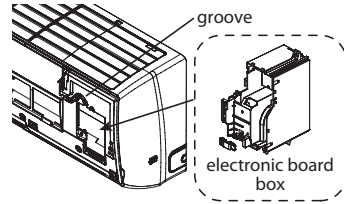
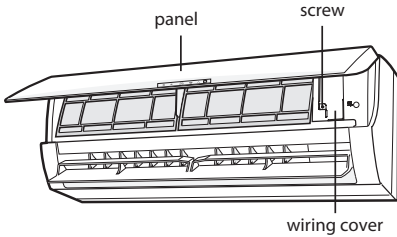


NOTICE

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

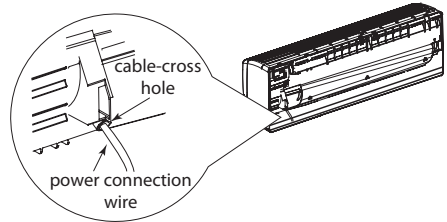


Step 7: Connect wire of indoor unit and repositioning of the ambient sensor

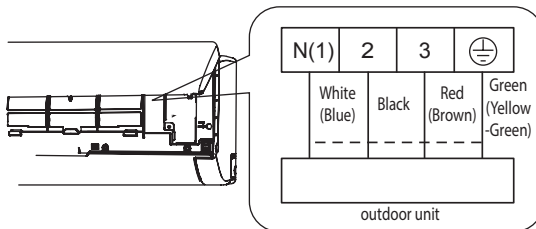


- Open the panel, remove the screw on the wiring cover and then take the cover off.
- Take the ambient temperature sensor in the electronic board box and insert it in the groove as per above image.

- 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.



- 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. After finishing wiring, clamp the grounding wire (yellow-green wire) into the wire-crossing groove as shown in the following figure, in order to avoid pressing the wire when closing the electric box cover.



Note: this wiring diagram is for reference only, please always refer to the one on the actual unit.

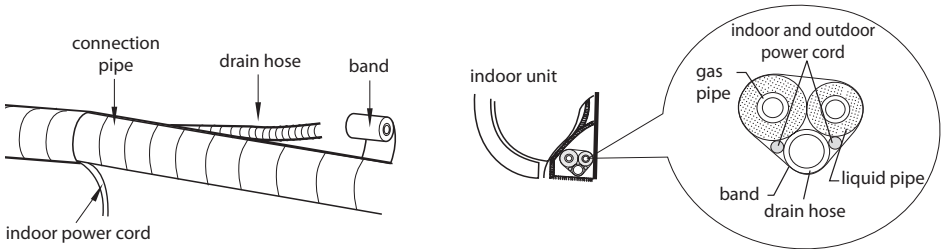
- Put wiring cover back and then tighten the screw.
- Close the panel.

Notes:

- All wires of indoor and outdoor unit should be connected by a qualified person.
- If the length of power connection wire is insufficient, please contact your dealer for a new one. Do not extend the wire by yourself.
- A 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 3 mm.

Step 8: Bind up pipes

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



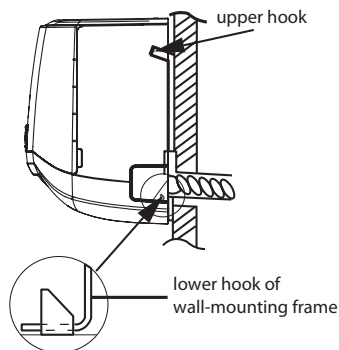
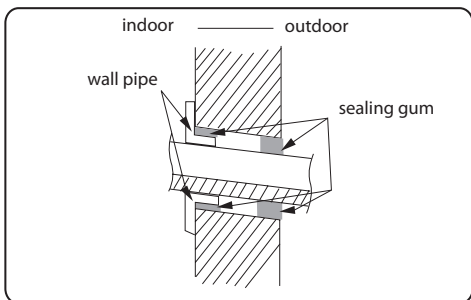
- Reserve a certain length of drain hose and power cord for installation when binding them. When binding to a certain degree, separate the indoor power and then separate the drain hose.
- Bind them evenly.
- The liquid pipe and gas pipe should be bound separately at the end.

Notes:

- The power cord and control wire cannot be crossed or winded.
- The drain hose should be bound at the bottom.

Step 9: Hang the indoor unit

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



Note:

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

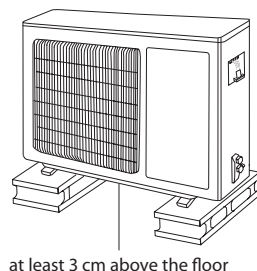
INSTALLATION OF OUTDOOR UNIT

Step 1: Fix the support of outdoor unit (select it according to the actual installation situation)

- Select installation location according to the house structure.
- Fix the support of outdoor unit on the selected location with expansion screws.

