ARMBRIDGE

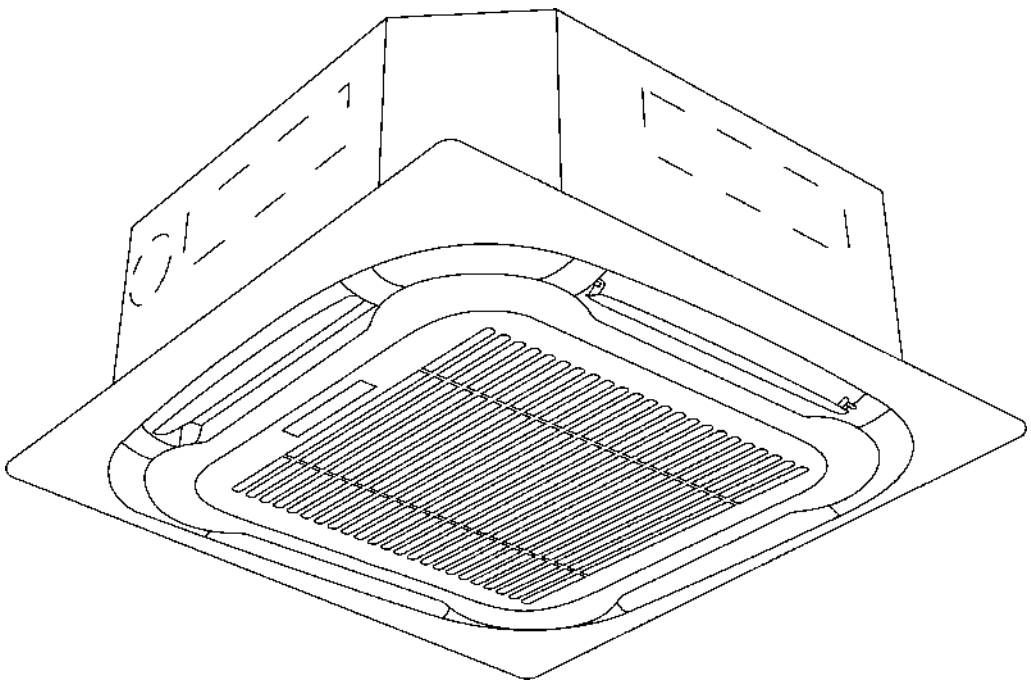
R32

OWNER'S MANUAL

MODELS

AB-TS09CT-230VI
AB-TS12CT-230VI
AB-TS18CT-230VI
AB-TS24CT-230VI

SINGLE-ZONE CEILING CASSETTE



Please read this manual carefully and thoroughly before installing the unit.
Take care of this manual for future reference.

Safety Notice

 A2L  A2L	Caution: Risk of fire The air conditioner is charged with inflammable refrigerant R32.
	Before using the air conditioner, please read the instruction manual first
	Before installing the air conditioner, please read the instruction manual first
	Before repairing the air conditioner, please read the technical service manual first

Compared with common refrigerant, R32 is an environmental-friendly refrigerant that has no harm to the ozone layer and weak greenhouse effect. Its GWP is 675. Because of its thermodynamic characteristics, R32 requires a smaller charging quantity to reach high energy efficiency. It is inflammable and odourless, but may cause explosion under certain circumstances

CONTENTS

Precautions

SAFETY RULES AND RECOMMENDATIONS FOR THE INSTALLER

1. Read this guide before installing and using the appliance.
2. During the installation of the indoor and outdoor units, access to the working area should be forbidden to children. Unforeseeable accidents could happen.
3. Make sure that the base of the outdoor unit is firmly fix .
4. Check that air cannot enter the refrigerant system and check for refrigerant leaks before turn on the air conditioner.
5. Carry out a test cycle after installing the air conditioner and record the operating data.
6. Protect the unit with a fuse of suitable capacity for the maximum input current or with another overload protection device.
7. Ensure that the mains voltage matches the voltage indicated on the nameplate. Keep the switch clean and ensure that the power cord terminals are correctly connected to the circuit. This prevents the risk of electric shock or fire caused by poor contact.
8. The appliance must be equipped with devices capable of disconnection from the mains power supply, have a contact separation in all poles to provide full disconnection under "over voltage category III conditions", these devices must also be incorporated into the fixed wiring in accordance with the wiring rules.
9. The air conditioner must be installed by professional or qualified persons. Do not try to install the conditioner alone, always contact specialized technical personnel.
10. Do not install the appliance at a distance of less than 50 cm from inflammable substances (alcohol etc.) Or from pressurized containers (e. g. spray cans).
11. If the appliance is used in areas without the possibility of ventilation, precautions must be taken to prevent any leaks of refrigerant gas from remaining in the environment and creating a danger of fire.
12. The packaging materials are recyclable and should be disposed of in the separate waste bins. Take the air conditioner at the end of its useful life to a special waste collection center for disposal.
13. Only use the air conditioner as instructed in this booklet. These instructions are not intended to cover every possible condition and situation. As with any electrical household appliance, common sense and caution are therefore always recommended for installation, operation and maintenance.
14. The appliance must be installed in accordance with applicable national regulations.
15. Before accessing the terminals, all the power circuits must be disconnected from the power supply.

16. 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.
17. Cleaning and maintenance must be carried out by specialized technical personnel. In any case disconnect the appliance from the mains electricity supply before carrying out any cleaning or maintenance.
18. This appliance has been made for air conditioning domestic environments and must not be used for any other purpose, such as for drying clothes, cooling food, etc.
19. Always use the appliance with the air filter mounted. Air conditioning without air filter could cause an excessive accumulation of dust and/or lead inner parts function failure.
20. The user is responsible for having the appliance installed by a qualified technician, who must check that earthing/grounding is done in accordance with current legislation and insert a thermal-magnetic circuit breaker.
21. The batteries in the remote controller must be recycled or disposed of properly. For disposal of scrap batteries, please discard the batteries as sorted municipal waste at the accessible collection point.
22. Never remain directly exposed to the flow of cold air for a long time. The direct and prolonged exposure to cold air could be dangerous for your health. Particular care should be taken in the rooms where there are children, old or sick people.
23. If the appliance gives off smoke or there is a smell of burning, immediately cut off the power supply and contact the Service Center. The prolonged use of the device in such conditions could cause fire or electrocution.
24. Have repairs carried out only by an authorised Service Center of the manufacturer. Incorrect repair could expose the user to the risk of electric shock, etc.
25. Unhook the switch if you foresee not to use the device for a long time. The airflow direction must be properly adjusted.
26. The flaps must be directed downw rds in the heating mode and upwards in the cooling mode.
27. Ensure that the appliance is disconnected from the power supply when it intends to keep inoperative for a long period and before carrying out any cleaning or maintenance.
28. Selecting the most suitable temperature can prevent damage to the appliance.

SAFETY RULES AND PROHIBITIONS

1. Do not bend, tug or compress the power cord since this could damage it. Electrical shocks or fire are probably due to a damaged power cord. Specialized technical personnel only is recommended to replace a damaged power cord.
2. Do not use extensions or gang modules.
3. Do not touch the appliance when barefoot or parts of the body are wet or damp.
4. Do not obstruct the air inlet or outlet of the indoor or the outdoor unit. The obstruction of these openings causes a reduction in the operative efficienc of the conditioner with possible consequent failures or damages.
5. In no way alter the characteristics of the appliance.
6. Do not install the appliance in environments where the air could contain flammable gas, oil or sulphur or near sources of heat.
7. This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
8. Do not climb onto or place any heavy or hot objects on top of the appliance.
9. Do not leave windows or doors open for long time when the air conditioner is operating.
10. Do not direct the airflow onto plant or animals.
11. A long direct exposition to the flow of cold air of the conditioner could have negative effe ts on plants and animals.
12. Do not put the conditioner in contact with water. The electrical insulation could be damaged and thus causing electrocution.
13. Do not climb onto or place any objects on the outdoor unit.
14. Never insert a stick or similar object into the appliance. It could cause injury.
15. Children should be supervised to ensure that they do not play with the appliance.
16. This unit is equipped with a refrigerant leak detector for safety.
17. This refrigerant sensor is only replaced with a manufacturer approved sensor. If the sensor is replaced only as part of the component assembly, the component should be labeled.
    (Some models have refrigerant leak sensors, subject to the actual product received.)
18. The appliance shall be installed according to the manufacturer's instructions, and the ventilation pipe shall not exceed the maximum length and number of turns specified by the manufacture .
19. Appliances shall be installed according to the instructions. Appliances that can be installed in different locations should be tested in all locations permitted by the manufacturer. The intake or exhaust openings should not be covered and the manufacturer's recommended air filter should be installed according to the instructions.

NOTE(WiFi models only)

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

Instruction for Servicing (R32)

1. Check the information in this manual to find out the dimensions of space needed for proper installation of the device, including the minimum distances allowed compared to adjacent structures.
2. Appliance shall be installed, operated and stored in a room with a floor area larger than 4 ^{2}.
3. The installation of pipe-work shall be kept to a minimum.
4. The pipe-work shall be protected from physical damage, and shall not be installed in an unventilated space if the space is smaller than 4m^2.
5. The compliance with national gas regulations shall be observed.
6. The mechanical connections shall be accessible for maintenance purposes.
7. Follow the instructions given in this manual for handling, installing, cleaning, maintaining and disposing of the refrigerant.
8. Make sure ventilation openings clear of obstruction.
9. **Notice:** The servicing shall be performed only as recommended by the manufacturer.
10. **Warning:** The appliance shall be stored in a well-ventilated area where the room size corresponds to the room area as specified for operation.
11. **Warning:** The appliance shall be stored in a room without continuously operating open flames (for example an operating gas appliance) and ignition sources (for example an operating electric heater).
12. The appliance shall be stored so as to prevent mechanical damage from occurring.
13. It is appropriate that anyone who is called upon to work on a refrigerant circuit should hold a valid and up-to-date certificate from an assessment authority accredited by the industry and recognizing their competence to handle refrigerants, in accordance with the assessment specification recognized in the industrial sector concerned. Service operations should only be carried out in accordance with the recommendations of the equipment manufacturer. Maintenance and repair operations that require the assistance of other qualified persons must be conducted under the supervision of the person competent for the use of flammable refrigerants.
14. Every working procedure that affects safety factors shall only be carried out by specialized persons.

15. Warning:

* Do not use any means to accelerate the defrosting process or clean the frost on your own. Follow the recommended guidelines from the manufacturer.
* 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.
* Be aware that refrigerants may not contain an odor.

Important Considerations

1. The air conditioner must be installed by professional personnel and the Installation manual is used only for the professional installation personnel! The installation specifications should be subject to our after-sale service regulations.
2. When filling the combustible refrigerant, any of your rough operations may cause serious or injuries to human body and objects.
3. A leak test must be done after the installation completed.
4. It is a must to do the safety inspection before maintaining or repairing an air conditioner using combustible refrigerant in order to ensure that the fire risk is reduced to minimum.
5. It is necessary to operate the machine under a controlled procedure in order to ensure that any risk arising from the combustible gas or vapor during the operation is reduced to minimum.
6. Requirements for the total weight of filled refrigerant and the area of a room to be equipped with an air conditioner (are shown as in the following Tables GG.1 and GG.2)

Refrigerant Charge and Room Area Limitations

In UL/CSA 60335-2-40, R32 refrigerant is classified as class A2L, which is mildly flammable.

Therefore, R32 refrigerant is suitable for systems needing additional refrigerant charge and which will limit the area of the rooms being served by the system. Similarly, the total amount of refrigerant in the system shall be less than or equal to the allowable maximum refrigerant charge. The allowable maximum refrigerant charge depends on the area of the rooms being served by the system.

NOTE:

The nouns in this section are explained as follows:

Mc: The actual refrigerant charge in the system.

A: The actual room area where the appliance is installed.

Amin: The required minimum room area.

Mmax: The allowable maximum refrigerant charge in a room.

Qmin: The minimum circulation airflo .

Anvmin: The minimum opening area for connected rooms.

The maximum charge and the required minimum floor area

m_1 = (6 m^3) x LFL , m_2 = (52 m^3)) x LFL, m_3 = (260 m^3)x LFL

Where LFL is the lower flammable limit in kg/ ^{3}, R32 LFL is 0.306 kg/ m^3.

The maximum charge in a room shall be in accordance with the following:

Table GG.1 - Maximum charge (kg)

Category	LFL (kg/m^3)	h_0(m)	Floor area (m^2)						
			4	7	10	15	20	30	50
R32	0.306	2.5	1.53	2.68	3.83	5.51	6.36	7.79	10.06
		2.8	1.71	3.00	4.28	6.17	7.12	8.73	11.27
		3	1.84	3.21	4.59	6.61	7.63	9.35	12.07

Table GG.1 - Maximum charge (oz)

Category	LFL (lbs/ft^2)	h_0(ft)	Floor area (m^2)						
			43.06 ft²	75.35 ft²	107.64 ft²	161.46 ft²	215.28 ft²	322.92 ft²	538.20 ft²
R32	0.0191	8.2	3.37	5.91	8.44	12.15	14.02	17.17	22.18
		9.19	3.77	6.61	9.44	13.6	15.69	19.25	24.84
		9.84	4.06	7.07	10.12	14.58	16.82	20.62	26.61

For R32 refrigerant charge amount and minimum room area:

The machine you purchased may be one of the types in the table below. The indoor and outdoor units are designed to be used together. Please check the machine you purchased. The indoor unit should be installed at least 8.2ft /2.5m above from the floor, and the minimum room area of operating or storage should be as specified in the following table

Table GG.2 - Minimum room area (m^2)

Category	LFL (kg/m^3)	h_0(m)	Charge amount (M) (kg) Minimum room area (m^2)						
			0.58	0.60	1.00	1.07	1.20	1.58	2.00
R32	0.306	2.5	1.52	1.57	2.61	2.80	3.14	4.13	5.23
		2.8	1.35	1.40	2.33	2.50	2.80	3.69	4.67
		3	1.26	1.31	2.18	2.33	2.61	3.44	4.36

Table GG.2 - Minimum room area (ft^2)

Category	LFL (lbs/ft^2)	h_0(m)	Charge amount (M) (lbs) Minimum room area (ft^2)						
			0.58lbs	0.60lbs	1.00lbs	1.07lbs	1.20lbs	1.58lbs	2.00lbs
R32	0.0191	8.2	16.36	16.90	28.10	30.14	33.79	44.45	56.28
		9.19	14.53	15.07	25.08	26.91	30.14	39.72	50.27
		9.84	13.56	14.10	23.47	25.08	28.10	37.03	46.94

≥Am²

A2L

Caution: Risk of fire

Read operator's manual

Operating instructions

A2L

Caution: Risk of fire

Read technical manual

7. Information on servicing:

1) Checks to the area

Prior to beginning work on systems containing flammable refrigerants, safety checks are necessary to ensure that the risk of ignition is minimized. For repair to the refrigerating system, the following precautions shall be complied with prior to conducting work on the system.

2) Work procedure

Work shall be undertaken under a controlled procedure so as to minimize the risk of a flammable gas or vapor being present while the work is being performed.

