ESV123C1AA
ESV183C1AA
ESV123C2UA
ESV183C2UA
ESV183C2CA
ESV223C2CA
ESV125C3HA
ESV185C3HA
ESV185C3NA

EN Split Type Air Conditioner

User Manual

Electrolux

Content

Explanation of Symbols

⚠ DANGER	Indicates a hazardous situation that, if not avoided, will result in death or serious injury.
⚠ WARNING	Indicates a hazardous situation that, if not avoided, could result in death or serious injury.
⚠ 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 that would be assigned a signal word WARNING or CAUTION.

Appliance filled with flammable gas R32.

Read the user manual instructions carefully before Usage, Installation and serviceability of the appliances.

The Refrigerant

- To realize the function of the air conditioner unit, a special refrigerant circulates in the system. The used refrigerant is the fluoride R32, which is specially cleaned. The refrigerant is flammable and inodorous. Furthermore, it can leads to explosion under certain conditions. But the flammability of the refrigerant is very low. It can be ignited only by fire.
- Compared to common refrigerants, R32 is a nonpolluting refrigerant with no harm to the ozonosphere. The influence upon the greenhouse effect is also lower. R32 has got very good thermodynamic features which lead to a really high energy efficiency. The units therefore need a less filling.

WARNING:

Do not use means to accelerate the defrosting process or to clean, other than those recommended by the manufacturer. Should repair be necessary, contact your nearest authorized Service Centre. Any repairs carried out by unqualified personnel may be dangerous. The appliance shall be stored in a room without continuously operating ignition sources. (for example: open flames, an operating gas appliance or an operating electric heater.) Do not pierce or burn.

Appliance filled with flammable gas R32. For repairs, strictly follow manufacturer's instructions only. Be aware that refrigrants not contain odour. Read specialist's manual.

WARNING

Operation and Maintenance

- This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved.
- Children shall not play with the appliance.
- Cleaning and user maintenance shall not be made by children without supervision.
- Do not connect air conditioner to multi-purpose socket. Otherwise, it may cause fire hazard.
- Do disconnect power supply when cleaning air conditioner. Otherwise, it may cause electric shock.
- If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.
- Do not wash the air conditioner with water to avoid electric shock.
- Do not spray water on indoor unit. It may cause electric shock or malfunction.
- After removing the filter, do not touch fins to avoid injury.
- Do not use fire or hair dryer to dry the filter to avoid deformation or fire hazard.

Precautions

WARNING

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

Precautions

WARNING

Attachment

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

Precautions

WARNING

- Do not put through the power before finishing installation.
- If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.
- The temperature of refrigerant circuit will be high, please keep the interconnection cable away from the copper tube.
- The appliance shall be installed in accordance with national wiring regulations.
- Installation must be performed in accordance with the requirement of NEC and CEC by authorized personnel only.
- The air conditioner is the class 1 electric appliance. It must be properly grounding with specialized grounding device by a professional. Please make sure it is always grounded effectively, otherwise it may cause electric shock.
- The yellow-green wire in air conditioner is grounding wire, which can't be used for other purposes.
- The grounding resistance should be less than 0.1 ohm.
- The appliance must be positioned so that the plug is accessible.
- All wires of indoor unit and outdoor unit should be connected by a professional.
- If the length of power connection wire is insufficient, please contact the supplier for a new one. Extending wire is forbidden.

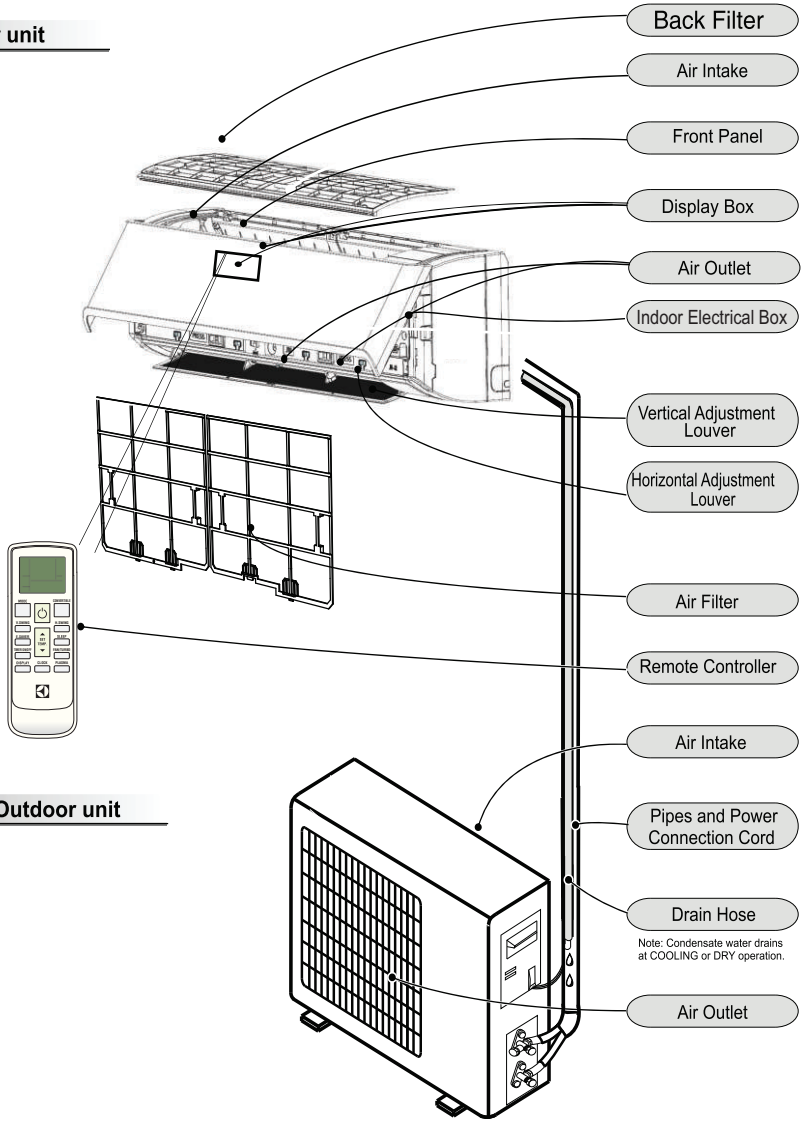
Precautions

WARNING

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

Identification of Parts

Indoor unit



Outdoor unit

The figures in this manual are based on the external view of a standard model. Consequently, the shape may differ from that of the air conditioner you have selected.

Display

For some models :
With Plasma

Display Set Temperature

Cool Mode Indicator

Plasma Indicator

ON/OFF Indicator

Timer Indicator

For some models :
Without Plasma

Display Set Temperature

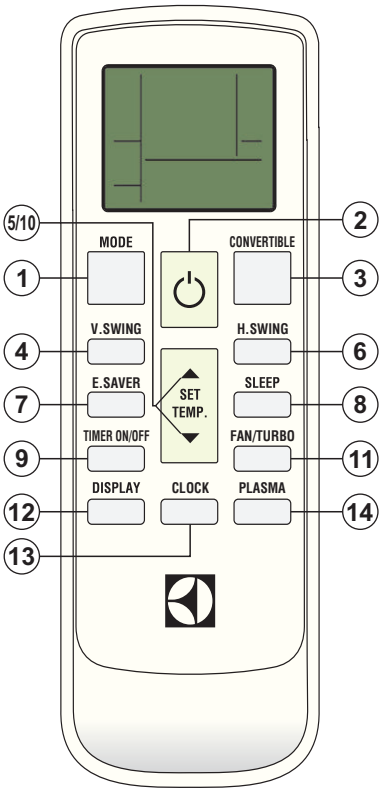
Cool Mode Indicator

ON/OFF Indicator

Timer Indicator

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

Buttons on remote controller



1. MODE BUTTON
   Press this button to select the operation mode.

2. ON/OFF BUTTON
   The appliance will be started when it is energized or will be stopped when it is in operation, if you press this button.