Notes:

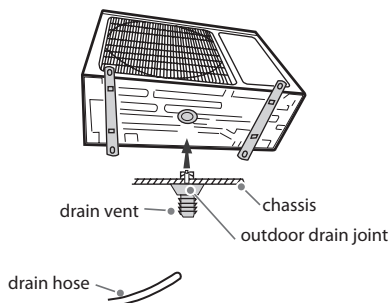
- Take sufficient protective measures when installing the outdoor unit.
- Make sure the support can withstand at least four times the unit weight.
- The outdoor unit should be installed at least 3 cm above the floor in order to install drain joint.
- Expansion screws needed per type of unit :



| Cooling capacity BTU/hr (W) | No Number of screws |
|--------------------------------|---------------------|
| 9000 (2637) | 6 |
| 12000 (3516) | 6 |
| 18000 (5274) | 8 |
| 24000 (7032) | 8 |

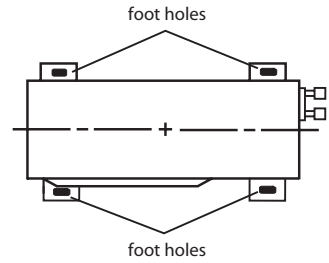
Step 2: Install drain joint

- Connect the outdoor drain joint into the hole on the chassis, as shown in the picture below.
- Connect the drain hose into the drain vent.



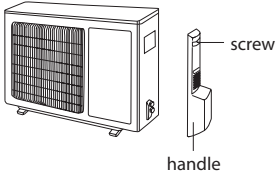
Step 3: Fix outdoor unit

- Place the outdoor unit on the support.
- Fix the foot holes of outdoor unit with bolts.

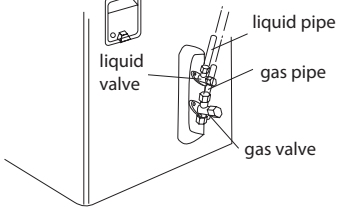


Step 4: Connect indoor and outdoor pipes

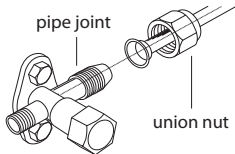
- Remove the screw on the right handle of outdoor unit and then remove the handle.



- Remove the valve cap and align the pipe joint on the flared orifice of the pipe.



- Pre-tighten the union nut by hand.

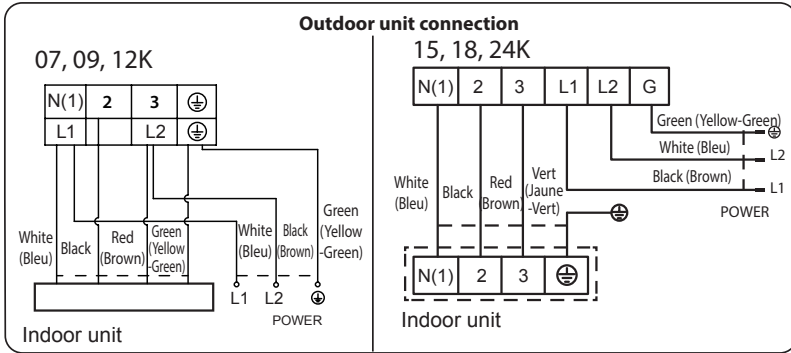


- Tighten the union nut with torque wrench by referring to the sheet below.

| 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 |

Step 5: Wiring of the unit

- Remove the wire clip; connect the power connection wire and signal control wire to the wiring terminal according to the color; fix them with screws.



Note: this wiring diagram is for reference only, please always refer to the one on the actual unit.

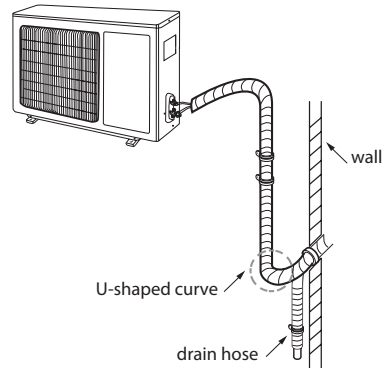
- Fix the power connection wire and signal control wire with wire clip.

