UNITED APPLIANCES®

Owner's Manual

Original Instructions Air Conditioners

MAXUM PRO SERIES

MODELS

UAUH18-DD6SG1
UAUH24-DD6SG1
UAUH36-DD6SG1
UAUH42-DD6SG1

Thank you for choosing our product. Please read this Owner's Manual carefully before operation and retain it for future reference. If you have lost the Owner's Manual, please contact the local agent or visit www.unitedappliances.com for the electronic version.

NOTE: Actual product may be different from graphics, please refer to actual products

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 odorless, but may cause explosion under certain circumstances.

CONTENTS

Precautions ····· 4
Instruction for Servicing (R32) ····· 7
Name of Parts and Functions ····· 18
Match Table ····· 20
Operating Precautions ····· 21
Installation Precautions ····· 22
Outdoor Unit Installation ····· 25
Outdoor Unit Installation (2/3 Zone System) ····· 31
Outdoor Unit Installation (4/5 Zone System) ····· 32
Split Outdoor Unit Mounting Dimensions ····· 34
Test Run ····· 35
Troubleshooting ····· 37
Disposal Guideline ····· 38
Manufacturer's Limited Warranty ····· 39

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 fixed.
4. Check that air cannot enter the refrigerant system and check for refrigerant leaks before turning 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 to 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 downwards in the heating mode and upwards in the cooling mode.
27. Ensure that the appliance is disconnected from the power supply when it is intended to remain 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. Only specialized technical personnel are 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 efficiency 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 a long time when the air conditioner is operating.
10. Do not direct the airflow onto plants or animals.
11. Long direct exposure to the flow of cold air of the conditioner could have negative effects on plants and animals.
12. Do not put the conditioner in contact with water. The electrical insulation could be damaged and thus cause 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 manufacturer.
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 $4m^2$.
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 are 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 damage 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 a 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 airflow.

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/m^3, R32 LFL is 0.306 kg/m^3.

For the appliances with a charge amount $m_1 < M = m_2$:

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

M_{max}= 2.5 x $(LFL)^{(5/4)}$ x h_0 x $(A)^{1/2}$, not to exceed M_{max}=SF x LFL x h_0 x A (GG. 3DV)

The required minimum floor area A_{min} to install an appliance with refrigerant charge M (kg) shall be in accordance with following: A_{min}= $(M/(2.5 \times (LFL)^{(5/4)} \times h_0))^2$, not less than A_{min}= M/ (SF x LFL x h_0) (GG. 4DV)

Non-ducted supply to a single room (Annex GG.2.2.1DV)

The minimum circulation airflow shall be:

Q_{max}= 30 x m_c / LFL

Non-ducted supply to a single room (Annex GG.8.2.2 & GG.1.3 & GG.1.4)

The minimum opening area for natural ventilation shall be calculated using the following equation:

Opening Area Requirements:

$$Anv_{min} = \frac{m_c - m_{max}}{LFL \times 104} \times \sqrt{\frac{A}{g \times m_{max}} \times \frac{M}{M - 29}}$$

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

Category	LFL (lb/ft^3)	h_0(ft)	Floor area (ft^2)						
			43	75.3	107.6	161.4	215.2	322.9	538.1
R32	0.019	8.2	16.5	28.8	41.2	59.3	36.5	83.9	108.2
		9.2	18.4	32.3	46.1	66.4	76.3	94.0	121.3
		9.8	19.8	34.6	49.4	71.1	82.1	100.6	129.9

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 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

Category	LFL (lb/ft^3)	h_0(ft)	Charge amount (M) (lb) Minimum room area (ft^2)						
			0.58	0.60	1.00	1.07	1.20	1.58	2.00
R32	0.019	8.2	16.4	16.9	28.1	30.1	33.8	44.5	56.3
		9.2	14.5	15.1	25.1	26.9	30.1	39.7	50.3
		9.8	13.6	14.1	23.5	25.1	28.1	37.0	46.9

Caution: Risk of fire

Read operator's manual

Operating instructions

Caution: Risk of fire

Read technical manual

16. 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 extinguisher

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 sufficiently 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.

17. Repairs to sealed components

Sealed electrical components shall be replaced.

18. Repair to intrinsically safe components

Intrinsically safe components must be replaced.

19. 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.

20. 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.

21. 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.

22. 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.

23. 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.

24. 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.

25. 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 order.

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.

26. 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 heater).

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 odor.

4) Attention: Les frigorigènes peuvent être inodores.

27. Statement

1) Please use the flammable gas detector to check before unloading and opening the container.

2) No ignition sources or 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

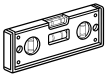
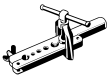
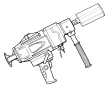
- Refrigerant Leak Detector
- Appropriate Installation Location

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 548°C 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.
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 closed to any heat source or combustible 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 leave the area until the refrigerant leaks completely for 15 minutes. If the product is damaged, it is necessary 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		Screwdrivers (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	

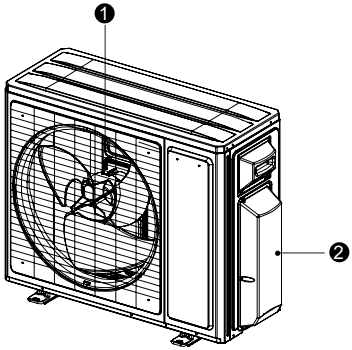
Name of Parts and Functions

⚠ WARNING
• Be sure to cut off the power supply before cleaning the air conditioner; otherwise electric shock might happen. • Wetting of air conditioner may cause the risk of electric shock. • Make sure not to wash your air conditioner in any case. • Volatile liquids such as thinner or gasoline will cause damage to the appearance of air conditioner. (Only use a soft dry cloth or moist cloth to clean the air conditioner cabinet). • This product must not be disposed together with the domestic waste. • This product has to be disposed of at an authorized electronic appliances. • The temperature of refrigerant circuit will be high, please keep the interconnection cable away from the copper tube.