3. CONVERTIBLE BUTTON
   Pres this button to turn on convertible mode C1, C2, C3 and C4.

4. V. SWING BUTTON
   Used to stop or start vertical adjustment louver swinging and set the desired up/down airflow direction.

5/10. SET TEMPERATURE SETTING BUTTONS
   Used to set temperature and timer.

6. H. SWING BUTTON*
   Used to stop or start horizontal adjustment louver swinging and set the desired left/right airflow Direction.

7. E. SAVER
   Used in cooling mode bye setting Temp to 24°C keeping the fan speed medium.

8. SLEEP BUTTON
   Used to set or cancel sleep mode operation.

9. TIMER ON/OFF BUTTON
   Used to set or cancel the timer operation.

11. FAN/TURBO BUTTON
   Used to select fan speed in sequence low, medium, high & auto.

12. DISPLAY BUTTON
   This key is used to activate/deactivate light feature.

13. CLOCK BUTTON
   Used to set the current time.

14. PLASMA BUTTON
   Used to ON or OFF Plasma

* Horizontal swing feature is not available on some models.

Operating modes

OPERATING MODES

- **Auto Mode**
- **Cool Mode**
- **Dry Mode**
- **Fan Mode**
- **Convertible Mode**

AUTO MODE :-

1. Press 'Mode' button to cyclically step through the AUTO → Cool → Dry → Fan modes and stop when Auto mode is selected.
2. Auto will appear on the remote display when you select the AUTO mode.
3. The air conditioner will automatically select cooling, or fan only operation depending on set temperature and the room temperature.

COOL MODE :-

1. Cool mode can be select by pressing the Mode key available in remote.
2. In this mode of operation, compressor will be switched on after a delay time of 3 minute depending on the differential of Room temperature.
3. In this mode display will show the set temperature and Set temperature can be changed from 16°C to 30°C by using the up and down Key available in Remote.
4. Fan speed can be selected by pressing FAN SPEED key available on remote and this speed can be change between Low, Medium, High or Auto speed.
5. In this COOL MODE FAN speed can be selected for TURBO Speed by pressing the "TURBO COOL" Key available on remote.
6. Swing control or Swing angle can be selected by pressing the SWING key available in remote.
7. During this mode of operation "SLEEP" functions can be enable or disable by using their respective key available in remote.

DRY MODE :-

1. DRY mode can be select by pressing the Mode key available in remote.
2. In this mode of operation, compressor will be switched on after a delay time of 3 minutes depending on the differential of Room temperature & Set Temperature.
3. In this mode display will show the set temperature and Set temperature can't be changed and it will be fixed 24°C.
4. In dry mode fan will run at low speed and it can't be changed.
5. Swing control or Swing angle can be selected by pressing the SWING key available in remote.

FAN MODE :-

1. FAN mode can be select by pressing the Mode key available in remote.
2. In this mode, Compressor will remain OFF always.
3. Fan speed can be selected by pressing FAN SPEED key available or remote and this speed can be change between Low, Medium or High speed.
4. In this mode display will show the Room temperature and this will be changing if the room ambient temperature changed.
5. Swing control or Swing angle can be selected by pressing the SWING key available in remote.

CONVERTIBLE OPERATION :-

1. By Pressing the Convertible key, AC comes to desirable tonnage requirement thus saving energy.
2. It only works in Cool Mode.

FOR 1T INV MODELS	
CONVERTIBLE	TONNAGE
C1	0.7T
C2	0.8T
C3	0.9T
C4	1.2T

FOR 1.5T INV MODELS	
CONVERTIBLE	TONNAGE
C1	0.9T
C2	1.1T
C3	1.3T
C4	1.6T

FOR 2T INV MODELS	
CONVERTIBLE	TONNAGE
C1	1.2T
C2	1.4T
C3	1.6T
C4	1.9T

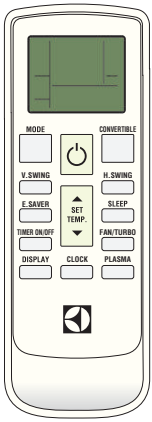
3. The tonnage data in above table is approximate value.

General Feature & Replacement of Batteries

GENERAL FEATURE:

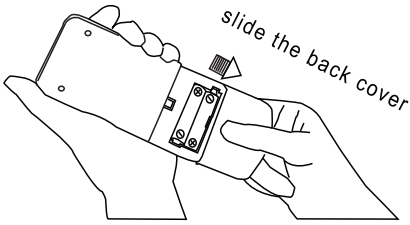
The controller has following features-

- Display: Dual digit display with LED indicators.
- Preset temperature setting from 16°C to 30°C.
- Compressor delay protection.
- Different Fan Speeds : Low, Medium, High, Auto & Turbo
- Timer can be set in hour to turn ON/OFF the machine.
- Memory backup in case of power failure.
- Dehumidifying operation.



REPLACEMENT OF BATTERIES

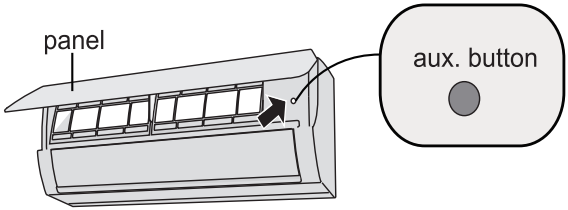
- When the signal from the remote controller becomes weak and the indoor unit can not receive it properly; or the indications on the display screen becomes blurred, please slide the back cover and replace with the new batteries.
- The positive and negative poles must match the installation positions.
- New batteries of the same type have to be used for replacement.
- If the remote controller is not to be used for long time, take out the batteries so as to prevent the leakage of the electrolyte from damaging the controller.
- If the remote controller is at abnormal state, you can take out the batteries on the back cover to clear off the display.



REMOTE CONTROLLER

Emergency operation

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



⚠WARNING:

Use insulated object to press the aux. button

Clean and maintenance

⚠ WARNING

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

Clean surface of indoor unit

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

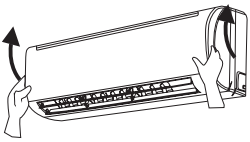
NOTICE:

- Do not remove the panel when cleaning it.

Additional Filters Installation Guide

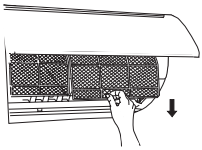
1 Open panel

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



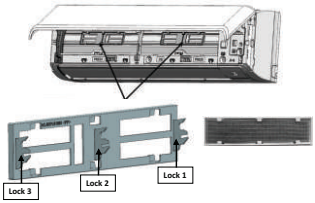
2 Remove filter

Remove the filter as indicated in the fig.



3 Additional filters Installation

Fix additional filter on evaporator coil at the place as shown in below picture.