Notes:

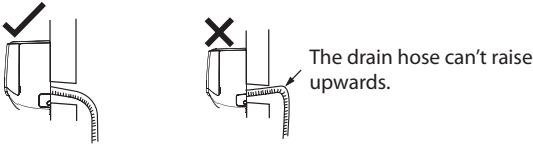
- After tightening the screw, pull the power cord slightly to check if it is solid.
- Never cut the power connection wire to extend or shorten it.

Step 6: Pipe arrangement

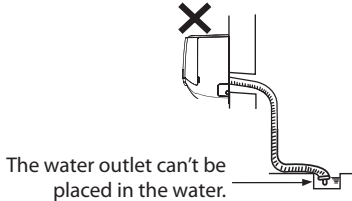
- The pipes should be placed along the wall, slightly bent and if possible be hidden. The minimum bending semi diameter is 10 cm.
- If the outdoor unit is higher than the wall hole, you must set a U-shaped curve in the pipe before pipe goes into the house, in order to prevent rain from getting in.



- The through-wall height of drain hose shouldn't be higher than the outlet pipe hole of indoor unit.

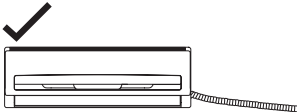


- For efficient drainage, the water outlet should not be submerged.

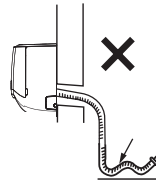
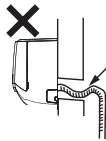
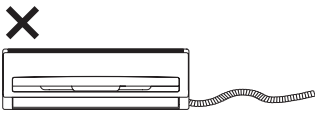


- Slant the drain hose slightly downwards; the drain hose can't be curved, raised, wavy, etc.

The drain hose must be straightened.

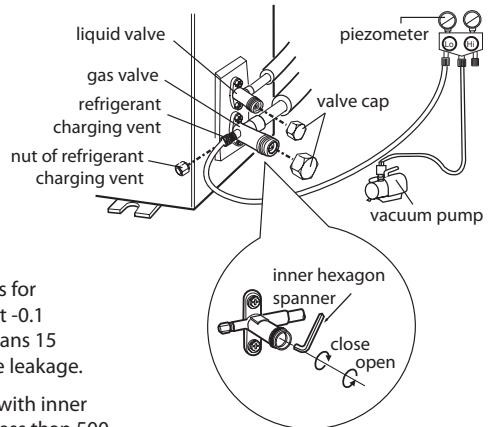


The drain hose can't be wavy.



VACUUM PUMPING

- Remove the valve caps on the liquid valve and gas valve and the nut of refrigerant charging vent.
- Connect the manometer charging hose to the refrigerant charging vent of gas valve and then connect the other charging hose to the vacuum pump.
- Open the manometer completely and operate for 10 to 15 minutes to check if the pressure of manometer remains at -0.1 MPa.
- Close the vacuum pump and maintain this status for 1 to 2 minutes to check if the pressure remains at -0.1 MPa (less than 500 microns, it could take more than 15 minutes). If the pressure decreases, there may be leakage.
- Open the liquid valve and gas valve completely with inner hexagon spanner and remove the manometer (less than 500 microns).
- Tighten the screw caps of valves and refrigerant charging vent.



Note:

Using a micro gage, bring the vacuum value down to at least 500 microns and make sure the value remains stable for at least 10 minutes after the pump has stopped. If the value increase and doesn't stay below 500 microns, there is a leak in the system.

LEAKAGE DETECTION

- With a leakage detector, check if there is leakage.
- If leakage detector is not available, please use soapy water for leakage detection. Apply soapy water at the suspected position and leave it there for 3 minutes. If there are bubbles coming out of this position, there is a leak.

CHECKING AFTER INSTALLATION

Check the following items after finishing installation:

| Items to check | Possible malfunction |
|--|---|
| Has the unit been installed solidly? | 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. |
| Are electric wiring and pipes installed correctly? | It may cause malfunction or damaging the parts. |
| Is the unit grounded securely? | It may cause electric leakage. |
| Does the power wire follow the specifications? | 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. |
| Are dust and installation debris removed? | It may cause malfunction or damaging the parts. |
| Are gas valve and liquid valve of connection pipe completely opened? | It may cause insufficient cooling (heating) capacity. |

OPERATION TEST

1. Before operation test

- Ensure that the customer is satisfied.
- Inform the customers about the important notes of the appliance.

2. Operation test

- Put through the power, press the ON/OFF button on the remote control to start the unit.
- Press MODE button to select AUTO, COOL, DRY, FAN or HEAT to check whether the operation is normal or not.
- If the ambient temperature is lower than 16 °C (61 °F), the appliance will not work in COOL (cooling) mode.