3) General work area

All maintenance staff and others working in the local area shall be instructed on the nature of work being carried out. Work in confined spaces shall be avoided. The area around the workspace shall be sectioned off. Ensure that the conditions within the area have been made safe by control of flammable material.

4) Checking for presence of refrigerant

The area shall be checked with an appropriate refrigerant detector prior to and during work, to ensure the technician is aware of potential flammable atmospheres. Ensure that the leak detection equipment being used is suitable for use with flammable refrigerants, i.e. non-sparking, adequately sealed or intrinsically safe.

5) Presence of fire extinguishe

If any hot work is to be conducted on the refrigeration equipment or any associated parts, appropriate fire extinguishing equipment shall be available to hand. Have a dry powder or CO_2 fire extinguisher adjacent to the charging area.

6) No ignition sources

No person carrying out work in relation to a refrigeration system which involves exposing any pipe work shall use any sources of ignition in such a manner that it may lead to the risk of fire or explosion. All possible ignition sources, including cigarette smoking, should be kept sufficientl far away from the site of installation, repairing, removing and disposal, during which refrigerant can possibly be released to the surrounding space. Prior to work taking place, the area around the equipment is to be surveyed to make sure that there are no flammable hazards or ignition risks. "No Smoking" signs shall be displayed.

7) Ventilated area

Ensure that the area is in the open or that it is adequately ventilated before breaking into the system or conducting any work that will produce heat. A degree of ventilation shall continue during the period that the work is carried out. The ventilation should safely disperse any released refrigerant and preferably expel it externally into the atmosphere.

8) Checks to the refrigeration equipment

Where electrical components are being changed, they shall be fit for the purpose and to the correct specification. At all times the manufacturer's maintenance and service guidelines shall be followed.

If in doubt consult the manufacturer's technical department for assistance.

The following checks shall be applied to installation using flammable refrigerant

-- The charge size is in accordance with the room size within which the refrigerant containing parts are installed;

-- The ventilation machinery and outlets are operating adequately and are not obstructed;

-- If an indirect refrigerating circuit is being used, the secondary circuit shall be checked for the presence of refrigerant;

-- Marking to the equipment continues to be visible and legible. Markings and signs that are illegible shall be corrected;

-- Refrigeration pipe or components are installed in a position where they are unlikely to be exposed to any substance which may corrode refrigerant containing components, unless the components are constructed of materials which are inherently resistant to being corroded or are suitably protected against being so corroded.

9) Checks to electrical devices

Repair and maintenance to electrical components shall include initial safety checks and component inspection procedures. If a fault exists that could compromise safety, then no electrical supply shall be connected to the circuit until it is satisfactorily dealt with. If the fault cannot be corrected immediately but it is necessary to continue operation, an adequate temporary solution shall be used. This shall be reported to the owner of the equipment so all parties are advised.

Initial safety checks shall include:

-- That capacitors are discharged: this shall be done in a safe manner to avoid possibility of sparking;

-- That no live electrical components and wiring are exposed while charging, recovering or purging the system;

-- That there is continuity of earth bonding.

8. Repairs to sealed components

Sealed electrical components shall be replaced.

9. Repair to intrinsically safe components

Intrinsically safe components must be replaced.

10. Cabling

Check that cabling will not be subject to wear, corrosion, excessive pressure, vibration, sharp edges or any other adverse environmental effects. The check shall also take into account the effects of aging or continual vibration from sources such as compressors or fans.

11. Detection of flammable refrigerants

Under no circumstances shall potential sources of ignition be used in the searching for or detection of refrigerant leaks. A halide torch (or any other detector using a naked flame) shall not be used.

12. Leak detection methods

The following leak detection methods are deemed acceptable for systems containing flammable refrigerants.

Electronic leak detectors shall be used to detect flammable refrigerants, but the sensitivity may not be adequate, or may need re-calibration. (Detection equipment shall be calibrated in a refrigerant-free area.) Ensure that the detector is not a potential source of ignition and is suitable for the refrigerant used. Leak detection equipment shall be set at a percentage of the LFL of the refrigerant and shall be calibrated to the refrigerant employed and the appropriate percentage of gas (25 % maximum) is confirmed. Leak detection fluids are suitable for use with most refrigerants but the use of detergents containing chlorine shall be avoided as the chlorine may react with the refrigerant and corrode the copper pipe-work. If a leak is suspected, all naked flames shall be removed/ extinguished. If a leakage of refrigerant is found which requires brazing, all of the refrigerant shall be recovered from the system, or isolated (by means of shut off valves) in a part of the system remote from the leak. Oxygen free nitrogen (OFN) shall then be purged through the system both before and during the brazing process.

13. Removal and evacuation

When breaking into the refrigerant circuit to make repairs or for any other purpose conventional procedures shall be used. However, it is important that best practice is followed since inflammability is a consideration. The following procedure shall be adhered to:

-- Remove refrigerant;

-- Purge the circuit with inert gas;

-- Evacuate;

-- Purge again with inert gas;

-- Open the circuit by cutting or brazing.

The refrigerant charge shall be recovered into the correct recovery cylinders. The system shall be flushed with OFN to render the unit safe. This process may need to be repeated several times.

Compressed air or oxygen shall not be used for this task.

Flushing shall be achieved by breaking the vacuum in the system with OFN and continuing to fill until the working pressure is achieved, then venting to atmosphere, and finally pulling down to a vacuum. This process shall be repeated until no refrigerant is within the system. When the final OFN charge is used, the system shall be vented down to atmospheric pressure to enable work to take place. This operation is absolutely vital if brazing operations on the pipe-work are to take place.

Ensure that the outlet for the vacuum pump is not close to any ignition sources and there is ventilation available.

14. Decommissioning

Before carrying out this procedure, it is essential that the technician is completely familiar with the equipment and all its details. It is recommended good practice that all refrigerants are recovered safely. Prior to the task being carried out, an oil and refrigerant sample shall be taken in case analysis is required prior to re-use of reclaimed refrigerant. It is essential that electrical power is available before the task is commenced.

1) Become familiar with the equipment and its operation.

2) Isolate system electrically.

3) Before attempting the procedure, ensure that:

- mechanical handling equipment is available, if required, for handling refrigerant cylinders;
- all personal protective equipment is available and being used correctly;
- the recovery process is supervised at all times by a competent person;
- recovery equipment and cylinders conform to the appropriate standards.

4) Pump down refrigerant system, if possible.

5) If a vacuum is not possible, make a manifold so that refrigerant can be removed from various parts of the system.

6) Make sure that cylinder is situated on the scales before recovery takes place.

7) Start the recovery machine and operate in accordance with manufacturer's instructions.

8) Do not overfill cylinders. (No more than 80% volume liquid charge).

9) Do not exceed the maximum working pressure of the cylinder, even temporarily.

10) When the cylinders have been filled correctly and the process completed, make sure that the

cylinders and the equipment are removed from site promptly and all isolation valves on the equipment are closed off.

11) Recovered refrigerant shall not be charged into another refrigeration system unless it has been cleaned and checked.

15. Labeling

Equipment shall be labeled stating that it has been de-commissioned and emptied of refrigerant. The label shall be dated and signed. Ensure that there are labels on the equipment stating the equipment contains flammable refrigerant.

16. Recovery

When removing refrigerant from a system, either for servicing or decommissioning, it is recommended good practice that all refrigerants are removed safely.

When transferring refrigerant into cylinders, ensure that only appropriate refrigerant recovery cylinders are employed. Ensure that the correct number of cylinders for holding the total system charge are available. All cylinders to be used are designated for the recovered refrigerant and labeled for that refrigerant(i.e. Special cylinders for the recovery of refrigerant). Cylinders shall be complete with pressure-relief valve and associated shut-off valves in good working orde .

Empty recovery cylinders are evacuated and, if possible, cooled before recovery occurs.

The recovery equipment shall be in good working order with a set of instructions concerning the equipment that is at hand and shall be suitable for the recovery of all appropriate refrigerants including, when applicable, flammable refrigerants. In addition, a set of calibrated weighing scales shall be available and in good working order. Hoses shall be complete with leak-free disconnect couplings and in good condition. Before using the recovery machine, check that it is in satisfactory working order, has been properly maintained and that any associated electrical components are sealed to prevent ignition in the event of a refrigerant release. Consult manufacturer if in doubt.

The recovered refrigerant shall be returned to the refrigerant supplier in the correct recovery cylinder, and the relevant waste transfer note arranged. Do not mix refrigerants in recovery units and especially not in cylinders.

If compressors or compressor oils are to be removed, ensure that they have been evacuated to an acceptable level to make certain that flammable refrigerant does not remain within the lubricant.

The evacuation process shall be carried out prior to returning the compressor to the suppliers.

Only electric heating to the compressor body shall be employed to accelerate this process. When oil is drained from a system, it shall be carried out safely.

17. Warning:

1) Do not use means to accelerate the defrosting process or to clean, other than those recommended by the manufacturer.

1) Ne pas utiliser de produits permettant d'accélérer le dégel ou de produits de nettoyage autres que ceux recommandés par le fabricant.

2) 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 heate .

2) L'appareil doit être entreposé dans un endroit sans source d'allumage fonctionnant en continu (par exemple: flamme nue, appareil au gaz en marche ou radiateur électrique en marche).

3) Do not pierce or burn.

3) Ne pas percer ni brûler.

4) Be aware that refrigerants may not contain an odour.

4) Attention : les frigorigènes peuvent être inodores.

18. Statement

1) Please use the flammable gas detector to check before unloading and open the containe .

2) No fire source and smoking.

3) That pipe work shall be protected from physical damage and, in the case of FLAMMABLE REFRIGERANTS, shall not be installed in an unventilated space, if that space is smaller than Amin in Annex GG, except for A2L REFRIGERANTS where the installed pipes comply with UL 60335-2-40 Clause. In case of field charge, the effect on REFRIGERANT CHARGE caused by the different pipe length has to be quantified

4) That compliance with national gas regulations shall be observed.

5) Be shipped with a FLAMMABLE REFRIGERANT CHARGE. Joints made in the installation between parts of the REFRIGERATING SYSTEM, with at least one part charged, shall be made in accordance with the following.

- A brazed, welded, or mechanical connection shall be made before opening the valves to permit refrigerant to flow between the REFRIGERATING SYSTEM parts. A vacuum valve shall be provided to evacuate the interconnecting pipe and/or any uncharged REFRIGERATING SYSTEM part.
- Mechanical connectors used indoors shall comply with ISO 14903. When mechanical connectors are reused indoors, sealing parts shall be renewed. When flared joints are reused indoors, the flare part shall be re-fabricated.
- Refrigerant tubing shall be protected or enclosed to avoid damage.
- Flexible refrigerant connectors (such as connecting lines between the indoor and outdoor unit) that may be displaced during NORMAL OPERATION shall be protected against mechanical damage.

6) That pipe work including piping material, pipe routing, and installation shall include protection from physical damage in operation and service, and be in compliance with national and local codes

and standards, such as ASHRAE 15, ASHRAE 15. 2, IAPMO Uniform Mechanical Code, ICC International Mechanical Code, or CSA B52. All field joints shall be accessible for inspection prior to being covered or enclosed;

7) That after completion of field piping for split systems, the field pipe work shall be pressure tested with an inert gas and then vacuum tested prior to refrigerant charging, according to the following requirements;

8) The appliance shall be stored so as to prevent mechanical damage from occurring.

9) Working personnel for maintenance, service and repair operations. Every working procedure that affects safety means shall only be carried out by competent persons according to Annex HH. Examples for such working procedures are:

- breaking into the refrigerating circuit;
- opening of sealed components;
- opening of ventilated enclosures.

Installation Safety Principles

1. Site Safety

Open Flames Prohibited

Ventilation Necessary

Operation Safety

Mind Static Electricity

Must wear protective clothing and anti-static gloves

Don’t use mobile phone

2. Installation Safety

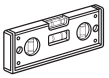
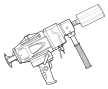
- Refrigerant Leak Detector
- Appropriate Installation Location

The left picture is the schematic diagram of a refrigerant leak detector.

Please note that:

1) The installation site should be well-ventilated.
2) The sites for installing and maintaining an air conditioner using Refrigerant R32 should be free from open fire or welding, smoking, drying oven or any other heat source higher than 54°C (129.2°F) which easily produces open fire.
3) When installing an air conditioner, it is necessary to take appropriate anti-static measures such as wear anti-static clothing and/or gloves.
4) It is necessary to choose the site convenient for installation or maintenance wherein the air inlets and outlets of the indoor and outdoor units should be not surrounded by obstacles or close to any heat source or combustible and/or explosive environment.
5) If the indoor unit suffers refrigerant leak during the installation, it is necessary to immediately turn off the valve of the outdoor unit and all the personnel should go out till the refrigerant leaks completely for 15 minutes. If the product is damaged, it is a must to carry such damaged product back to the maintenance station and it is prohibited to weld the refrigerant pipe or conduct other operations on the user's site.
6) It is necessary to avoid the places where there are other electrical products, power switch plugs and sockets, kitchen cabinet, bed, sofa and other valuables right under the lines on two sides of the indoor unit.

Suggested Tools

Tool	Picture	Tool	Picture	Tool	Picture
Standard Wrench		Pipe Cutter		Vacuum Pump	
Adjustable/ Crescent Wrench		Screw drivers (Phillips & Flat blade)		Safety Glasses	
Torque Wrench		Manifold and Gauges		Work Gloves	
Hex Keys or Allen Wrenches		Level		Refrigerant Scale	
Drill & Drill Bits		Flaring tool		Micron Gauge	
Hole Saw		Clamp on Amp Meter		Welding Gun	

Operating condition

Inverter air conditioner:

HEATING	Room temperature 0°C~27°C(32°F~81°F)
	Outdoor temperature -20°C~30°C(-4°F~86°F)
COOLING/ DRY	Room temperature 17°C~32°C(63°F~90°F)
	Outdoor temperature T1 climate: -15°C~53°C(5°F~127°F)

With the power supply connected, restart the air conditioner after shutdown, or switch it to other mode during operation, and the air conditioner protection device will start. The compressor will resume operation after 3 minutes.

Noise pollution

- Install the air conditioner in a place that can bear its weight in order to operate more quietly.
- Install the outdoor unit in a place where the air discharged and the operation noise do not annoy your neighbors.
- Do not place any obstacles in front of the outlet of the outdoor unit for fear it affects operation and increases the noise level.

Features of Protector

1. The protective device will trip at following cases.
   - Stop the appliance and restart it at once or change other modes during operation, you have to wait 3 minutes before restarting.
   - After switching on the power circuit breaker and then turn on the air conditioner at once, you have to wait about 20 seconds.
2. In case all operations have stopped, you need.
   - Press "ON/OFF" button again to restart it.
   - Set TIMER once again if it has been canceled.

Inspection

After a long time of operation, the air conditioner should be inspected for the following items.

- Abnormal heating of the power supply cord or even a burnt smell.
- Abnormal operating noise or vibration.
- Water leakage from indoor unit.
- Metal cabinet electrified.
- Stop using the air conditioner if above problem happened.
- It is advisable that the air conditioner should be given a detailed check-up after using for five years even if none of the above happen.

