UNITED APPLIANCES®

# Owner's Manual

Original Instructions

**Air Conditioners** | DC Inverter Air Handler Series
for R410A Unitary Split Air Conditioner

AIR HANDLER SERIES

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.

**Models:**

UADH24-DD3D1

UADH30-DD3D1

UADH36-DD3D1

UADH42-DD3D1

UADH48-DD3D1

UADH60-DD3D1

# To Users

Thank you for selecting Gree product. Please read this instruction manual carefully before installing and using the product, so as to master and correctly use the product. In order to guide you to correctly install and use our product and achieve expected operating effect, we hereby instruct as below:

(1) 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. Children should be supervised to ensure that they do not play with the appliance.

(2) In order to ensure reliability of product, the product may consume some power under stand-by status for maintaining normal communication of system and preheating refrigerant and lubricant. If the product is not to be used for long, cut off the power supply; please energize and preheat the unit in advance before reusing it.

(3) Please properly select the model according to actual using environment, otherwise it may impact the using convenience.

(4) This product can't be installed at corrosive, inflammable or explosive environment or the place with special requirements, such as kitchen. Otherwise, it will affect the normal operation or shorten the service life of the unit, or even cause fire hazard or serious injury. As for above special places, please adopt special air conditioner with anti-corrosive or anti-explosion function.

(5) If the product needs to be installed, moved or maintained, please contact our designated dealer or local service center for professional support. Users should not disassemble or maintain the unit by themselves, otherwise it may cause relative damage, and our company will bear no responsibilities.

(6) All the illustrations and information in the instruction manual are only for reference. In order to make the product better, we will continuously conduct improvement and innovation. If there is adjustment in the product, please subject to actual product.

# Exception Clauses

Manufacturer will bear no responsibilities when personal injury or property loss is caused by the following reasons:

(1) Damage the product due to improper use or misuse of the product.

(2) Alter, change, maintain or use the product with other equipment without abiding by the instruction manual of manufacturer.

(3) After verification, the defect of product is directly caused by corrosive gas.

(4) After verification, defects are due to improper operation during transportation of product.

(5) Operate, repair, maintain the unit without abiding by instruction manual or related regulations.

(6) After verification, the problem or dispute is caused by the quality specification or performance of parts and components that produced by other manufacturers.

(7) The damage is caused by natural calamities, bad using environment or force majeure.

# Contents



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

# 1 Safety Precautions

## ⚠WARNING

This product can't be installed at corrosive, inflammable or explosive environment or the place with special requirements, such as kitchen. Otherwise, it will affect the normal operation or shorten the service life of the unit, or even cause fire hazard or serious injury. As for above special places, please adopt special air conditioner with anti-corrosive or anti-explosion function.

Improper installation, adjustment, alteration, service, maintenance, or use can cause explosion, fire, electrical shock, or other conditions which may cause death, personal injury, or property damage. Consult a qualified installer, service agency, or your distributor or branch for information or assistance. The qualified installer or agency must use factory--authorized kits or accessories when modifying this product. Refer to the individual instructions packaged with the kits or accessories when installing. Follow all safety codes. Wear safety glasses, protective clothing, and work gloves. Use quenching cloth for brazing operations. Have fire extinguisher available. Read these instructions thoroughly and follow all warnings or cautions included in literature and attached to the unit. Consult local building codes and National Electrical Code (NEC) for special requirements. Recognize safety information. This is the safety--alert symbol ⚠.

When you see this symbol on the unit and in instructions or manuals, be alert to the potential for personal injury. Understand these signal words: **DANGER**, **WARNING**, **CAUTION** and **NOTICE**. These words are used with the safety--alert symbol.

| | |
|---|---|
| ⚠ DANGER | Indicates a hazardous situation that, if not avoided, will result in death or serious injury. |
| ⚠WARNING | Indicates a hazardous situation that, if not avoided, could result in death or serious injury. |
| ⚠CAUTION | Indicates a hazardous situation that, if not avoided, may result in minor or moderate injury. |
| ***NOTICE*** | Indicates important but not hazard-related information, used to indicate risk of property damage. |

# ⚠WARNING

**Electrical shock hazard:**

Failure to follow this warning could result in personal injury or death.

Before installing, modifying, or servicing system, main electrical disconnect switch must be in the OFF position. There may be more than 1 disconnect switch. Lock out and tag switch with a suitable warning label.

| ⚠WARNING | |
|---|---|
| (1) | The air conditioner should be grounded to avoid electric shock. Do not connect the ground wire to gas pipe, water pipe, lightning arrester or telephone wire. |
| (2) | The appliance shall be stored in a well-ventilated area where the room size corresponds to the room area as specified for operation. |
| (3) | 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). |
| (4) | According to federal/state/local laws and regulations, all packages and transportation materials, including nails, metal or wooden parts, and plastic packing material, must be treated in a safe way. |

| ⚠WARNING | |
|---|---|
| (1) | Please install according to this instruction manual. Installation must be performed in accordance with the requirement of NEC and CEC by authorized personnel only. |
| (2) | Any person who is involved with working on or breaking into a refrigerant circuit should hold a current valid certificate from an industry-accredited assessment authority, which authorises their competence to handle refrigerants safely in accordance with an industry recognised assessment specification. |
| (3) | Servicing shall only be performed as recommended by the equipment manufacturer. |
| (4) | The appliance shall be installed in accordance with national wiring regulations. |
| (5) | The fixed wires connecting to the appliance must be configured with all-pole disconnection device under voltage grade III according to wiring rules. |
| (6) | Air conditioner should be stored with protective measures against mechanical damage caused by accident. |
| (7) | If the installation space for air conditioner pipe is too small, adopt a protective measure to prevent the pipe from physical damage. |
| (8) | During installation, use the specialized accessories and components, otherwise water leakage, electric shock or fire hazard may occur. |
| (9) | Please install the air conditioner in a secure place that can withstand the weight of air conditioner. Insecure installation may cause the air conditioner falling down and lead to injury. |

| ⚠ WARNING |
|---|
| (10) Be sure to adopt independent power circuit. If the power cord is damaged, it must be repaired by the manufacturer, service agent or other professional agents. |
| (11) The air conditioner can be cleaned only after it is turned off and power-disconnected, otherwise electric shock may occur. |
| (12) The air conditioner is not intended to be cleaned or maintained by children without supervision. |
| (13) Do not alter the setting of pressure sensor or other protective devices. If the protective devices are short-circuited or changed against rules, fire hazard or even explosion may occur. |
| (14) Do not operate the air conditioner with wet hands. Do not wash or sprinkle water on the air conditioner, otherwise malfunction or electric shock will occur. |
| (15) Do not dry the filter with naked flame or an air blower; otherwise the filter will be out of shape. |
| (16) If the unit is to be installed in a small space, please adopt protective measures to prevent the concentration of refrigerant from exceeding the allowable safety limit; excessive refrigerant leakage may lead to explosion. |
| (17) When installing or re-installing the air conditioner, please keep the refrigerant circuit away from substances other than the specified refrigerant, such as air. Any presence of foreign substances will cause abnormal pressure change or even explosion, resulting in injury. |