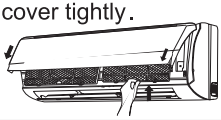
Filter casing locks should be pressed on evaporator coil in sequence as shown below lock 1 → lock 2 → lock 3

Caution- Do not press all locks at the same time.

•Additional filter qty may vary refer as received in machine. (applicable for some models)

4 Install filter

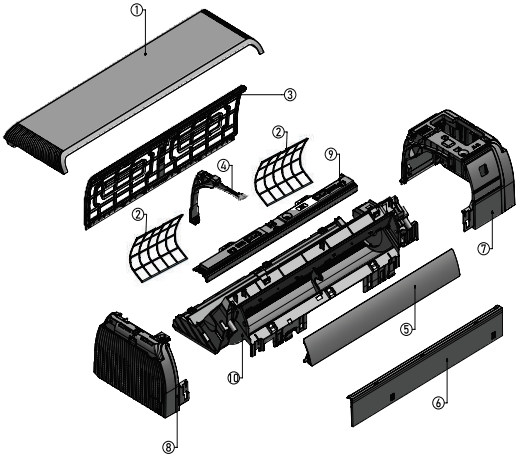
Install the filter and then close the panel cover tightly.



Note: It is advisable to replace the filter at interval of 1 Year for PM2.5 filter and 2 years for Anti-bacterial filter.

Clean and Maintenance

PARTS DISASSEMBLY GUIDE



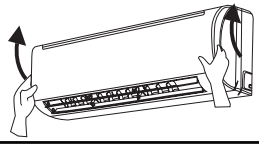
SERIES OF PARTS	PART NAME
1	AIR INTAKE FRONT PANEL
2	AIR FILTER
3	BACK FILTER
4	FILTER GUIDE
5	HORIZONTAL VANE
6	INSTALL COVER
7	SIDE R SUB ASSEMBLY
8	SIDE L SUB ASSEMBLY
9	FRONT DISCHARGE
10	CHASSIS J-SERIES

*Need to follow the sequence of parts as shown above for proper disassembly of Indoor units.

Clean filter

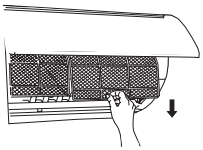
1 Open panel

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



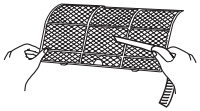
2 Remove filter

Remove the filter as indicated in the fig.



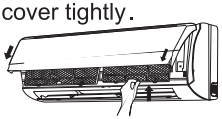
3 Clean filter

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



4 Install filter

Install the filter and then close the panel cover tightly.



⚠ WARNING

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

Clean and Maintenance

NOTICE: 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 mounting bracket for outdoor unit is damaged or corroded. If yes, please contact dealer.
5. Check whether drainage pipe is damaged.

NOTICE: Checking after use-season

1. Disconnect power supply.
2. Clean filter and indoor unit's panel.
3. Check whether mounting bracket for outdoor unit is damaged or corroded. If yes, please contact dealer.

Notice for recovery

1. Many 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.

Troubleshooting

Error Signals on the Display

For INVERTER MODELS

ODU Light Flash	IDU Error Code	Abnormality or Protection Description
25	EE	Indoor machine EE fault
26	E1	Indoor fan fault
27	E2	Indoor fan zero-crossing detection abnormal
28	E3	Indoor coil temperature sensor fault
29	E4	Indoor ambient temperature sensor fault
1	E0	Outdoor EE fault
2	E6	Indoor and outdoor machine communication fault
4	F1	Compressor starting abnormal (phase failure, reverse)
5	F2	Compressor out-of-step fault
6	F3	IPM module fault
7	F4	Compressor shell roof fault/protection
8	F5	Discharge temperature sensor fault
9	F6	Suction temperature sensor fault
10	F7	Outdoor coil temperature sensor fault
11	F8	Outdoor ambient temperature sensor fault
12	F9	Outdoor DC fan fault
/	E8	Outdoor communication fault
13	P1	Outdoor machine AC current protection
14	P2	Compressor phase current protection
15	P3	Outdoor unit over-high/over-low AC voltage protection
16	P4	DC voltage over-high or over-low voltage protection
17	P5	IPM over-high temperature protection
18	P6	Discharge temperature overheat protection
19	P7	Cooling indoor coil anti-freezing protection
20	P8	Cooling outdoor coil overheat protection
21	P9	Heating indoor coil overheat protection
22	PC	Cooling outdoor ambient temperature over-low protection
23	PH	Heating outdoor ambient temperature over-high protection
31	L1	Drive bus voltage over-high protection
32	L2	Drive bus voltage over-low protection
33	L3	Drive phase current overload fault
34	L4	Phase current sampling abnormal
In case of any error, codes will shown on IDU display		

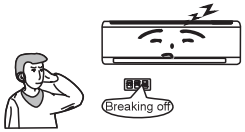
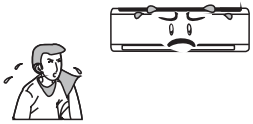
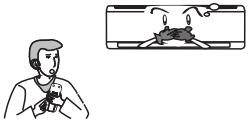
IMPORTANT NOTE : *As a part of the special in-built Auto- feature, the IDU blower runs for 45sec after it is switched off from the remote. This feature enables the removal of any water droplet/Moisture from the coil. Moisture trapped in the coil leads to mold formation leading to bad odor and unhealthy air flow.*

OPERATING CONDITIONS

- If the air conditioner operates in a high humidity environment in the cool mode for an extended period of time, condensation may occur.

2. The performance parameters refer to name plate.
3. The **outdoor unit** should not be installed in a **closed area**.

Troubleshooting

Phenomenon	Troubleshooting
Creaking noise can be heard when start or stop the unit. 	• This is caused by the deformation of plastic due to the changes in temperature.
The unit does not run. 	• Has the power been shut down? • Is the power plug loose? • Is the circuit protection device tripped off or not? • Is voltage higher or lower? (Tested by professionals) • Is the Timer correctly used?
Cooling (Heating) efficiency is not good. 	• Is Temp. setting suitable? • Were inlet and outlet vents obstructed? • Is filter dirty? • Are the windows and doors closed? • Was Fan speed set at low speed? • Is there any heat source in the room?
Wireless remote control is not available. 	• The unit is interfered by abnormal or frequent functions switchover occasionally, the controller cannot operate. At this time, you should to pull out the plug, and reinsert it. • Is the remote within operating range or obstructed by any cloth or item? • Check if the batteries need replacement. • Whether the wireless remote control is damaged.
There is water leakage in the room from the unit	• The air humidity is on the high side. • Condensing water is overflowing as leakage. • Pipe connection to indoor unit is loose.
Water leakage in outdoor unit	• When the unit is running in COOL mode, the pipe and connection of pipe would be condensed due to the water cooling down. • When the unit is running in Auto Defrosting mode the ice thaws and flows out.
Noise from indoor unit emitted.	• The sound of fan or compressor relay switching on or off. • When defrosting is started or stopped, the refirgerant starts flowing in reverse direction causing the sound due to compressor switching.

Troubleshooting

Phenomenon	Troubleshooting
Indoor unit does not blow air.	• In dehumidifying mode, indoor fan may stop to avoid condensing water from vaporizing again.
Moisture on air outlet vent.	• If unit is running in highly humid conditions for a long time, the moisture will condense and drip from the vent.