Features of HEATING mode

Preheat

2-5 minutes are necessary to preheat the indoor heat exchanger at the beginning of "HEATING" operation, lest cold air be discharged.

Defrost

In "HEATING" operation the appliance will defrost automatically. This procedure lasts 2~10 minutes, then returns to "HEATING" mode automatically. During defrosting, indoor fan stop running and return to heating mode operation automatically when defrosting has finished.

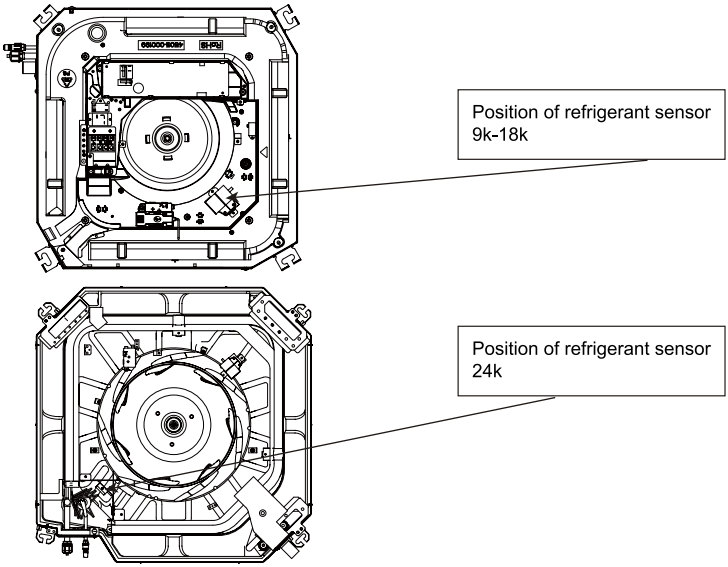
Refrigerant Sensor (Optional)

Important Notes:

1. The refrigerant sensor must be maintained by a professional and only the specified sensor by the manufacturer can be replaced.
2. The design life of the refrigerant sensor is 15 years, please replace the sensor within the range of the service life.
3. The refrigerant sensor automatically detects the condition of the machine while in operation, and will automatically start the circulating air flow and stop the compressor when the concentration reaches the alarm range.
4. The alarm signal of the refrigerant sensor is as follows table:

	Error Code
Refrigerant Leak Protection	Display “Hd”
The communication of the refrigerant sensor is abnormal	Display “Fd”

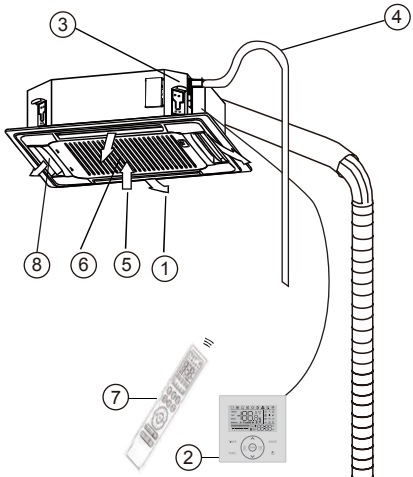
5. The installation position of the refrigerant sensor is shown in the figure below (for example, the appearance of different cabinets may be different)



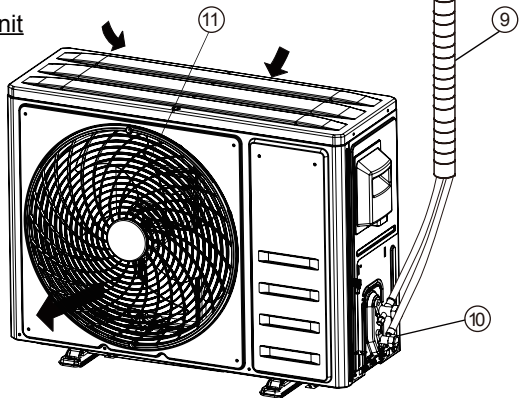
6. This unit is equipped with a refrigerant leak detector for safety. To be effective, the unit must be electrically powered at all times after installation, other than If you forsee not to use the device for a long time.
7. This refrigerant sensor shall only be replaced with manufacturer approved sensor.
8. LEAK DETECTION SYSTEM installed. Unit must be powered except for If you forsee not to use the device for a long time.

Parts and Functions

Indoor Unit



Outdoor Unit



① Air Outlet
② Wire controller
③ PUMP
④ Drainage Pipe
⑤ Air Return
⑥ Filter
⑦ Remote controller
⑧ AIR FLOW LOUVER
⑨ Refrigerant connection pipes
⑩ Cut-off valve
⑪ Air Outlet grille

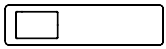
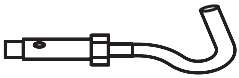
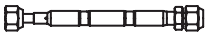
Actual product may vary from the image.

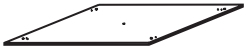
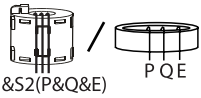
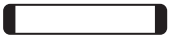
Requirements

- When the air temperature is below 5°F, the air conditioner cannot be started up until it is powered on for 2 hours. Furthermore, in case of a shutdown lasting for about one day only, please do not cut off the electricity supply.
- Notice that the air inlet/outlet must not be choked up. If choke up takes place, the air conditioner behavior may be affected, or air conditioner cannot run because of actuation of protector.

Please check whether the following list of accessories are of full scope. If there are some spare items, please store them carefully aside.

Packing list:

Serial number	Name	Quantity	Sketch map
1	Remote control unit	×1	
2	Battery	×2	
3	Soundproof / insulation sheath (some models)	x1	
4	Soundproof / insulation sheath (some models)	x1	
5	Outlet pipe clamp ring assembly	×1	
6	Outlet pipe clasp (some models)	1~2 (Depending on models)	
7	Drain pipe assembly (some models)	×1	
8	Copper nut	2~4 (Depending on models)	
9	Instruction book	×1	
10	Suspension bolt (some models)	x4	
11	Ceiling hook (some models)	x4	
12	Throttle (some units)	x1	
13	Belt (some models)	x4	
14	Conduit installation plate (some models)	x1	
15	Hose clamp (some models)	x2	

16	Installation paper template (some models)	x1	
17	Anti-shock rubber (some models)	x1	
18	Drain joint (some models)	x1	
19	Seal ring (some models)	x1	
20	Magnetic ring (wrap the electric wires S1&S2 (P&Q&E) around the magnetic ring twice) (some models)	x1	
21	Magnetic ring (Hitch it on the connective cable between indoor unit and outdoor unit after installation.) (some models)	Varies by model	
22	Tapping screw (some models)	x4	
23	Mounting foot pads for the outdoor unit (some models)	x2	
24	Cable Clamp (some models)	x2	
25	Wired controller plate (some models)	x1	
26	Connecting pipe (some models)	x1	
27	Connecting wire (some models)	x1	
28	Drain joint (indoor unit)(some models)	x1	

Function and Operation of Panel's Parts

⚠ NOTICE
Please adjust room temperature properly especially when the old men, children, patients stay at house.
Lightning and other electromagnetic radiation may cause a faulty effect. If this occurs, Please disconnect the power supply, then reconnect it, and restart the unit. Do not block the inlet of the indoor unit or the outlet of the outdoor unit; any blockage will reduce cooling or heating efficien .

CONSTITUTION OF PANEL

1. It suits for Body dimension :

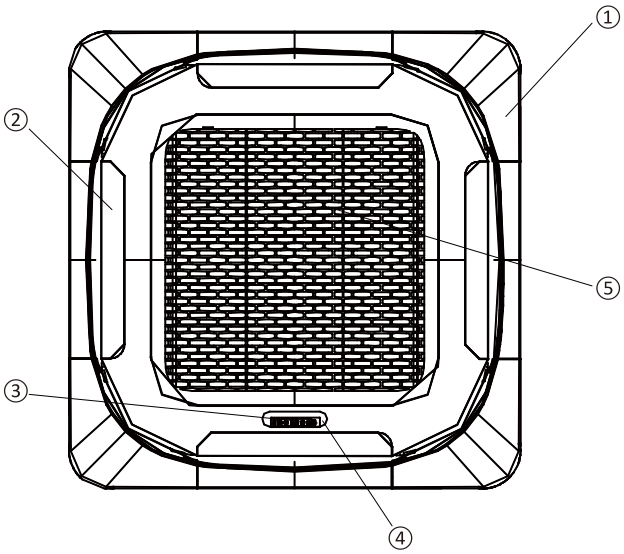
Compact cassette(9K/12K/18K):570mm×260mm×570mm;

cassette(24K) :838mm×254mm×838mm;

2. It suits for Panel dimension:

Compact cassette(9K/12K/18K):650mm×30mm×650mm,

cassette(24k):950mm×33mm×950mm.



① PANEL ② AIR FLOW LOUVER ③ INFRARED SIGNAL RECEIVER

④ DISPLAY PANEL ⑤ Air-Return GRILLE

Display Panel

Infrared signal receiver : receive of signal from the remote controller.

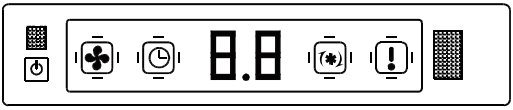
To make your remote controller operation more efficient, please let remote controller emit or aim at infrared signal receiver.

Buzzer: firstly power supplied or any of remote controller operations will make the buzzer sound once. Some obstacles occurring in the system will be recognized by intelligent recognition system of unit, lighting on the DISPLAY PANEL flashing show the type of obstacles.

DISPLAY PANEL

1. It suits for Body dimension :838mmX254mmX838mm or 838mmX299mmX838mm.

The first panel of this housing size.



Buzzer
Nixie tube
Manual Switch
Defrosting/preheat light
Running light
Warning light
Timing light
Infrared signal receiver

Second panel for this housing size.

Buzzer
Nixie tube
Manual Switch
Defrost
Running light
Trouble light
Timing light
Infrared signal

2. It suits for compact cassette body dimension :570mmX260mmX570mm cooling and heating pump type

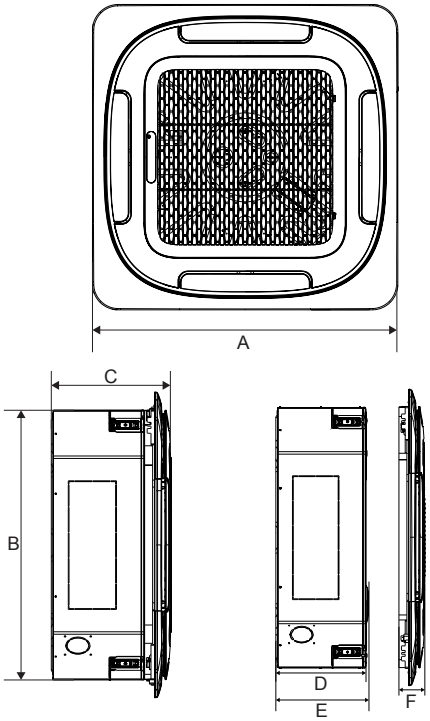
Buzzer
Nixie tube
Manual Switch
Timing light
Running light
Defrost
Infrared signal receiver

Indoor Unit Installation

Please select the space to install indoor unit according to the dimension show above, then install correctly, and have enough space for maintenance.

Select installation location considering piping and wiring connection after the Indoor Unit has been hanged. Then decide the piping wiring leading direction.

- Be sure to lead the refrigerant pipe, drain pipe and connection wires out to its connection location before hanging the unit if the opening on the ceiling has been decided.
- Confirm sizes of the indoor unit and ceiling opening with the attached installation paper pattern. (Please fix the paper pattern below the body with M5X16 screws (4))



Unit: mm/in.

Model	Indoor unit					
	A	B	C	D	E	F
9-18K	650/25.6	570/22.4	303/11.9	245/9.6	255/10.0	61/2.4
24K	950/37.4	838/32.9	327/12.9	245/9.6	254/10.0	82/3.2

INSTALLATION LOCATIONS

⚠ CAUTIONS

1. Location in the following places may cause malfunction of the machine. (If unavoidable, please consult your local dealer)

1) A place where there is flammable gas leakage

2) There is salty air surrounding(near the coast).

3) There is caustic gas(the sulfide, for example) existing in the air (near a hot fountain)

4) A place where can not bear the weight of the machine.

5) In kitchen where it is full of oil gas.

6) There is strong electromagnetic wave existing.

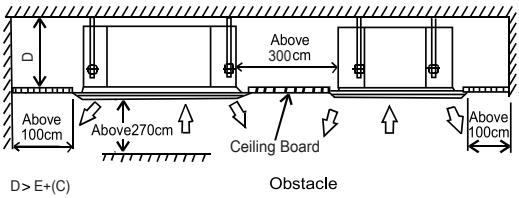
7) There is acid or alkaline liquid evaporating.

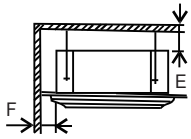
8) A place where air circulation is not enough.

9) The appliance shall not be installed in the laundry

2. Electrical Insulation must be done on the air conditioner and the building complying to National Regulations.

INSTALLATION SPACE





Wall material	Flammable material	Fire-proof material or other nonflammable materials other than metal	Fire-proof structure
Up(E)	Above 5cm/1.96in	Above 5cm/1.96in	Above 5cm/1.96in
Sides(F)	Above 100cm/39.3in	Above 100cm/39.3in	/

HEIGHT BETWEEN CEILING AND FLOOR

The installation height between ceiling and floor must be 2.7m~3.2m (8.8ft~10.5ft.)

CEILING HOLE AND THE HOOK INSTALLATION

Preparation Work on the Ceiling

- Installation method should be changed under the different construction structure. Please consult the professional for the detailed information.
- After opening a hole, the ceiling should be horizontal and strong to prevent vibration.

1) Cut the beams at the hole and remove them.

2) Reinforcing the beams that have been cut and the beams fixing the ceiling

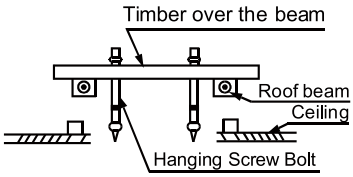
Installation of the hanging screw bolt.

Bolt with M10 thread is to be used. The center distance between the bolts is decided by the size of the unit.

Use the following method to install:

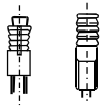
Wooden construction

Put the square timber over the roof beam, then install the hanging screw bolts.



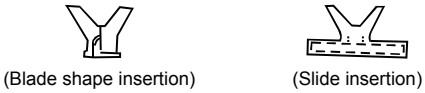
For finished concrete bricks

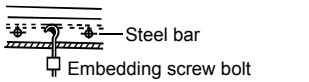
Install the hanging hook with expansion bolt into the concrete deep to 45~50mm (1.77~1.96in) to prevent loose.



New Concrete Bricks

Inlaying or embedding the screw bolts.