| *NOTICE* |
|---|
| (1) Do not put a finger or other objects into the air inlet or return air grill. |
| (2) Please adopt safety protection measures before touching the refrigerant pipe; otherwise your hands may be hurt. |
| (3) Please arrange the drain pipe according to the instruction manual. |
| (4) Never stop the air conditioner by directly cutting off the power. |
| (5) Please select the proper copper pipe according to the requirement for pipe thickness. |
| (6) Never install the air conditioner in the following places:<br>a) Places with oil smoke or volatile liquid: plastic parts may deteriorate and fall off or even cause water leakage.<br>b) Places with corrosive gas: copper pipe or the welding parts may be corroded and cause refrigerant leakage. |
| (7) Adopt proper measures to protect the outdoor unit from small animals because they may damage the electric components and cause malfunction of the air conditioner. |

| NOTICE |
|---|
| (1) If thermostat is to be used, it should be connected first before powering up the unit, otherwise the thermostat may not be able to use. |
| (2) Only use soft dry cloth or slightly wet cloth with neutral detergent to clean the casing of the air conditioner. |
| (3) Before operating the unit under low temperature, connect it to power for 8 hours. If it is stopped for a short time, for example, one night, do not cut off the power (This is to protect the compressor). |
| (4) In order to ensure the reliability of the compressor, the unit force the compressor run for at least 6 minutes every time the compressor turns on, regardless of the room temperature. Therefore, it is necessary to select a thermostat having the minimum run time for the compressor or delaying a few minutes to turn the indoor unit off after the outdoor unit is shut down or stopped at the temperature point, in order to avoid that the indoor unit is turned off by the thermostat while the out unit is running which can result in the malfunction of the air conditioner. |
| (5) In order to avoid the abnormality of the unit caused by the high temperature of the pipe, it is forbidden to use gas auxiliary when the outdoor unit is turned on. |

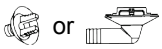
# 2 Product Introduction

## 2.1 Operating Range

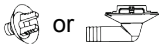
| — | Cooling | Heating |
|---|---|---|
| Outdoor temperature | 5°F(-15°C)~118.4°F (48°C) | 5°F (-15°C)~75.2°F (24°C) |

## 2.2 Standard Accessories

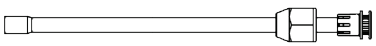
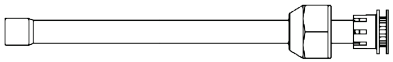
UADH24-DD3D1

| Outdoor unit accessories | | | | |
|---|---|---|---|---|
| No. | Name | Appearance | Q'ty | Usage |
| 1 | Drain plug |  | 4 | To plug the unused drain hole |
| 2 | Drainage connecter |  | 1 | To connect with the hard PVC drain pipe |

UADH30-DD3D1, UADH36-DD3D1, UADH42-DD3D1, UADH48-DD3D1, UADH60-DD3D1

| Outdoor unit accessories | | | | |
|---|---|---|---|---|
| No. | Name | Appearance | Q'ty | Usage |
| 1 | Drain plug |  | 3 | To plug the unused drain hole |
| 2 | Drainage connecter |  | 1 | To connect with the hard PVC drain pipe |

## 2.3 Optional Accessories

| Outdoor unit accessories | | | | |
|---|---|---|---|---|
| No. | Name | Appearance | Q'ty | Usage |
| 1 | Throw-over pipe |  | 1 | Connect the unit with the liquid pipe |
| 2 | Throw-over pipe |  | 1 | Connect the unit with the gas pipe |

# 3 Installation

## 3.1 Installation Preparation

### 3.1.1 Selection of Installation Location

| ⚠WARNING |
|---|
| ①. The unit must be installed where strong enough to withstand the weight of the unit and fixed securely, otherwise the unit would topple or fall off. |
| ②. Install the air conditioner at a place where the inclination is less than 5°. |
| ③. Do not install where there is the danger of combustible gas leakage. |
| ④. Do not install the unit at a place with leakage of inflammable gas. |

Selection of installation location for outdoor unit (Select a location pursuant to the following condition).

(1) Noise and air flow produced by the outdoor unit will not disturb the neighbors.

(2) Select a location that is safe and away from animals and plants. If not, please add safety fences to protect the unit.

(3) Install at a place with good ventilation. Make sure the outdoor unit stays at a well-ventilated place with no obstacles nearby that may obstruct the air inlet and outlet.

(4) The installation location should be able to withstand the weight and vibration of outdoor unit and allow the installation to be carried out safely.

(5) Avoid installing at a place with leakage of inflammable gas, oil smoke or corrosive gas.

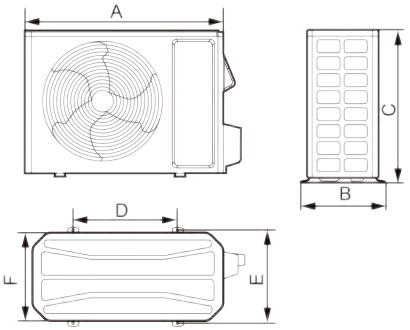
(6) Keep it away from strong wind because strong wind will affect the outdoor fan and lead to insufficient air flow volume and thus affecting the unit's

performance.

(7) Away from any object that may get the air conditioner generating noise.

(8) Install the outdoor unit at a place where condensate can be easily drained.

### 3.1.2 Unit Dimension




Unit: inch(mm)

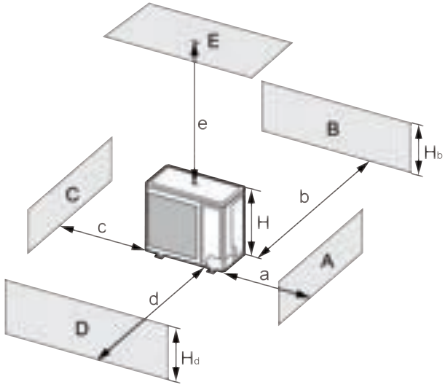
| Dimensions / Model | A | B | C | D | E | F |
|---|---|---|---|---|---|---|
| UADH24-DD3D1 | 35 (889) | 15-13/16 (402) | 25-7/8 (658) | 22-7/16 (570) | 14-9/16 (370) | 13-3/8 (340) |
| UADH30-DD3D1 | 36-5/16 (923) | 16-13/16 (427) | 29-3/8 (746) | 24 (610) | 15-9/16 (396) | 14-9/16 (370) |
| UADH36-DD3D1 | | | | | | |
| UADH42-DD3D1 | 37-1/8 (943) | 16-13/16 (427) | 32-1/2 (826) | 25 (635) | 15-9/16 (396) | 14-9/16 (370) |
| UADH48-DD3D1 | | | | | | |
| UADH60-DD3D1 | 39 (990) | 16-13/16 (427) | 37-13/16 (960) | 29-3/4 (755) | 15-9/16 (396) | 14-9/16 (370) |

**NOTE:** The indoor unit models that can be matched with the outdoor unit can be found on the AHRI website.

### 3.1.3 Diagram of Unit Installation Space and Location

Diagram of installation space and location for outdoor unit (Notice: for best performance of the outdoor unit, make sure its installation space conforms to the following installation dimensions).