Immediately stop all operations and pull the plug out in the following situations. Contact a qualified service technician to review.

There are loud noises during operation.

There is a strong smell emitted when operating.

Water is leaking in the room, more than due to condensation.

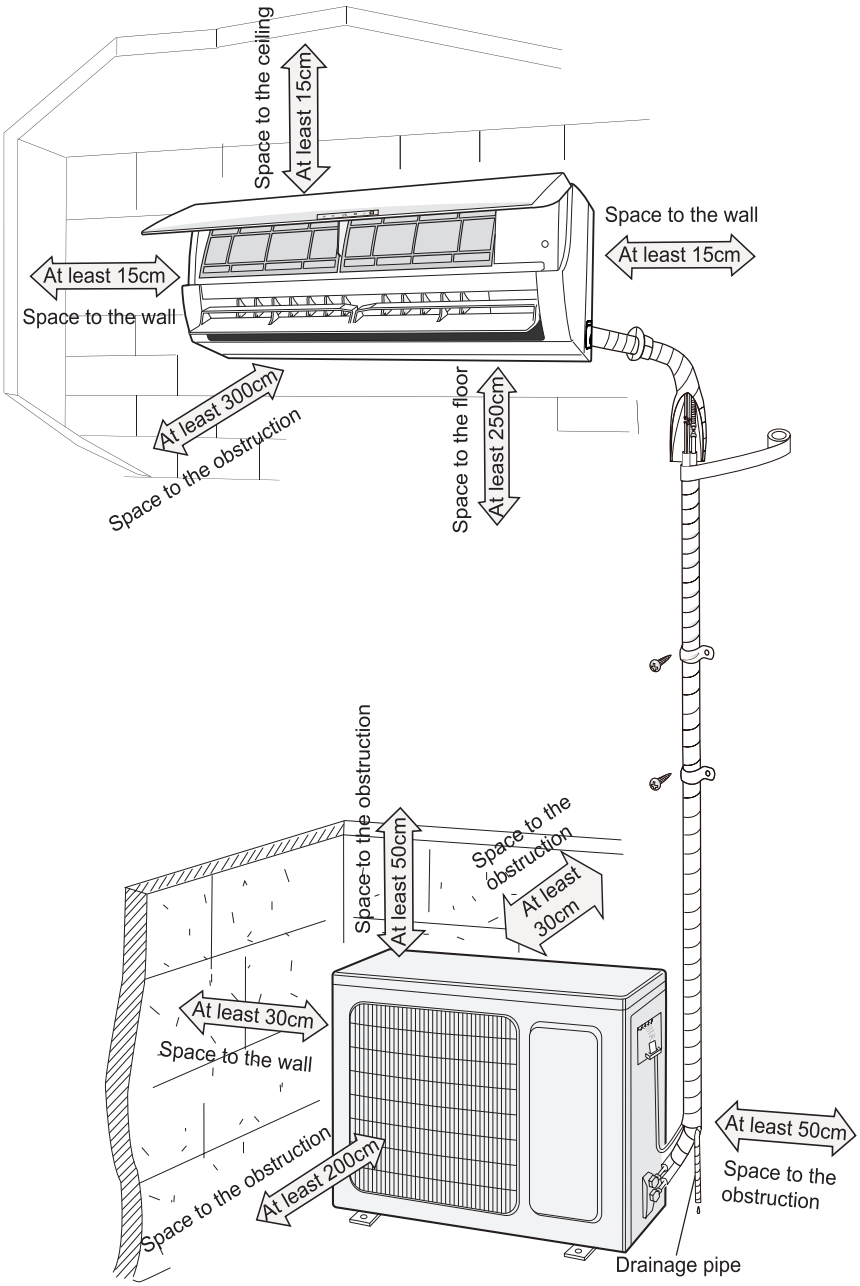
Protetction switch breaks often.

Water or liquids are splashed accidentally into the unit.

Heat is observed in power supply cord or plug.

▶ Stop running and pull out the plug.

Installation dimension diagram



Safety precautions for installing and relocating the unit

To ensure safety, please be mindful of the following precautions.

⚠ Warning

- **When installing or relocating the unit, be sure to keep the refrigerant circuit free from air or substances other than the specified refrigerant.**
  Any presence of air or other foreign substance in the refrigerant circuit will cause system pressure rise or compressor rupture, resulting in injury.
- **When installing or moving this unit, do not charge the refrigerant which is not comply with that on the nameplate or unqualified refrigerant.**
  Otherwise, it may cause abnormal operation, wrong action, mechanical malfunction or even series safety accident.
- **When refrigerant needs to be recovered during relocating or repairing the unit, be sure that the unit is running in cooling mode.Then, fully close the valve at high pressure side (liquid valve).About 30-40 seconds later, fully close the valve at low pressure side (gas valve), immediately stop the unit and disconnect power. Please note that the time for refrigerant recovery should not exceed 1 minute.**
  If refrigerant recovery takes too much time, air may be sucked in and cause pressure rise or compressor rupture, resulting in injury.
- **During refrigerant recovery, make sure that liquid valve and gas valve are fully closed and power is disconnected before detaching the connection pipe.**
  If compressor starts running when stop valve is open and connection pipe is not yet connected, air will be sucked in and cause pressure rise or compressor rupture, resulting in injury.
- **When installing the unit, make sure that connection pipe is securely connected before the compressor starts running.**
  If compressor starts running when stop valve is open and connection pipe is not yet connected, air will be sucked in and cause pressure rise or compressor rupture, resulting in injury.
- **Prohibit installing the unit at the place where there may be leaked corrosive gas or flammable gas.**
  If there leaked gas around the unit, it may cause explosion and other accidents.
- **Do not use extension cords for electrical connections. If the electric wire is not long enough, please contact a local service center authorized and ask for a proper electric wire.**
  Poor connections may lead to electric shock or fire.
- **Use the specified types of wires for electrical connections between the indoor and outdoor units. Firmly clamp the wires so that their terminals receive no external stresses.**
  Electric wires with insufficient capacity, wrong wire connections and insecure wire terminals may cause electric shock or fire.

Tools for installation

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

Note:

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

Selection of installation location

Basic requirement

Installing the unit in the following places maycause 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 sulfureted 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. Select a location where the condensation water can be dispersed easily and won't affect other people.
3. Select a location which is convenient to connect the outdoor unit and near the power socket.
4. Select a location which is out of reach for children.
5. The location should be able to withstand the weight of indoor unit and won't increase noise and vibration.
6. The appliance must be installed 2.5m above floor.
7. Don't install the indoor unit right above the electric appliance.
8. Please try your best to keep way from fluorescent lamp.

Outdoor unit

1. Select a location where the noise and outflow air emitted by the outdoor unit will not affect neighborhood.
2. The location should be well ventilated and dry, in which the outdoor unit won't be exposed directly to sunlight or strong wind.
3. The location should be able to withstand the weight of outdoor unit.
4. Make sure that the installation follows the requirement of installation dimension diagram.
5. Select a location which is out of reach for children and far away from animals or plants.If it is unavoidable, please add the fence for safety purpose.

Requirements for electric connection

Safety precaution

1. Must follow the electric safety regulations when installing the unit.
2. According to the local safety regulations, use qualified power supply circuit and air switch.
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. For models with a power plug, make sure the plug is within reach after installation.
6. Do not put through the power before finishing installation.
7. If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.
8. The temperature of refrigerant circuit will be high, please keep the interconnection cable away from the copper tube.
9. The appliance shall be installed in accordance with national wiring regulations.