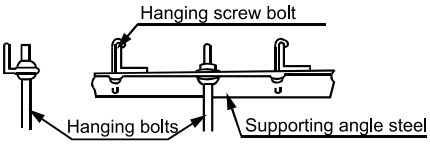




(Pipe hanging and embedding screw bolt)

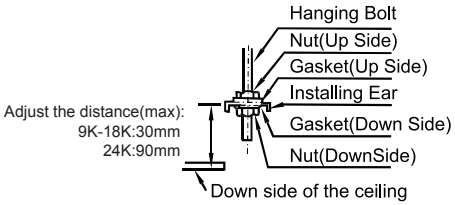
Steel roof beam structure

Install the supporting angle steel.



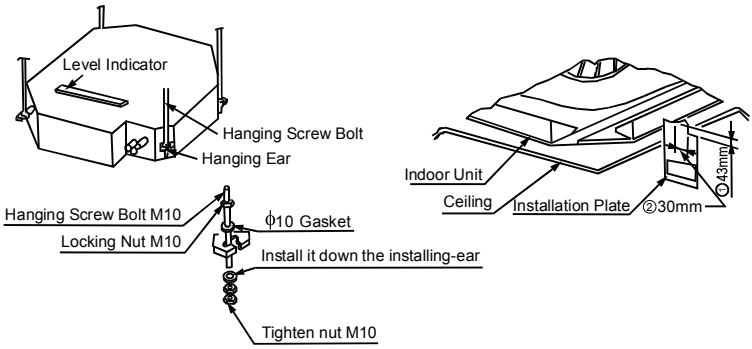
Overhanging the indoor unit

Adjust the gasket as shown in the figure belo .



• Install the hanging bolt into T groove of the hanging tool.

Over hang the indoor unit and ensure it is level using a level indicator.



PANEL INSTALLATION

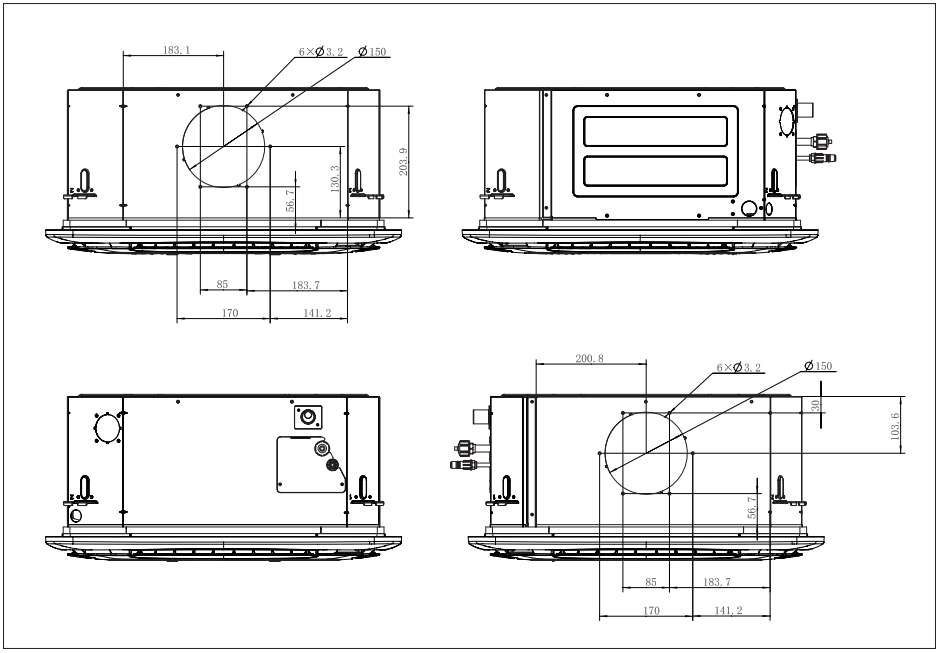
- Panel installation should be done after piping and wiring connection.
- Be sure that the indoor unit and ceiling hole installation size is right before installation.

CAUTION

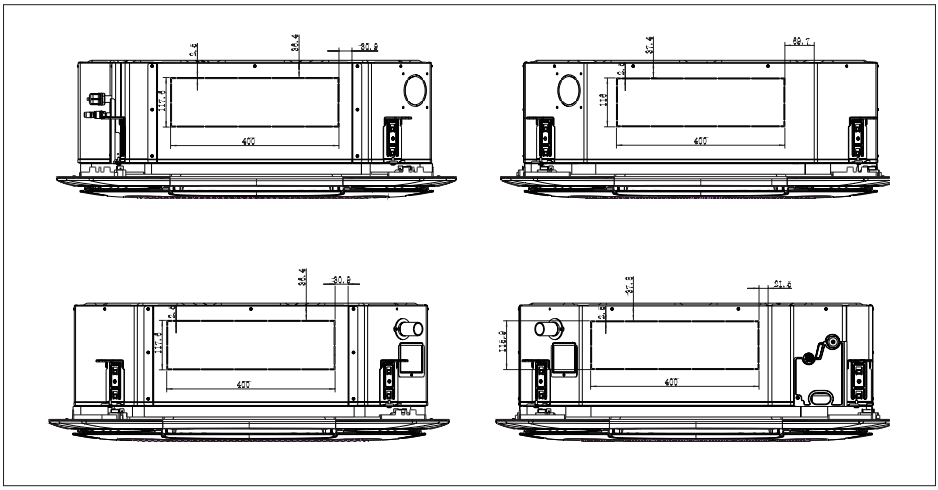
Be sure to seal the connection parts between the panel - the ceiling and the panel - the indoor unit , or even small gaps may cause wind/water leakage or condensing water.

Air duct parameters

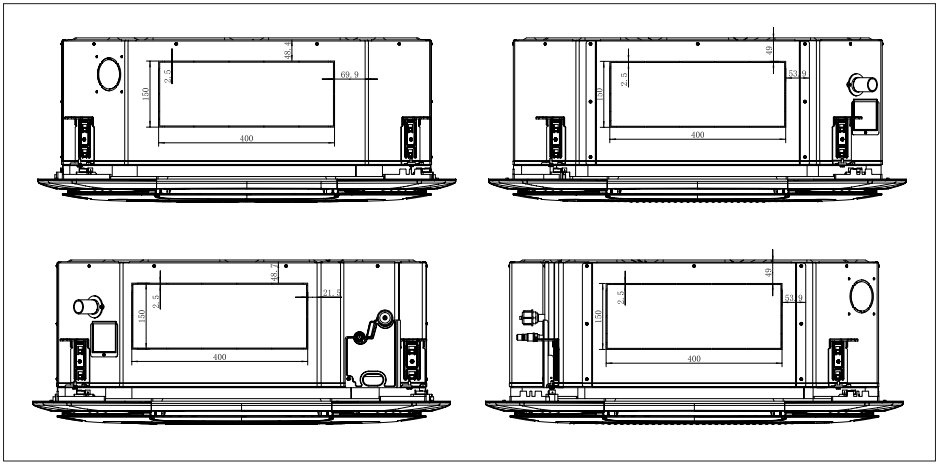
Model	L(max length) one duct connection	L(max length) two duct connection
9K	2m/6.56ft	1.5m/4.92ft
12K	2m/6.56ft	1.5m/4.92ft
18K	2m/6.56ft	1.5m/4.92ft
24K	2m/6.56ft	1.5m/4.92ft
36k	2m/6.56ft	1.5m/4.92ft
48K	2m/6.56ft	1.5m/4.92ft
55K	2m/6.56ft	1.5m/4.92ft



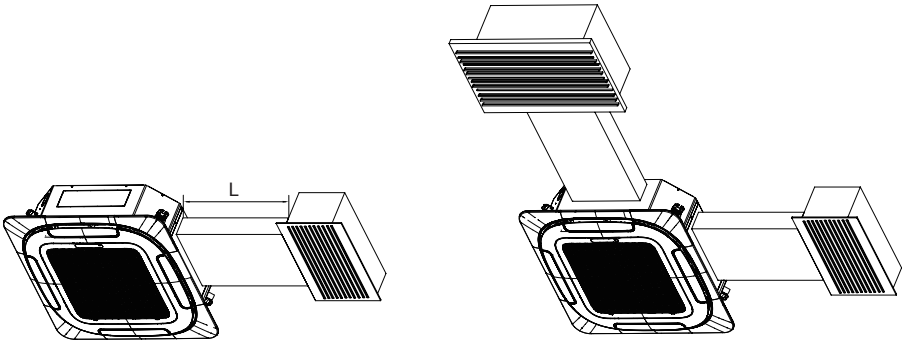
9K-18K Indoor Unit Air Vent Size



24K Indoor Unit Air Vent Size

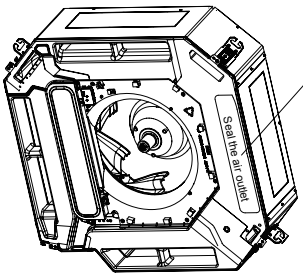


36K-55K Indoor Unit Air Vent Size



one duct connection

two duct connection



If you want to close the original outlet after connecting the air duct, you need to stick the sealing tape on the air outlet corresponding to the air duct as shown in the figure before installing the panel.

in case of one duct connection

1. The duct inner diameter should be 30mm/1.18in larger than the unit's external air vent size (refer to length & width/diameter in diagram), and must not be smaller than the dimensions shown.
2. The air volume in duct is around 130-180m3/h or 77–106 CFM for model 9K-18K.
   The air volume in duct is around 375-525 m3/h or 221–309 CFMfor model 24K to 55K.
3. The max. length of duct is 2m/6.56ft.
4. It is recommended not to close the original air outlet after connecting the air duct. If the effect of the air duct is not good, the original air outlet can be closed, but pay attention to whether there is water dripping during operation after sealing.

in case of two duct connection

1. The duct inner diameter should be 30mm/1.18in larger than the unit's external air vent size (refer to length & width/diameter in diagram), and must not be smaller than the dimensions shown.
2. The air volume in duct is around 65-90m3/h or 38–53 CFM for model 9K-18K.
   The air volume in duct is around 180-260 m3/h or 106–153 CFM for model 24K to 55K.
3. The max. length of duct is 1.5m/4.92ft.
4. It is recommended not to close the original air outlet after connecting the air duct. If the effect of the air duct is not good, the original air outlet can be closed, but pay attention to whether there is water dripping during operation after sealing.

Drainage Pipe Connection

CAUTION

Be sure to follow the Installation Manual during drainage pipe installation. The drainage pipe must be insulated to prevent condensation.

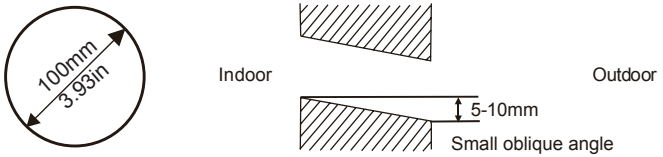
Drill Wall Hole

A hole in the wall should be drilled for refrigerant piping, the drainage pipe, and connecting cables.

1) Determine the location of wall hole base on the position of mounting plate.
2) The hole should be have a 100mm/3.93in diameter at least and a small oblique angle to facilitate drainage.
3) Drill the wall hole with 100mm/3.93in core drill and with small oblique angle lower than the indoor end about 5mm to 10mm./ 0.19 to 0.39 inches

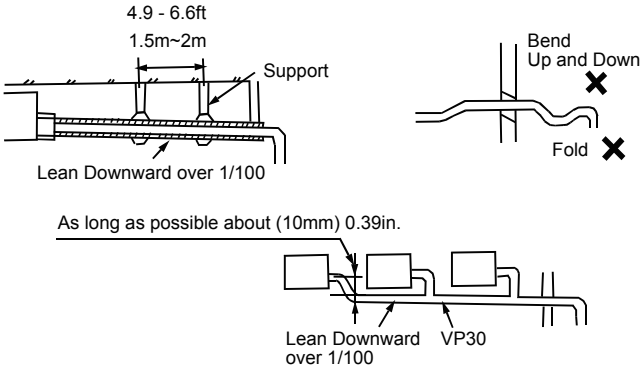
Caution:

When drill the wall hole, make sure to avoid wires, plumbing and other sensitive components.



⚠ CAUTIONS

- The drain pipe of the indoor unit must be heat - insulated; otherwise, it will condense dew, and the same applies to the connections of the indoor unit.
- The downward slope of the drain pipe should be more than 1/100, with no kinks or bends.
- The total length of the drain pipe when pulled horizontally shall not exceed 20m. If the pipe is too long, a support stand must be installed every 1.5 to 2m (4.9 to 6.6ft) to prevent kinking.
- Refer to the following diagrams for the pipe installation.
- Do not apply any pressure to the connection part of the drain pipe.

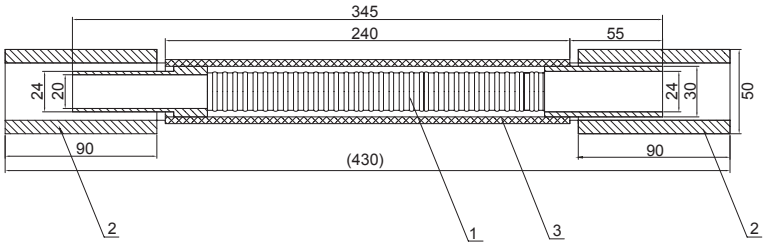


Drainage Pipe Material, Heat-insulating Material

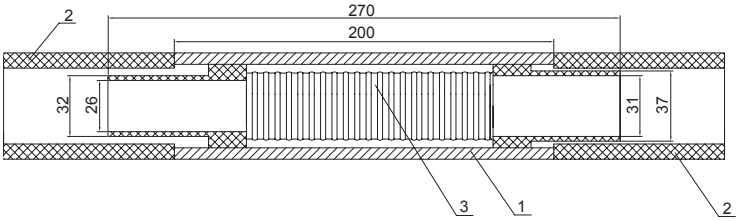
The listed material should be used:

Drainage Pipe Material	Polyvinyl chloride pipe	9K/12K/18K
		24K
Heat Insulation Material	Foamed polyethylene insulation plate	

9K/12K/18K:

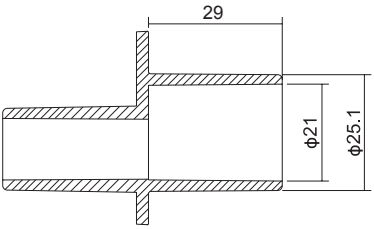


24K:

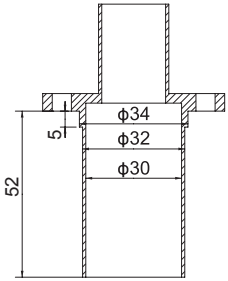


Drain nozzle dimension drawing

9K/12K/18K:



24K:



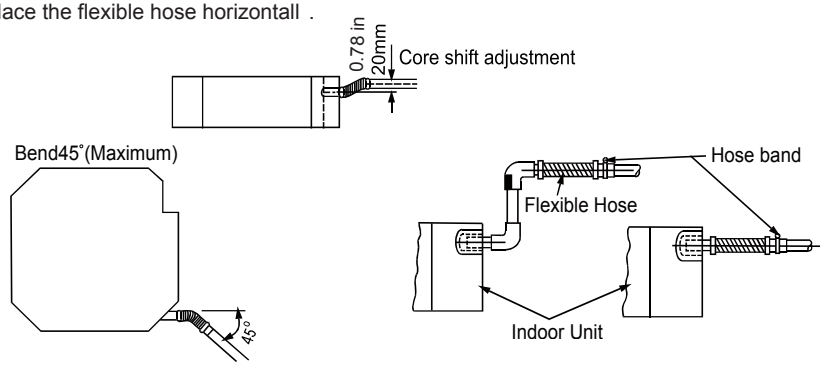
Advice:

The size of the purchased drain pipe should not be larger than the diameter of the pipe of the machine.