Outdoor Unit

❶ Air outlet grille

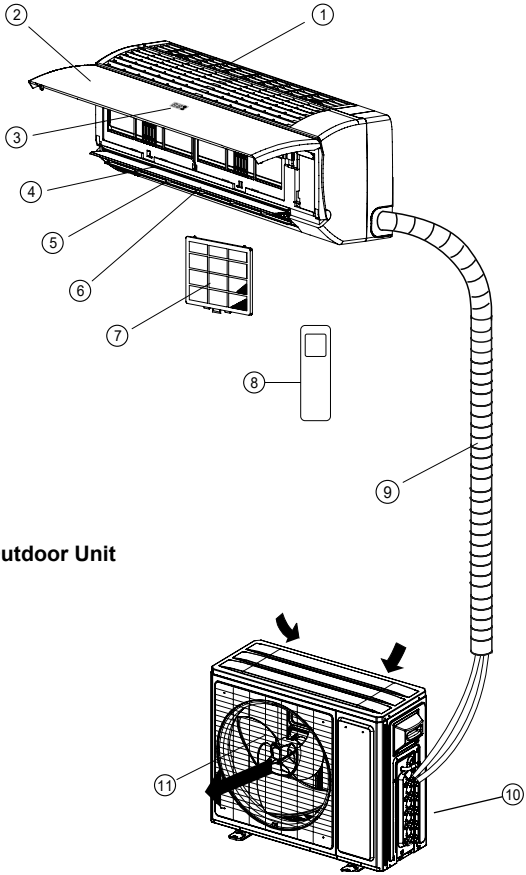
❷ Valve cover



Note:

- The above pictures are only simple schematic diagrams of the equipment; the actual product shall prevail.
- The prototype runs for a total of 8 hours.After shutting down, the fan will rotate 70s backwards to remove and clean the heat exchanger.

Indoor Unit



Outdoor Unit

1. Air Inlet
2. Panel
3. Host Display Section
4. Air Outlet
5. Adjusting Plate for Leftward Wind Direction
6. Adjusting Plate for Up/down Wind Direction
7. Air Filter
8. Remote Controller
9. Refrigerant connection pipes
10. Cut-off valve
11. Air Outlet grille

Note: This above is only a schematic diagram. For specific configurations, please refer to the actual product.

Requirements

- When the air temperature is below -15°C, 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 blocked. If chokeup 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.

Match Table

IDU / ODU	Voltage	2 Zone System indoor	3 Zone System indoor	4 Zone System indoor	5 Zone System indoor
2 Zone System outdoor	230V	09+09 09+12 09+18 12+12	None	None	None
3 Zone System outdoor	230V	09+09 09+12 09+18 12+12 12+18 12+24 18+18	09+09+09 09+09+12 09+09+18 09+12+12 09+12+18 12+12+12	None	None
4 Zone System outdoor	230V	09+09 09+12 09+18 09+24 12+12 12+18 12+24 18+18 18+24 24+24	09+09+09 09+09+12 09+09+18 09+09+24 09+12+12 09+12+18 09+12+24 12+12+12 12+12+18 12+12+24 12+18+18	09+09+09+09 09+09+09+12 09+09+09+18 09+09+12+12 09+09+12+18 09+12+12+12 12+12+12+12	None
5 Zone System outdoor	230V	09+09 09+12 09+18 09+24 12+12 12+18 12+24 18+18 18+24 24+24	09+09+09 09+09+12 09+09+18 09+09+24 09+12+12 09+12+18 09+12+24 09+18+18 09+18+24 09+24+24 12+12+12 12+12+18 12+12+24 12+18+18 12+18+24 12+24+24 18+18+18 18+18+24	09+09+09+09 09+09+09+12 09+09+09+18 09+09+12+12 09+09+12+18 09+12+12+12 09+12+12+18 09+12+12+24 09+12+18+24 12+12+12+12 12+12+12+18 12+12+12+24 12+12+18+18	09+09+09+09+09 09+09+09+09+12 09+09+09+09+18 09+09+09+09+24 09+09+09+12+12 09+09+09+12+18 09+09+09+12+24 09+09+09+18+18 09+09+12+12+12 09+09+12+12+18 09+12+12+12+12 09+12+12+12+18 12+12+12+12+12

NOTE:

1. If total indoor units load exceeds nominal capacity of outdoor unit, the practical output capacity of every indoor unit will be correspondingly attenuated. This situation is very evidently during heating mode.
2. For Cassette series, it should be considered as 18K unit in combination chart because the 9K/12K/18K sizes are the same.

Operating Precautions

Working Temperature Range

Inverter air conditioner:

HEATING	Room temperature 0°C~27°C (63°F~80°F)
	Outdoor temperature • 18K~55K: Energy Star Series: -25°C~24°C (-13°F~75°F)
COOLING / DRY	Room temperature 17°C~32°C (63°F~80°F)
	Outdoor temperature • 18K~55K: Energy Star Series: -15°C~55°C (5°F~131°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 detail 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 stops running and return to heating mode operation automatically when defrosting has finished.

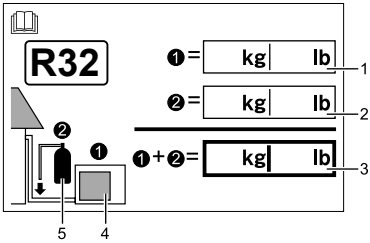
Installation Precautions

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 and
- ① + ② the total refrigerant charge on the refrigerant charge label supplied with the product.

Affix the refrigerant charge label near the manufacturer'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.

Pipe Length and Additional Refrigerant

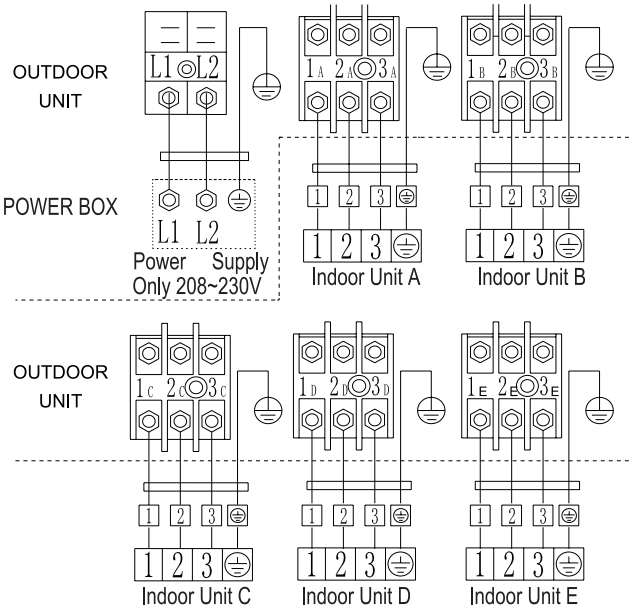
Inverter Models ODU Capacity (Btu/h)	2 Zone System	3 Zone System	4 Zone System	5 Zone System
Max. equivalent length for all indoor units	131ft/40m	197ft/60m	262ft/80m	328ft/100m
Max. length to farthest indoor unit	82ft/25m	98ft/30m	98ft/30m	98ft/30m
Max. height difference between indoor and outdoor unit	49ft/15m	49ft/15m	49ft/15m	49ft/15m
Max. height difference between indoor unit	33ft/10m	33ft/10m	33ft/10m	33ft/10m
Standard refrigerant pipe length (ft/m)	49ft/15m	74ft/22.5m	98ft/30m	123ft/37.5m
Additional refrigerant charge (Based on the IDU liquid line size)	10g/m	10g/m	10g/m	10g/m

Cable Connection Between IDU To ODU

⚠ Note: Plug the connecting cables into the corresponding terminals as shown. For example, Terminal (A) of the outdoor unit must be connected to indoor unit A.