Please notice that the unit is filled with flammable gas R32. Inappropriate treatment of the unit involves the risk of severe damages of people and material. Details to this refrigerant are found in chapter “refrigerant”.

Grounding requirement

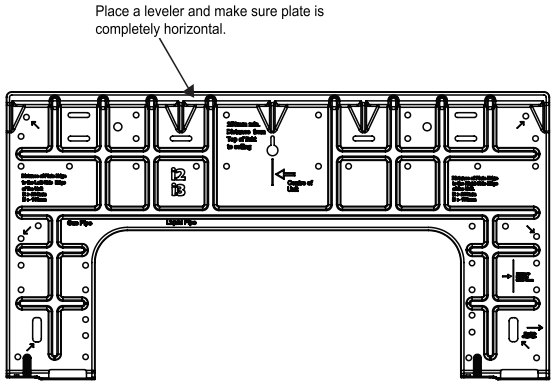
1. The air conditioner is the first class electric appliance. It must be properly grounding with specialized grounding device by a professional. Please make sure it is always grounded effectively, otherwise it may cause electric shock.
2. The yellow-green wire in air conditioner is grounding wire, which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

Air-conditioner	Air switch capacity
09K	10A
12K	16A
15/18/24K	25A

Installation of indoor unit

Make sure there is enough space for installation and maintenance.

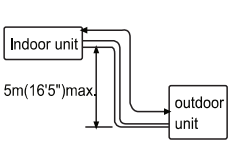
- To take into consideration the operational convenience and safety in installation, it is recommended to ensure enough space between the unit and the walls



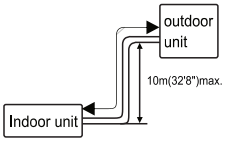
Attention: If there are some additional function devices to install on the air conditioner, be sure to add to the installation space for the function devices.

Height limits of indoor and outdoor units.

- Either the indoor unit or the outdoor unit can be higher, but the height difference must comply with the stated requirements.
- Try to reduce the bending of the piping line as much as possible so as to avoid possible negative impacts on the performance of the units.



If indoor is at more height

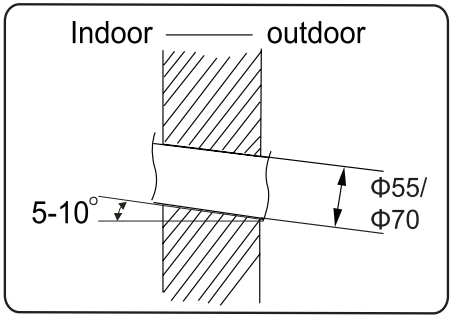


If outoor is at more height

Installation of indoor unit

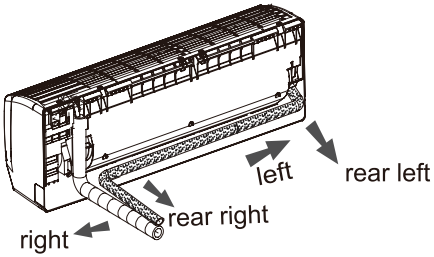
Note:

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

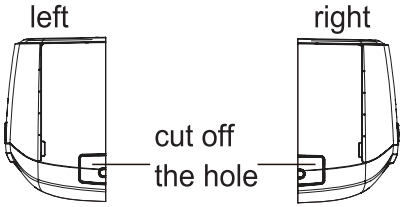


Step four: outlet pipe

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



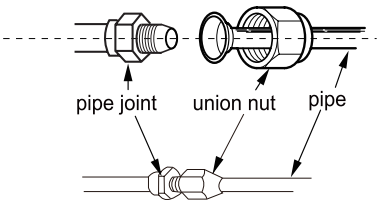
2. When select leading out the pipe from left or right, please cut off the corresponding hole on the bottom case.



Step five: connect the pipe of indoor unit

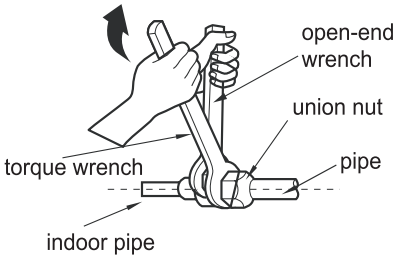
1. Aim the pipe joint at the corresponding bellmouth.

2. Pretightening the union nut with hand.



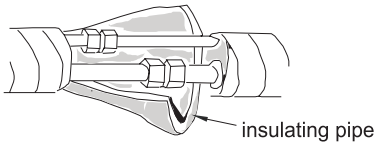
3. Adjust the torque force by referring to the following sheet. Place the open-end wrench on the pipe joint and place the torque wrench on the union nut. Tighten the union nut with torque wrench.

Installation of indoor unit



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

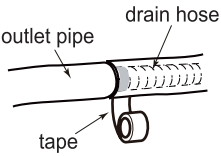
4. Wrap the indoor pipe and joint of connection pipe with insulating pipe, and then wrap it with tape.

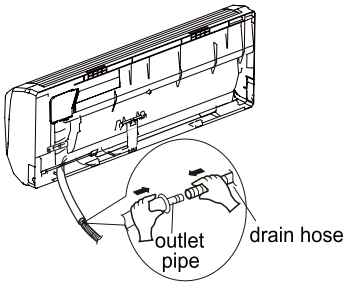


Step six: install drain hose

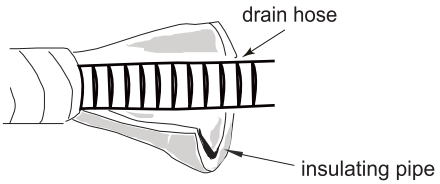
1. Connect the drain hose to the outlet pipe of indoor unit.

2. Bind the joint with tape.



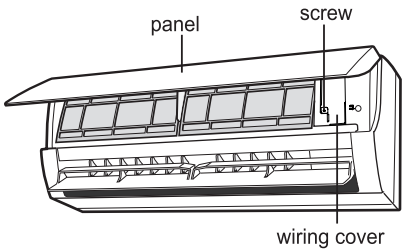


Note:
- Add insulating pipe in the indoor drain hose in order to prevent condensation.
- The plastic expansion particles are not provided.



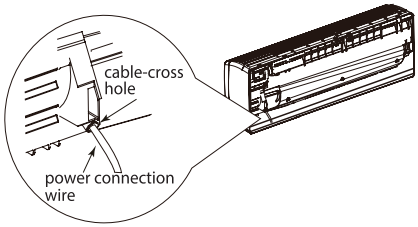
Step seven: connect wire of indoor unit

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

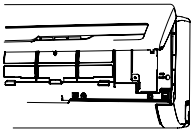


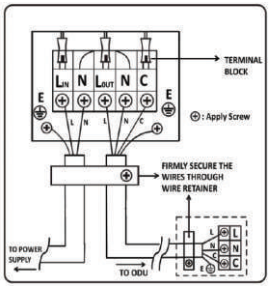
Installation of indoor unit

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

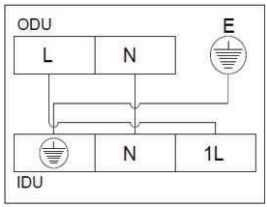


3. Remove the wire clip; connect the power connection wire to the wiring terminal according to the color; tighten the screw and then fix the power connection wire with wire clip.