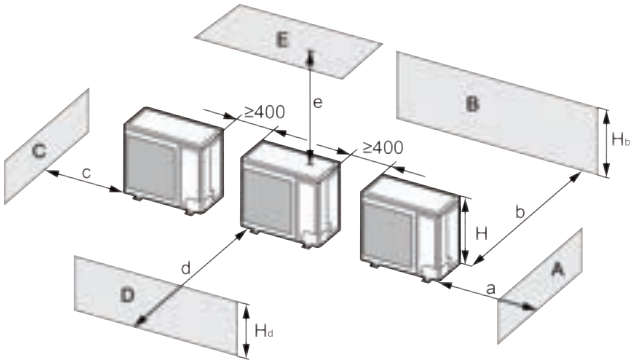
1) When one outdoor unit is to be installed.




| A~E | $H_b$ $H_d$ H | | (mm) | | | | |
|---|---|---|---|---|---|---|---|
| | | | a | b | c | d | e |
| B | — | | - | ≥100 | - | - | - |
| A,B,C, | — | | ≥300 | ≥100 | ≥100 | - | - |
| B,E | — | | - | ≥100 | - | - | ≥1000 |
| A,B,C,E | — | | ≥300 | ≥150 | ≥150 | - | ≥1000 |
| D | — | | - | - | - | ≥1000 | - |
| D,E | — | | - | - | - | ≥1000 | ≥1000 |
| B,D | $H_b < H_d$ | $H_d > H$ | - | ≥100 | - | ≥1000 | - |
| | $H_b > H_d$ | $H_d < H$ | - | ≥100 | - | ≥1000 | - |
| B,D,E | $H_b < H_d$ | $H_b \leq 1/2H$ | - | ≥250 | - | ≥2000 | ≥1000 |
| | | $1/2H < H_b \leq H$ | - | ≥250 | - | ≥2000 | ≥1000 |
| | | $H_b > H$ | Prohibited | | | | |
| | $H_b > H_d$ | $H_d \leq 1/2H$ | - | ≥100 | - | ≥2000 | ≥1000 |
| | | $1/2H < H_d \leq H$ | - | ≥200 | - | ≥2000 | ≥1000 |
| | | $H_d > H$ | Prohibited | | | | |

2) When two or more outdoor units are to be installed side by side.

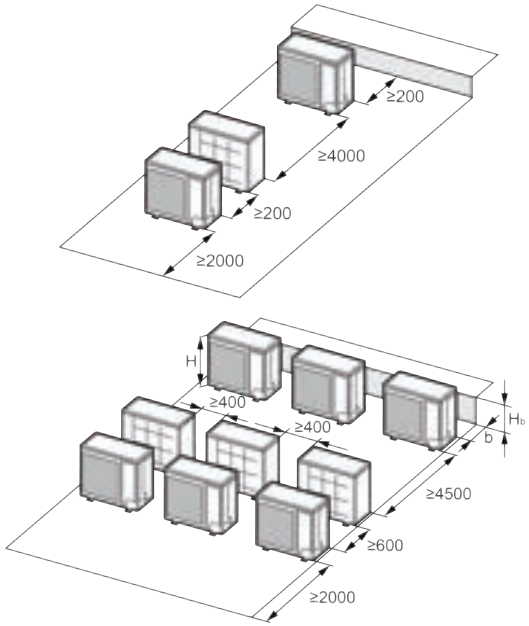
Unit: mm




| A~E | $H_b$ $H_d$ H | | (mm) | | | | |
|---|---|---|---|---|---|---|---|
| | | | a | b | c | d | e |
| A,B,C | — | | ≥300 | ≥300 | ≥1000 | - | - |
| A,B,C,E | — | | ≥300 | ≥300 | ≥1000 | - | ≥1000 |
| D | — | | - | - | - | ≥2000 | - |
| D,E | — | | - | - | - | ≥2000 | ≥1000 |
| B,D | $H_b < H_d$ | $H_d > H$ | - | ≥300 | - | ≥2000 | - |
| | $H_b > H_d$ | $H_d \le 1/2H$ | - | ≥250 | - | ≥2000 | - |
| | | $1/2H < H_d \le H$ | - | ≥300 | - | ≥2500 | - |
| B,D,E | $H_b < H_d$ | $H_b \le 1/2H$ | - | ≥300 | - | ≥2000 | ≥1000 |
| | | $1/2H < H_b \le H$ | - | ≥300 | - | ≥2500 | ≥1000 |
| | | $H_b > H$ | Prohibited | | | | |
| | $H_b > H_d$ | $H_d \le 1/2H$ | - | ≥250 | - | ≥2500 | ≥1000 |
| | | $1/2H < H_d \le H$ | - | ≥300 | - | ≥2500 | ≥1000 |
| | | $H_d > H$ | Prohibited | | | | |

3) When outdoor units are installed in rows.

Unit: mm




| $H_b$ H | (mm) |
|---|---|
| $H_b \leq 1/2H$ | b ≥ 250 |
| $1/2H < H_b \leq H$ | b ≥ 300 |
| $H_b > H$ | Prohibited |

## 3.2 Unit Installation

| ***NOTICE*** |
|---|
| (1) The outdoor unit does not have a TXV (thermal expansion valve), please make sure there is a throttling valve (which throttles the unit when it operates in cooling mode and opens fully when it operates in heating mode) in the indoor unit (air handler or A coil). |
| (2) For areas with frequent snowfall, please clean up the snow in time to avoid covering unit.<br>The unit installed in areas expecting snow are suggested to be raised with support frames<br>If possible, avoid locations that are likely to accumulate snow. if not possible, a snow guard should be installed on the unit to prevent accumulation of snow on the top of the unit. |

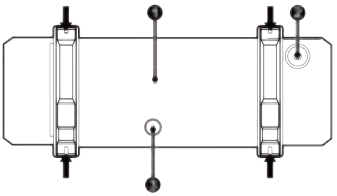
### 3.2.1 Outdoor Unit Installation

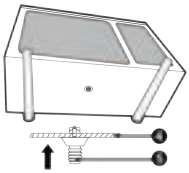
(1) If the outdoor unit is installed on a solid ground such as concrete, use M10 screw bolts and nuts to secure the unit and make sure the unit stands erect and level.

(2) If it vibrates and causes noise, please add rubber cushion between the outdoor unit and the installation base.

(3) When the outdoor unit is in heating or defrosting, it needs to drain water. When installing the drain pipe, plug the accompanied drainage connector to the drainage hole on the chassis of the outdoor unit. Then connect a drain hose to the drainage connector (If drainage connector is used, the outdoor unit should be at least 10cm from the installation ground. See the following figures).