Flexible Hose

Measure diameter of the hard pipe using cutting method, and adjust the joining angle.

- Pull out the flexible hose, do not over deform than illustrated belo .
- Be sure to bind it with the attached band.
- Please place the flexible hose horizontall .



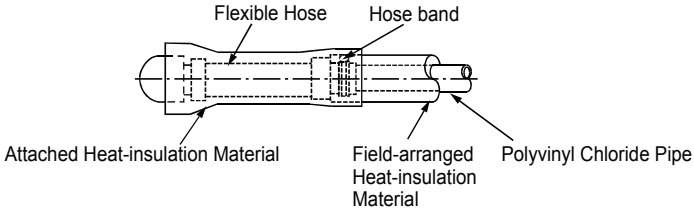
Connection Procedure

Connect the flexible pipe with the polyvinyl chloride pipe.

- The outer diameter of the purchased polyvinyl chloride pipe should be smaller than the inner diameter of the flexible hose. When the polyvinyl chloride pipe is much smaller in size than the flexible hose, glue should be applied on the polyvinyl chloride pipe and tape should be bundled to completely fit the flexible hose
- Use polyvinyl chloride glue at the connection part of the drainage pipe, and make sure there is no water leakage.
- Apply glue to the front 40mm (1.57in) of the polyvinyl chloride pipe, then insert it into the flexible pipe until it can't be pushed in anymore.
- It needs 10 minutes for the glue to dry. Do not impose pressure on the connection during the drying period.
- Wind tape on the outside of the pipes to prevent the two pipes from falling off.

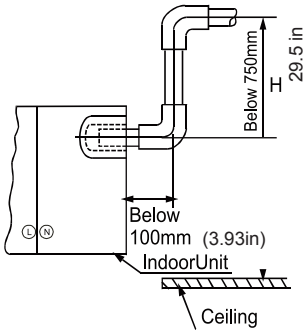
Heat Insulation

Wrap the flexible hose carefully with the attached heat insulation material from the start to the end (to indoor part)



Drainage Upward

To ensure the drainage pipe does not slope downward, lead it upward to the maximum height H first, then direct it downward.



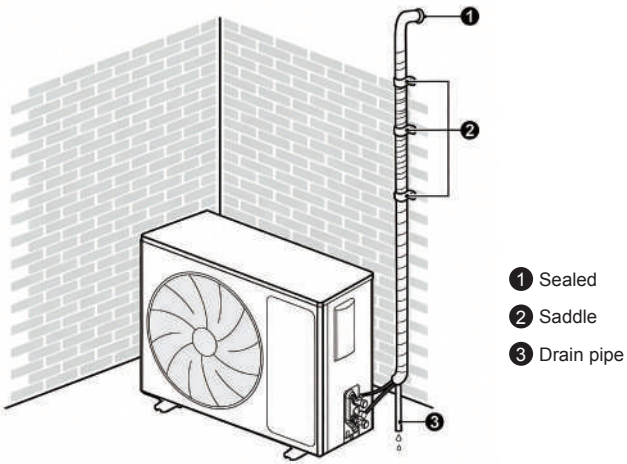
Outdoor Side Drain Pipe

1. If the outdoor unit is underneath the indoor unit, arrange the pipeline according to the following diagram.

1) Drain hose should be placed on the ground and its end should not be immersed into water. The whole pipeline should be supported and fixed onto the wall.

2) Wind the insulating tape from bottom to top.

3) The whole pipeline should be wound with insulating tape and fixed onto the wall with saddles.

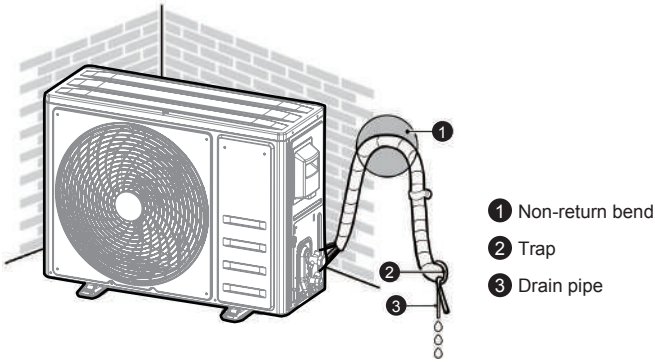


2. If the outdoor unit is above the indoor unit, arrange the pipeline according to the following diagram.

1) Wind the insulating tape from bottom to top.

2) The whole pipeline should be wound together to avoid water returning to the room.

3) Use saddles to fix the whole pipeline onto the wall.



Drainage Test

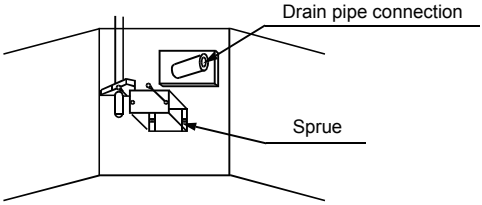
Check if the drain pipe is unobstructed before starting the test.

1) Pour water from the spout to test for blockages.

2) Slowly pour 600cc of water from the spout using a pot or hose, taking care not to contact the drain pump motor.

3) After preparation, disconnect the water level switch. Apply 220 - 240V AC to the terminal board, and the drain pump should start immediately.

4) After the drain pump has run for 2 minutes, reset the water level pin. The drain pump motor will stop after a total of 10 minutes of operation.



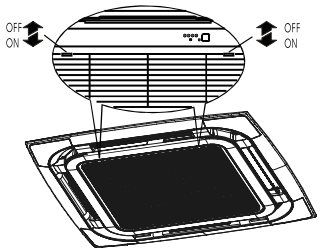
Motor Sound Test

- Conduct the drainage test while checking the running sound of the drain pump motor.
- After the drainage test, reset the water level switch to its original position.

Installation of Panel

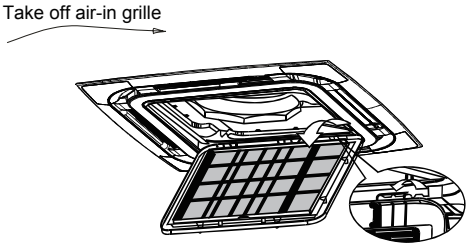
BODY DIMENSION:950X950X33 Unit: mm

Unload air-in grille

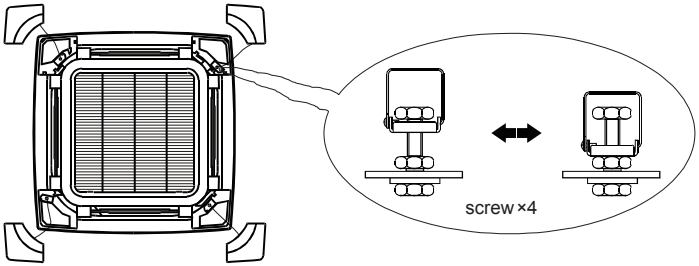


BODY DIMENSION:37.4X37.4X1.29 Unit: in

Unload air-in grille

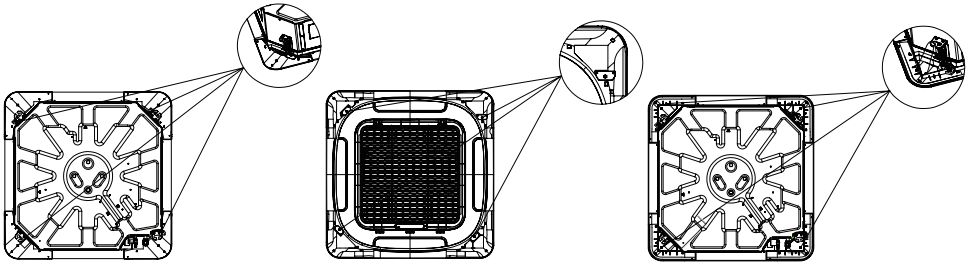


Unload panel installation cap



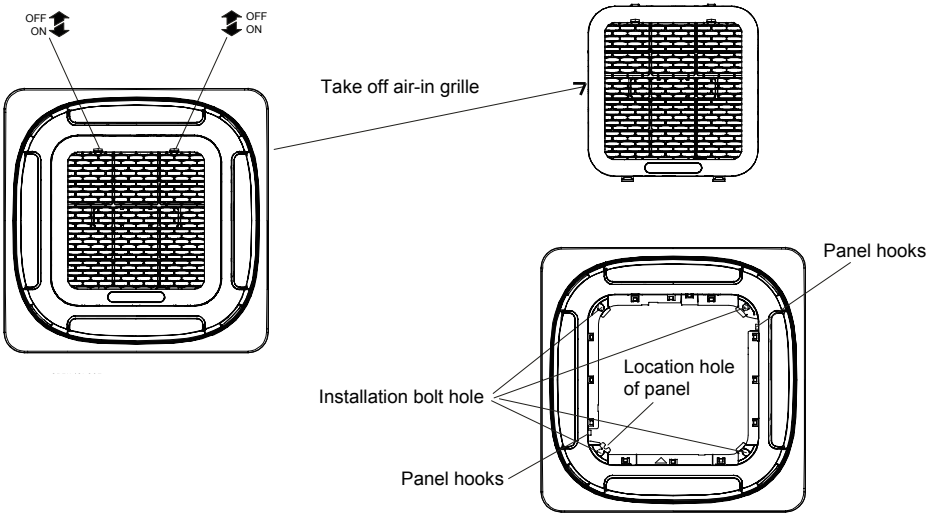
INSTALLATION OF PANEL

1. First, remove the installation caps from the four corners.
2. Insert the four clamps into the hooks on the panel.
3. Then, secure the panel by tightening the four bolts on the clamps.
4. Reattach the installation caps to the four corners of the panel.
5. Finally, hang the panel's hanging rope onto the fixed bracket.



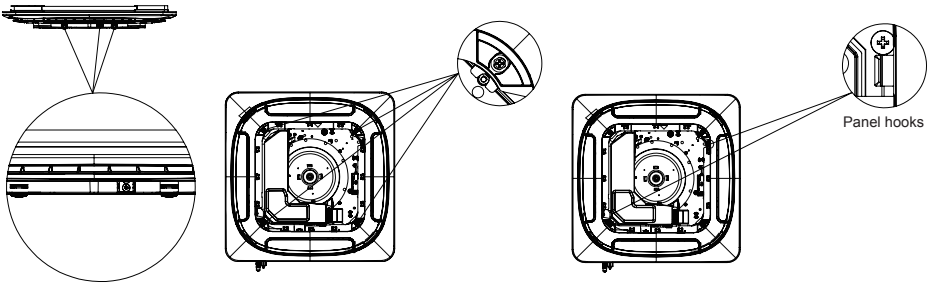
BODY DIMENSION:650X650X30

Unload air-in grille



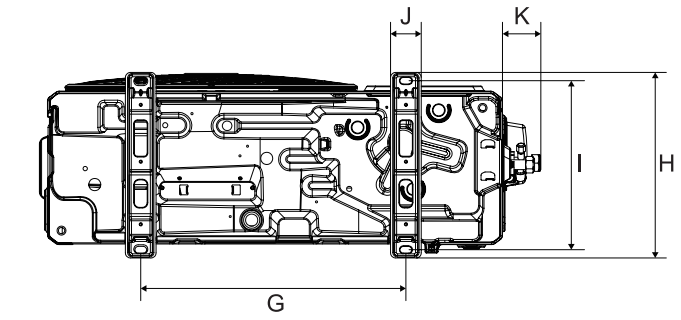
INSTALLATION OF PANEL

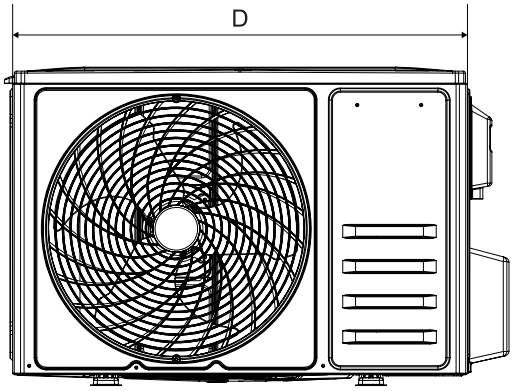
1. First, toggle the two fasteners of the ventilation grille. Then, loosen the screws to remove the ventilation grille, which is suspended from the panel by a hanging cord.
2. Open the four corner covers, hang the four lifting lugs on the four hooks of the internal unit, adjust the lifting lugs using a screwdriver to make the panel fit snugly against the internal unit, and then reinstall the four corner covers in place.
3. Hang the two steel cables of the panel onto the panel hooks.
4. Finally, fasten the ventilation grille back onto the panel by tightening the screws and snapping the grille into place.

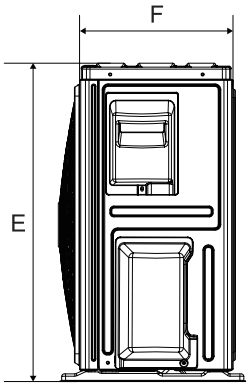


Outdoor Unit Installation

Split type outdoor unit







Unit: mm

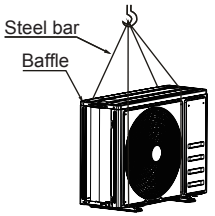
Model	Outdoor unit							
	D	E	F	G	H	I	J	K
9K	721	498	240	415	290	263	48	59
12K	742	551	257	434	305	278	48	59
18K	794	602	292	516	349	314	54	58
24K	843	700	330	586	375	348	59	48

Unit: in

Model	Outdoor unit							
	D	E	F	G	H	I	J	K
9K	28.4	19.6	9.44	16.3	11.4	10.4	1.9	2.3
12K	29.2	21.7	10.1	17.1	12.0	10.9	1.9	2.3
18K	31.2	23.7	11.5	20.3	13.7	12.4	2.1	2.3
24K	33.1	27.5	13.0	23.1	14.8	13.7	2.3	1.9

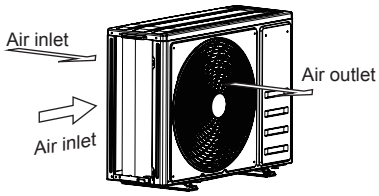
Move outdoor unit

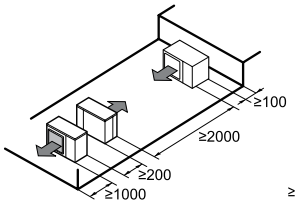
1. Please use 4 pieces of 6mm steel wire to lift the outdoor unit and move it to the desired location.
2. To prevent the outdoor unit from being deformed, please add baffl on the surface of the outdoor unit where the steel wires may come into contact.
3. After moving, please remove the wooden tray from the bottom.