Applicable for Inverter Models



Applicable for Fix speed Models

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

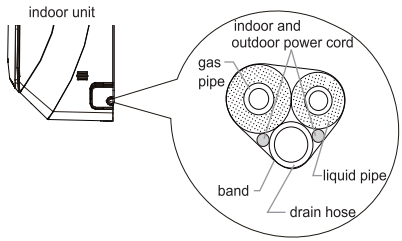
Note:

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

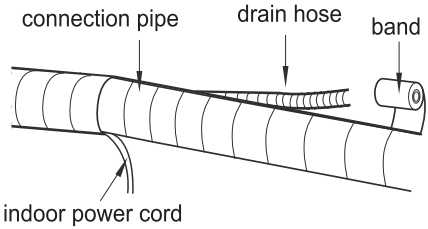
Installation of indoor unit

Step eight: bind up pipe

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



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.

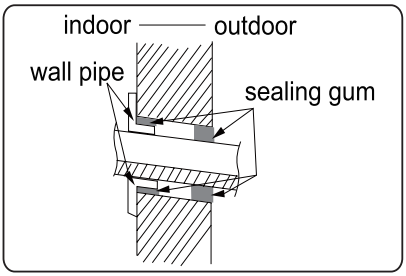


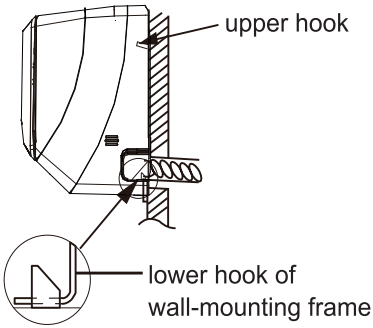
3. Bind them evenly.
4. The liquid pipe and gas pipe should be bound separately at the end.

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

Step nine: hang the indoor unit

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





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

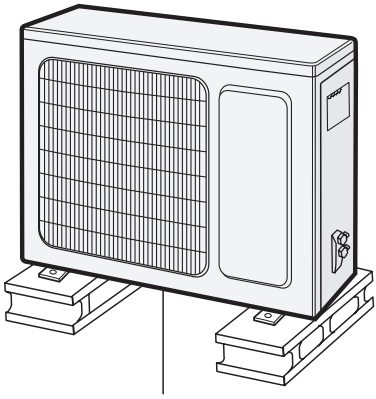
Installation of outdoor unit

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

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

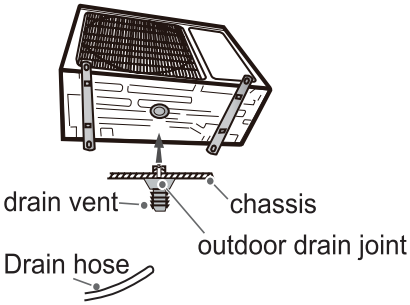
Note:

- Take sufficient protective measures when installing the outdoor unit.
- Make sure the support can withstand at least four times of the unit weight.
- The outdoor unit should be installed at least 3cm above the floor in order to install drain joint.
- For the unit with cooling capacity of 2300W ~5000W, 6 expansion screws are needed; for the unit with cooling capacity of 6000W ~8000W, 8 expansion screws are needed; for the unit with cooling capacity of 10000W ~16000W, 10 expansion screws are needed.



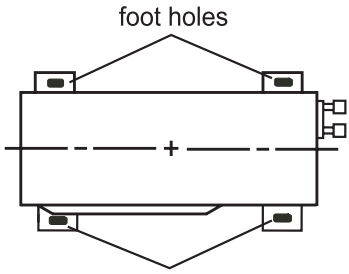
Step two: install drain joint (Only for cooling and heating unit)

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



Step three: fix outdoor unit

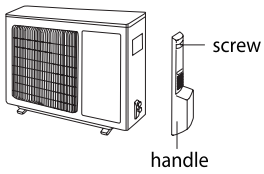
1. Place the outdoor unit on the support.
2. Fix the foot holes of outdoor unit with bolts.



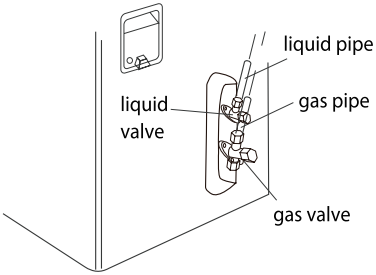
Installation of outdoor unit

Step four: connect indoor and outdoor pipes

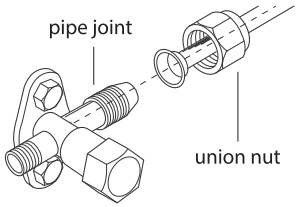
1. Remove the screw on the right handle of outdoor unit and then remove the handle.



2. Remove the screw cap of valve and aim the pipe joint at the bellmouth of pipe.



3. Pretightening the union nut with hand.

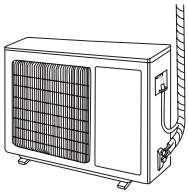


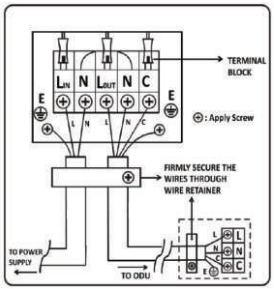
4. Tighten the union nut with torque wrench by referring to the sheet below.

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 five: connect outdoor electric wire

1. Remove the wire clip; connect the power connection wire and signal control wire (only for cooling and heating unit) to the wiring terminal according to the color; fix them with screws.





Applicable for Inverter Models

Installation of outdoor unit

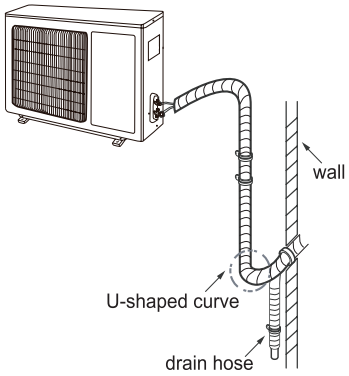
2. Fix the power connection wire and signal control wire with wire clip (only for cooling and heating unit).

Note:
- After tighten the screw, pull the power cord slightly to check if it is firm.
- Never cut the power connection wire to prolong or shorten the distance.

Step six: neaten the pipes

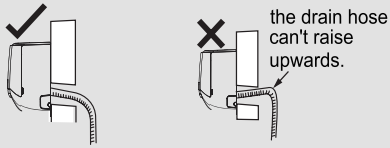
1. The pipes should be placed along the wall, bent reasonably and hidden possibly. Min. semidiameter of bending the pipe is 10cm.

2. 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 room, in order to prevent rain from getting into the room.

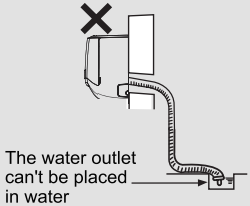


Note:

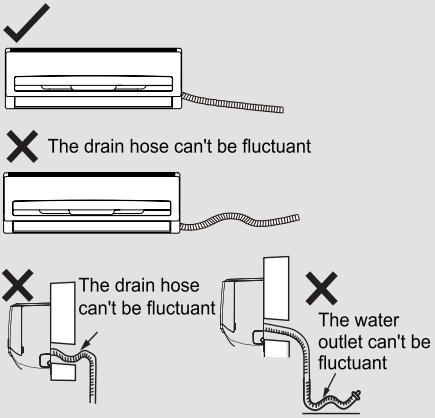
- The through-wal height of drain hose shouldn't be higher than the outlet pipe hole of indoor unit.