(4) Plugs and drainage connector are not recommended if there is an electrical heater on the chassis.



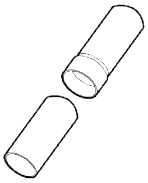


1 Bottom
2 Drain cap
3 Drain pipe mounting hole

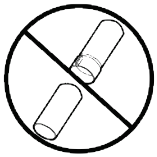
4 Chassis
5 Drain connection

### 3.2.2 Connection Pipe Installation

#### 3.2.2.1 Installation Notice and Requirement on Connection Pipe



Line set size matches service valve connector



Do not crimp service valve connector when pipe is smaller than connector

Installation method: Connect the connection pipes first to the unit. When bending a connection pipe, be careful not to damage the pipe. Do not over-tighten the screw nut, otherwise leakage will occur. Besides, the outside of connection pipe

should be added with a layer of insulating cotton to protect it from mechanical damage during installation, maintenance and transportation.

| Item / Model | Size of fitting pipe(inch) | | Maximum pipe length feet(m) | Biggest drop between indoor and outdoor units feet(m) |
|---|---|---|---|---|
| | Liquid pipe | Gas pipe | | |
| UADH24-DD3D1<br>UADH30-DD3D1 | Φ3/8 | Φ3/4 | 98.4(30) | 49.2(15) |
| UADH36-DD3D1<br>UADH42-DD3D1<br>UADH48-DD3D1<br>UADH60-DD3D1 | Φ3/8 | Φ3/4 | 164(50) | 98.4(30) |

Connection pipe should adopt water-proof insulating material. Its wall thickness should be 0.5-1.0mm and the pipe wall should be able to withstand 6.0MPa. The longer the connection pipe is the worse cooling and heating performance it has.

### 3.2.2.2 Pipe Flaring

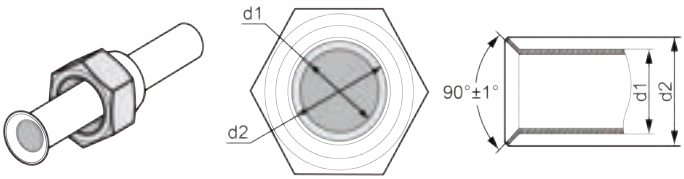
(1) Cut the connection pipe with a pipe cutter.

(2) The mouth of connection pipe should face downward. Remove burrs with the cut surface so that the chips do not enter the pipe.

(3) Remove the cut-off valve of outdoor unit and take out the flare nut from the bag of indoor unit accessories. Then fit the flare nut on the pipe and use a flaring tool to flare the mouth of connection pipe.

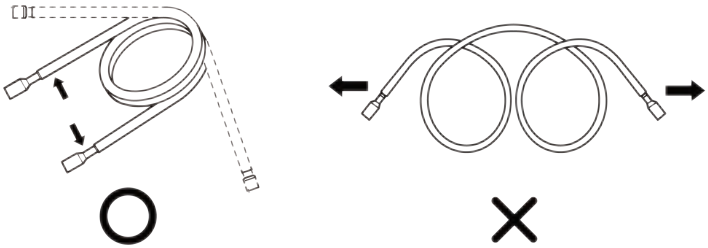
(4) Check whether the flaring part has cracked. (See the figure below).

(5) If you replace the outdoor unit, you need to welded an additional dry filter at the gas pipe.



### 3.2.2.3 Pipe Bending

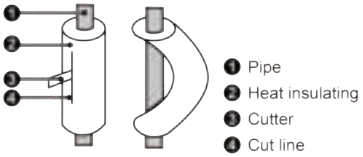
(1) The pipes are shaped by your hands. Be careful not to collapse them.



(2) Do not bend the pipes in an angle more than 90°.

(3) If the pipe is repeatedly bent or extended, it will become hard and difficult to be bent or extended. So do not bend or extend the pipe for more than 3 times.

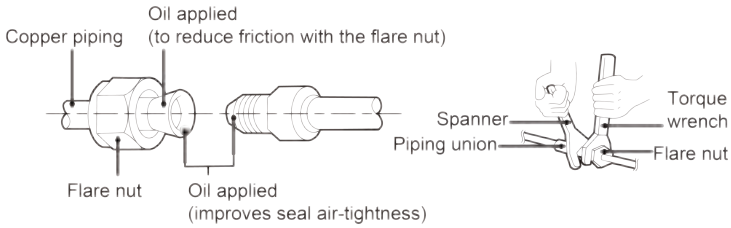
(4) When bending the pipe, do not bend it excessively, otherwise it will get broken. As shown beside, use a sharp cutter to cut the heat insulating pipe and bend it after the pipe is exposed. After bending, place the heat insulating pipe back on the pipeline and fix it with adhesive tape.




### 3.2.2.4 Connection Pipe of the Units

| NOTICE | |
|---|---|
| ①. | Connect the pipe to the unit. Please follow the instructions stated in the figures below. Use both spanner and torque wrench. |
| ②. | When connecting the tapered screw nut, first apply chilled machine oil on its inner and outer surface and then screw it up for 3~4 circles. |
| ③. | Confirm the tightening torque by referring to the following table (If the screw nut is over-twisted, it may be damaged and cause leakage). |
| ④. | Check whether gas leakage occurs to the connection pipe and then apply thermal insulation, as shown below. |
| ⑤. | Wind sponge around the joint of gas pipe and heat insulation sheath of gas collecting pipe. |
| ⑥. | Be sure to connect gas pipe after liquid pipe is connected. |
| ⑦. | Be sure to have insulation for gas pipe. Insulation for liquid pipe is optional. |

### 3.2.2.4.1 Screw Connection




| Pipe diameter (inch) | Tightening torque (N·m) |
|---|---|
| Φ1/4 | 15-30 |
| Φ3/8 | 35-40 |
| Φ1/2 | 45-50 |
| Φ5/8 | 60-65 |
| Φ3/4 | 70-75 |
| Φ7/8 | 80-85 |

## 3.2.3 Connection Pipe Vacuum Pumping and Leak Detection

### 3.2.3.1 Vacuum Pumping

| ***NOTICE*** |
|---|
| ① Make sure the outlet of vacuum pump is away from fire source and is well-ventilated. |
| ② Before vacuum pumping, make sure the unit cut-off valves are closed. |

(1) Remove the caps of the liquid valve, gas valve and also the service port.

(2) Connect the hoses at the low pressure and high pressure sides of the manifold valve assembly to the service ports of the unit's gas valve and liquid valve, and meanwhile the gas and liquid valves should be kept closed in case of refrigerant leak.

(3) Connect the hose used for evacuation to the vacuum pump.

(4) Open the switch at the lower pressure side of the manifold valve assembly and start the vacuum pump. Meanwhile, the switch at the high pressure side of the manifold valve assembly should be kept closed, otherwise evacuation would fail.

(5) The evacuation duration depends on the unit's capacity, generally.