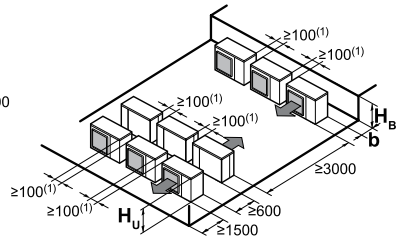


INSTALLATION SPACE

1. After leaving repair space as illustrated below, install the outdoor unit with power supply equipment installed at the side of the outdoor unit. Please refer to ELECTRIC SUPPLY INSTALLATION MANUAL for the installation method.
2. Please make sure necessary space for installation and repair.



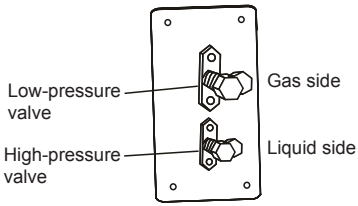




H_B H_U	b (mm)
$H_B \leq ½H_U$	b≥250
$½H_U < H_B \leq H_U$	b≥300
$H_B > H_U$	/

Refrigerant pipes

1. The junction is inside the cover of the right panel. Please remove the cover first.
2. Route the pipe through the side gap of the cover.
3. After connecting via the valve opening, reinstall the cover from the left, right, or back for installation.
4. The diagram on the right is the schematic diagram of the outdoor unit's valve installation panel. The gas side (low-pressure side) is oriented upward, and the liquid side is oriented downward.



INSTALLATION

Pre-installation precautions

- Please confirm that the installation personnel are qualifi d for relevant installation work. If the air conditioner is installed by persons without special skills, normal operations will not be ensured, and even personal and property safety will be affected.

User guideline

- The user's installation site should be provided with a regular power supply conforming to that indicated on the air conditioner's nameplate, and its voltage should be within the range of 90% - 110% of the rated voltage value.
- The power circuit should be equipped with a protective device, such as a leakage protector or an air switch, which should have a capacity greater than 1.5 times the maximum current value of the air conditioner.
- Always use a dedicated circuit and a properly-grounded socket compatible with the air conditioner's attached plug. The attached plug is equipped with a grounding pin, and it must not be modified at will.
- Please use the fuse or circuit breaker prescribed in the Installation Instructions.
- Only a qualified electrician is allowed to carry out wiring tasks strictly according to electrical safety requirements.
- Do ensure proper grounding of the air conditioner; in other words, the main power switch of the air conditioner must be connected to a reliable ground wire.

Precautions

- The air conditioner should be installed securely; otherwise poor installation may lead to abnormal noise and vibration.
- Outdoor unit should be installed at a spot ensuring that its air outlet noises and hot exhaust will not violate your neighbors.

Unit body installation

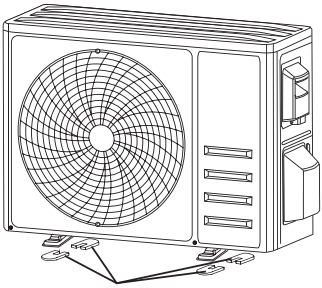
1. Mark the installation position for expansion bolts according to the outdoor unit's installation dimensions.
2. Drill holes, clean the concrete dust, and insert the expansion bolts.
3. If applicable, install 4 rubber pads on the installation holes before placing the outdoor unit (Optional).
4. Doing so will reduce vibrations and noise.
5. Place the outdoor unit onto the bolts and pre-drilled holes.
6. Use a wrench to firmly secure the outdoor unit with the bolts.

Note:

The outdoor unit can be fixed on a wall-mounting bracket.

Follow the wall-mounting bracket's instructions to attach the bracket to the wall. Then, fasten the outdoor unit to the bracket and ensure it is level.

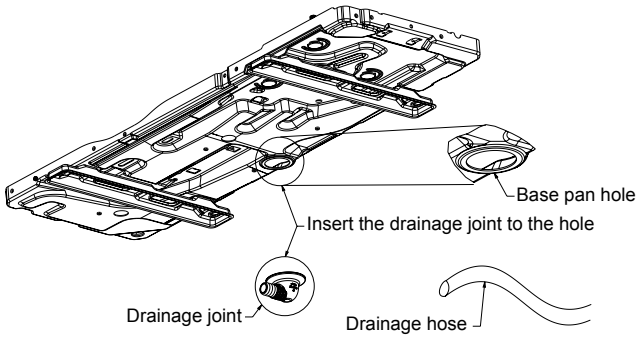
The wall-mounting bracket must support at least 4 times the weight of the outdoor unit.



Install 4 rubber blankets (Optional)

Install Drainage Hose

1. This step only for heat pump models or RCACs.
2. Insert the drainage joint to the hole at the bottom of the outdoor unit.
3. Connect the drainage hose to the joint and make the connection well enough.



NOTE:

Before bolting the outdoor unit in place, you must install the drain joint at the bottom of the unit. For units with a base pan built-in (with multiple holes for proper draining during defrost), the drain joint is not needed to be installed.

In cold climates, ensure the drain hose is as vertical as possible to ensure swift water drainage. If water drains too slowly it can freeze in the hose and flood the unit.

Refrigerant Pipes Installation

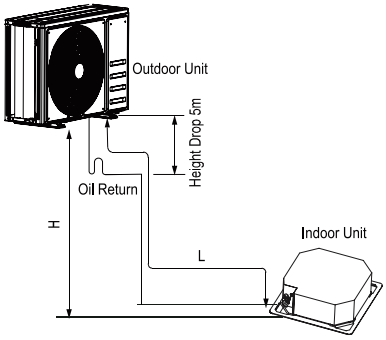
Pipe dimension and ways of installation

Outdoor pipe dimension and ways of install (in sequence of cooling capacity)

Pipe Material		Copper Pipe for Air Conditioner		
Model		9~18K	24K	36K
Size(mm)	Liquid side	Φ6.35 (1/4inch)	Φ6.35 (1/4inch)	Φ6.35 (1/4inch)
	Gas side	Φ9.52(3/8inch)	Φ12.7(1/2inch)	Φ15.88(5/8inch)

Please refer to refrigerant pipe connection for detail

Allowed length and height drop



Remove objects and water

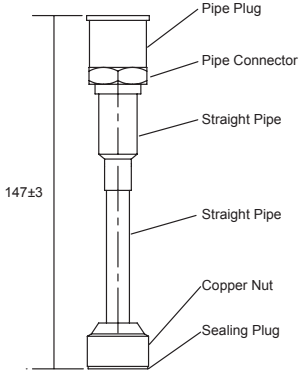
- Use high-pressure nitrogen to clean the pipe instead of using outdoor refrigerant for this cleaning process.
- Before installing the refrigerant pipe, please clean the pipe to prevent foreign objects from being inside.

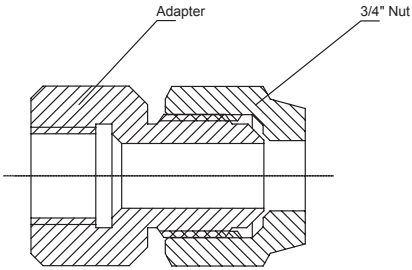
Additional refrigerant charge

- The additional charge is based on the diameter and length of the outlet and inlet liquid pipes.
- This AC has been charged with a standard amount of refrigerant for 7.5m connection pipes. Connection pipes beyond 7.5m should be additionally charged as follows.

Inverter Models Capacity (Btu/h)	9K/12K	18K/24K	36K
Length of pipe with standard charge	7.5m/25ft	7.5m/25ft	7.5m/25ft
Maximum distance between indoor and outdoor unit	15m/49ft	20m/65ft	30m/98ft
Additional refrigerant charge	10g/m	10g/m	10g/m
Max. diff. in level between indoor and outdoor unit	10m/33ft	15m/49ft	20m/65ft
Type of refrigerant	R32		

Note: Some connecting pipe sizes differ from the outdoor unit specifications. An adapter is required for installation.



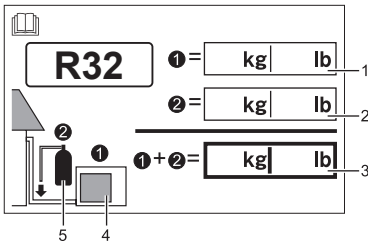


Refrigerant charge label

Please fill in with indelible ink.

- ① The factory refrigerant charge of the product,
- ② The additional refrigerant amount charged in the field an
- ① + ② the total refrigerant charge on the refrigerant charge label supplied with the product.

Affix the refrigerant charge label near the manufactur 's label after filling it out.

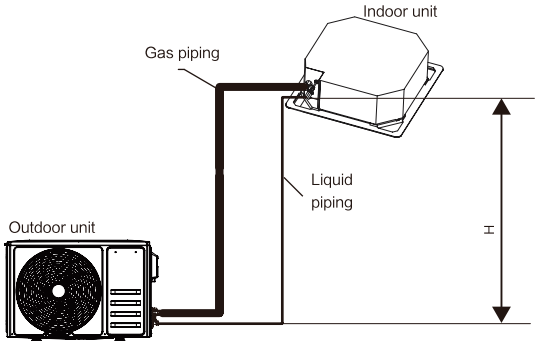


1. Factory refrigerant charge of the product: see unit manufacturer's label.
2. Additional refrigerant amount charged in the field.
3. Total refrigerant charge.
4. Outdoor unit.
5. Refrigerant cylinder and manifold for charging.

Non-return bend and oil return bend

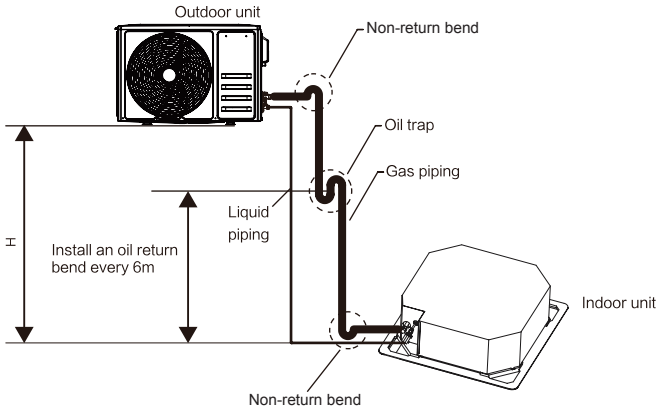
1) When outdoor unit is beneath the indoor unit.

There's no need to add non-return bend at the lowest or highest position of the vertical pipe, as shown below:

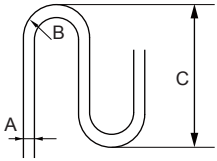


2) When outdoor unit is above the indoor unit.

It's necessary to add oil return bend and non-return bend at the lowest and highest position of the vertical pipe, as shown below:



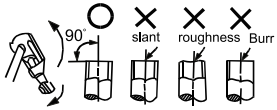
Dimensions for the making of oil return bend are as follows:



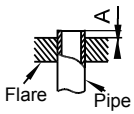
A(inch)	B(mm)	C(mm)
Φ3/8	≥20	≤150
Φ1/2	≥26	≤150
Φ5/8	≥33	≤150

FLARING

1. Cut the refrigerant pipe off with a pipe cutte .



2. Flare the pipe after putting it into the connection nut.



Outside Diameter	A(mm)	
	MAX	MIN
Φ1/4"	8.7	8.3
Φ3/8"	12.4	12.0
Φ1/2"	15.8	15.4
Φ5/8"	19.0	18.6
Φ3/4"	23.3	22.9

Stop valve operation item

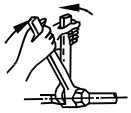
- Open the valve rod until it reaches the stop position. Do not attempt to open it further.
- Fasten the valve bonnet with a spanner or other similar tools.
- Ensure the valve rod bonnet is securely fastened.

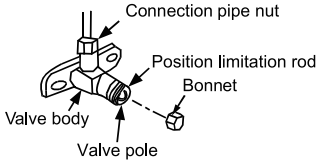
Junction Fixture

Aim at the connection pipe, fix the nut of the connection pipe, and then tighten it with a spanner as shown in the following diagram.

⚠Notice

According to the installation conditions, an excessively large tightening torque will damage the nut.

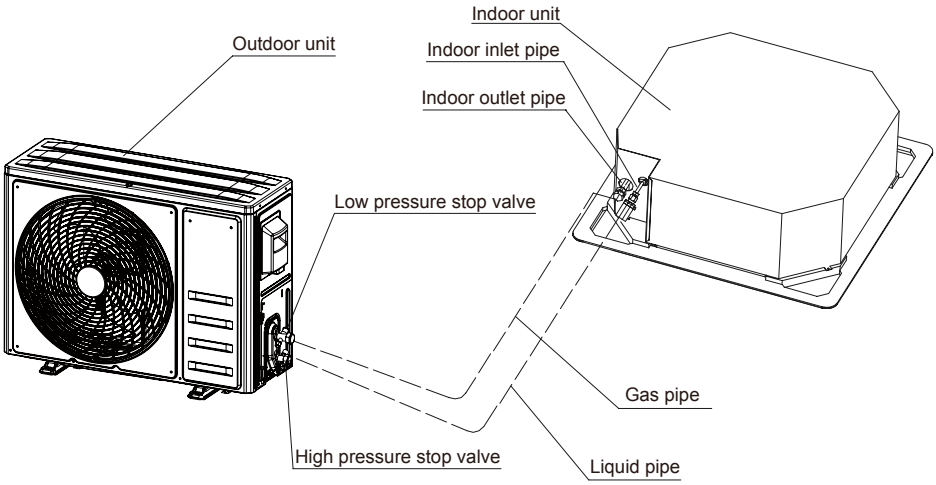




Pipe Size	Newton meter(N x m)	Pound-force foot(lbf-ft)	Kilogram-force meter(kgf-m)
1/4" (φ6. 35)	15-20	11.1-14.8	1.5-2.0
3/8"(φ9. 52)	31-35	22.9-25.8	3.2-3.6
1/2"(φ12)	45-50	33.2-36.9	4.6-5.1
5/8"(φ15. 88)	60-65	44.3-48.0	6.1-6.6

⚠ Note: This table is only for reference, the installation shall meet the requirements of local laws and regulations.

- The following figure only shows the assembly relationship of the indoor unit, outdoor unit and refrigerant pipes.
- Please refer to the following figures to install.



NOTE

- The throttle subassembly has been installed in the outdoor unit.
- Use two spanners to connect the pipe with indoor/outdoor pipes to avoid the copper pipe cracking.
- Please pay attention to the connection orientation when connecting.

Joints shall be tested with detection equipment with a capability of 5g/year of refrigerant or better, with the equipment in standstill and under operation or under a pressure of at least these standstill or operation conditions.

Electric Wiring

CAUTION

- Be sure to install Current Leakage Protection Switch.
- Or electric shock may occur.
- The appliance must be positioned so that the plug is accessible.
- The appliance shall be installed in accordance with national wiring regulations.

1. Power cord is to be selected according to national regulations.
2. Outdoor unit power cord should be selected and connected according to the outdoor unit installation manual.
3. Wiring should be away from high temperature components, or the insulation layer of the wires may melt down.
4. Use wire clamp to fix the wires and terminal block after connection.
5. Control wire should be wrapped together with heat insulated refrigerant pipes.
6. Connect the indoor unit to power only after the refrigerant has been vacuumed.

