



# IEWQ/ICHQ Series High Wall Inverter Installation Manual

ENGLISH

- ✓ Read this Manual before the operation and keep it for reference.
- ✓ Read all safety precautions on the manual, improper use can cause serious injury.

Specification and performance data listed herein are subject to change without notice

[www.omegainverter.com](http://www.omegainverter.com)



Is a product of **OMEGA** Environmental Technologies LLC.

---

## Table of Contents

<b>Part I : Technical Information</b> .....	1
<b>1. Summary</b> .....	1
<b>Part II : Installation and Maintenance</b> .....	2
<b>2. Notes for Installation and Maintenance</b> .....	2
<b>3. Installation</b> .....	5
<b>3.1 Installation Dimension Diagram</b> .....	5
<b>3.2 Installation Parts-checking</b> .....	7
<b>3.3 Selection of Installation Location</b> .....	7
<b>3.4 Requirement For Electric Connection</b> .....	7
<b>3.5 Installation of Indoor Unit</b> .....	7
<b>3.6 Installation of Outdoor Unit</b> .....	10
<b>3.7 Vacuum Pumping and Leak Detection</b> .....	11
<b>3.8 Check after Installation and Test Operation</b> .....	11

---

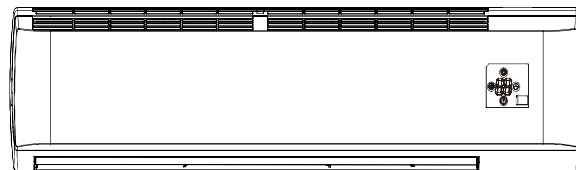
# Part I : Technical Information

---

## 1. Summary

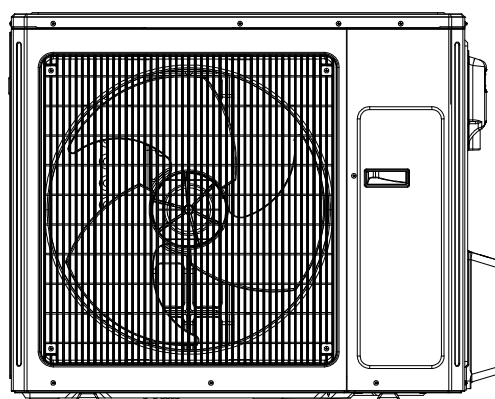
### Indoor Unit

IEWQ036J3A-RWI100



### Outdoor Unit

ICHQ036J3A-RLH100



### Remote Controller:



# Part II : Installation and Maintenance

## 2. Notes for Installation and Maintenance

### Safety Precautions: Important!

Please read the safety precautions carefully before installation and maintenance.

The following contents are very important for installation and maintenance.

Please follow the instructions below.

- The installation or maintenance must accord with the instructions.
- Comply with all national electrical codes and local electrical codes.
- Pay attention to the warnings and cautions in this manual.
- All installation and maintenance shall be performed by distributor or qualified person.
- All electric work must be performed by a licensed technician according to local regulations and the instructions given in this manual.
- Be caution during installation and maintenance. Prohibit incorrect operation to prevent electric shock, casualty and other accidents.



### Warnings

#### Electrical Safety Precautions:

1. Cut off the power supply of air conditioner before checking and maintenance.
2. The air condition must apply specialized circuit and prohibit share the same circuit with other appliances.
3. The air conditioner should be installed in suitable location and ensure the power plug is touchable.
4. Make sure each wiring terminal is connected firmly during installation and maintenance.
5. Have the unit adequately grounded. The grounding wire Can't be used for other purposes.
6. Must apply protective accessories such as protective boards, cable-cross loop and wire clip.
7. The live wire, neutral wire and grounding wire of power supply must be corresponding to the live wire, neutral wire and grounding wire of the air conditioner.
8. The power cord and power connection wires Can't be pressed by hard objects.
9. If power cord or connection wire is broken, it must be replaced by a qualified person.

10. If the power cord or connection wire is not long enough, please get the specialized power cord or connection wire from the manufacture or distributor. Prohibit prolong the wire by yourself.