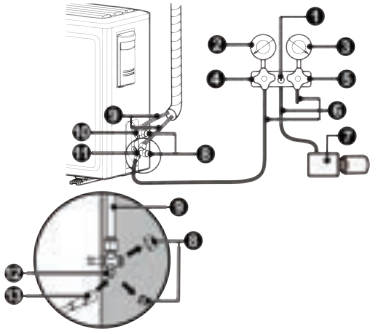
| Model | Time(min) |
|---|---|
| UADH24-DD3D1<br>UADH30-DD3D1 | 30 |
| UADH36-DD3D1<br>UADH42-DD3D1<br>UADH48-DD3D1<br>UADH60-DD3D1 | 45 |

And verify if the pressure gauge at the low pressure side of the manifold valve assembly reads -0.1MPa, if not, it indicates there is leak somewhere. Then, close the switch fully and then stop the vacuum pump.

(6) Wait for 10min to see if the system pressure can remain unchanged. During this time, the reading of the pressure gauge at the low pressure side can not be larger than 0.005MPa.

(7) Slightly open the liquid valve and let some refrigerant go to the connection pipe to balance the pressure inside and outside of the connection pipe, so that air will not come into the connection pipe when removing the hose. Note that the gas and liquid valve can be opened fully only after the manifold valve assembly is removed.

(8) Place back the caps of the liquid valve, gas valve and also the service port.



1 Gauge manifold
2 Pressure gauge (Low-pressure)
3 Pressure gauge (High-pressure)
4 Switch (Low-pressure)
5 Switch (High-pressure)
6 Hose
7 Vacuum pump
8 Cap
9 Connection pipe
10 Liquid valve
11 Gas valve
12 Service port
13 Hose with the valve pin

## *NOTICE*

For large-size units, there are maintenance ports for liquid valve and gas valve. During evacuation, you may connect the two hoses of the branch valve assembly to the maintenance ports to speed up the evacuation.

### 3.2.4 Refrigerant Adding

See the following table for the amount of additional refrigerant.

| Item / Model | Standard pipe length | Unnecessary charge pipe length | Additional refrigerant amount for extra pipe |
|---|---|---|---|
| UADH24-DD3D1<br>UADH30-DD3D1 | 7.5m | ≤9.5m | 10g/m |
| UADH36-DD3D1<br>UADH42-DD3D1<br>UADH48-DD3D1<br>UADH60-DD3D1 | 7.5m | ≤9.5m | 30g/m |

### 3.2.5 Installation of Drain Pipe

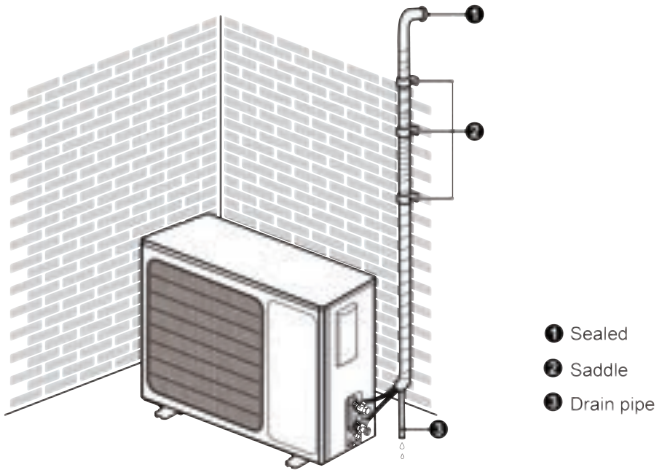
#### 3.2.5.1 Outdoor Side Drainage Pipe

(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.

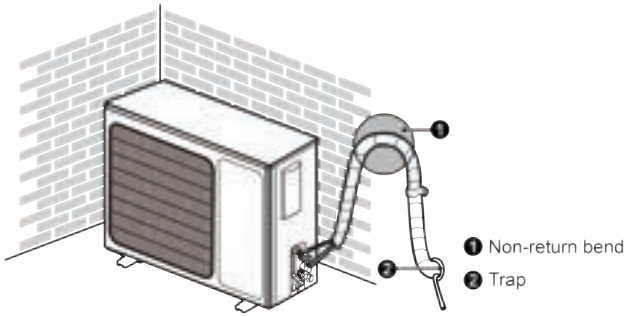
2) Wind the insulating tape from bottom to top.

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.




## 3.3 Electrical Installation

### 3.3.1 Requirement and Notice on Electrical Installation

**⚠WARNING**

The electrical installation for the air conditioner should observe the following requirements:

①. The electrical installation must be conducted by professionals in compliance with local laws and regulations and the instructions in this manual. The electric circuit must be equipped with a circuit breaker and air switch both with sufficient capacity.

②. The unit's operating power must be within the nominal range stated in the instruction manual. Use a specialized power circuit for the air conditioner. Do not draw power from another power circuit.

③. The air conditioner circuit should be at least 1.5m away from any inflammable surface.

④. The external power cords, the thermostat wires and outdoor unit must be effectively fixed.

⑤. The external power cords, the thermostat wires and outdoor unit can't directly contact any hot objects. For example: they must not contact chimney pipes, warm gas pipes or other hot objects.

⑥. The external power cords, and the thermostat wires and outdoor unit must not be squeezed. Never pull, stretch or bend the wires.

⑦. The external power cords, the thermostat wires and outdoor unit must not collide with any metal beam or edge on the ceiling, or touch any metal burrs or sharp metal edge around.

⑧. Connect wires correspondingly by referring to the circuit diagram labeled on the unit or electric box. Screws must be tightened up. Slipped screws must be replaced by specialized flat-head screws.

⑨. Wiring terminals should be connected firmly to the terminal board. Loose connection is forbidden.

⑩. The wire gauge of power cords should be large enough. Damaged power cords or other wires must be replaced by specialized wires. Wiring work must be done according to national wiring rules and regulations.

⑪. This outdoor unit has a heating four-way valve.

### 3.3.2 Electrical Parameters

| Model | Power supply | Fuse capacity (A) | Maximum over-current protection (A) | Minimum circuit ampacity (A) |
|---|---|---|---|---|
| UADH24-DD3D1 | 208/230V-1Ph-60Hz | 30 | 30 | 19.5 |
| UADH30-DD3D1 | 208/230V-1Ph-60Hz | 35 | 35 | 20.5 |
| UADH36-DD3D1 | 208/230V-1Ph-60Hz | 40 | 40 | 24 |
| UADH42-DD3D1 | 208/230V-1Ph-60Hz | 40 | 40 | 26.5 |
| UADH48-DD3D1 | 208/230V-1Ph-60Hz | 60 | 60 | 36.5 |
| UADH60-DD3D1 | 208/230V-1Ph-60Hz | 60 | 60 | 38.5 |

