

OWNER'S AND INSTALLATION MANUAL

INDOOR UNIT SPLIT



ENGLISH

DIAMANT

GIA-S09DIAR32-INT | GIA-S12DIAR32-INT

Thanks for choosing our product.
Please, read carefully this manual
before using the product.

giatsu

GIA GROUP

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This marking indicates that this product should not be disposed with other household wastes throughout the EU. To prevent possible harm to the environment or human health from uncontrolled waste disposal, recycle it responsibly to promote the sustainable reuse of material resources. To return your used device, please use the return and collection systems or contact the retailer where the product was purchased. They can take this product for environmental safe recycling.

Precautions

Operation and Maintenance



WARNING

This appliance can be used by children aged of 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.

Maintenance must be performed by qualified professional person. Otherwise, it may cause physical 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 put fingers or objects into air inlet or air outlet. It may cause physical injury or damage.

Precautions

Operation and Maintenance



WARNING

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 professional person for service.

- Power cord is overheating or damaged.
- There's abnormal sound during operation.
- Circuit break off frequently.
- Air conditioner produces 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 the switch with an insulating object except metal.

Do not step on top panel of outdoor unit, or put heavy objects. It may cause damage or physical injury.

Appendixes

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, must use qualified power supply circuit and circuit break.

Must install the circuit break. If not, it may cause malfunction.

An all-pole disconnection switch which has a contact separation of at least 3mm in all poles should be connected in fixed wiring.

Including an circuit break with suitable capacity. Air switch should be included magnet buckle and heating buckle function, it can protect the circuit-short and overload.

Precautions

Appendixes



WARNING

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 will cause 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.

Do not energized before finishing installation.

If the supply cord is damaged, it must be replaced by the manufacturer, service agent or similarly qualified persons to avoid hazard.

The temperature of refrigerant circuit will be high, please keep the interconnection cable away from the copper pipe.

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 professional person. 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.

Precautions

Attachment



All wires of indoor unit and outdoor unit should be connected by professional person.

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.

If you need to relocate the air conditioner to another place, only the qualified person can perform the work. Otherwise, it may cause physical injury or damage.

Choose the place which is out of the reach of 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

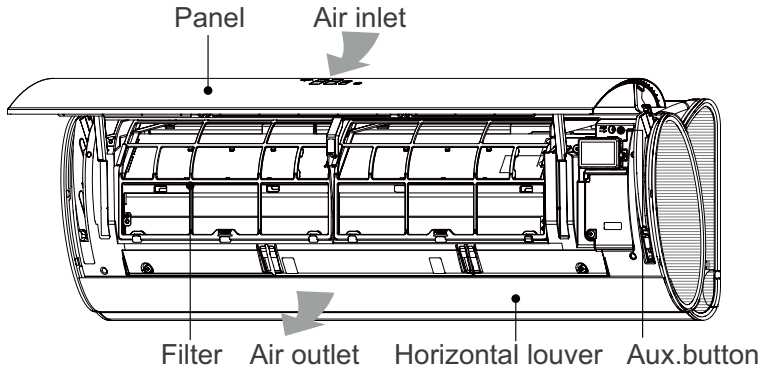
	Indoor side DB/WB(°C)	Outdoor side DB/WB(°C)
Maximum cooling	32/23	43/26
Maximum heating	27/-	24/18

NOTE:

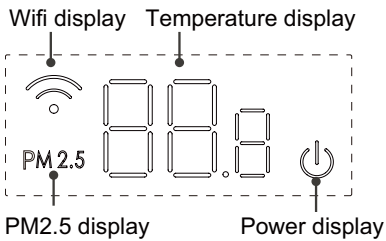
The operating temperature range (outdoor temperature) for cooling is 18°C ~43°C ; Heating temperature range for the model without electric heating belt for chassis is -15°C ~ 24°C ; Heating temperature range for the model with electric heating belt for chassis is -20°C ~24°C .

Parts name

Indoor unit



Display



Remote controller



NOTE:

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

Indoor unit address inquiry

If match with MULTI-S outdoor unit, when units has malfunction and need to inquire the address to maintainance, the step is as below:

Remote controller aims to the indoor display, press "Light" and "-" buttons at the same time for 3s , then will display the indoor unit address(1~5) for 3s.