7. Don’t connect the power wire to the signal wire connection end.

Panel Wiring

Connect the Swing Motor terminal block according to cassette indoor unit wiring diagram.

Terminal Board Diagram

Please refer to cassette indoor unit wiring for the wiring.

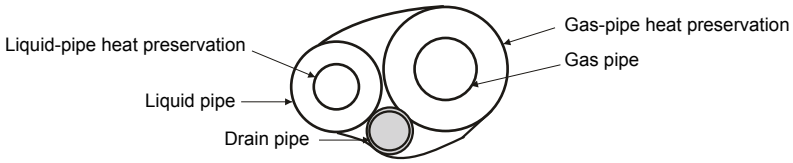
1. Binding treatment

Once the connecting wires have been properly connected, bind the connecting tubing, connecting wire and drain pipe by binding tapes.

After binding treatment, the cross section is shown in the figure below

Notice: Drain pipe must not be flattened during binding treatment.

Drain pipe outlet should be led to a place that can avoid affecting the environment.

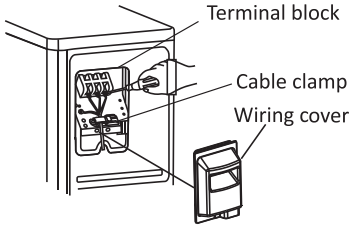


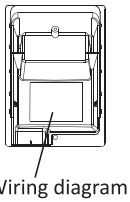
- Open or close incorrectly.
- Objects or water into the AC.
- Fuse or electric leakage protector breaks for several times.

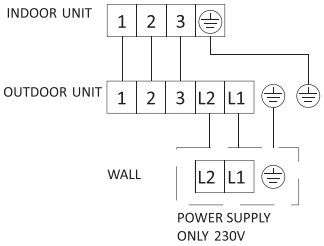
Install Wiring

1. Use a Phillips screwdriver to unscrew wiring cover, grasp and press it down gently to take it down.
2. Unscrew the cable clamp and take it down.
3. According to the wiring diagram pasted inside the wiring cover, connect the connecting wires to the corresponding terminals, and ensure all connections are firmly and securel .
4. Reinstall the cable clamp and wiring cover.

Note: When connecting the wires of indoor and outdoor units, the power should be cut off.







Dedicated Distribution Device and Wire for Air Conditioner

Wiring material ampacities	AWG
4	22
7	20
10	18
13	16
18	14
25	12
30	10
40	8
55	6
70	4

⚠ Note: This table is only for reference, the installation shall meet the requirements of local laws and regulations. The suitable temperature for selecting wire gauge is 25℃±5℃ (77°F±41°F).

Air Purging

Use a vacuum pump to vacuum from the gas-side refrigerant charging port of the outdoor unit.

If air and moisture remain inside the refrigeration system, they may have the following adverse effects

- A rise in pressure inside the refrigeration system;
- A decrease in cooling effect
- Moisture freezing and blocking the refrigeration system;
- Rusting of certain system components.
- Don't use the outdoor unit's refrigerant to perform vacuuming. (A certain volume of refrigerant was added to the outdoor unit at the factory.)

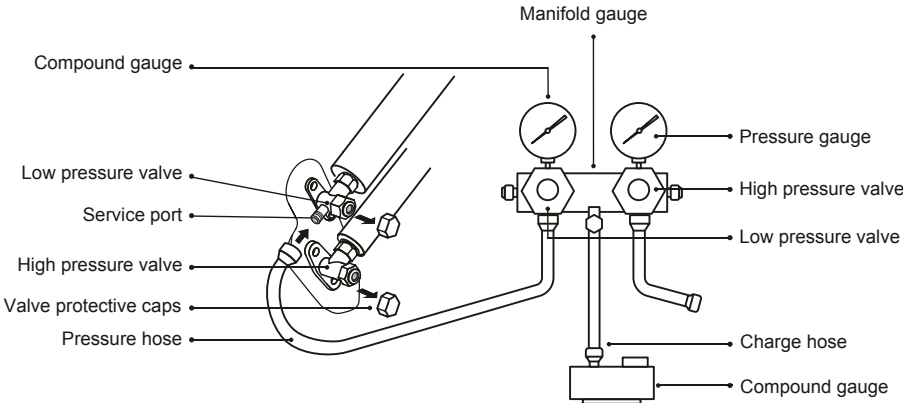
- When a vacuum pump is used, each low-pressure valve must be operated as follows.

Please refer to the operation manual for the usage of the manifold valve.

1. Use a spanner to take down the protective caps from the service port, low pressure valve and high pressure valve of the outdoor unit.
2. Connect the pressure hose of manifold gauge to the service port on the outdoor unit low pressure valve.
3. Connect the charge hose from the manifold gauge to the vacuum pump.
4. Open the low pressure valve of the manifold gauge and close the high pressure valve.
5. Turn on the vacuum pump to vacuum the system.
6. The vacuum time should not be less than 15 minutes, or make sure the compound gauge indicates -0.1 MPa(-76 cmHg).
7. Close the low pressure valve of the manifold gauge and turn off the vacuum.
8. Wait for 5 minutes, then check that there has been no change in system pressure.

9. Open the low pressure valve counterclockwise for 1/4 turn with hexagonal wrench to let a little refrigerant fill in the system, and close the low pressure valve after 5 seconds and quickly remove the pressure hose.
10. Check all indoor and outdoor joints for leakage with soapy water or leak detector.
11. Fully open the low pressure valve and high pressure valve of the outdoor unit with hexagonal wrench.
12. Reinstall the protective caps of the service port, low pressure valve and high pressure valve of the outdoor unit.
13. Reinstall the valve cover.

- The following figure only shows the assembly relationship of the indoor unit, outdoor unit, and refrigerant pipes.
- Please refer to the following figures to install.



Test Run

Before testing

1. Check if piping, drainage and external wiring have been finished correctl .
2. Check if the power supply complies with requirements; if there is refrigerant leakage; if the all wires and cables are correctly connected and well fixed.

Function test

1. After checking, energize your appliance and press the buttons on the control panel to see if the buttons function;
2. If LCD screen displays normally.

Notes

1. Please read this operating and installation instructions carefully.
2. Do not let air in or refrigerant out during installing or reinstalling the appliance.
3. Test run the air conditioner after finishing installation and keep the record.
4. Type of fuse for controller of indoor unit is 50CT/524, rated specification is T5A, 250VAC. Fuse for the whole unit is not supplied by the manufacturer, so the installer must employ a suitable fuse or other over-current protective device for the power supply circuit according to the maximum power input as required.
5. The air conditioner operates safely when ambient static pressure is 0.8~1. 05 standard atmosphere pressure.

Checks Before Operation

⚠ CAUTIONS

1. Check that the wiring is not broken off or disconnected.
2. Check that the air filter is installed. (Some air-conditioners have no air filters
3. Check that the outdoor unit air outlet or inlet is not blocked. Disconnect the power supply before cleaning the air conditioner.
4. Check the access control and dry contact interfaces on the electrical control board—they cannot be connected simultaneously. Only one should be connected at a time.

Clean the air filter

- The air filter can prevent the dust or other particulate from going inside. In case of blockage of the filte , the working efficienc of the air conditioner may greatly decrease. Therefore, the filter must be cleaned once two weeks during long time usage.
- If the air conditioner is positioned in a dust place, the cleaning frequency of the air filter must be increased.
- If the accumulated dust is too heavy to be cleaned, please replace the filter with a new one (replaceable air filter is an optional fitting)

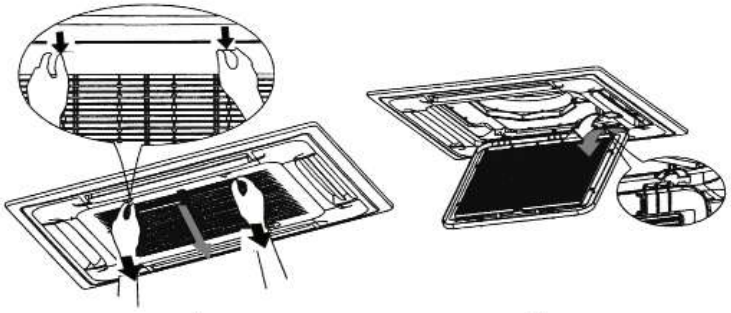
Cassette Type

1. Open the air grille

Push the grille switches towards the middle simultaneously as indicated in sketch A. Then pull down the air-in grille.

Caution:

The control box cables, which are originally connected with the main body electrical terminators must be pulled off before doing as indicated belo .



2. Take out the air-in grille (together with the air filter shown in Sketch B) Pull the air-in grille down at 45 ° and lift it up to take out the grille.
3. Dismantle the air filte .
4. Clean the air filter (Vacuum cleaner or pure water may be used to clean the air filte . If the dust accumulation is too heavy, please use soft brush and mild detergent to clean it and dry out in cool place).

Adjusting Air Flow Direction

While the unit is in operation, you can adjust the air flow louver to change the flow direction and equalize the room temperature evenly.

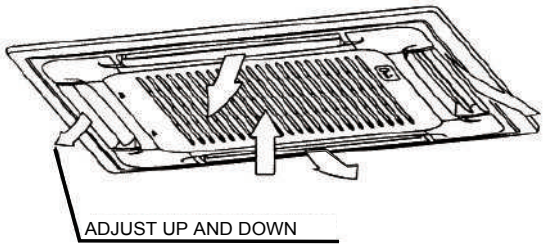
Thus you can enjoy it more comfortably.

1. Set the desired air flow direction.

Push the SWING button to adjust the louver to the desired position and push this button again to maintain the louver at this position.

2. Adjust the air flow direction automaticall .

Push the SWING button, the louver will swing automatically.



While this function is set, the swing fan of indoor unit runs; otherwise, the swing fan doesn't run.

When the air conditioner isn't in operation (including when TIMER ON is set), the SWING button will be disabled.

Maintenance

⚠ WARNING

Disconnect the power supply before cleaning the air conditioner.

Cleaning the indoor unit and remote controller.

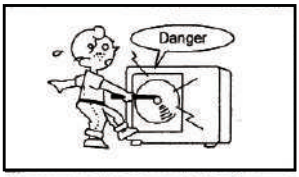
⚠ CAUTIONS

1. Use a dry cloth to wipe the indoor unit and remote controller.
2. A cloth dampened with cold water may be used on the indoor unit if it is very dirty.
3. Never use a damp cloth on the remote controller.
4. Do not use a chemically-treated duster for wiping or leave such material on the unit for long, because it may damage or fade the surface of the unit.
5. Do not use benzine, thinner, polishing powder, or similar solvents for cleaning. These may cause the plastic surface to crack or deform.

If you do not plan to use the unit for at least 1 month.

1. Operate the fan for about half a day to dry the inside of the unit.
2. Stop the air conditioner and disconnect power.
3. Remove the batteries from the remote controller.

Important Safety Information

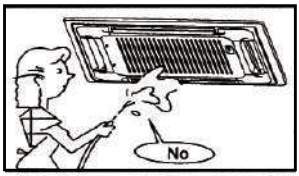


⚠ CAUTION

Do not attempt to install this unit by yourself. This unit requires installation by qualified persons.

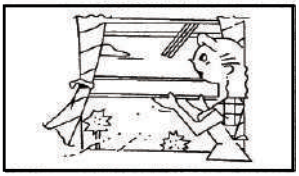
⚠ DANGER

Do not attempt to service the unit yourself. This unit has no user serviceable components. Opening or removing the cover will expose you to dangerous voltage. Turning off the power supply will not prevent potential electric shock.



⚠ DANGER

Never put hands or objects into the air outlet of indoor or outdoor units. These units are installed with a fan running at high speed. To touch the moving fan will cause serious injury.



⚠ DANGER

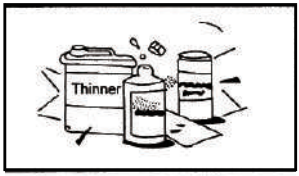
To avoid the risk of serious electrical shock, Never sprinkle or spill water or liquids on unit.

⚠ WARNING

Ventilate the room regularly while the air conditioner is in use, especially if there is also a gas appliance in use in this room, Failure to follow these directions may result in a loss of oxygen in the room.

⚠ WARNING

To prevent electric shock, be sure to turn off the power before cleaning or maintenance.

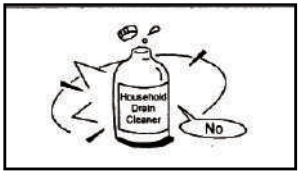


⚠ WARNING

Do not use liquid cleaners or aerosol cleaners. use a soft and dry cloth for cleaning the unit. To avoid electric shock, never attempt to clean the units by sprinkling water.

⚠ CAUTION

Do not use caustic household drain cleaners in the unit. Drain cleaners can quickly destroy the unit components (drain pan and heat exchanger coil etc).



⚠ NOTE

For proper performance, operate the unit in temperature and humidity ranges indicated in this owner's manual. If the unit is operated beyond these conditions, it may cause malfunctions of the unit or dew dripping from the unit.

