improve your life

PACKAGE DCI R32

CASSETTE UNITS

USER and INSTALLATION MANUAL

OUTDOOR UNITS	INDOOR UNITS
AEG ECO 35PIH	ASG ECO 35PH
AEG ECO 50PIH	ASG ECO 50PH
AEG ECO 70PIH	ASG ECO 70PH
AEG ECO 85PIH	ASG ECO 85PH
AEG ECO 100PIH	ASG ECO 100PH
AEG ECO 140PIH	ASG ECO 140PH
AEG ECO 100PIH3	ASG ECO 160PH
AEG ECO 140PIH3	
AEG ECO 160PIH3	

Please read this manual carefully before installing and using the air conditioner, and retain for future reference.

V 01/20

To Users

Thank you for selecting Argo 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 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.

(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 has gone through strict inspection and operational test before leaving the factory. In order to avoid damage due to improper disassembly and inspection, which may impact the normal operation of unit, please do not disassemble the unit by yourself. You can contact with the special maintenance center of our company if necessary.

(5) For personal injury or property loss and damage caused by improper operation such as improper installation and debugging, unnecessary maintenance, violation of related national laws and rules and industrial standard, and violation of this instruction manual, etc., we will bear no liability.

(6) When the product is faulted and cannot be operated, please contact with our maintenance center as soon as possible by providing the following information.

1）Contents of nameplate of product (model, cooling/heating capacity, product No., ex-factory date).

2）Malfunction status (specify the situations before and after the error occurs).

(7) 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. We have the right to make necessary revision to the product from time to time due to the reason of sales or production, and reserve the right to revise the contents without further notice.

(8) Indoor unit must not be installed in a laundry.

(9) 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.

(10) Argoclima assumes no responsibility for personal injury, property loss or equipment damage caused by improper installation and commissioning, unnecessary maintenance, or not following relevant national rules and regulations, industrial standards and requirements in this instruction manual.

(11) The final right to interpret for this instruction manual belongs to Argoclima.

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 Notices (Please be sure to abide)

SPECIAL WARNING:

(1) Be sure to comply with national gas regulations.

(2) Do not pierce or burn.

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

(4) Be aware that refrigerants may not contain an odor.

(5) Appliance shall be installed, operated and stored in a room with a floor area larger than"X" m^2（"X" see section 3.1.1）.

(6) The appliance shall be stored in a room without continuously operating ignition sources (for example: open flames, an operating gas appliance or an operating electric heater).

PROHIBITED: This sign indicates that the operation must be prohibited. Improper operation may cause severe damage or death to people.

WARNING: If not abide strictly, it may cause severe damage to the unit or the people.

NOTICE: If not abide strictly, it may cause slight or medium damage to the unit or the people.

OBSERVED: This sign indicates that the items must be observed. Improper operation may cause damage to people or property.

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.

Please read this operating manual carefully before operating the unit.

The air conditioner is charged with inflammable refrigerant R32 (GWP: 675).

Before using the air conditioner, please read the instruction manual.

Before installing the air conditioner, please read the instruction manual.

Before repairing the air conditioner, please read the instruction manual.
The figures in this manual may be different with the material objects, please refer to the material objects for reference.

PROHIBITED
(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. Maintenance and repair requiring the assistance of other skilled personnel shall be carried out under the supervision of the person competent in the use of flammable refrigerants.
(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.