Clean and maintenance

WARNING

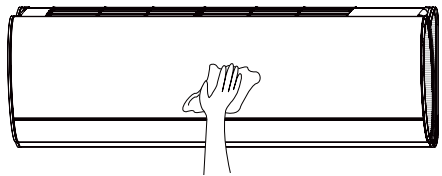
- Turn off the air conditioner and disconnect the power before cleaning the air conditioner to avoid electric shock.
- Do not wash the air conditioner with water to avoid electric shock.
- Do not use volatile liquid to clean the air conditioner.

Clean surface of indoor unit

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

Note:

Do not remove the panel when cleaning it.

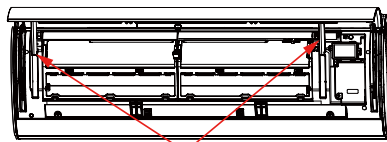
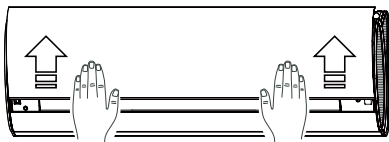


How to clean IFD module?

After 600 hours operation of the air conditioner, the indoor unit shows "CL" to remind users to clean IFD module. After cleaning the IFD module, restart the AC then the code is eliminated.

1.Open panel

Put your hands on both sides of the panel, push the panel upward according to the direction of arrow, then open the panel. Place the supporting rods which are on the left and right sides of the panel on the chute to support the panel.

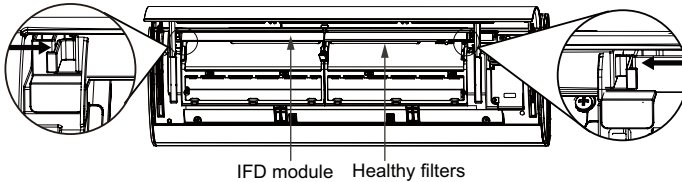


Supporting rod

Clean and maintenance

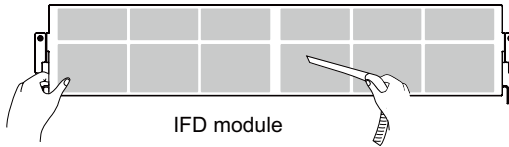
2. Remove IFD module

Pull out the IFD module by pressing the buttons at the left and right ends.



3. Clean IFD module

Clean IFD module by vacuum cleaner or water rinsing. If the IFD module is too dirty such as serious oil contamination, it should be cleaned with warm water (below 45°C) dissolved with neutral detergent. After that dry it in a cool place.

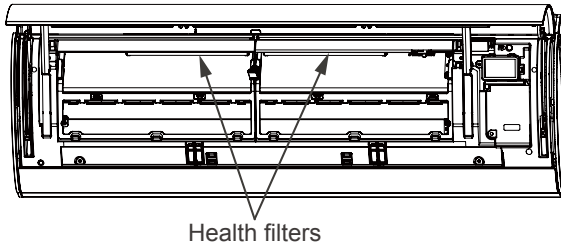


4. Installation IFD module

After the IFD module is dried, push the IFD module to slot of the air conditioner, then cover the panel.

■ For the models with healthy filters, please refer to below steps to clean healthy filters.

(1) Remove the health filter from the air filter along the arrow direction. The health filters can be installed in the opposite way.



- (2) Clean healthy filter by vacuum cleaner or water rinsing. If the healthy filter is too dirty such as serious oil contamination, it should be cleaned with warm water (below 45°C) dissolved with neutral detergent. After that dry it in a cool place.
- (3) Clean the surface dust with a soft brush and then clean it with a blower for maintenance.

NOTE:

- 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.

Clean and maintenance

Checking before use-season

1. Check whether air inlets and air outlets are blocked.
2. Check whether air switch, plug and socket are in good condition.
3. Check whether filter is clean.
4. Check whether drainage pipe is damaged.

Checking after use-season

1. Disconnect power supply.
2. Clean filter and indoor unit's panel .

Notice for recovery

1. Most packing materials are recyclable materials.
Please dispose them in appropriate recycling unit.
2. If you want to dispose the air conditioner, please contact local dealer or consultant service center for the correct disposal method.

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 professional person.