Troubleshooting

Error Code	Error Content	Error History Times	Error Definition and Protection
E0	Indoor and outdoor communication failure	1	Hardware Error
E1	Indoor room temperature sensor failure	2	Hardware Error
E2	Indoor pipe temperature sensor failure	3	Hardware Error
E3	Outdoor fancoil temperature sensor failure	4	Hardware Error
E4	Abnormal system malfunction (lack of refrigerant)	5	Hardware Error
E5	Model configuration erro	6	Hardware Error
E6	Indoor PG/DC fan motor failure	7	Hardware Error
E7	Outdoor ambient temperature sensor failure	8	Hardware Error
E8	Outdoor exhaust temperature sensor failure	9	Hardware Error
E9	Outdoor IPM module failure/compressor drive failure	10	Hardware Error
EA	Outdoor current sensor failure	11	Hardware Error
Eb	The Main PCB and Display board communication abnormal	12	Hardware Error
EC	Outdoor modules Communication failure	13	Hardware Error
EE	Outdoor EEPROM fault	14	Hardware Error
EF	Outdoor DC fan motor failure	15	Hardware Error
EH	ODU Suction pipe temperature sensor failure	16	Hardware Error
EP	Outdoor compressor casing top failure	17	Hardware Error
EU	Outdoor voltage sensor failure	18	Hardware Error
Ej	Outdoor central coil temperature sensor failure	30	Hardware Error
En	Outdoor air pipe temperature sensor failure	31	Hardware Error
Ey	Outdoor liquid pipe temperature sensor failure	32	Hardware Error
P0	IPM module protection	19	Others Error
P1	Overvoltage and undervoltage protection	20	Others Error

Error Code	Error Content	Error History Times	Error Definition and Protection
P2	Overcurrent protection	21	Others Error
P3	Other protections	22	Others Error
P4	Protection against excessive outdoor exhaust temperature	23	Others Error
P5	Subcooling protection on Cooling mode	24	Others Error
P6	Overheating protection on Cooling mode	25	Others Error
P7	Overheating protection on Heating mode	26	Others Error
P8	Protection against high or low outdoor temperature	27	Remote control display adjustment
P9	Compressor drive protection (abnormal load)	28	Others Error
PA	Communication failure/mode conflic	29	Others Error
F0	Infrared human sensing sensor failure	33	Remote control display adjustment
F1	Battery module failure	34	Remote control display adjustment
F2	Exhaust temperature sensor failure protection	35	Others Error
F3	Failure protection of outer tube temperature sensor	36	Others Error
F4	Abnormal protection of refrigerant circulation	37	Others Error
F5	PFC protection	38	Others Error
F6	Compressor missing/reverse phase protection	39	Others Error
F7	Module temperature protection	40	Others Error
F8	Abnormal commutation of four-way valve	41	Others Error
F9	Module temperature sensor circuit malfunction	42	Hardware Error
FA	Compressor phase current detection fault	43	Hardware Error
Fb	Cooling and heating overload protection limit frequency reduction	44	Remote control display adjustment
FC	Limiting/Reducing frequency for High power consumption protection	45	Remote control display adjustment
FE	Module current (compressor phase current) protection limit/frequency reduction	46	Remote control display adjustment
FF	Module temperature protection limit/ frequency reduction	47	Remote control display adjustment

Error Code	Error Content	Error History Times	Error Definition and Protection
FH	Drive protection limit/frequency reduction	48	Remote control display adjustment
FP	Anti condensation protection limit/ frequency reduction	49	Remote control display adjustment
FU	Anti freezing protection limit/frequency reduction	50	Remote control display adjustment
Fj	Exhaust protection limit/frequency reduction	51	Remote control display adjustment
Fn	External AC current protection limit/ frequency reduction	52	Remote control display adjustment
Fy	Lack of gas protection	53	Others Error
H1	High pressure switch malfunction	54	Hardware Error
H2	Low pressure switch malfunction	55	Hardware Error
bf	TVOC sensor failure	56	Remote control display adjustment
bc	PM2.5 sensor failure	57	Remote control display adjustment
bj	Humidity sensor failure	58	Remote control display adjustment
bE	CO2 sensor malfunction	59	Hardware Error
bd	Fresh air module failure	60	Hardware Error
d4	Water full protection	61	Others Error
d5	Access control protection	62	Hardware Error
Fd	Refrigerant sensor fault	65	Hardware failure
Hd	Refrigerant leakage protection	66	Hardware failure

Disposal Guideline

1) Minimum installation height, minimum room area (operating or storage) refer to installation manual.

1) La taille minimale d'installation, la surface minimale de pièce (opération ou stockage) se réfèrent au manuel d'installation.

2) Risk Of Fire-Auxiliary devices which may be ignition sources shall not be installed in the ductwork, other than auxiliary devices listed for use with the specific appliance. See instructions.

2) Risque d'incendie - l'équipement auxiliaire qui peut être une source d'inflammation ne doit pasêtre installé dans le système de tuyauterie, a l'exception de l'équipement auxiliaire utilisé avec unéquipement spécifique. oir les instructions.

3) Mount with the lowest moving parts at least 2.5m (8.2ft) above floor or grade level.

3) Installé avec la partie mobile la plus basse au moins 2.5m(8.2ft) au-dessus du sol ou du plan du sol.

4) Risk of electric shock. Can cause injury or death. Disconnect all remote electric power supplies before servicing.

4)Risque de choc électrique. Causer des blessures ou la mort. Avant la réparation, débranchez toute alimentation à distance.

5) Risk of Fire. Flammable Refrigerant Used. To Be Repaired Only By Trained Service Personnel. Do Not Puncture Refrigerant Tubing.

5) Risque d'incendie. Utilisation de réfrigérants inflammables. L'entretien ne peut être effectué que par un personnel de maintenance formé. Ne pas percer la ligne de réfrigérant.

6) Risk Of Fire. Dispose Of Properly In Accordance With Federal Or Local Regulations. Flammable Refrigerant Used.

6) Risque d'incendie. Disposer correctement conformément à la réglementation fédérale ou locale. Utilisation de réfrigérants inflammables.

7) Risk Of Fire. Flammable Refrigerant Used. Consult Repair Manual/Owner's Guide Before Attempting To Service This Product. All Safety Precautions Must Be Followed.

7) Risque d'incendie. Utilisation de réfrigérants inflammables. Veuillez consulter le manuel de réparation/guide de l'utilisateur avant d'essayer de réparer ce produit. Toutes les précautions de sécurité doivent être respectées.

8) Risk Of Fire. Due to Flammable Refrigerant Used. Follow Handling Instructions Carefully in Compliance with National Regulations.

8) Risque d'incendie causé par l'utilisation de réfrigérants inflammables. Suivez attentivement les instructions de manutention conformément aux réglementations nationales.

9) Warning: before accessing the terminals, all power supply circuits must be disconnected.

9) Avertissement: Avant d'accéder aux bornes de raccordement, tous les circuits d'alimentation doivent être déconnectés.

WARRANTY

Limited Warranty provided by Comfortside, LLC. (hereby referred to as Comfortside) applies only to registered products installed by a licensed HVAC technician and covers specified products and parts, subject to the following details:

Product Registration: Products must be registered for Limited Warranty within 60 days of installation by licensed HVAC technician. Products can be registered at **armbridge.us.** Alternatively, the warranty registration card from the product User's Manual can be filled out and sent in as instructed.

Warranty Coverage: The warranty covers the parts of the products which may be defective due to the quality of the materials or workmanship, under normal use and proper maintenance. Warranty is provided only to the first original owner of the Product, where it is originally installed, and is not transferable to the subsequent owners.

Warranty Exclusions: Comfortside is not responsible for any warranty claim:

1. For equipment installed outside of the Continental US and Canada.
2. For equipment not installed according to manufacturer's guidelines.
3. For equipment which has been removed from the original site of installation and reinstalled at another location.
4. If registration information cannot be verified (i.e., invalid license number or wrong information provided).
5. Regarding damages or repairs arising as a result of a faulty installation, inappropriate application, or improper use.
6. Regarding damages or repairs arising from any external perils, out of Comfortside's control, acts of nature such as fires, storms, accidents, floods, broken or frozen water pipes, electrical surges, input power with under or overvoltage, lightning, or existence of corrosive substances nearby.
7. Regarding damages or repairs arising from use of non-compatible parts, third-party components, alterations, modifications, or improper applications.
8. Regarding improper service or poor maintenance of the equipment, such as cleaning of all air filters, heat exchangers, fans, and blowers, in addition to any necessary lubrication of internal components and maintenance of external accessories.
9. Regarding changes that can be considered cosmetic, including but not limited to small fin damages, scratches on the unit cover, etc.
10. Regarding resetting of power or the circuit breakers and replacement of other types of fuses, both internal and external.
11. Regarding any damage caused using dirty, recycled, or wrong type of refrigerants and lubricants.
12. Regarding damage due to moisture, air, dust, sand, dirt, etc., that have been allowed into the system.
13. Regarding damage caused by continuing use of the product after a malfunction has been noticed or indicated at the display module, through an error code.
14. Regarding damages or performance issues due to improper matching, product selection, under-sizing, over-sizing, improper installation, or misuse.
15. Regarding loss or replacement of refrigerant, lubricant, or oil.
16. Regarding labor or any costs associated with labor.

Warranty Begin Date: Warranty begins on the date of registration.

Warranty End Date: Products that have not been registered as instructed above are not covered under Warranty. The length of your Warranty depends on the specific model unit you have purchased. Information on Warranty length is available online, by visiting **armbridge.us** As further explained below in detail, coverage is only for the original registered user who owns and resides in the dwelling or operates business in the property in which the product is installed.

WARRANTY

Remaining Warranty: Any part, component or product that is replaced under the terms of the Warranty, will be covered under the same Warranty for the duration in which the original Warranty for the product is applicable.

Warranty Procedure: Comfortside will furnish a new or refurbished part, without any charge for the part itself, for the replacement of any part that has been determined to have failed, by Comfortside at its sole discretion, due to defects in its materials or workmanship under standard use and proper maintenance. The payment of the shipping costs for the part will be the sole responsibility of the owner of the product. Comfortside reserves the right to ask the owner of the product to return the failed part before or after a replacement part is sent out. The product owner or technician should contact Comfortside Technical Support at (800) 977-0722, Monday to Friday from 9AM to 8PM Eastern Time, while the technician is on site, servicing the unit. The product may or may not display error codes. The technician should be on site while troubleshooting with the Comfortside Technical Support Agent so he or she can address symptoms observed, specific electrical and mechanical measurements, and other detailed information that may be required for proper diagnosis.

While technicians may refer to Comfortside's website or YouTube channel for helpful information, such as manuals and videos based on certain error codes, the technician will need to troubleshoot with the Technical Support Agent for Warranty purposes. Comfortside is not able to remotely diagnose a product and or offer remedies, without proper diagnosis results.

When contacting Technical Support, a licensed technician must be onsite, and the following information needs to be provided:

- The Serial Number of the unit.
- The product purchase invoice and an installation invoice from licensed HVAC technician.
- Case number (if applicable) provided during previous Technical Support call(s).
- Comfortside may ask for photos and/or other diagnostic information it deems necessary prior to processing the Warranty claim.

It should be noted that Comfortside Technical Support Agents troubleshoot on a case-by-case basis, following best practices and procedures to diagnose problems and solutions. Through this process, it is most efficient to diagnose one issue or error code at a time. It is possible that the first suggested solution may or may not solve one problem of multiple failures, in which case the Technician will continue through troubleshooting for remaining issues/error codes.

Labor cost, materials, and other costs: Any labor costs and/or the costs for the supplies or materials used or purchased in the field for the replacement of the defective part, remain the responsibility of the owner. No other costs involved in diagnosis, lodging, transportation, servicing, repair, replacement, installation, removal, shipping, etc., are to be covered under the Warranty.

Refrigerant: Any costs related to charging, recharging, adjustment, or removal of refrigerant, and the cost of the refrigerant itself, are not covered under any circumstances. All products go through vigorous quality

Comfortside does not cover any claims related to the lack of refrigerant in new products, discovered upon arrival, or during installation, as well as subsequent refrigerant loss occurring at any time afterward.

WARRANTY

This Warranty is not transferable. No person or entity is authorized to change the terms and conditions outlined in this Warranty agreement, in any respect, nor to create any additional obligations or liabilities for any party involved.

This warranty agreement supersedes all prior warranty agreements between the parties and constitutes the complete, final, and exclusive understanding of the parties with respect to the subject matter. All prior negotiations, representations, or promises, whether oral or written, of either party shall be deemed to have been merged herein.

If any part of this Warranty Agreement shall be invalidated for any reason, such part shall be deleted, and the remainder shall be unaffected and shall continue in full force and effect. This Warranty provides you certain legal rights and you may also have other rights, which vary from State to State. Therefore, some of these limitations or exclusions may not apply to you.

States with Express and Implied Warranties: Products in states with Express and Implied Warranties do not need to be registered for Comfortside Warranty. However, for Warranty support, installation invoice should be provided.

Pursuing legal remedies:
ARBITRATION CLAUSE. IMPORTANT. PLEASE REVIEW THIS ARBITRATION CLAUSE, AS IT AFFECTS YOUR LEGAL RIGHTS.

1. This arbitration clause affects your rights against Comfortside and any of its employees, agents, affiliates, successors, or assignees, all of whom together are referred to below as “we” or “us” for the simplicity of reference.
2. **ARBITRATION REQUIREMENT: EXCEPT AS STATED BELOW, ANY DISBUTE BETWEEN YOU AND ANY OF US SHALL BE DECIDED BY NEUTRAL AND BINDING ARBITRATION, RATHER THAN ANY COURT OR BY TRIAL BY JURY. ARBITRATION WILL BE HANDLED ONLY ON AN INDIVIDUAL BASIS AND ALL PARTIES EXPRESSLY WAIVE; ANY RIGHTS TO PARTICIPATE AS A CLASS REPRESENTATIVE OR CLASS MEMBER, ANY RIGHTS TO CLASS ARBIRATION OR ANY CONSOLIDATION OF INDIVIDUAL ARBITRATIONS. THE ARBITRATOR WILL BE A MEMBER OF THE AMERICAN ARBITRATION ORGANIZATION.** The meaning of “Dispute” has the broadest possible meaning allowable by law, including any controversy, claim or other dispute, relating to or arising from the purchase of the product, any of the warranties upon the product, or the condition of the product, as well as the determination of the application or the scope of the Arbitration Clause itself. Rights to appeal and discovery are also limited in arbitration based on the rules of the arbitration organizations.
3. **Governing Law:** Effect and procedures of arbitration will be governed by the Federal Arbitration Act (9 U.S.C. § et seq.) rather than any related state law. In case of any substantive warranty, your claims and rights under such substantive warranty will be governed by the applicable law of the state in which Product was purchased.
4. **Location of the Arbitration:** Unless otherwise provided under the applicable law, arbitration hearing will be conducted in the judicial district in Miami-Dade County, Florida.
5. **Costs of the Arbitration:** Unless otherwise provided under the applicable law, each party will be responsible for its own cost, payable to the arbitration organization, and the costs of their attorneys, experts or other fees.
6. **Survival and Enforceability of the Arbitration Clause:** This arbitration clause will survive the expiration or termination of this warranty agreement, indefinitely.

DE-COMMISSIONING,DISMANTLING&DISPOSAL

This product contains refrigerant under pressure, rotating parts, and electrical connections which may be a danger & cause injur. All work must only be carried out by competent persons using suitable protective clothing and safety precautions.

Read the Manual

Risk of Electric Shock

RoHS

Unit is Remotely controlled
& may start without warning

1. Isolate all sources of electrical supply to the unit including any control system supplies switched by the unit.
   Ensure that all points of electrical and gas isolation are secured in the OFF position.
   The supply cables and gas pipe work may then be disconnected and removed.
   For points of connection refer to unit installation instructions.
2. Remove all refrigerant from each system of the unit into a suitable container using a refrigerant reclaim or recovery unit.
   This refrigerant may then be reused, if appropriate, or returned to the manufacturer for disposal.
   Under no circumstances should refrigerant be vented to atmosphere Where appropriate, drain the refrigerant oil from each system into a suitable container and dispose of according to local laws and regulations governing disposal of oily wastes.
3. Packaged units can generally be removed in one piece after disconnection as above.
   Any fixing down bolts should be removed and then unit lifted from position using the points provided and equipment of adequate lifting capacity.
   Reference MUST be made to the unit installation instructions for unit weight and correct methods of lifting.
   Note that any residual or spilt refrigerant oil should be mopped up and disposed of as described above.
4. After removal from position the unit parts may be disposed of according to local laws and regulations.
5. Meaning of crossed Out wheeled dustbin: Do not dispose of electrical appliances as unsorted municipal waste, use separate collection facilities.
   Contact your local government for information regarding the collection systems available. If electrical appliances are disposed of in landfills or dumps, hazardous substances can leak into the groundwater and get into the food chain, damaging your health and well being. When replacing old appliances with new ones, the retailer is legally obligated to take back your old appliance for disposals at least free of charge.

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