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

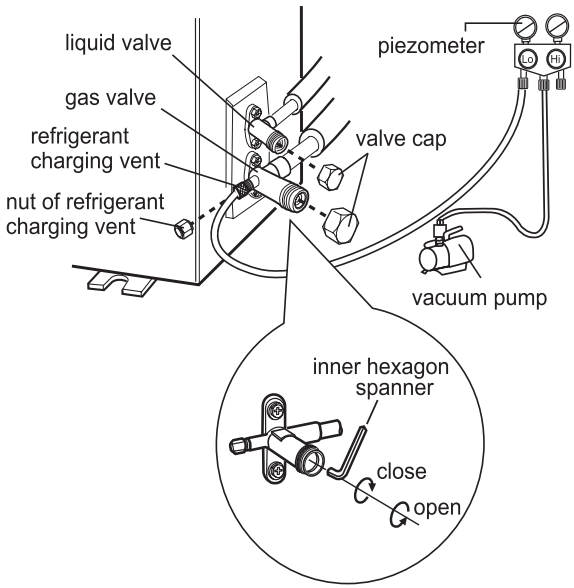


- Slant the drain hose slightly downwards. The drain hose can't be curved, raised and fluctuant, etc.



Vacuum pumping

Use vacuum pump



1. Remove the valve caps on the liquid valve and gas valve and the nut of refrigerant charging vent.
2. Connect the charging hose of piezometer to the refrigerant charging vent of gas valve and then connect the other charging hose to the vacuum pump.
3. Open the piezometer completely and operate for 10-15min to check if the pressure of piezometer remains in -0.1MPa.
4. Close the vacuum pump and maintain this status for 1-2min to check if the pressure of piezometer remains in -0.1MPa. If the pressure decreases, there may be leakage.
5. Remove the piezometer, open the valve core of liquid valve and gas valve completely with inner hexagon spanner.
6. Tighten the screw caps of valves and refrigerant charging vent.
7. Reinstall the handle.

Leakage detection

1. With leakage detector:
   Check if there is leakage with leakage detector.
2. With soap water:
   If leakage detector is not available, please use soap water for leakage detection. Apply soap water at the suspected position and keep the soap water for more than 3min. If there are air bubbles coming out of this position, there's a leakage.

Check after installation

● Check according to the following requirement after finishing installation.

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

Test operation

1. Preparation of test operation

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

2. Method of test operation

- Put through the power, press ON/OFF button on the remote controller to start operation.
- Press MODE button to select AUTO, COOL, DRY & FAN 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.

DC INVERTER TESTING PROCEDURE

Applicable only for Inverter Models

Full Load Cooling testing procedure

1. To enable the test mode, switch on the Unit and set it to “Cooling” Mode.
2. Set temp. as “16°C” and fan speed to “High”.
3. Press Display Key from remote 8 times continuously within 10 Seconds
4. As the test mode gets enable, get enabled, buzzer sounds twice and the whole LED light panel lights up and starts blinking on indoor display.

Details set temperature and operating conditions information as below

Cooling condition		Setting temperature	Description
Indoor	Outdoor		
27/19	35/24	16°C	Full Load Cooling

Half Load Cooling testing procedure

1. To enable the test mode, switch on the Unit and set it to “Cooling” Mode.
2. Set temp. as “17°C” and fan speed to “High”.
3. Press Display Key from remote 8 times continuously within 10 Seconds
4. As the test mode gets enable, twice buzzer sound will come with whole LED light panel lights up and starts blinking on indoor display.

Details set temperature and operating conditions information as below

Cooling condition		Setting temperature	Description
Indoor	Outdoor		
27/19	35/24	17°C	Half Load Cooling

Note : On power reset, controller will come out from the test mode and will run in normal operation. To enter in test mode, user has to again follow the procedure from point 1 in both load condition.

Configuration of connection pipe

1. Standard length of connection pipe -- 3 m

2. Max length of connection pipe -- as given in below table

Sheet 1 Max length & height of connection pipe Unit: mtr

capacity	Max length of connection pipe
12000Btu/h (3516W)	15
18000Btu/h (5274W)	15
22000 Btu/h (6448 W)	15

capacity	Max heigth of connection pipe
12000Btu/h (3516W)	10
18000 Btu/h (5274W)	10
22000 Btu/h (6448 W)	10

4. The calculation method of additional refrigerant oil and refrigerant charging amount after prolonging connection pipe
   After the length of connection pipe is prolonged for 10m at the basis of standard length, you should add 5ml of refrigerant oil for each additional 5m of connection pipe.
   The calculation method of additional refrigerant charging amount (on the basis of liquid pipe):
   (1) Additional refrigerant charging amount= prolonged length of liquid pipe × additional refrigerant charging amount per meter
   (2) Basing on the length of standard pipe, add refrigerant according to the requirement as shown in the table. The additional refrigerant charging amount per meter is different according to the diameter of liquid pipe. See Sheet 2.

Configuration of connection pipe

Sheet 2. Additional refrigerant charging amount for R32

Diameter of connection pipe mm		Indoor unit throttle	Outdoor unit throttle	
Liquid pipe	Gas pipe	Cooling only, cooling and heating (g / m)	Cooling only (g / m)	cooling and heating (g / m)
Φ6	Φ9.5 or Φ12	16	12	16
Φ6 or Φ9.5	Φ16 or Φ19	40	12	40
Φ12	Φ19 or Φ22.2	80	24	96
Φ16	Φ25.4 or Φ31.8	136	48	96
Φ19	–	200	200	200
Φ22.2	–	280	280	280

Note: The additional refrigerant charging amount in Sheet 2 is recommended value, not compulsory.

Safety operation of flammable refrigerant

Qualification requirement for installation and maintenance man

- All the work men who are engaging in the refrigeration system should bear the valid certification awarded by the authoritative organization and the qualification for dealing with the refrigeration system recognized by this industry. If it needs other technician to maintain and repair the appliance, they should be supervised by the person who bears the qualification for using the flammable refrigerant.
- It can only be repaired by the method suggested by the equipment's manufacturer.

Installation notes

- The air conditioner is not allowed to use in a room that has running fire (such as fire source, working coal gas ware, operating heater).
- It is not allowed to drill hole or burn the connection pipe.
- The air conditioner must be installed in a room that is larger than the minimum room area. The minimum room area is shown on the nameplate or following table a.
- Leak test is a must after installation.

table a - Minimum room area (m^2)

Minimum room area(m^2)	Charge amount (kg)	≤1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2	2.1	2.2	2.3	2.4	2.5
	floor location	/	14.5	16.8	19.3	22	24.8	27.8	31	34.3	37.8	41.5	45.4	49.4	53.6
	window mounted	/	5.2	6.1	7	7.9	8.9	10	11.2	12.4	13.6	15	16.3	17.8	19.3
	wall mounted	/	1.6	1.9	2.1	2.4	2.8	3.1	3.4	3.8	4.2	4.6	5	5.5	6
	ceiling mounted	/	1.1	1.3	1.4	1.6	1.8	2.1	2.3	2.6	2.8	3.1	3.4	3.7	4

Maintenance notes

- Check whether the maintenance area or the room area meet the requirement of the nameplate.
  - It's only allowed to be operated in the rooms that meet the requirement of the nameplate.
- Check whether the maintenance area is well-ventilated.
  - The continuous ventilation status should be kept during the operation process.
- Check whether there is fire source or potential fire source in the maintenance area.
  - The naked flame is prohibited in the maintenance area; and the "no smoking" warning board should be hanged.
- Check whether the appliance mark is in good condition.
  - Replace the vague or damaged warning mark.