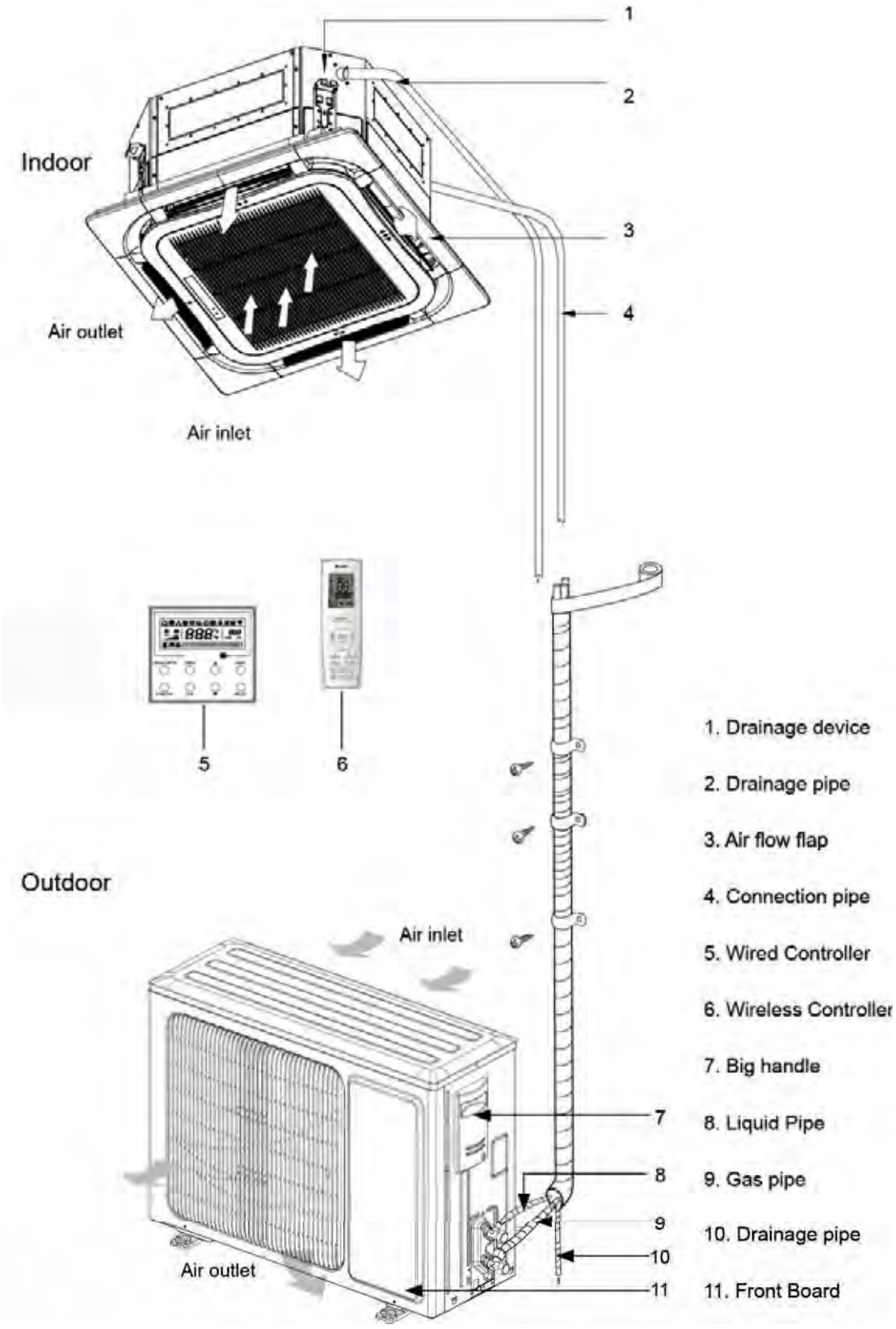
(6) Air conditioner should be stored with protective measures against mechanical damage caused by accident.
(7) If the installation space for air conditioner pipe is too small, adopt a protective measure to prevent the pipe from physical damage.
(8) During installation, use the specialized accessories 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.
(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 air return 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) Indoor unit can only be installed indoors while outdoor unit can be installed either indoors or outdoors. Never install the air conditioner in the following places: a) Places with oil smoke or volatile liquid: plastic parts may deteriorate and fall off or even cause water leakage. 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.

OBSERVED
(1) If wired control is to be used, it should be connected first before powering up the unit, otherwise the wired control may not be able to use.
(2) When installing the indoor unit, keep it away from television, wireless waves, and fluorescent.
(3) Only use soft dry cloth or slightly wet cloth with neutral detergent to clean the casing of the air conditioner.
(4) 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).

2 Product Introduction

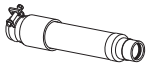
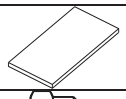
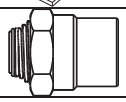
2.1 Overall Layout



2.2 Product Operating Range

	Cooling（DB）	Heating（DB）
Outdoor temperature	-20℃～48℃	-20℃～24℃
Indoor temperature	≥16℃	≤30℃

2.3 Standard Accessories

Indoor Unit Accessories				
No.	Name	Appearance	Q'ty	Usage
1	Drain Hose		1	To connect with the hard PVC drain pipe
2	Nut with Washer		4	To fix the hook on the cabinet of the unit.
3	Washer		10	To be used together with the hanger bolt for installing the unit.
4	Installation Paperboard		1	Used for ceiling drilling
5	Gasket Mounting Board		4	Used to prevent gasket from falling off
6	Wireless Controller +Battery		1+2	To control the indoor unit
7	Sealing Plaster		1	Used for holes through the wall
8	Fastener		6	To fasten the sponge/ Heat-shringkable Bushing
9	Insulation		1	To insulate the gas pipe
10	Insulation		1	To insulate the liquid pipe
11	Installation Paperboard		4	To insulate the drain pipe
12	Removal-Proof Screw Nut		1	To connect gas pipe
13	Removal-Proof Screw Nut		1	To connect liquid pipe
14	Enswathement		2	Used for winding the pipe connecting the indoor and outdoor units
15	Heat-Shringkable Bushing		1	Connect the front panel to the main body

Outdoor Unit Accessories				
No	Name	Appearance	Q'ty	Usage
1	Drain Plug		1or3	To plug the unused drain hole.
2	Drainage Connecter		1	To connect with the hard PVC drain pipe

3 Installation

3.1 Installation Preparation

3.1.1 Notice on Installation

(1) Notice on Refrigerant Concentration before Installation.