Note:

1. Connect to internal and external communication lines.
2. Connect the Neutral wire.
3. Connect the Live wire.



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°C±5°C.

Power Supply				
Model	Voltage	MCA	Breaker	Recommended power cord specifications
18K	208-230V	14	20	14AWG
27K	208-230V	16	25	14AWG
36K	208-230V	24	35	12AWG
42K	208-230V	27	45	12AWG

This air conditioner does not include a power cord. A licensed electrician should be consulted to select and install the appropriate power cord based on the model and the local voltage requirements.

Outdoor Unit Installation

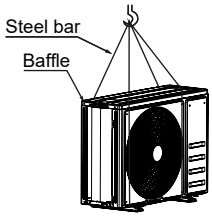
Step1: Select Installation Location

Select a site that allows for the following:

1. Do not install the outdoor unit near sources of heat, steam or flammable gas.
2. Do not install the unit in too windy or dusty places.
3. Do not install the unit where people often pass. Select a place where the air discharge and operating sound will not disturb the neighbors.
4. Avoid installing the unit where it will be exposed to direct sunlight (otherwise use a protection, if necessary, that should not interfere with the air flow).
5. Reserve the spaces as shown in the picture for the air to circulate freely.
6. Install the outdoor unit in a safe and solid place.
7. If the outdoor unit is subject to vibration, place rubber blankets onto the feet of the unit.

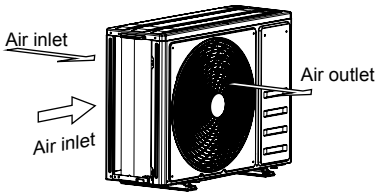
Move outdoor unit (Mainly for high-rise applications and large/heavy models)

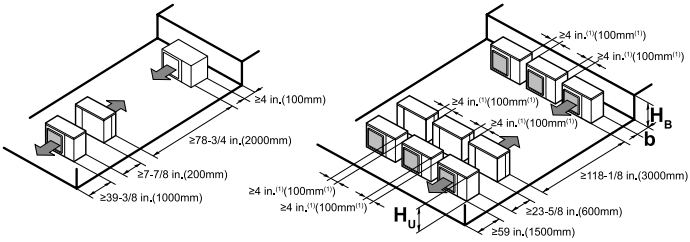
1. Please use 4 pieces of 6mm steel wire to lift the outdoor unit and move it to the desired location.
2. To prevent the outdoor unit from being deformed, please add baffles on the surface of the outdoor unit where the steel wires may come into contact.
3. After moving, please remove the wooden tray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

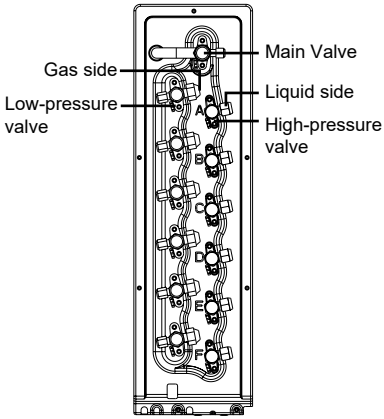




H_B H_U	b
$H_B \leq ½H_U$	b≥9-7/8 in. (b≥250mm)
$½H_U < H_B \leq H_U$	b≥11-3/4 in. (b≥300mm)
$H_B > H_U$	/

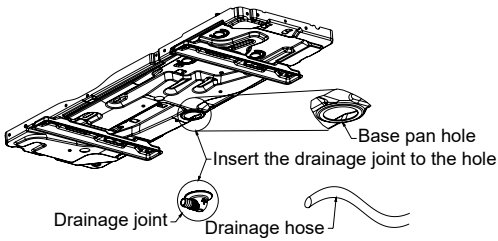
Refrigerant pipes

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.



Step2: 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 ensure the connection is secure.



Step3: Fix Outdoor Unit

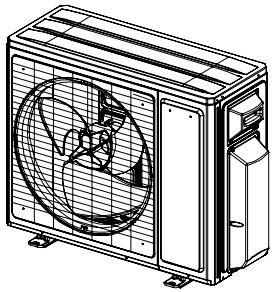
1. According to the outdoor unit installation dimensions to mark the installation position for expansion bolts.
2. Drill holes and clean the concrete dust and place the bolts .
3. If applicable install 4 rubber blankets on the hole before placing the outdoor unit (Optional). This will reduce vibrations and noise.

4. Place the outdoor unit base on the bolts and pre-drilled holes.
5. Use wrench to fix the outdoor unit firmly with bolts.

Note:

The outdoor unit can be fixed on a wall-mounting bracket. Follow the instruction of the wall-mounting bracket to fix the wall-mounting bracket on the wall, and then fasten the outdoor unit on it and keep it horizontal.

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



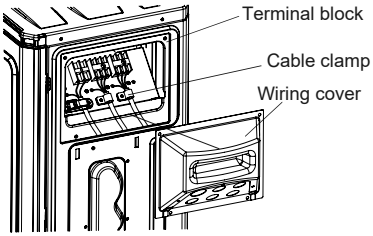
Install 4 anchor bolts(Optional)

Install 4 rubber mats(Optional)

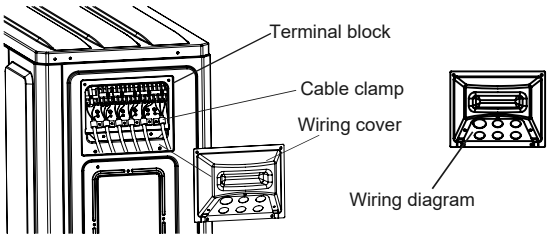
Step4: Install Wiring

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 firm and secure.
4. Reinstall the cable clamp and wiring cover.