OTHER CONSIDERATIONS

CONFIGURATION OF CONNECTION PIPE

- Standard length of connection pipe: 25 ft. (7.5 m).
- Minimum length of connection pipe: 10 ft. (3 m).
- Maximum length of connection pipe and maximum height difference:

| Cooling capacity BTU/hr (W) | Maximum length of connection pipe ft. (m) | Maximum height difference ft. (m) |
|--------------------------------|---|---|
| 9000 (2637) | 49 (15) | 33 (10) |
| 12000 (3516) | 66 (20) | 33 (10) |
| 18000 (5274) | 82 (25) | 33 (10) |
| 24000 (7032) | 82 (25) | 33 (10) |

Additional refrigerant liquid and refrigerant charge required after extending connection pipes

- The calculation method of additional refrigerant charge (on the basis of liquid pipe) is:

Additional refrigerant charge (oz) = extended length of liquid pipe (ft.) x 0.2

- Based on the length of standard pipe and depending on pipe diameter, add refrigerant as per following chart.

Additional refrigerant charge for R410A

| Diameter of connection pipe | | Outdoor unit throttle | |
|-----------------------------|------------------|-----------------------|------------------------------|
| Liquid pipe (mm) | Gas pipe (mm) | Cooling only (g/m) | Cooling and heating (g/m) |
| Φ 6 | Φ 9.52 ou Φ 12 | 15 | 20 |
| Φ 6 ou Φ 9.52 | Φ 16 ou Φ 19 | 15 | 50 |
| Φ 12 | Φ 19 ou Φ 22.2 | 30 | 120 |
| Φ 16 | Φ 25.4 ou Φ 31.8 | 60 | 120 |
| Φ 19 | - | 250 | 250 |
| Φ 22.2 | - | 350 | 350 |

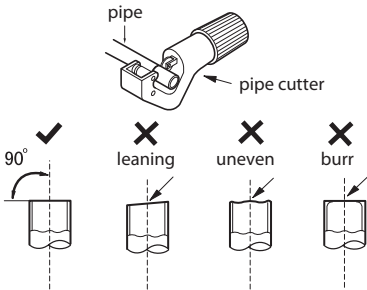
PIPE EXPANDING METHOD

Notes:

- Improper pipe expanding is the main cause of refrigerant leakage.
- Use mechanical joints only. Do not weld on the pipes.
- Please expand the pipe according to the following steps:

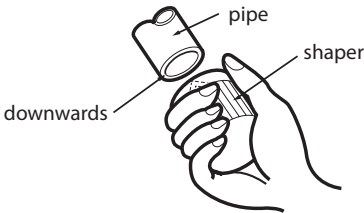
1. Cut the pipe

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



2. Remove the burrs

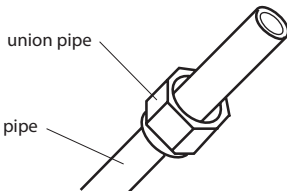
- Remove the burrs with a shaper and prevent the burrs from getting into the pipe.



3. Put on suitable insulating pipe

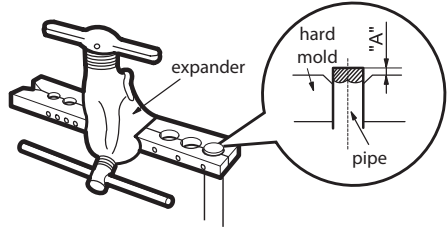
4. Put on the union nut

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



5. Expand the port

- Expand the port with an expander.



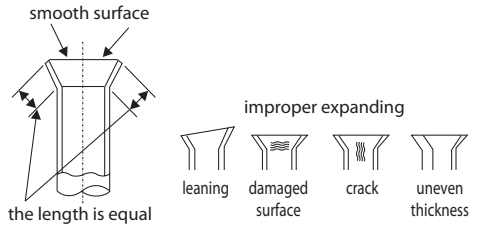
Note:

"A" varies according to the diameter, please refer to the chart below:

| Outer diameter (mm) | A (mm) | |
|---------------------|--------|-----|
| | Max | Min |
| Φ 6 - 6.35 (1/4") | 1.3 | 0.7 |
| Φ 9.52 (3/8") | 1.6 | 1.0 |
| Φ 12 - 12.7 (1/2") | 1.8 | 1.0 |
| Φ 15.8 - 16 (5/8") | 2.4 | 2.2 |

6. Inspection

- Check the quality of the expansion. If the surface is not smooth, repeat the previous steps.





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