11. For the air conditioner without plug, an air switch must be installed in the circuit. The air switch should be all-pole parting and the contact parting distance should be more than 3mm.

12. Make sure all wires and pipes are connected properly and the valves are opened before energizing.

13. Check if there is electric leakage on the unit body. If yes, please eliminate the electric leakage.

14. Replace the fuse with a new one of the same specification if it is burnt down; dont replace it with a cooper wire or conducting wire.

15. If the unit is to be installed in a humid place, the circuit breaker must be installed.

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

●When installing or relocating the unit, be sure to keep the refrigerant circuit free from air or substances other than the specified refrigerant.

Any presence of air or other foreign substance in the refrigerant circuit will cause system pressure rise or compressor rupture, resulting in injury.

●When installing or moving this unit, do not charge the refrigerant which is not comply with that on the nameplate or unqualified refrigerant.

Otherwise, it may cause abnormal operation, wrong action, mechanical malfunction or even series safety accident.

●When refrigerant needs to be recovered during relocating or repairing the unit, be sure that the unit is running in cooling mode. Then, fully close the valve at high pressure side (liquid valve). About 30-40 seconds later, fully close the valve at low pressure side (gas valve), immediately stop the unit and disconnect power. Please note that the time for refrigerant recovery should not exceed 1 minute.

If refrigerant recovery takes too much time, air may be sucked in and cause pressure rise or compressor rupture, resulting in injury.

●During refrigerant recovery, make sure that liquid valve and gas valve are fully closed and power is disconnected before detaching the connection pipe.

If compressor starts running when stop valve is open and connection pipe is not yet connected, air will be sucked in and cause pressure rise or compressor rupture, resulting in injury.

●When installing the unit, make sure that connection pipe is securely connected before the compressor starts running. If compressor starts running when stop valve is open and

---

connection pipe is not yet connected, air will be sucked in and cause pressure rise or compressor rupture, resulting in injury.

- Prohibit installing the unit at the place where there may be leaked corrosive gas or flammable gas.

If there leaked gas around the unit, it may cause explosion and other accidents.

- Do not use extension cords for electrical connections. If the electric wire

is not long enough, please contact a local service center authorized and ask for a proper electric wire.

Poor connections may lead to electric shock or fire.

- Use the specified types of wires for electrical connections between the indoor and outdoor units. Firmly clamp the wires so that their terminals receive no external stresses.

Electric wires with insufficient capacity, wrong wire connections and insecure wire terminals may cause electric shock or fire.

#### **Installation Safety Precautions:**

1. Select the installation location according to the requirement of this manual.(See the requirements in installation part)
2. Handle unit transportation with care; the unit should not be carried by only one person if it is more than 20kg.
3. When installing the indoor unit and outdoor unit, a sufficient fixing bolt must be installed; make sure the installation support is firm.
4. Wear safety belt if the height of working is above 2m.
5. Use equipped components or appointed components during installation.
6. Make sure no foreign objects are left in the unit after finishing installation.

#### **Refrigerant Safety Precautions:**

1. Avoid contact between refrigerant and fire as it generates poisonous gas; Prohibit prolong the connection pipe by welding.
2. Apply specified refrigerant only. Never have it mixed with any other refrigerant. Never have air remain in the refrigerant line as it may lead to rupture or other hazards.
3. Make sure no refrigerant gas is leaking out when installation is completed.
4. If there is refrigerant leakage, please take sufficient measure to minimize the density of refrigerant.
5. Never touch the refrigerant piping or compressor without wearing glove to avoid scald or frostbite.

