Thank you for choosing our product.
For proper operation, please read and keep this manual carefully.
If you have lost the Owner’s Manual, please contact the local agent or visit www.gree.com or sent email to global@gree.com.cn for electronic version.
GWH09TA-K3DNA1B/O (DRED)
GWH12TB-K3DNA1B/O (DRED)
GWH18TC-K3DNA1B/O (DRED)
GWH24TD-K3DNA1C/O (DRED)
GWH28TD-K3DNA1B/O (DRED)
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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.

R410A(R32/125: 50/50): 1975
Precautions

WARNING

- This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved.
- Children shall not play with the appliance.
- Cleaning and user maintenance shall not be made by children without supervision.
- Do not connect air conditioner to multi-purpose socket. Otherwise, it may cause fire hazard.
- Do disconnect power supply when cleaning air conditioner. Otherwise, it may cause electric shock.
- Do not spray water on indoor unit. It may cause electric shock or malfunction.
- Do not spill water on the remote controller, otherwise the remote controller may be broken.
- Do not repair air conditioner by yourself. It may cause electric shock or damage. Please contact dealer when you need to repair air conditioner.
- Do not block air outlet or air inlet. It may cause malfunction.
- If you need to relocate the air conditioner to another place, only the qualified person can perform the work. Otherwise, it may cause personal injury or damage.
- Do not step on top panel of outdoor unit, or put heavy objects. It may cause damage or personal injury.
- Do not extend fingers or objects into air inlet or air outlet. It may cause personal injury or damage.
- Air Conditioner should be properly grounded. Incorrect grounding may cause electric shock.
- Do install the circuit break. If not, it may cause malfunction.
- Installation and maintenance must be performed by qualified professionals. Otherwise, it may cause personal injury or damage.
Precautions

Working temperature range

<table>
<thead>
<tr>
<th></th>
<th>Indoor side DB/WB(℃)</th>
<th>Outdoor side DB/WB(℃)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum cooling</td>
<td>32/23</td>
<td>43/26</td>
</tr>
<tr>
<td>Maximum heating</td>
<td>27/-</td>
<td>24/18</td>
</tr>
</tbody>
</table>

- The operating temperature range (outdoor temperature) for cooling only unit is 18℃ ~48℃; for heat pump unit is -15℃ ~ 48℃.

Parts name

Outdoor Unit

NOTICE:
Actual product may be different from above graphics, please refer to actual products.
Installation dimension diagram

- Drainage pipe
- Space to the obstruction: at least 30cm
- Space to the obstruction: at least 50cm
- Space to the obstruction: at least 200cm
- Space to the wall: at least 30cm
- Space to the wall: at least 50cm
- Drainage pipe
Tools for installation

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

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

Selection of installation location

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

1. The place with strong heat sources, vapors, flammable or explosive gas, or volatile objects spread in the air.
2. The place with high-frequency devices (such as welding machine, medical equipment).
3. The place near coast area.
4. The place with oil or fumes in the air.
5. The place with sulfureted gas.
6. Other places with special circumstances.
7. The appliance shall not be installed in the laundry.

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

Safety precaution

1. Must follow the electric safety regulations when installing the unit.
2. According to the local safety regulations, use qualified power supply circuit and circuit break.
3. Make sure the power supply matches with the requirement of air conditioner.
   Unstable power supply or incorrect wiring or malfunction. Please install proper power supply cables before using the air conditioner.
4. Properly connect the live wire, neutral wire and grounding wire of power socket.
5. Be sure to cut off the power supply before proceeding any work related to electricity and safety.
6. Do not put through the power before finishing installation.
7. If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.
8. The temperature of refrigerant circuit will be high, please keep the interconnection cable away from the copper tube.
9. The appliance shall be installed in accordance with national wiring regulations.
10. Installation must be performed in accordance with the requirement of NEC and CEC by authorized personnel only

Grounding requirement

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

<table>
<thead>
<tr>
<th>Air-conditioner</th>
<th>Circuit break capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>09K</td>
<td>10A</td>
</tr>
<tr>
<td>12K</td>
<td>16A</td>
</tr>
<tr>
<td>18K</td>
<td>16A</td>
</tr>
<tr>
<td>24、28K</td>
<td>25A</td>
</tr>
</tbody>
</table>
Installation of outdoor unit

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

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

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

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

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

Step three: fix outdoor unit

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

Step four: connect indoor and outdoor pipes

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

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

3. Pretightening the union nut with hand.

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

<table>
<thead>
<tr>
<th>Hex nut diameter</th>
<th>Tightening torque (N·m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Φ 6</td>
<td>15~20</td>
</tr>
<tr>
<td>Φ 9.52</td>
<td>30~40</td>
</tr>
<tr>
<td>Φ 12</td>
<td>45~55</td>
</tr>
<tr>
<td>Φ 16</td>
<td>60~65</td>
</tr>
<tr>
<td>Φ 19</td>
<td>70~75</td>
</tr>
</tbody>
</table>

Step five: connect outdoor electric wire

1. Remove the wire clip; connect the power connection cord and signal control cord to the wiring terminal according to the color; fix them with screws.
Installation of outdoor unit

2. Fix the power connection cord and signal control cord with wire clip.

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

Step six: Installation connection wires of DRED module

Note:
- For the connection wire and power cord of DRED module, it’s suggested to use rubber cord that is pursuant to IEC 57 of IEC 60245. If the power cord and connection wire use H05VV-F or other conducting wires that are unsuitable for outdoors, we suggest user should install the power cord and connection wire in wire-leading ducts that are separated from rain and violet ray.
- DRED module should be installed indoors or inside an enclosed space that can prevent rain and violet ray.
- The connection wire of DRED module and the wire connecting indoor unit and outdoor unit shall share a same wire clip. Another wire clip is used to secure the power cord of outdoor unit (as picture shows).