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



2 zone system



5 zone system

Step5: Connecting Refrigerant Pipe

1. Unscrew the valve cover, grasp and press it down gently to take it down (if the valve cover is applicable).
2. Remove the protective caps from the end of valves.
3. Take off the plastic cover in the pipe ports and check whether there is any debris on the port of the connecting pipe and ensure the port is clean.
4. After aligning the center, rotate the flare nut of the connecting pipe to tighten the nut as tightly as possible by hand.
5. Use a spanner to hold the body of the valve and use a torque wrench to tighten the flare nut according to the torque values in the torque requirements table. (Refer to the torque requirements table in the section below)
6. Refrigerant cylinder and manifold for charging. Torque Parameters:

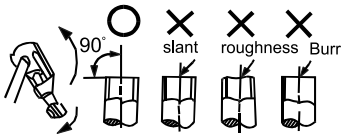
Pipe Size	Newton meter (N x m)	Pound-force foot (lbf-ft)	Kilogram-force meter (kgf-m)
1/4" (φ6.35)	15-20	11.1-14.8	1.5-2.0
3/8" (φ9.52)	31-35	22.9-25.8	3.2-3.6
1/2" (φ12)	45-50	33.2-36.9	4.6-5.1
5/8" (φ15.88)	60-65	44.3-48.0	6.1-6.6

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

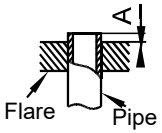
IMPORTANT: If need to connect to 1/2 or 5/8 connection pipe, please use the transit adapter, and find it in indoor carton box together with user manual bag.

FLARING

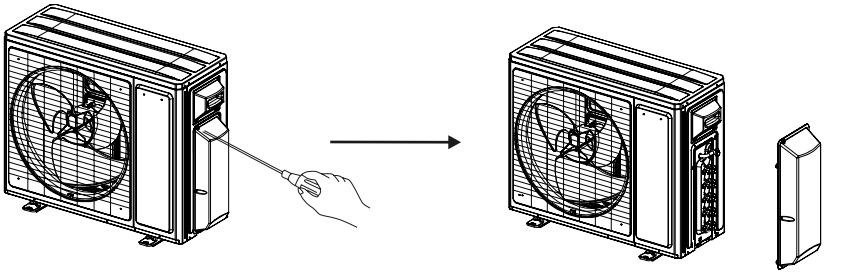
1. Cut the refrigerant pipe off with a pipe cutter.

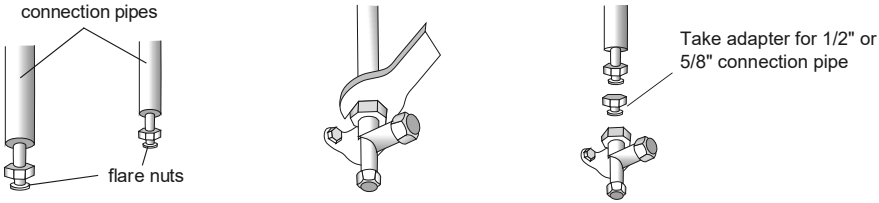


2. Flare the pipe after putting it into the connection nut.



Outside Diameter	A	
	MAX	MIN
Φ1/4"	0-3/8 in. (8.7mm)	0-3/8 in. (8.3mm)
Φ3/8"	0-1/2 in. (12.4mm)	0-1/2 in. (12.0mm)
Φ1/2"	0-5/8 in. (15.8mm)	0-5/8 in. (15.4mm)
Φ5/8"	0-3/4 in. (19.0mm)	0-3/4 in. (18.6mm)
Φ3/4"	0-7/8 in. (23.3mm)	0-7/8 in. (22.9mm)

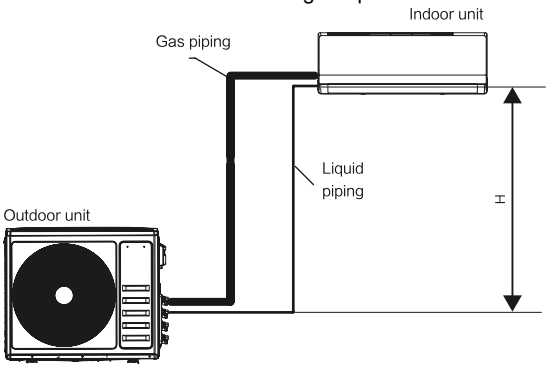




Non-return bend and oil return bend

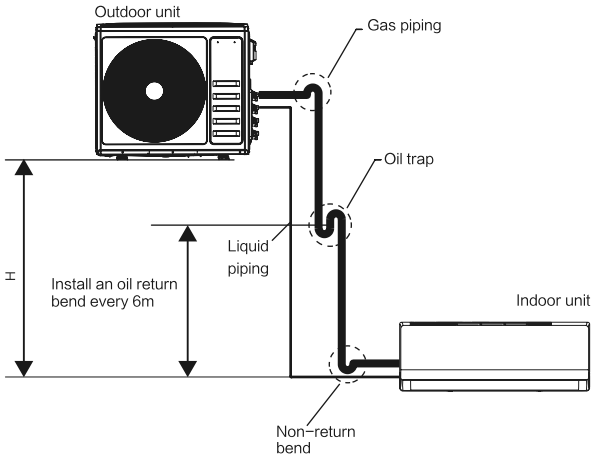
1) Outdoor unit is beneath the indoor unit.

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

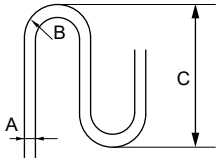


2) Outdoor unit is above the indoor unit.

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:

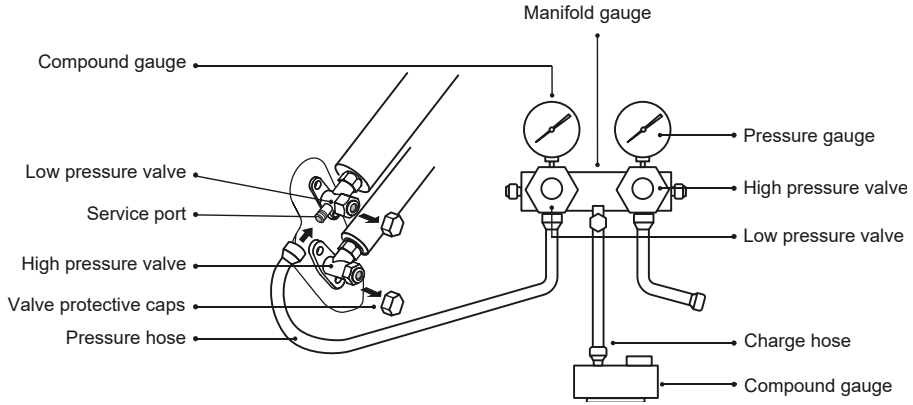


A (inch)	B	C
Φ3/8	≥ 0-3/4 in. (20mm)	≤ 5-7/8 in. (150mm)
Φ1/2	≥ 1 in. (26mm)	≤ 5-7/8 in. (150mm)
Φ5/8	≥ 1-1/4 in. (33mm)	≤ 5-7/8 in. (150mm)

Outdoor Unit Installation (2/3 Zone System)

Step6: Vacuum Pumping

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 -0.1MPa (-76cmHg)
7. Close the low pressure valve of the manifold gauge and turn off the vacuum.
8. Hold the pressure for 5 minutes, make sure that the rebound of compound gauge pointer does not exceed 0.005MPa.
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.