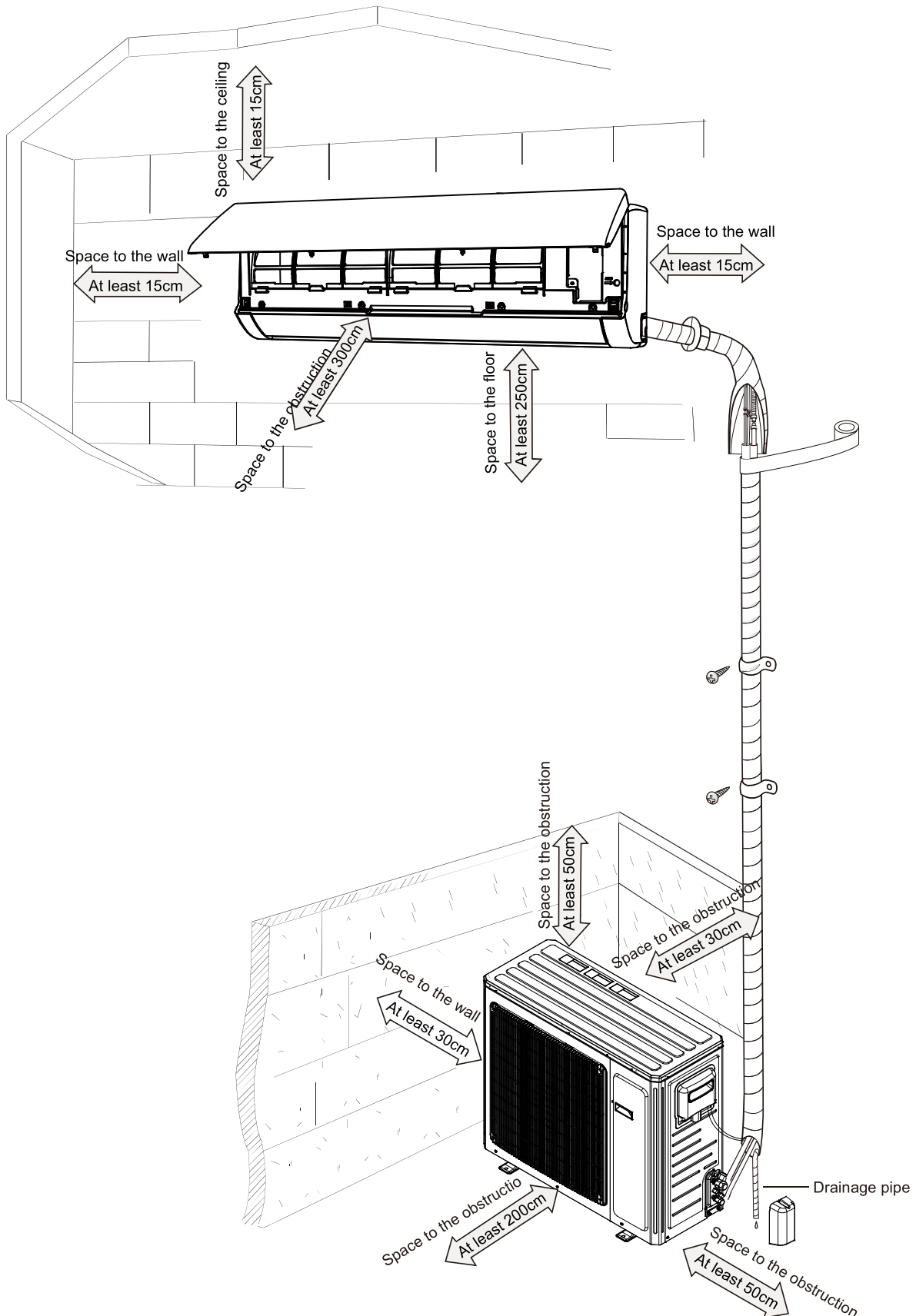
**Improper installation may lead to fire hazard, explosion, electric shock or injury.**

## Main Tools for Installation and Maintenance

<p>1. Level meter, measuring tape</p> 	<p>2. Screw driver</p> 	<p>3. Impact drill, drill head, electric drill</p> 
<p>4. Electroprobe</p> 	<p>5. Universal meter</p> 	<p>6. Torque wrench, open-end wrench, inner hexagon spanner</p> 
<p>7. Electronic leakage detector</p> 	<p>8. Vacuum pump</p> 	<p>9. Pressure meter</p> 
<p>10. Pipe pliers, pipe cutter</p> 	<p>11. Pipe expander, pipe bender</p> 	<p>12. Soldering appliance, refrigerant container</p> 