Welding

- If you should cut or weld the refrigerant system pipes in the process of maintaining, please follow the steps as below:

Safety operation of flammable refrigerant

a. Shut down the unit and cut power supply
b. Eliminate the refrigerant
c. Vacuuming
d. Clean it with N_2 gas
e. Cutting or welding
f. Carry back to the service spot for welding

- The refrigerant should be recycled into the specialized storage tank.
- Make sure that there isn't any naked flame near the outlet of the vacuum pump and it's well-ventilated.

Filling the refrigerant

- Use the refrigerant filling appliances specialized for R32. Make sure that different kinds of refrigerant won't contaminate with each other.
- The refrigerant tank should be kept upright at the time of filling refrigerant.
- Stick the label on the system after filling is finished (or haven't finished).
- Don't overfilling.
- After filling is finished, please do the leakage detection before test running; another time of leak detection should be done when it's removed.

Safety instructions for transportation and storage

- Please use the flammable gas detector to check before unload and open the container.
- No fire source and smoking.
- According to the local rules and laws.

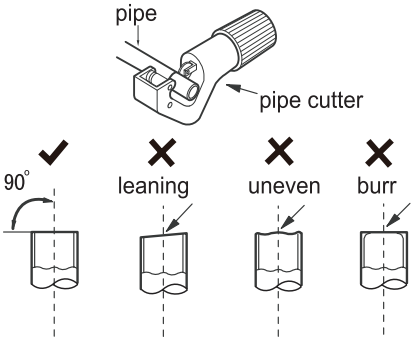
Pipe expanding method

Note:

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

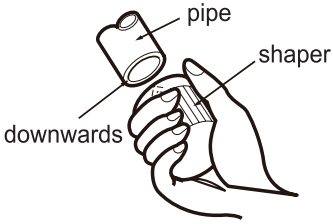
A: Cut the pipe

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



B: Remove the burrs

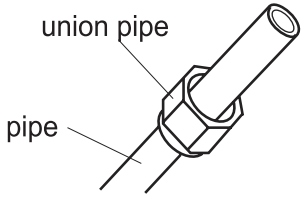
- Remove the burrs with shaper and prevent the burrs from getting into the pipe.



C: Put on suitable insulating pipe

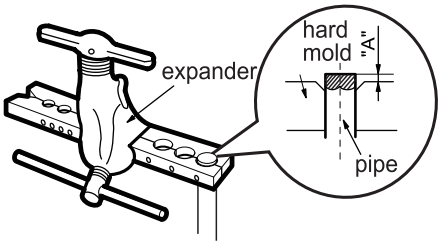
D: Put on the union nut

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



E: Expand the port

- Expand the port with expander.



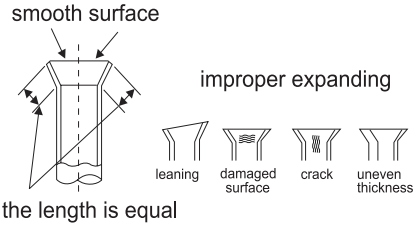
Note:

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

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

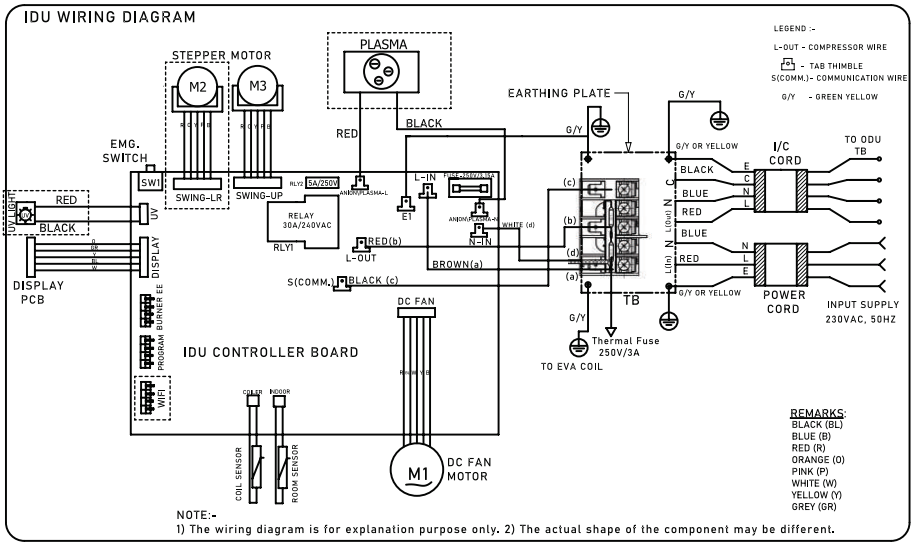
F: Inspection

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



IDU WIRING DIAGRAM

For INVERTER MODELS

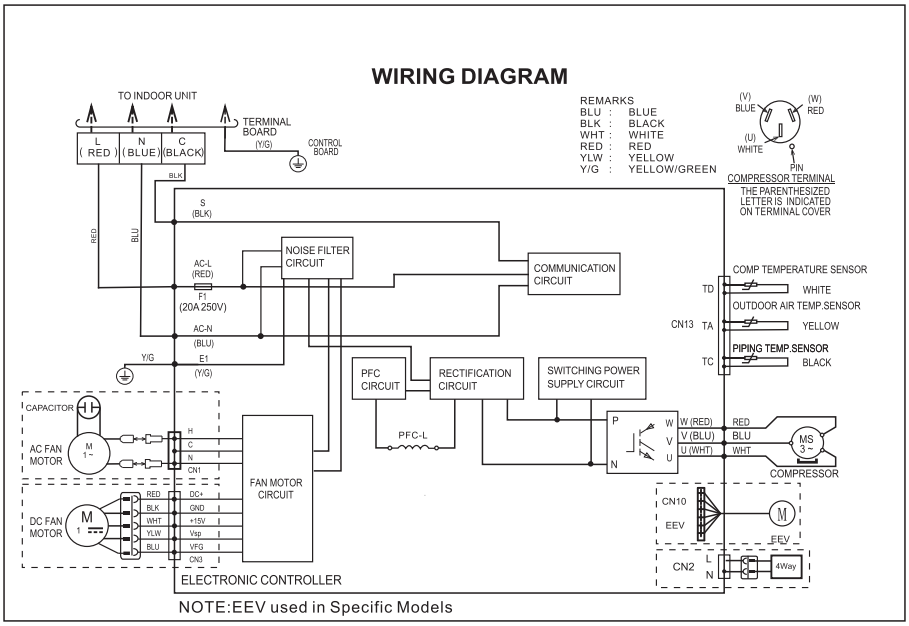


*Please note above wiring diagram is the latest version and some units may has an old version actual unit.

Instruction for installation

ODU WIRING DIAGRAM

For INVERTER MODELS



NOTE:EEV used in Specific Models

*Please note above wiring diagram is the latest version and some units may has an old version actual unit.

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