Outdoor Unit Installation (4/5 Zone System)

Step7: Vacuum Pumping

1. Preparations and Precautions

Air and foreign matter in the refrigerant circuit can cause abnormal rises in pressure, which can damage the air conditioner, reduce its efficiency, and cause injury. Use a vacuum pump and manifold gauge to evacuate the refrigerant circuit, removing any non-condensable gas and moisture from the system.

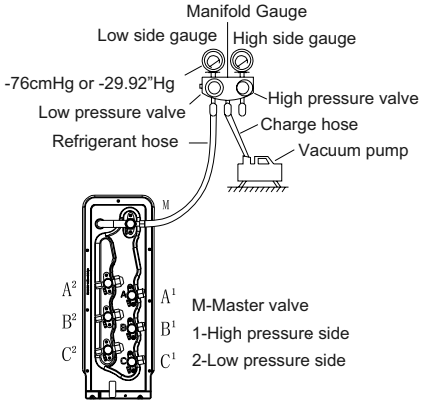
Evacuation should be performed upon initial installation.

Before performing evacuation

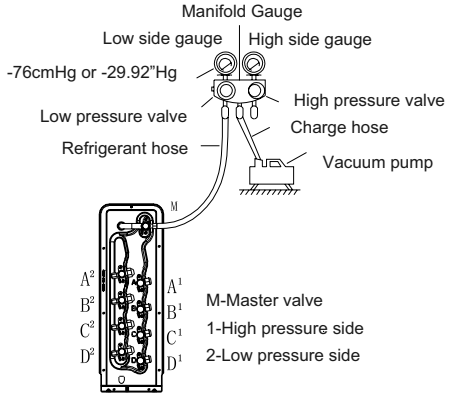
1) Check to make sure that both high-pressure and low-pressure pipes between the indoor and outdoor units are connected properly in accordance with the Refrigerant Piping Connection section of this manual.
2) Check to make sure all wiring is connected properly.
3) Perform nitrogen leak check on all refrigerant joints.

2. Evacuation Instructions

Before using the manifold gauge and vacuum pump, read their operation manuals to familiarize yourself with how to use them properly.

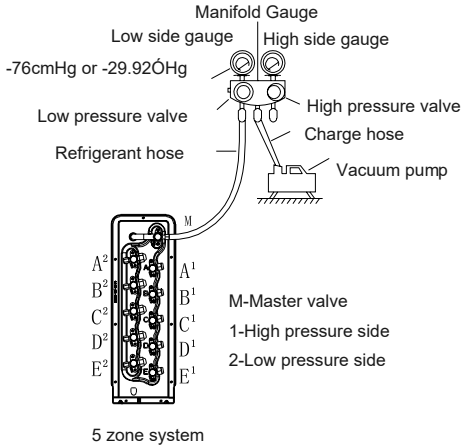


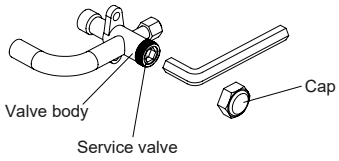
3 zone system



4 zone system

1. Connect the refrigeration hose from the low side manifold gauge to the master service valve port of the outdoor unit.
2. Connect charge hose from the manifold gauge to the vacuum pump.
3. Open the low pressure side service valves (A2, B2, C2, etc.) if the lineset was connected. But be careful not to open the high pressure side service valves (A1, B1, C1, etc.)





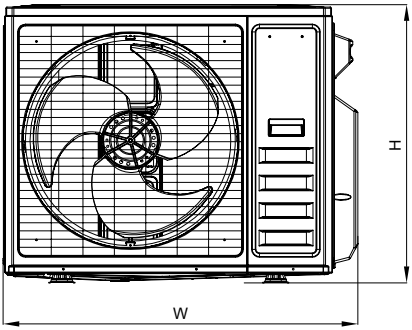
4. Open the Low Pressure side valve on the manifold gauge. Keep the High Pressure side valve closed.
5. Turn on the vacuum pump to evacuate the system.
6. Run the vacuum until the Compound Meter reads -76cmHg/-29.92"Hg (-101KPa). It is recommended to use a micron gauge; Run the vacuum until the micron gauge reads 350 to 500 microns or less.
7. After the vacuum process has been achieved, close the Low Pressure side valve on the manifold gauge, and turn off the vacuum pump.
8. Wait for approximately 10 to 15 minutes, then check that there has been no change in system vacuum. It is recommended to use a micron gauge; Check to make sure the system is still below 500 microns.
9. If there is a change in system vacuum, refer to Gas Leak Check section for information on how to check for leaks. If there is no change in system vacuum, remove the charge hose from the service port.
10. Using allen wrench, fully open the master valves (M) on the top and the high pressure side service valves (A1, B1, C1, etc.).
11. Tighten valve caps on all valves (master valves, high side and low side services valves) by hand. You may tighten it further using a torque wrench if needed.

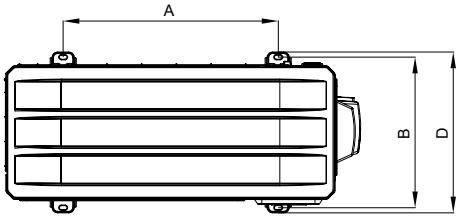
NOTICE: Open valve stems gently, when opening service valve, turn the allen wrench until it hits against the stopper. Do not try to force the valve to open further.

Warning: Failure to open the main valve (M) may result in damage to the compressor.