# 3. Installation

## 3.1 Installation Dimension Diagram







## 3.2 Installation Parts-checking

No.	Name	No.	Name
1	Indoor unit	8	Sealing gum
2	Outdoor unit	9	Wrapping tape
3	Connection pipe	10	Support of outdoor unit
4	Drainage pipe	11	Fixing screw
5	Wall-mounting frame	12	Drainage plug(cooling and heating unit)
6	Connecting cable(power cord)	13	Owners manual, remote controller
7	Wall pipe		

### ⚠ Note:

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

## 3.3 Selection of Installation Location

### 1. 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.
- (8) It's not allowed to be installed on the unstable or motive base structure (such as truck) or in the corrosive environment (such as chemical factory).

### 2. Indoor Unit:

- (1) There should be no obstruction near air inlet and air outlet.
- (2) Select a location where the condensation water can be dispersed easily and won't affect other people.
- (3) Select a location which is convenient to connect the outdoor unit and near the power socket.
- (4) Select a location which is out of reach for children.
- (5) The location should be able to withstand the weight of indoor unit and won't increase noise and vibration.
- (6) The appliance must be installed 2.5m above floor.
- (7) Don't install the indoor unit right above the electric appliance.
- (8) Please try your best to keep away from fluorescent lamp.

### 3. 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 fence for safety purpose.

## 3.4 Requirement For Electric Connection

### 1. Safety Precaution

- (1) Must follow the electric safety regulations when installing the unit.
- (2) According to the local safety regulations, use qualified power supply circuit and air switch.
- (3) Make sure the power supply matches with the requirement of air conditioner. Unstable power supply or incorrect wiring may result in electric shock, fire hazard or malfunction. Please install proper power supply cables before using the air conditioner.

Air-conditioner	Air switch capacity
36K	25A

- (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.

### 2. Grounding Requirement:

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

## 3.5 Installation of Indoor Unit

### 1. Choosing Installation location

Recommend the installation location to the client and then confirm it with the client.

### 2. Install Wall-mounting Frame

- (1) Hang the wall-mounting frame on the wall; adjust it in horizontal position with the level meter and then point out the screw fixing holes on the wall.
- (2) Drill the screw fixing holes on the wall with impact drill (the specification of drill head should be the same as the plastic expansion particle) and then fill the plastic expansion particles

in the holes.

(3) Fix the wall-mounting frame on the wall with tapping screws (ST4.2X25TA) and then check if the frame is firmly installed by pulling the frame. If the plastic expansion particle is loose, please drill another fixing hole nearby.

### 3. Install Wall-mounting Frame

(1) Choose the position of piping hole according to the direction of outlet pipe. The position of piping hole should be a little lower than the wall-mounted frame.(As show in Fig.1)

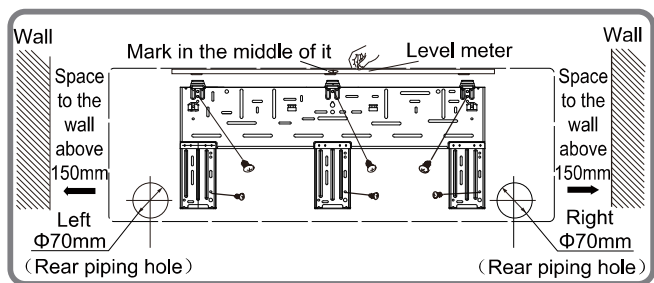


Fig.1

(2) Open a piping hole with the diameter of Φ70mm on the selected outlet pipe position. In order to drain smoothly, slant the piping hole on the wall slightly downward to the outdoor side with the gradient of 5-10°. (As show in Fig.2)