Phenomenon	Check items	Solution
Indoor unit can't receive remote controller's signal or remote controller has no action.	Whether it's interfered severely (such as static electricity, stable voltage)?	Pull out the plug. Reinsert the plug after about 3min, and then turn on the unit again.
	Whether remote controller is within the signal receiving range?	Signal receiving range is 8m.
	Whether there are obstacles?	Remove obstacles.
	Whether remote controller is pointing at the receiving window?	Select proper angle and point the remote controller at the receiving window on indoor unit
	Is sensitivity of remote controller low; fuzzy display and no display?	Check the batteries. If the power of batteries is too low, please replace them.
	No display when operating remote controller?	Check whether remote controller appears to be damaged. If yes, replace it.
	Fluorescent lamp in room?	Take the remote controller close to indoor unit. Turn off the fluorescent lamp and then try it again.
No air emitted from indoor unit.	Air inlet or air outlet of indoor unit is blocked?	Eliminate obstacles.
	In heating mode, indoor temperature reached to setting temperature?	After reaching to setting temperature, indoor unit will stop blowing out air.
	Heating mode is turned on just now?	In order to prevent blowing out cold air, indoor unit will be started after delaying for several minutes, which is a normal phenomenon.
Air conditioner can't operate	Power failure?	Wait until power recovery.
	Is plug loose?	Reinsert the plug.
	Is circuit broken off or fuse burnt out?	Ask professional person to replace circuit break or fuse.
	Wiring has malfunction?	Ask professional person to replace it.
	Has unit restarted immediately after stopping operation?	Wait for 3min, and then turn on the unit again.
	Whether the function setting for remote controller correct?	Reset the function.

Malfunction analysis

Phenomenon	Check items	Solution
Mist is emitted from indoor unit's air outlet.	Is indoor temperature and humidity 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	Is unit operating under auto mode?	Temperature can't be adjusted under auto mode. Please switch the operation mode if you need to adjust temperature.
	Did you require temperature exceeds the seting temperature range?	Seting temperature range: 16℃ ~31℃
Cooling (heating) effect is not good.	Is voltage too low?	Wait until the voltage resumes normal.
	Is filter dirty?	Clean the filter.
	Is the setting temperature in proper range?	Adjust temperature to proper range.
	Are door and window opened?	Close door and window.
Odours are emitted	Whether there's odour source,such as furniture and cigarette, etc.	Clean the filter. Eliminate the odour source.
Air conditioner operates normally suddenly	Whether there's interference,such as thunder, wireless devices, etc.	Disconnect power, put back power, and then turn on the unit again.
" Water flowing" noise	Is air conditioner turned on or turned off just now?	The noise is the sound of refrigerant flowing inside the unit, which is a normal phenomenon.
Cracking noise	Is air conditioner turned on or turned off just now?	This is the sound of friction caused by expansion and/or contraction of panel or other parts due to the change of temperature.

Contact us

When below phenomenon occurs, please turn off air conditioner and disconnect power immediately, and then contact the dealer or professional person for service.

- Power cord is overheating or damaged.
- Air conditioner makes burning smell.
- There's abnormal sound during operation.
- Circuit break off frequently.
- 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.

Malfunction analysis

Error Code

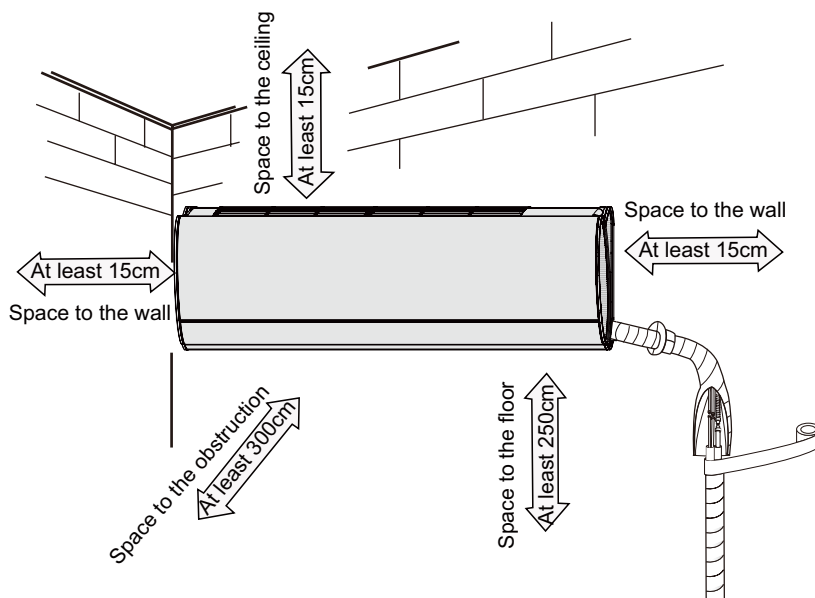
When air conditioner status is abnormal, temperature indicator on indoor unit will blink to display corresponding error code. Please refer to below list for identification of error code.