Split Outdoor Unit Mounting Dimensions

Outdoor Model	Outdoor Unit Dimensions mm (in.)	Mounting Dimensions mm (in.)	
	W x H x D	A	B
18K	852x603x349 (33.54x23.74x13.74)	516 (20.31)	314 (12.36)
27K	913x699x375 (35.94x27.52/10x14.76)	580 (22.83)	336 (13.23)
36K/42K	1083x858x494 (42.64x33.78x19.45)	660 (25.98)	462 (18.19)





Test Run

Inspections Before Test Run

Do the following checks before test run.

Description	Inspection method
Electrical safety inspection	• Check whether the power supply voltage complies with specification. • Check whether there is any wrong or missing connection between the power lines, signal line and earth wires. • Check whether the earth resistance and insulation resistance comply with requirements.
Installation safety inspection	• Confirm the direction and smoothness of drainage pipe. • Confirm that the joint of refrigerant pipe is installed completely. • Confirm the safety of outdoor unit, mounting plate and indoor unit • installation. • Confirm that the valves are fully open. • Confirm that there are no foreign objects or tools left inside the unit. • Complete installation of indoor unit air inlet grille and panel.
Refrigerant leakage detection	• The piping joint, the connector of the two valves of the outdoor unit, the valve spool, the welding port,etc.where leakage may occur. • Foam detection method: Apply soapy water or foam evenly on the parts where leakage may occur, and observe whether bubbles appear or not, if not, it indicates that the leakage detection result is safe. • Leak detector method: Use a professional leak detector and read the instruction of operation, detect at the position where leakage may occur. • The duration of leak detection for each position should last for 3 minutes or more; • If the test result shows that there is leakage, the nut should be tightened and tested again until there is no leakage; • After the leak detection is completed, wrap the exposed pipe connector of indoor unit with thermal insulation material and wrap with insulation tape.

Test Run Instruction

1. Turn on the power supply.
2. Press the ON/OFF button on the remote controller to turn on the air conditioner.
3. Press the Mode button to switch the mode COOLING and HEATING.

In each mode set as below:

COOLING-Set the lowest temperature

HEATING-Set the highest temperature

4. Run about 8 minutes in each mode and check all functions are properly run and respond to the remote controller. Functions check as recommended:

1) If the outlet air temperature responds to the cooling and heating modes.
2) If the water drains properly from the drainage hose.
3) If the Louver and deflectors(optional) rotate properly.

5. Observe the test run state of the air conditioner at least 30 minutes.
6. After the successful test run, return the normal setting and press ON/OFF button on the remote controller to turn off the unit.
7. Inform the user to read this manual carefully before use, and demonstrate to the user how to use the air conditioner, the necessary knowledge for service and maintenance, and the reminder for storage of accessories.

Note:

If the ambient temperature exceeds the range mentioned in the section OPERATION INSTRUCTIONS, and it can not run COOLING or HEATING mode, lift the front panel and refer to the emergency button operation to run the COOLING and HEATING mode.

8. Mode conflict protection of indoor units.

When two or more indoor units are running simultaneously, ensure there is no mode conflict between them. The execution logic is as follows:

a. The mode of the first running indoor unit is the basic mode. Then, compare the modes of other indoor units to determine if there is a conflict.

b. Cooling mode (dry mode) conflicts with heating mode.

c. Fan mode conflicts with heating mode. When they conflict, regardless of which indoor unit runs first, the heating mode (as the basic mode) takes priority.

d. The conflicting indoor unit will display a PA fault on the panel, and its fan will stop running.

Troubleshooting

MALFUNCTION	POSSIBLE CAUSES
The appliance does not operate	Wrong wiring connection
	Power failure/power terminal pulled out.
	Damaged indoor/outdoor unit fan motor.
	Faulty compressor thermomagnetic circuit breaker.
	Faulty protective device or fuses.
	Loose connections or power terminal pulled out.
	It sometimes stops operating to protect the appliance.
	Voltage higher or lower than the voltage range.
	Active TIMER-ON function.
	Damaged electronic control board.
Strange odor	Dirty air filter.
Noise of running water	Back flow of liquid in the refrigerant circulation.
A fine mist comes from the air outlet	This occurs when the air in the room becomes very cold, for example in the "COOLING" or "DEHUMIDIFYING/DRY" modes.
A strange noise can be heard	This noise is made by the expansion or contraction of the front panel due to variations in temperature and does not indicate a problem.
Insufficient airflow, either hot or cold	Unsuitable temperature setting.
	Obstructed air conditioner intakes and outlets.
	Dirty air filter.
	Fan speed set at minimum.
	Other sources of heat in the room.
	No refrigerant.
The appliance does not respond to commands	Remote control is not close enough to indoor unit.
	The batteries of remote control need to be replaced.
	Obstacles between remote control and signal receiver in indoor unit.
The display is off	Active DISPLAY function.
	Power failure.
Switch off the air conditioner immediately and cut off the power supply in the event of:	Strange noises during operation.
	Faulty electronic control board.
	Faulty fuses or switches.
	Spraying water or objects inside the appliance.
	Overheated cables.
	Very strong smells coming from the appliance.

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 pas être installé dans le système de tuyauterie, a l'exception de l'équipement auxiliaire utilisé avec un équipement spécifique. Voir 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.

MANUFACTURER'S LIMITED WARRANTY

1.0 WARRANTOR. This Limited Warranty is offered by Dragon Trade International Corp , 1205 Highland Avenue, National City, California 91950, ("Manufacturer") on the Products described below.

2.0 PRODUCT. This Limited Warranty applies to the following products, residential and commercial air conditioner units manufactured by Manufacturer, collectively ("Product").

3.0 WHO MAY USE THIS WARRANTY. This Limited Warranty is intended only for the benefit original purchasers who purchase product from an authorized retailer or installer of the product in the United States on or after September 1, 2023, ("Consumer").

4.0 WARRANTY COVERAGE. Subject to the "Warranty Conditions, Limitations, and Exclusions" set forth hereinbelow, Manufacturer expressly warrants the Product as follows:

4.01 Manufacturer warrants the Product to be free from defects in material and workmanship as follows: for a period of ten (10) years on all parts, including the Compressor, and one (1) year on the remote controller from the date of delivery to the Consumer, ("Warranty Period"). Date of delivery to Consumer shall be the date earlier of the date the Product is delivered to the Consumer's installation contractor or the place of installation.

4.02 Manufacturer, in its sole discretion, will repair or replace, free of charge, the Product or component part thereof, which proves to be defective in materials or workmanship during the Warranty Period. Any replacement parts provided by will be of equal or greater quality than the replaced part.