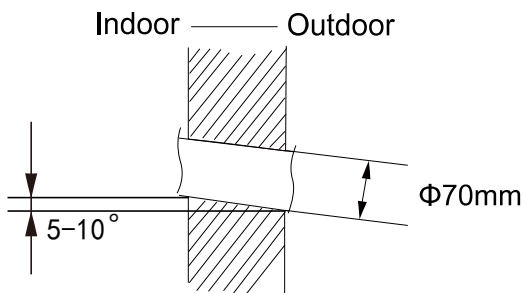


Fig.2

#### ⚠ Note:

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

### 4. Outlet Pipe

(1) The pipe can be led out in the direction of right, rear right, left or rear left.(As show in Fig.3)

(2) When selecting leading out the pipe from left or right, please cut off the corresponding hole on the bottom case.(As show in Fig.4)

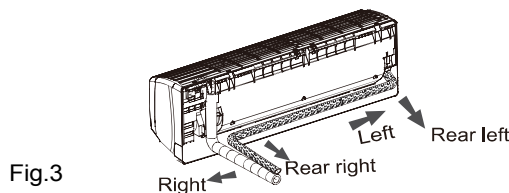


Fig.3

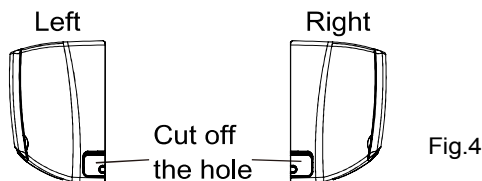


Fig.4

### 5. Connect the Pipe of Indoor Unit

(1) Aim the pipe joint at the corresponding bellmouth.(As show in Fig.5)

(2) Pretightening the union nut with hand.

(3) Adjust the torque force by referring to the following sheet. Place the open-end wrench on the pipe joint and place the torque wrench on the union nut. Tighten the union nut with torque wrench.(As show in Fig.6)

(4) Wrap the indoor pipe and joint of connection pipe with insulating pipe, and then wrap it with tape.(As show in Fig.7)

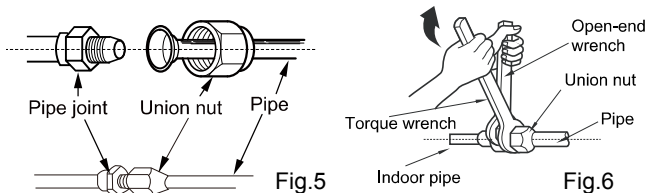
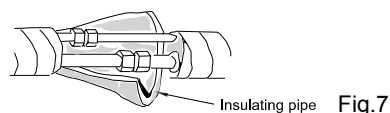


Fig.5

Fig.6



Insulating pipe Fig.7

Refer to the following table for wrench moment of force:

Hex nut diameter(mm)	Tightening torque(N·m)
Φ6	15~20
Φ9.52	30~40
Φ12	45~55
Φ16	60~65
Φ19	70~75

### 6. Install Drain Hose

(1) Connect the drain hose to the outlet pipe of indoor unit.(As show in Fig.8)

(2) Bind the joint with tape.(As show in Fig.9)

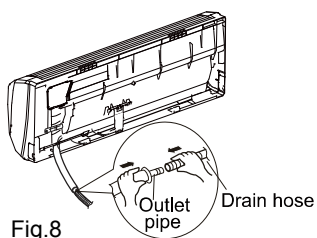


Fig.8

**⚠ Note:**

- (1) Add insulating pipe in the indoor drain hose in order to prevent condensation.
- (2) The plastic expansion particles are not provided. (As show in Fig.10)

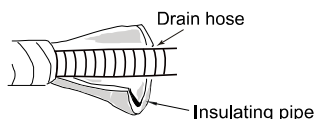


Fig.10

**7. Connect Wire of Indoor Unit**

- (1) Open the panel, remove the screw on the wiring cover and then take down the cover. (As show in Fig.11)