### 3.3.3 Connection of Power Cords and Thermostat Wires

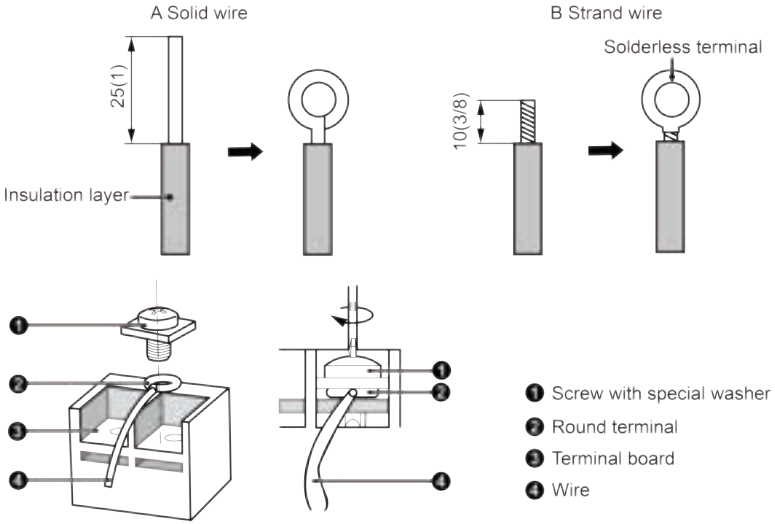
(1) For solid wires (as shown below):

1) Use wire cutters to cut off the wire end and then peel away about 25mm of the insulation layer.
2) Use a screwdriver to unscrew the terminal screw on the terminal board.
3) Use nippers to bend the solid wire into a ring that fits the terminal screw.
4) Form a proper ring and then put it on the terminal board. Use a screwdriver to tighten up the terminal screw.

(2) For strand wires (as shown below):

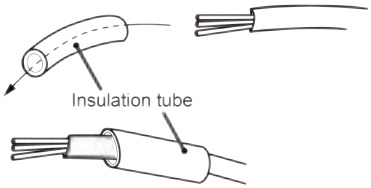
1) Use wire cutters to cut off the wire end and then peel away about 10mm of the insulation layer.
2) Use a screwdriver to unscrew the terminal screw on the terminal board.
3) Use a round terminal fastener or clamp to fix the round terminal firmly on the peeled wire end.
4) Locate the round terminal conduit. Use a screwdriver to replace it and tighten up the terminal screw (as shown below).

Unit: mm(inch)



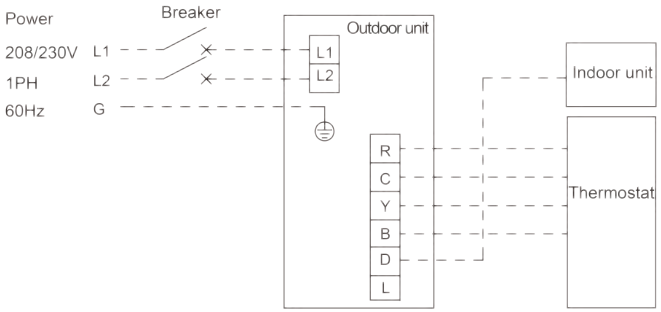
(3) How to connect the thermostat wires and power cords.

Lead the thermostat wires and power cords through the insulation tube (as shown in the following figure).

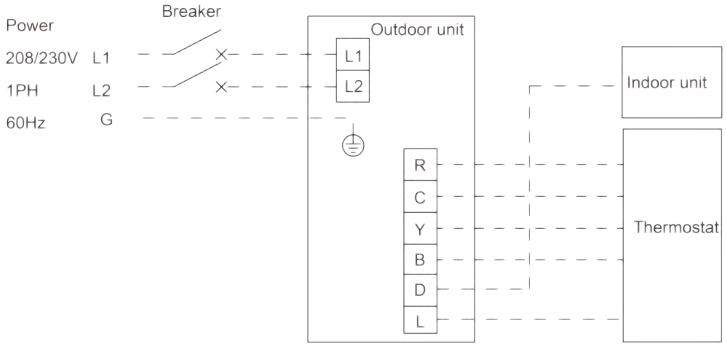



| ⚠ WARNING |
|---|
| ①. Before working, please check whether the units are powered on. |
| ②. Wrong wire connection may burn the electrical components. |
| ③. Connect the wires firmly to the wiring box. Incomplete installation may lead to fire hazard. |
| ④. Ground wire should be connected. |

Electrical wiring of outdoor units




UADH24-DD3D1, UADH30-DD3D1, UADH36-DD3D1




UADH42-DD3D1, UADH48-DD3D1, UADH60-DD3D1

**NOTE:** Y means Compressor control signal;

B which is energized under the heating mode means 4-way valve control signal;

D means defrosting signal;

R means 24V AC power supply;

C means 24V common.

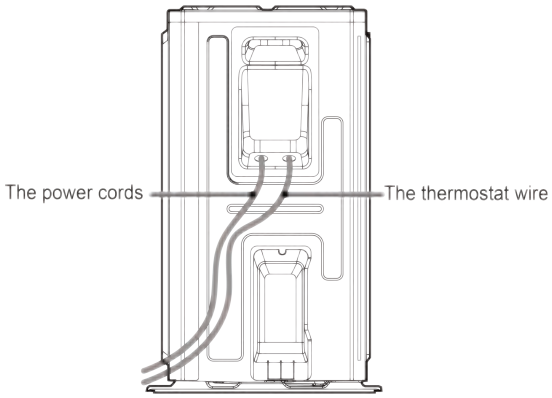
**NOTE:** When outdoor defrosts, D of outdoor unit will send 24V signal to avoid cold winds.

**NOTE:** As for the indoor unit which do not include D, there is no need to connect the D terminals.

**NOTE:** L reserved function.

| ⚠ WARNING | |
|---|---|
| ①. | High and low voltage wires should be led out from holes in the handle. |
| ②. | Do not bundle up the thermostat wires or lay them side by side, otherwise errors will occur. |
| ③. | High and low voltage wires should be secured separately. |
| ④. | Use screws to tighten up the thermostat wires and power cords of the units on the terminal board. Wrong connection may lead to fire hazard. |
| ⑤. | If the thermostat wires of the units and power cords are not correctly connected, the air conditioner may get damaged. |
| ⑥. | Ground the units through connecting the ground wire. |
| ⑦. | The units should comply with applicable local and national rules and regulations on power consumption. |
| ⑧. | When connecting the power cords, make sure the phase sequence of the power supply matches with the corresponding terminals, otherwise the compressor will get reversed and operate abnormally. |

Schematic diagram of the engineering routing:



## 3.4 Check after Installation

Check Items after Installation

| Check items | Possible events due to improper installation |
|---|---|
| Is the main body installed securely? | The unit may fall down, vibrate or produce noise. |
| Did you do water leakage test? | Cooling capacity may become unsatisfactory. |
| Is the unit well insulated from heat? | Condensate, water drops may occur. |
| Does water drainage go well? | Condensate, water drops may occur. |
| Is the voltage consistent with that stated on the nameplate? | The unit may fail or its components may get burned. |
| Are the wires and pipes installed correctly? | The unit may fail or its components may get burned. |
| Has the unit been safely grounded? | Risk of electric leakage. |
| Do the specifications of wires comply with the requirement? | The unit may fail or its components may get burned. |
| Is there any obstacle blocking the air inlet and outlet of the units? | Cooling capacity may become unsatisfactory. |
| Have you recorded the length of refrigerant pipe and the refrigerant charging amount? | The refrigerant charging amount can't be controlled. |

## 3.5 Test Running

**Preparation before connecting the power:**

(1) Power must not be connected if the installation work is not completed.