Note: Below picture is for reference. Please refer to actual products.
Step seven: neaten the pipes

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

2. If the outdoor unit is higher than the wall hole, you must set a U-shaped curve in the pipe before pipe goes into the room, in order to prevent rain from getting into the room.

Note:
- The through-wal height of drain hose shouldn't be higher than the outlet pipe hole of indoor unit.
- The water outlet can't be placed in water in order to drain smoothly.
- Slant the drain hose slightly downwards. The drain hose can't be curved, raised and fluctuant, etc.
Vacuum pumping

Use vacuum pump

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

Leakage detection

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

- Check according to the following requirement after finishing installation.

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

Test operation

1. Preparation of test operation
   - The client approves the air conditioner.
   - Specify the important notes for air conditioner to the client.

2. Method of test operation
   - Put through the power, press ON/OFF button on the remote controller to start operation.
   - Press MODE button to select AUTO, COOL, DRY, FAN and HEAT to check whether the operation is normal or not.
   - If the ambient temperature is lower than 16°C, the air conditioner can’t start cooling.
**Configuration of connection pipe**

1. Standard length of connection pipe
   - 5m, 7.5m, 8m.

2. Min. length of connection pipe is 3m.

3. Max. length of connection pipe and max. high difference.

<table>
<thead>
<tr>
<th>Cooling capacity</th>
<th>Max length of connection pipe</th>
<th>Max height difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>5000Btu/h (1465W)</td>
<td>15</td>
<td>5</td>
</tr>
<tr>
<td>7000Btu/h (2051W)</td>
<td>15</td>
<td>5</td>
</tr>
<tr>
<td>9000Btu/h (2637W)</td>
<td>15</td>
<td>5</td>
</tr>
<tr>
<td>12000Btu/h (3516W)</td>
<td>20</td>
<td>10</td>
</tr>
<tr>
<td>18000Btu/h (5274W)</td>
<td>25</td>
<td>10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cooling capacity</th>
<th>Max length of connection pipe</th>
<th>Max height difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>24000Btu/h (7032W)</td>
<td>25</td>
<td>10</td>
</tr>
<tr>
<td>28000Btu/h (8204W)</td>
<td>30</td>
<td>10</td>
</tr>
<tr>
<td>36000Btu/h (10548W)</td>
<td>30</td>
<td>20</td>
</tr>
<tr>
<td>42000Btu/h (12306W)</td>
<td>30</td>
<td>20</td>
</tr>
<tr>
<td>48000Btu/h (14064W)</td>
<td>30</td>
<td>20</td>
</tr>
</tbody>
</table>

4. The additional refrigerant oil and refrigerant charging required after prolonging connection pipe
   - After the length of connection pipe is prolonged for 10m at the basis of standard length, you should add 5ml of refrigerant oil for each additional 5m of connection pipe.
   - The calculation method of additional refrigerant charging amount (on the basis of liquid pipe):
     Additional refrigerant charging amount = prolonged length of liquid pipe × additional refrigerant charging amount per meter
   - When the length of connection pipe is above 5m, add refrigerant according to the prolonged length of liquid pipe. The additional refrigerant charging amount per meter is different according to the diameter of liquid pipe. See the following sheet.
### Configuration of connection pipe

Additional refrigerant charging amount for R22, R407C, R410A and R134a

<table>
<thead>
<tr>
<th>Diameter of connection pipe</th>
<th>Outdoor unit throttle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liquid pipe(mm)</td>
<td>Gas pipe(mm)</td>
</tr>
<tr>
<td>Φ6</td>
<td>Φ9.52 or Φ12</td>
</tr>
<tr>
<td>Φ6 or Φ9.52</td>
<td>Φ16 or Φ19</td>
</tr>
<tr>
<td>Φ12</td>
<td>Φ19 or Φ22.2</td>
</tr>
<tr>
<td>Φ16</td>
<td>Φ25.4 or Φ31.8</td>
</tr>
<tr>
<td>Φ19</td>
<td>_</td>
</tr>
<tr>
<td>Φ22.2</td>
<td>_</td>
</tr>
</tbody>
</table>
Pipe expanding method

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

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

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

C: Put on suitable insulating pipe

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

E: Expand the port
- Expand the port with expander.

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

<table>
<thead>
<tr>
<th>Outer diameter (mm)</th>
<th>A(mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Φ6-6.35(1/4&quot;)</td>
<td>1.3</td>
</tr>
<tr>
<td>Φ9.52(3/8&quot;)</td>
<td>1.6</td>
</tr>
<tr>
<td>Φ12-12.7(1/2&quot;)</td>
<td>1.8</td>
</tr>
<tr>
<td>Φ15.8-16(5/8&quot;)</td>
<td>2.4</td>
</tr>
</tbody>
</table>

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