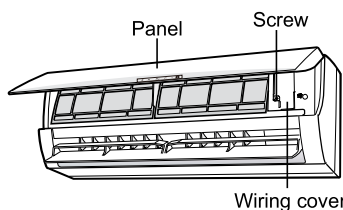


Fig.11

- (2) Make the power connection wire go through the cable-cross hole at the back of indoor unit and then pull it out from the front side. (As show in Fig.12)

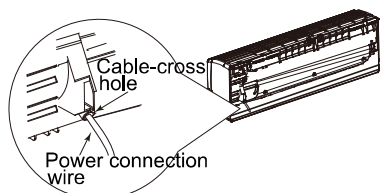
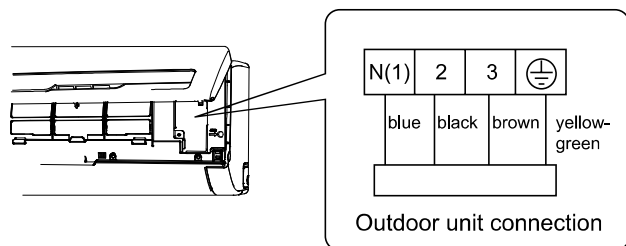


Fig.12

- (3) Remove the wire clip; connect the power connection wire to the wiring terminal according to the color; tighten the screw and then fix the power connection wire with wire clip. (As show in Fig.13)



Note: The wiring connect is for reference only, please refer to the actual one.

Fig.13

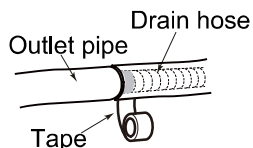


Fig.9

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

**⚠ Note:**

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

**8. Bind up Pipe**

- (1) Bind up the connection pipe, power cord and drain hose with the band. (As show in Fig.14)
- (2) Reserve a certain length of drain hose and power cord for installation when binding them. When binding to a certain degree, separate the indoor power and then separate the drain hose. (As show in Fig.15)
- (3) Bind them evenly.
- (4) The liquid pipe and gas pipe should be bound separately at the end.

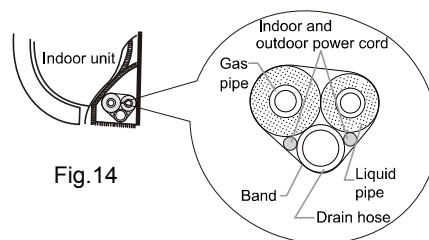


Fig.14

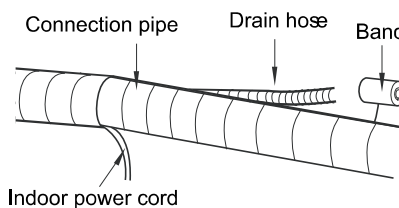


Fig.15

**⚠ Note:**

- (1) The power cord and control wire Can't be crossed or winding.
- (2) The drain hose should be bound at the bottom.

**9. Hang the Indoor Unit**

- (1) Put the bound pipes in the wall pipe and then make them pass through the wall hole.
- (2) Hang the indoor unit on the wall-mounting frame.
- (3) Stuff the gap between pipes and wall hole with sealing gum.
- (4) Fix the wall pipe. (As show in Fig.16)
- (5) Check if the indoor unit is installed firmly and closed to the wall. (As show in Fig.17)

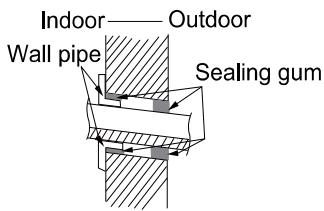


Fig.16

**⚠ Note:**

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

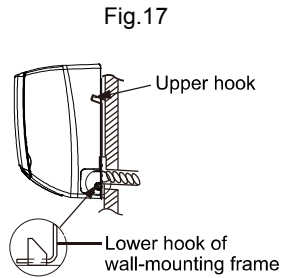


Fig.17

### 3.6 Installation of Outdoor Unit

#### 1. 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:**

- (1) Take sufficient protective measures when installing the outdoor unit.
- (2) Make sure the support can withstand at least four times the unit weight.
- (3) The outdoor unit should be installed at least 3cm above the floor in order to install drain joint.(As show in Fig.18)
- (4) 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.