(2) Control circuit is correct and all the wires are firmly connected.

(3) Cut-off valves of the gas pipe and liquid pipe are open.

(4) The inside of the unit should be clean. Take irrelevant objects out if there is any.

(5) After checking, re-install the front side plate.

**Operation after connecting the power:**

(1) If all the above works are finished, power on the unit.

(2) If the outside temperature is more than 30°C, heating mode can't be enabled.

(3) Before test operation, make sure unit is power on and compressor has been preheated for more than 8 hours. Touch the unit to check whether it's normally preheated. Start test operation after unit is normally preheated, otherwise compressor might be damaged. Debugging must be performed by professional technicians or under the guide of professional technicians.

(4) Make sure the units can run normally.

(5) If there's sound of liquid shock when the compressor is running, then stop the air conditioner immediately. Wait until the electric heating belt is heated enough, and then restart the air conditioner.

## *NOTICE*

①. If you use thermostat to turn off the unit and then immediately turn the unit on again, compressor will need 3min to restart. Even if you press "ON/OFF" button on the thermostat, it won't be started up right away.

②. If there's no display on the thermostat, it's probably because the connection wires between the units and the thermostat are not connected. Please check again.

# 4 Maintenance

## 4.1 Failures Not Caused by Faults of the AC

If your air conditioner fails to function normally, please first check the following items before maintenance:

| Problem | Cause | Corrective measure |
|---|---|---|
| The air conditioner can't run. | If you turn off the unit and then immediately turn it on, in order to protect the compressor and avoid system overload, compressor will delay running for 3min. | Please wait for a while. |
| | Wire connection is wrong. | Connect wires according to the wiring diagram. |
| | Fuse or circuit breaker is broken. | Replace the fuse or switch on the circuit breaker. |
| | Power failure. | Restart after power is resumed. |
| | Power plug is loose. | Re-insert the power plug. |
| Bad cooling or heating effect. | Air inlet and outlet of the units have been blocked. | Clear the obstacles and keep the room for the units well ventilated. |
| | Improper temperature setting | Reset a proper temperature. |
| | Fan speed is too low. | Reset a proper fan speed. |
| | Air flow direction is not right. | Change the direction of air louvers. |
| | Doors or windows are open. | Close them. |
| | Exposed under direct sunshine. | Put on curtains or louvers in front of the windows. |
| | Too many heat sources in the room. | Remove unnecessary heat sources. |
| | Filter is blocked or dirty. | Send for a professional to clean the filter. |
| | Air inlets or outlets of the units are blocked. | Clear away obstacles that are blocking the air inlets and outlets of the units. |

The following situations are not operation failures.

| Problem | Time of occurrence | Cause |
|---|---|---|
| Mist comes from the air conditioner. | During operation. | If the unit is running under high humidity, the wet air in the room will be quickly cooled down. |
| The air conditioner generates some noise. | System switches to heating mode after defrosting. | Defrosting process will generate some water, which will turn to water vapor. |
| | The air conditioner is buzzing at the beginning of operation. | Thermostat will be buzzing when it starts working. The noise will become weak 1min later. |
| Dust comes from the air conditioner. | When the unit is turned on, it purrs. | When the system is just started, the refrigerant is not stable. About 30s later, the purr of the unit becomes low. |
| | About 20s after the unit first enables the heating mode or there is refrigerant brushing sound when defrosting under heating. | It's the sound of 4-way valve switching direction. The sound will disappear after the valve changes its direction. |
| | There is hissing sound when the unit is started or stopped and a slight hissing sound during and after operation. | It's the sound of gaseous refrigerant that stops flowing and the sound of drainage system. |
| | There is a sound of crunching during and after operation. | Because of temperature change, front panel and other components may be swelled up and cause abrasion sound. |
| | There is a hissing sound when the unit is turned on or suddenly stopped during operation or after defrosting. | Because refrigerant suddenly stops flowing or changes the flow direction. |
| | The unit starts operation after being unused for a long time. | Dust inside the units come out together with the air. |
| The air conditioner generates some smell. | During operation. | The room smell or the smell of cigarette comes out through the units. |

# *NOTICE*

Check the above items and adopt the corresponding corrective measures. If the air conditioner continues to function poorly, please stop the air conditioner immediately and contact Gree's authorized local service center. Ask our professional service staff to check and repair the unit.

## 4.2 Error Code

| ⚠WARNING |
|---|
| ①. If abnormal things (for example, awful smell) occur, please stop the unit immediately and disconnect power. Then contact Gree's authorized service center. If the unit continues to run in abnormal situations, it may get damaged and cause electric shock or fire hazard. |
| ②. Do not repair the air conditioner by yourself. Improper maintenance will cause electric shock or fire hazard. Please contact Gree's authorized service center and send for professional service staff to repair. |

If the LED displayer on mainboard of outdoor unit displays an error code, please refer to the error code meaning stated in the following table.

| No. | Error code | Error |
|---|---|---|
| 1 | E1 | Compressor high pressure protection |
| 2 | E3 | Refrigerant lack protection or compressor low pressure protection |
| 3 | E4 | Compressor air discharge high-temperature protection |
| 4 | H4 | Overload protection |
| 5 | F4 | Discharge temperature sensor error |
| 6 | F3 | Outdoor ambient temperature sensor error |
| 7 | e1 | High pressure sensor error |
| 8 | e3 | Low pressure sensor error |
| 9 | EE | Memory chip reading and writing failure |
| 10 | C4 | ODU jumper cap error |
| 11 | F2 | Condenser temperature sensor error |
| 12 | F6 | ODU tube temperature sensor error |
| 13 | H3 | Compressor overload protection |
| 14 | PL | Bus low-voltage protection |
| 15 | PH | Bus high-voltage protection |
| 16 | PA | ODU AC current protection |
| 17 | H5 | IPM module current protection |
| 18 | H6 | DC fan error |

| No. | Error code | Error |
|---|---|---|
| 19 | HC | PFC overcurrent protection |
| 20 | Lc | Compressor startup failure |
| 21 | Ld | Compressor phase-sequence protection |
| 22 | P0 | Driver reset protection |
| 23 | P5 | Compressor phase over-current protection |
| 24 | LF | Power protection |
| 25 | Pc | Driver current error |
| 26 | H7 | Compressor out-of-step protection |
| 27 | LE | Compressor overspeed |
| 28 | P6 | Master control and driver communication error |
| 29 | P8 | Driver module temperature protection |
| 30 | P7 | Module temperature sensor circuit failure |
| 31 | ee | Drive memory chip error |
| 32 | PU | Capacitor charging failure |
| 33 | PP | Input AC voltage error |
| 34 | PF | Drive board ambient temperature sensor error |
| 35 | P9 | AC contractor protection |
| 36 | PE | Temperature drift protection |
| 37 | Pd | Sensor connection protection |
| 38 | A1 | Outdoor fan IPM module protection |
| 39 | AC | Outdoor fan startup failure |
| 40 | UL | Outdoor fan overcurrent protection |
| 41 | AE | Outdoor fan current detection circuit error |
| 42 | AJ | Outdoor fan out-of-step protection |
| 43 | C8 | ODU jumper cap 2 error |