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

Error Code	Troubleshooting	Solution
CL	Filter filth blockage alert	Power off,clean filter.If the filter is not dirty, turn off the air conditioner for 2min then restart,the code will be removed automatically.
E1	Overheat protection	Turn off,restart after 5min,if the code occurs again after a few minutes, please contact the professional person.
E2	Overcurrent protection	Turn off,restart after 5min,if the code occurs again after a few minutes, please contact the professional person.
L0	Jumper malfunction	Pull out the plug, restart after 3min, if the code occurs again , please contact the professional person.
L1	PG motor(indoor)zero-crossing detecting circuit malfunction	Turn off,restart after a few seconds, if the code occurs again after a few minutes, please contact the professional person.
L2	No feedback signal of indoor unit fan	Turn off,restart after a few seconds, if the code occurs again after a few minutes, please contact the professional person.
L3/L6	Communication malfunction	Power off the unit, restart after 3min, if the code occurs again ,please check the communication wire of indoor unit and outdoor unit is correct of not, then power on again.
U0	Short/open circuit of indoor environment sensor	Power off the unit, restart after 3min, if the code occurs again , please contact the professional person.
U1	Short/open circuit of indoor unit tube sensor	Power off the unit, restart after 3min, if the code occurs again , please contact the professional person.
U6	Liquid pipe temp. sensor malfunction	Power off the unit, restart after 3min, if the code occurs again , please contact the professional person.
U7	Gas pipe temp. sensor malfunction	Power off the unit, restart after 3min, if the code occurs again , please contact the professional person.
PC	Mode conflict	The mode of this indoor unit is conflicting with other indoor units, please turn off other indoor units or change the mode to non-conflicted mode.

If there're other error codes, please contact professional person for service.

Installation drawing



Selection of location

Basic requirement

Installing the unit in the following places may cause malfunction. If it is unavoidable, please consult the local dealer:

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.

Indoor unit

1. There should be no obstruction near air inlet and air outlet.
2. Choose a place where the condensation water can be dispersed easily and won't affect other people.
3. Choose a place which is convenient to connect the outdoor unit and near the power socket.
4. Choose a place which is out of the reach of children.
5. The place 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.

Installation prepare

Tools

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

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 connect the power before finishing inatallation.
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. The all-pole disconnection switch having a contact separation of at least 3mm in all poles should be connected in fixed wiring. For models with a power plug, make sure the plug is within reach after installation.

Installation of indoor unit

Step 1: Choose installation place

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

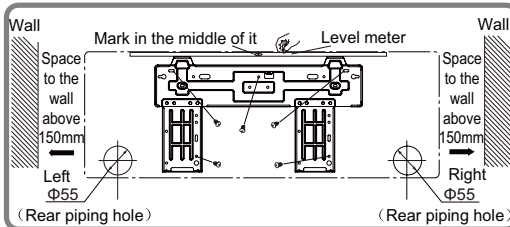
Step 2: Install wall-mounting frame

1. Hang the wall-mounting frame on the wall; make it vertical with the level meter and then make 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 3: Open piping hole

1. Choose the place 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, as below.

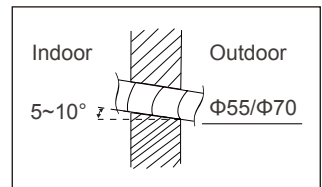
Dimension: 910x303x200



2. Open a piping hole with the diameter of $\Phi 55/\Phi 70$ 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 $5\sim 10^\circ$.

Note:

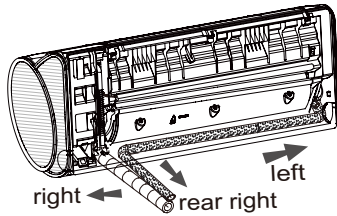
- Pay attention to dust prevention and take relevant safety measures when opening the hole.
- The plastic expansion particles are not provided and should be bought locally.