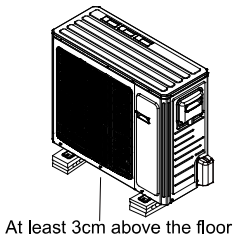


Fig.18

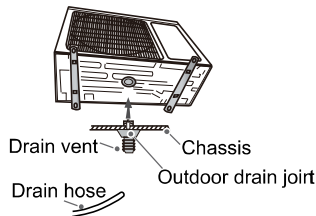


Fig.19

#### 2. Install Drain Joint(Only for cooling and heating unit)

- (1) Connect the outdoor drain joint into the hole on the chassis.
  - (2) Connect the drain hose into the drain vent.
- (As show in Fig.19)

#### 3. Fix Outdoor Unit

- (1) Place the outdoor unit on the support.
  - (2) Fix the foot holes of outdoor unit with bolts.
- (As show in Fig.20)

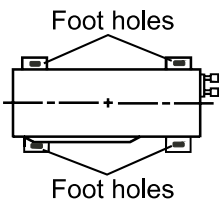


Fig.20

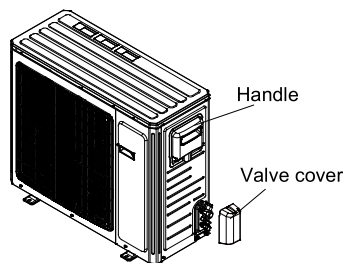


Fig.21

#### 4. Connect Indoor and Outdoor Pipes

- (1) Remove the screw on the handle and valve cover of outdoor unit and then remove the handle and valve cover.(As show in Fig.21)
- (2) Remove the screw cap of valve and aim the pipe joint at the bellmouth of pipe.(As show in Fig.22)

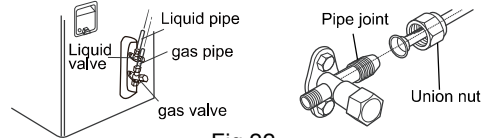


Fig.22

- (3) Pretightening the union nut with hand.
- (4) Tighten the union nut with torque wrench .

Refer to the following table for wrench moment of force :

Hex nut diameter(mm)	Tightening torque(N·m)
Φ6	15~20
Φ9.52	30~40
Φ12	45~55
Φ16	60~65
Φ19	70~75

#### 5. Connect Outdoor Electric Wire

- (1) Remove the wire clip; connect the power connection wire and power card to the wiring terminal according to the color; fix them with screws.(As show in Fig.23)

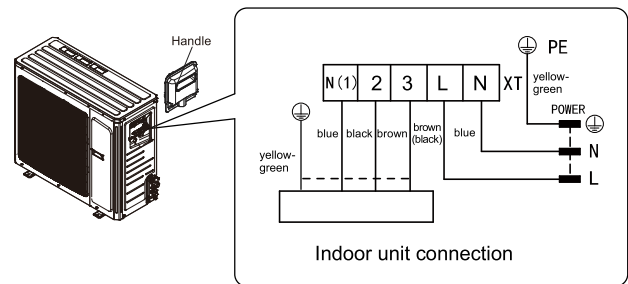


Fig.23

Note: the wiring connect is for reference only, please refer to the actual one.

- (2) Fix the power connection wire with wire clip.

**⚠ Note:**

- (1) After tightening the screw, pull the power cord slightly to check if it is firm.
- (2) Never cut the power connection wire to prolong or shorten the distance.