## 4.3 Unit Maintenance

| ⚠ WARNING | |
|---|---|
| ①. | Only professionals are allowed to carry on daily maintenance. |
| ②. | Before contacting any wire, make sure power is cut off. |
| ③. | Do not let any inflammable objects near the unit. |
| ④. | Do not use organic solvent to clean the air conditioner. |
| ⑤. | If you need to replace a component, please ask a professional to repair with a component supplied by the original manufacturer so as to ensure the unit's quality. |

| ⚠WARNING |
|---|
| ⑥. Improper operation may get the unit broken, hit by electric shock or cause fire. |
| ⑦. Do not make the air conditioner wet or electric shock may be lead, ensure that the air conditioner will not be cleaned by water rinsing under any circumstance. |

| *NOTICE* |
|---|
| ①. Before cleaning, please make sure the unit is stopped. Cut the circuit breaker and remove the power socket, otherwise, electric shock may occur. |
| ②. Do not wash the air conditioner with water, otherwise fire hazard or electric shock may occur. |
| ③. When cleaning the filter, please be careful of your steps. If you need to work high above the ground, please be extremely careful. |

### 4.3.1 Heat Exchanger of Outdoor Unit

Conduct cleaning for the heat exchanger of outdoor unit periodically, clean it once at least in every two months. Clean the dust and sundries on the surface of the heat exchanger with dust collector and nylon brush, if there's compressed air source; use the compressed air to blow the dust on the surface of the heat exchanger. Don't use tap water for cleaning.

### 4.3.2 Drainage Pipe

Periodically check if the drainage pipe is blocked to smooth the condensate water.

### 4.3.3 Notices at the Beginning of the Using Season

(1) Check if the air inlet/outlet of the units are blocked.

(2) Check if the ground connection is reliable.

(3) Check if the air filter screen is properly installed.

(4) If starting up again after long-term shut down, preset the power switch of air conditioner to "ON" status before 8h of operation, to preheat the crankcase of outdoor compressor.

(5) Check if the installation of outdoor unit is firm, if not, please contact with Gree appointed maintenance center.

### 4.3.4 Maintenance at the End of the Using Season

(1) Cut off the main power of air conditioner.

(2) Clean the dust and sundries in outdoor unit.

(3) If the outdoor unit is rusty, coat the rusty location with paint to prevent it from expanding.

### 4.3.5 Components Replacement

Components are available in Gree agency or Gree distributors nearby.

## 4.4 Notice on Maintenance

### 4.4.1 Information on Servicing

The manual shall contain specific information for service personnel who shall be instructed to undertake the following when servicing an appliance that employs a flammable refrigerant.

#### 4.4.1.1 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.

#### 4.4.1.2 Ventilated Area

Ensure that the area is in the open or that it is adequately ventilated before breaking into the system or conducting any hot work. 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.

#### 4.4.1.3 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 installations using flammable refrigerants:

(1) The ventilation machinery and outlets are operating adequately and are not obstructed.

(2) If an indirect refrigerating circuit is being used, the secondary circuit shall be checked for the presence of refrigerant.

(3) Marking to the equipment continues to be visible and legible. Markings and signs that are illegible shall be corrected.

(4) 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.

#### 4.4.1.4 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:

(1) Those capacitors are discharged: this shall be done in a safe manner to avoid possibility of sparking.

(2) That no live electrical components and wiring are exposed while charging, recovering or purging the system.

(3) That there is continuity of earth bonding.

### 4.4.2 Repairs to Sealed Components

#### 4.4.2.1 Electrical Safety

From the equipment being worked upon prior to any removal of sealed covers, etc. If it is absolutely necessary to have an electrical supply to equipment during servicing, then a permanently operating form of leak detection shall be located at the most critical point to warn of a potentially hazardous situation.

#### 4.4.2.2 Particular Attention

Electrical components, the casing is not altered in such a way that the level of protection is affected. This shall include damage to cables, excessive number of connections, terminals not made to original specification, damage to seals, incorrect fitting of glands, etc.

Ensure that apparatus is mounted securely.

Ensure that seals or sealing materials have not degraded such that they no longer serve the purpose of preventing the ingress of flammable atmospheres. Replacement parts shall be in accordance with the manufacturer's specifications.

***NOTICE***

The use of silicon sealant may inhibit the effectiveness of some types of leak detection equipment. Intrinsically safe components do not have to be isolated prior to working on them.

### 4.4.3 Repair to Intrinsically Safe Components

Do not apply any permanent inductive or capacitance loads to the circuit without ensuring that this will not exceed the permissible voltage and current permitted for the equipment in use.

Intrinsically safe components are the only types that can be worked on while live in the presence of a flammable atmosphere. The test apparatus shall be at the correct rating.

Replace components only with parts specified by the manufacturer. Other parts may result in the ignition of refrigerant in the atmosphere from a leak.

### 4.4.4 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 ageing or continual vibration from sources such as compressors or fans.

### 4.4.5 Charging Procedures

In addition to conventional charging procedures, the following requirements shall be followed.

(1) Ensure that contamination of different refrigerants does not occur when using charging equipment. Hoses or lines shall be as short as possible to minimize the amount of refrigerant contained in them.
(2) Cylinders shall be kept upright.
(3) Ensure that the refrigeration system is earthed prior to charging the system with refrigerant.
(4) Label the system when charging is complete (if not already).
(5) Extreme care shall be taken not to overfill the refrigeration system.

(6) Prior to recharging the system it shall be pressure tested with OFN. The system shall be leak tested on completion of charging but prior to commissioning. A follow up leak test shall be carried out prior to leaving the site.

### 4.4.6 Decommissioning

Before carrying out this procedure, it is essential that the technician is completely familiar with the equipment and all its detail. 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 reuse 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:
    1) Mechanical handling equipment is available, if required, for handling refrigerant cylinders.
    2) All personal protective equipment is available and being used correctly.
    3) The recovery process is supervised at all times by a competent person.
    4) 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.

### 4.4.7 Labelling

Equipment shall be labelled stating that it has been decommissioned and emptied of refrigerant. The label shall be dated and signed.

### 4.4.8 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 labelled 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.

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 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 Notice 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.

Any quality or other issues encountered in the purchased air conditioner, please contact the local Gree after-sales service department.

# 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.

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Dragon Trade International Corp.
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