4.03 All Warranty service or repairs must be performed in accordance with the provisions of the "How to Obtain Warranty Service" section set forth hereinbelow.

4.04 This Limited Warranty does NOT include labor, or any other costs incurred for service, maintenance, repair, removal, replacement, installation, compliance with local building and electrical codes; nor does it include shipping, handling, delivery or transportation cost of the Product or any replacement parts thereof.

5.0 WARRANTY CONDITIONS, LIMITATIONS, AND EXCLUSIONS. This Limited Warranty is subject to the following conditions, limitations, and exclusions:

5.01 This Limited Warranty only applies to Products purchased after September 1, 2023.

5.02 This Limited Warranty only applies to Products purchased by original consumer purchasers who, purchase the Product from an authorized retailer or installer of the Product, and install the Product, in the United States; it does not apply to Products received through promotions, contests, giveaways, or sponsorship events.

5.03 This Limited Warranty is transferrable if, and only if, the Products is purchased through, and registered with, an authorized a dealer.

5.04 This Limited Warranty only applies to Products installed by appropriately and validly licensed contractors in accordance with: (a) all applicable codes, laws, rules, regulations, and requirements, including without limitation all applicable building permits; and (b) all manufacturer installation instructions and best industry practices; and after proper handling and best transport practices from date of purchase.

5.05 This Limited Warranty does not apply to damage resulting from or repaired by: (a) improper installation or operator error; (b) installation by non or inappropriately licensed persons firms or entities; (c) misuse, abuse, accident, or unauthorized alteration; (d) natural disaster, weather, or acts of nature; (e) animals, vermin or pests; (f) power failures, including brownouts or surges; (g) frozen or broken pipes; (h) inadequate ventilation or corrosive environments at or around the installation site; (i) inadequate maintenance, including maintenance not performed in accordance with the Product operating manual or recognized best practices; (j) ordinary wear and tear; or (k) any other conditions or acts beyond the control of Manufacturer, (l) spare parts, damaged during maintenance and repairs.

5.06 EXCEPT AS OTHERWISE PROVIDED IN THIS LIMITED WARRANTY, OR AS REQUIRED BY LAW, MANUFACTURER MAKES NO OTHER WARRANTIES OF ANY KIND WITH RESPECT TO THE PRODUCT, AND HEREBY DISCLAIMS AND EXCLUDES ALL WARRANTIES AND REMEDIES NOT EXPRESSLY PROVIDED HEREIN OR REQUIRED BY LAW, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTIES. NO ONE IS AUTHORIZED TO CHANGE THIS LIMITED WARRANTY IN ANY RESPECT OR CREATE ANY OTHER OBLIGATION OR LIABILITY FOR MANUFACTURER IN CONNECTION WITH THE PRODUCT OR ANY UNITED APPLIANCES EQUIPMENT.

5.07 UNDER NO CIRCUMSTANCES SHALL MANUFACTURER BE LIABLE FOR ANY INDIRECT, INCIDENTAL, SPECIAL, PUNITIVE OR CONSEQUENTIAL DAMAGES, INCLUDING, BUT NOT LIMITED TO, INFRINGEMENT OF THIRD PARTY RIGHTS, LOSS OF GOODWILL, LOSS OF REVENUE OR PROFITS, WORK INTERRUPTION, SYSTEM FAILURE, DETERIORATION OF OTHER PROPERTY, COSTS OF PRODUCT REMOVAL AND REINSTALLATION, INCREASE IN THE USE OF ENERGY, LOSS OF USE, INJURY TO PERSONS OR PROPERTY ARISING OUT OF OR RELATED TO THE PRODUCT, WHETHER FOR BREACH OF WARRANTY, BREACH OF CONTRACT, TORT OR OTHERWISE, EVEN IF MANUFACTUER HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGE. IN NO EVENT SHALL MANUFACTURER'S LIABILITY EXCEED THE ACTUAL PURCHASE PRICE OF THE SYSTEM WITH RESPECT TO WHICH ANY CLAIM IS MADE.

5.08 SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF WARRANTIES OR EXCLUSIONS OR LIMITATIONS OF DAMAGES, INCLUDING INIENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATIONS OR EXCLUSIONS MAY NOT APPLY.

5.09 This Limited Warranty does not apply to (a) service calls when no covered Product defect is identified; or (b) to explain the use and operation of the Product to the Consumer.

5.10 In the event of a Product failure, the Product should be de-energized, but otherwise should remain as-is, where-is until inspected by an authorized technician, unless there is a life/safety threat or the likelihood of resultant physical damage to other property, in which case all appropriate safety precautions should be taken by qualified persons. Absent a life/safety threat or the likelihood of resultant physical damage to other property, the failure to maintain the Product as-is, where-is as provided herein, voids the Warranty.

6.0 Product Registration

It is recommended that Consumer complete the Product Registration Card included in the original Product packaging and return it to Manufacturer or register on the Product on the manufacturer's website. Doing so will facilitate a Warranty Claim (defined hereinbelow); however, the Consumer is not required to complete and return the Product Warranty Card for his Limited Warranty to be effective.

7.0 HOW TO OBTAIN WARRANTY SERVICE

7.01 During the Warranty Period, contact the Manufacturer by email at customerservices@unitedappliances.com, or telephone at 800-691-2050, or United States mail at 1205 Highland Avenue, National City, California 91950, to notify Manufacturer of a claim under this Limited Warranty, ("Warranty Claim").

7.02 As part of the Warranty Claim, Consumer will be required to present the original purchase invoice for the Product, and completed Product registration, which shall include the name and CSLB license number of the certified installer, as well as any other reasonable documentation reflecting date of purchase and/or date of delivery of the Product to the Consumer.

7.03 Within thirty (30) days from the date the Warranty Claim is received by Manufacturer, an authorized service technician will visit the Consumer's residence to inspect the Product and determine whether the Warranty Claim is covered under this Limited Warranty.

7.04 If the Warranty Claim is covered, Manufacturer, subject to the labor and shipping limitations above, will, in its sole discretion, will repair or replace, the Product or any covered component part thereof, at no cost to the Consumer.

7.05 Consumer will be invoiced for all shipping and labor costs incurred in connection with the repair or replacement of the Product or any component part provided herein and shall pay such invoice upon receipt.