#### 6. 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.(As show in Fig.24)

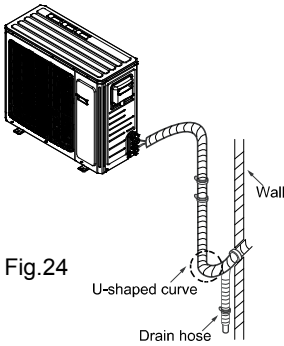


Fig.24

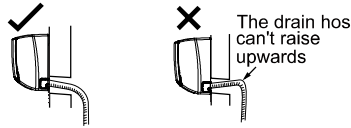


Fig.25

**⚠ Note:**

- (1) The through-wall height of drain hose shouldnt be higher than the outlet pipe hole of indoor unit.(As show in Fig.25)
- (2) Slant the drain hose slightly downwards. The drain hose Can't be curved, raised and fluctuant, etc.(As show in Fig.26)
- (3) The water outlet Can't be placed in water in order to drain smoothly.(As show in Fig.27)

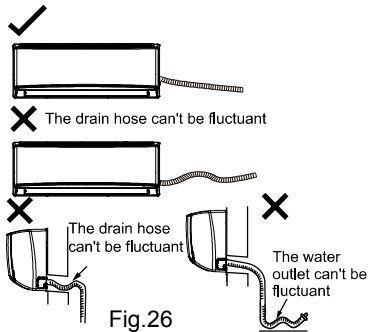


Fig.26

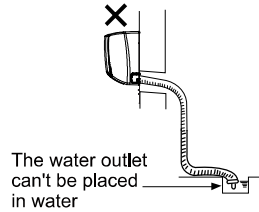


Fig.27

### 3.7 Vacuum Pumping and Leak Detection

#### 1. 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.(As show in Fig.28)

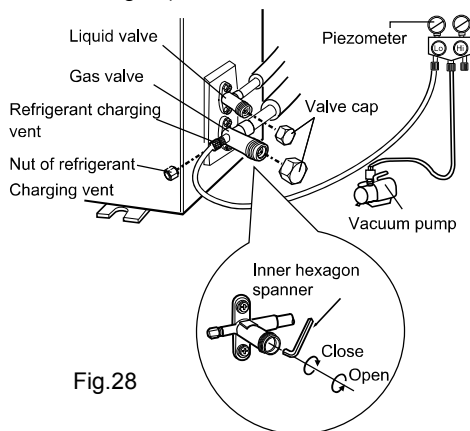


Fig.28

#### 2. 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, theres a leakage.

### 3.8 Check after Installation and Test Operation

#### 1. Check after Installation

Check according to the following requirement after finishing installation.

NO.	Items to be checked	Possible malfunction
1	Has the unit been installed firmly?	The unit may drop, shake or emit noise.
2	Have you done the refrigerant leakage test?	It may cause insufficient cooling (heating) capacity.
3	Is heat insulation of pipeline sufficient?	It may cause condensation and water dripping.
4	Is water drained well?	It may cause condensation and water dripping.
5	Is the voltage of power supply according to the voltage marked on the nameplate?	It may cause malfunction or damage the parts.
6	Is electric wiring and pipeline installed correctly?	It may cause malfunction or damage the parts.
7	Is the unit grounded securely?	It may cause electric leakage.
8	Does the power cord follow the specification?	It may cause malfunction or damage the parts.
9	Is there any obstruction in air inlet and air outlet?	It may cause insufficient cooling (heating) capacity.
10	The dust and sundries caused during installation are removed?	It may cause malfunction or damaging the parts.
11	The gas valve and liquid valve of connection pipe are open completely?	It may cause insufficient cooling (heating) capacity.
12	Is the inlet and outlet of piping hole been covered?	It may cause insufficient cooling (heating) capacity or waster eletricity.

#### 2. Test Operation

- (1) Preparation of test operation
  - The client approves the air conditioner installation.
  - 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.



**OMEGA**  
ENVIRONMENTAL  
TECHNOLOGIES LLC.

17702 Mitchell North, #101  
Irvine, CA. 92614 .USA  
Tel: 714 795 2830  
Fax: 714 966 1646  
info@otecometa.com  
www.otecometa.com

**OTEC**<sup>TM</sup>  
AIR CONDITIONING

**Showroom & Technology Center**  
11380 Interchange Circle North  
Miramar, FL 33025 .USA  
Tel: 305 901 1270  
Fax: 954 212 8280  
info@otecometa.com  
www.otecometa.com  
IEWQ(CHQ)J3A-IM1R0622