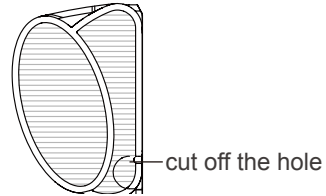
Installation of indoor unit

Step 4: Outlet pipe

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

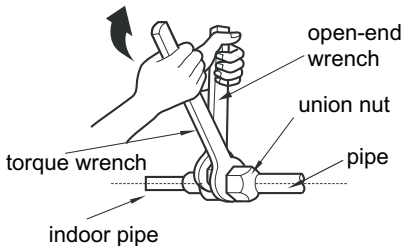
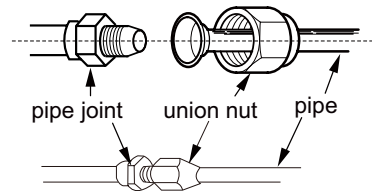


2. When select leading out the pipe from left or right, please cut off the corresponding hole on the bottom case.



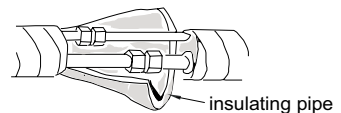
Step 5: Connect the pipe of indoor unit

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.



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

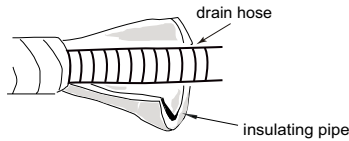
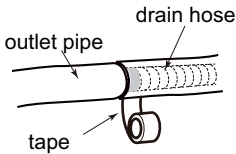
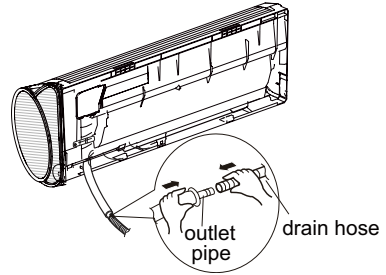
4. Wrap the indoor pipe and joint of connection pipe with insulating pipe, and then wrap it with tape.



Installation of indoor unit

Step 6: Install drain hose

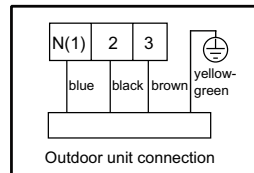
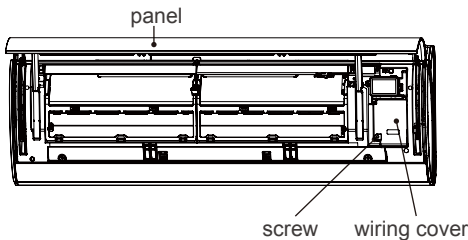
1. Connect the drain hose to the outlet pipe of indoor unit.
2. Bind the joint with tape.



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

Step 7: Connect wire of indoor unit

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



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.

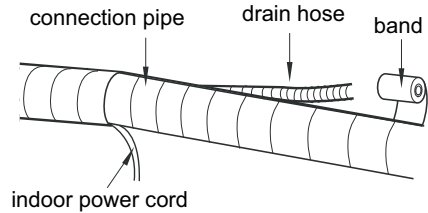
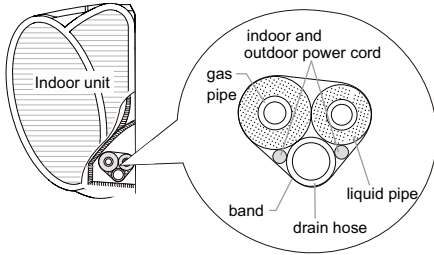
NOTE:

- All wires of indoor unit and outdoor unit should be connected by a professional person.
- If the length of power connection wire is not long enough, please contact the supplier and ask 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 air switch 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 8: Bind up pipe

1. Bind up the connection pipe, power cord and drain hose with the band.
2. 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.