8.0 DISPUTE RESOLUTION

8.01 Agreement for Binding Arbitration. Arbitration under this Agreement is governed by the Federal Arbitration Act (9 U.S.C. §§ 1 et seq.). This Agreement applies to Consumer and Manufacturer, and their respective heirs, assigns, spouses, family members, affiliates, officers, directors, attorneys, insurers, shareholders, successors, subsidiaries and/or parent companies, and survives the termination of the Warranty Period. SUBJECT TO CONSUMER'S RIGHT TO BRING ANY CLAIM AGAINST MANUFACTURER IN A SMALL CLAIMS COURT OF

COMPETENT JURISDICTION CONSUMER AND MANUFACTURER AGREE THAT ANY DISPUTE, CLAIM OR CONTROVERSY ARISING OUT OF THIS AGREEMENT OR THE USE OF THE PRODUCT, INCLUDING ISSUES OF ARBITRABILITY, SHALL, ("DISPUTE"), AT THE OPTION OF EITHER PARTY, BE RESOLVED BY BINDING ARBITRATION BEFORE A SINGLE NEUTRAL ARBITRATOR ADMINISTERED BY JUDICIAL ARBITRATION AND MEDIATION SERVICES ("JAMS") UNDER ITS APPLICABLE ARBITRATION RULES IN EFFECT AT THE TIME THE DISPUTE ARISES. DISPUTES SHALL NOT BE RESOLVED BY COURT OR JURY TRIAL, AND CONSUMER IS WAIVING ANY RIGHT TO A COURT OR JURY TRIAL. The JAMS Policy on Consumer Arbitration and Minimum Standards of Procedural Fairness in effect at the time the Dispute arises are deemed incorporated by reference herein and shall govern the Arbitration.

The JAMS Rules and may be found at www.jamsadr.com, by searching for "JAMS Arbitration Rules" using a service such as www.Google.com or www.Yahoo.com, or by asking Manufacturer for a copy of the rules. If for any reason JAMS will not administer the arbitration, either party may apply to a court of competent jurisdiction with authority over the location where the arbitration will be conducted for appointment of a neutral Arbitrator.

The Arbitration hearing shall, unless the Parties otherwise agree in writing, be held within forty-five miles of where CONSUMER resides. Manufacturer shall pay all costs and expenses unique to arbitration, including without limitation the arbitrator's fees. The Parties shall be entitled to discovery as provided by the Federal Rules of Civil Procedure. The arbitrator must follow applicable law and may award only those remedies that would have applied had the matter been heard in court. Judgment may be entered on the arbitrator's decision in any court of competent authority.

Either Consumer or Manufacturer may apply to a court of competent authority for temporary or preliminary injunctive relief in connection with an arbitrable controversy, but only upon the ground that the award to which that party may be entitled may be rendered ineffectual without such relief.

8.02 Class, Collective, and Representative Action Waiver. This Agreement affects your ability to participate in class, collective or representative actions. Consumer and Manufacturer agree to bring any Dispute in Arbitration on an individual basis only, and not on a class, collective, or private attorney general representative basis. There will be no right or authority for any Dispute to be brought, heard or arbitrated as a class, collective, representative, or private attorney general action, or as a member in any purported class, collective, representative, or private attorney general proceeding ("Class Action Waiver"). Notwithstanding any other provision of this Agreement or the JAMS Rules, disputes regarding the validity, enforceability, or breach of the Class Action Waiver may be resolved only by a civil court of competent jurisdiction and not by an arbitrator. In any case in which (1) the dispute is filed as a class, collective, representative, or private attorney general action and (2) a civil court of competent jurisdiction finds all or part of the Class Action Waiver unenforceable, the class, collective, representative, and/or private attorney general action to that extent must be litigated in a civil court of competent jurisdiction, but the portion of the Class Action Waiver that is enforceable shall be enforced in arbitration. The Class Action Waiver shall be severable in any case in which the dispute is filed as an individual action and severance is necessary to ensure that the individual action proceeds in arbitration.

8.03 Commencing the Arbitration. All claims in arbitration are subject to the same statues of limitations that would apply in court under applicable law. The Party bringing the claim must demand arbitration in writing and deliver the written demand by hand or first-class mail to the other party within the applicable statute of limitations period. The demand for arbitration shall include identification of the parties, a statement of the legal and factual basis of the claim(s), and a specification of the remedy sought. Any demand for arbitration shall be provided to Provider's registered agent for service of process. The arbitrator shall resolve all disputes regarding the timeliness or propriety of the demand for arbitration.

8.04 Enforcement of this Agreement. This Agreement is the full and complete agreement relating to the formal resolution of disputes covered by this Agreement and shall supersede all other agreements concerning arbitration. In the event any part of this Agreement is held unenforceable, the rest of this Agreement will be enforceable. If the Class Action Waiver in Section 2 of this Agreement is unenforceable, Manufacturer and Consumer agree that this Agreement is otherwise silent as to any Party's ability to bring a class, collective, or representative action in arbitration.

9.0 GENERAL PROVISIONS

9.01 Governing Law. This Limited Warranty and any Warranty Claim hereunder shall be governed by the laws of the State of California, unless the Consumer lives in and the Product was installed in a residence located in a different state, in which case the laws of the state of installation shall apply.

9.02 Entire Agreement. This Agreement constitutes the entire agreement between the Parties hereto pertaining to the subject matter hereof, and all prior or contemporaneous agreements, representations, or understandings by and between the Parties, whether written or oral, are superseded and merged herein.

9.03 Modification; Waiver. No supplement, amendment or modification of this Limited Warranty shall be valid or binding unless in writing and executed by an authorized officer of Manufacturer. Manufacturer shall not be deemed to have waived any provision in this Agreement, unless specifically agreed to in writing and signed authorized officer of Manufacturer. No waiver of any provision of this Limited Warranty shall be deemed to constitute a continuing waiver of that provision, nor shall it be deemed to constitute a waiver of any other provision.

9.04 Severability. Should any provision of this Agreement be declared by any court of competent jurisdiction to be illegal or invalid, the validity of the remaining parts, terms, or provisions shall not be affected thereby, and said illegal and/or invalid part, term, or provision shall be deemed not to be a part of the Agreement.

10. NOTICE TO CONSUMER

This Limited Warranty gives you specific legal rights. You may have other rights which vary from state to state.

RETURN AND EXCHANGE

If you have any issues with your product or
not entirely satisfied, please visit
https://unitedappliances.com/us/returns-exchange/
or scan the QR code for all the steps

UNITED APPLIANCES®

Imported by
Dragon Trade International Corp.
614 5th Ave. Ste D, San Diego CA 92101-6964

Customer service (800) 691-2050
www.unitedappliances.com

MAXIMUM **QUALITY** | MAXIMUM **EFFICIENCY**