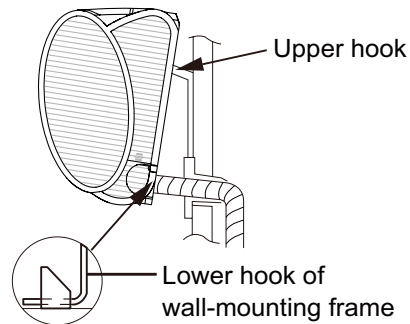
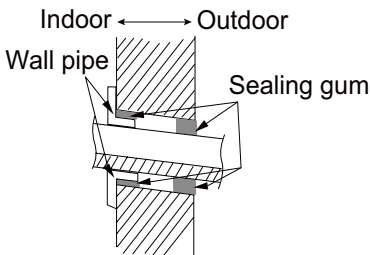
3. Bind them evenly.
4. The liquid pipe and gas pipe should be bound separately at the end.

NOTE:

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

Step 9: 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.



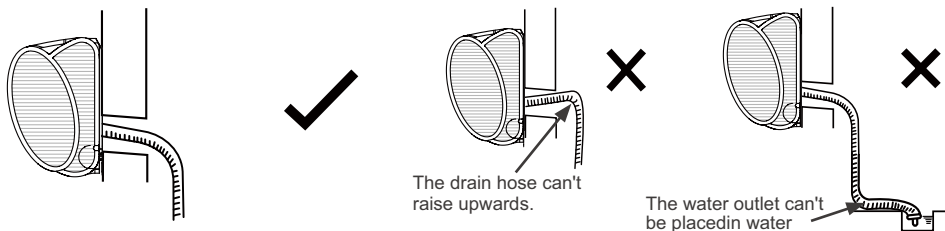
- Do not bend the drain hose too excessively in order to prevent blocking.

Installation of indoor unit

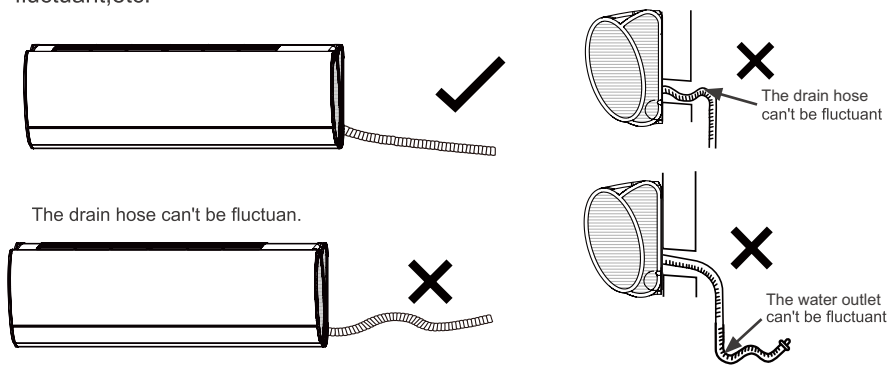
Note:

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

The water outlet can't be placed in water in order to drain smoothly.



Slant the drain hose slightly downwards. The drain hose can't be curved, raised and fluctuant, etc.



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.
Are the dust and sundries caused during installation are removed?	It may cause malfunction or damage the parts.
Do the gas valve and liquid valve of connection pipe 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 about air conditioner to the client.

2. Method of test operation

- Connect 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.

3. If match with MULTI-S outdoor unit, after installing the complete units, must test operating when first power on and turn on units to ensure the correct installation.

The steps of test operation is as below:

A: Use remote controller to select cooling mode and set the temperature in 16°C. Aim to the indoor display board, press "+, -, +, -, +, -" in 5s, then the indoor display "LL" with a long whistle. This indicates the units start to test operating.

B: The test operating is finished when indoor display change to show temperature from "LL".

C: If the indoor display show "PA" and outdoor unit stop in test operating, indicate the installation has mistake, please check the cable connection and the pipe connection of refrigerant. Correct the mistake and start to test operating again.

Note: All the units can operating normally until pass the test operating.



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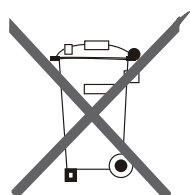
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**IMPORTANT INFORMATION FOR CORRECT DISPOSAL OF THE PRODUCT
IN ACCORDANCE WITH EC DIRECTIVE 2002/96/EC.**

At the end of its working life, the product must not be disposed of as urban waste. It must be taken to a special local authority differentiated waste collection centre or to a dealer providing this service.

Disposing of a household appliance separately avoids possible negative consequences for the environment and health deriving from inappropriate disposal and enables the constituent materials to be recovered to obtain significant savings in energy and resources. As a reminder of the need to dispose of household appliances separately, the product is marked with a crossed-out wheeled dustbin.