This air conditioner uses R32 refrigerant. The construction area for installation, operation and storage of the air conditioner must be larger than the minimum construction area. The minimum area for installation is determined by:

1) Refrigerant charging quantity for the entire system (ex-factory charging quantity + additional charging quantity);

2) Checking out in the applicable tables:

a) For indoor unit, confirm the model of indoor unit and check the corresponding table.

b) For outdoor unit that is installed or placed indoors, select the corresponding table according to the height of the room.

Height of the room	Select the applicable table
＜1.8m	Floor standing type
⩾1.8m	Wall mounted type

3) Refer to the following table to check out the minimum construction area.

Ceiling type			Wall mounted type			Floor standing type	
Weight(kg)	Area (m^2)		Weight(kg)	Area (m^2)		Weight (kg)	Area (m^2)
＜1.224	—		＜1.224	—		＜1.224	—
1.224	0.956		1.224	1.43		1.224	12.9
1.4	1.25		1.4	1.87		1.4	16.8
1.6	1.63		1.6	2.44		1.6	22.0

Ceiling type		Wall mounted type		Floor standing type	
Weight(kg)	Area (m^2)	Weight(kg)	Area (m^2)	Weight(kg)	Area (m^2)
1.8	2.07	1.8	3.09	1.8	27.8
2.0	2.55	2.0	3.81	2.0	34.3
2.2	3.09	2.2	4.61	2.2	41.5
2.4	3.68	2.4	5.49	2.4	49.4
2.6	4.31	2.6	6.44	2.6	58.0
2.8	5.00	2.8	7.47	2.8	67.3
3.0	5.74	3.0	8.58	3.0	77.2
3.2	6.54	3.2	9.76	3.2	87.9
3.4	7.38	3.4	11.0	3.4	99.2
3.6	8.27	3.6	12.4	3.6	111
3.8	9.22	3.8	13.8	3.8	124
4.0	10.2	4.0	15.3	4.0	137
4.2	11.3	4.2	16.8	4.2	151
4.4	12.4	4.4	18.5	4.4	166
4.6	13.5	4.6	20.2	4.6	182
4.8	14.7	4.8	22.0	4.8	198
5.0	16.0	5.0	23.8	5.0	215
5.2	17.3	5.2	25.8	5.2	232
5.4	18.6	5.4	27.8	5.4	250
5.6	20.0	5.6	29.9	5.6	269
5.8	21.5	5.8	32.1	5.8	289
6.0	23.0	6.0	34.3	6.0	309
6.2	24.5	6.2	36.6	6.2	330
6.4	26.1	6.4	39.1	6.4	351
6.6	27.8	6.6	41.5	6.6	374
6.8	29.5	6.8	44.1	6.8	397
7.0	31.3	7.0	46.7	7.0	420
7.2	33.1	7.2	49.4	7.2	445
7.4	34.9	7.4	52.2	7.4	470
7.6	36.9	7.6	55.1	7.6	496
7.8	38.8	7.8	58.0	7.8	522
8.0	10.8	8.0	61.0	8.0	549

(2) When installing an outdoor unit with single or double fans, hold the handle and then lift it up slowly (Do not touch the condenser with your hand or other objects). If you hold only one side of the casing, the casing may be pulled out of shape, so please hold the base of the unit as well. During installation, be sure to use the components specified in the instruction manual.

(3) Please use the charging machine specialized for R32 refrigerant; Before

charging, keep the refrigerant tank in an upright position. After charging, stick a label on the air conditioner saying no excessive charging.

(4) The following tools will be used: 1) Liquid-level gauge; 2) Screwdriver; 3) Electric driven rotary hammer; 4) Drill; 5) Pipe expander; 6) Torque wrench; 7) Open-end wrench; 8) Pipe cutter; 9) Leak detector; 10) Vacuum pump; 11) Pressure gauge; 12) Universal meter; 13) Hexagon wrench; 14) Tapeline.

3.1.2 Selection of Installation Location

 **WARNING**
①. If the outdoor unit will be exposed in strong wind, it must be securely located, otherwise it may fall down.
②. Install the air conditioner at a place where the inclination is less than 5°.
③. Do not install the unit at a place with direct sunlight.
④. Do not install the unit at a place with leakage of inflammable gas.

Selection of Installation Location for Indoor Unit (Select a location pursuant to the following condition).

(1) Air inlet and outlet of the indoor unit should be away from obstacles to make sure the unit's air flow can reach the entire room. Do not install the unit in a kitchen or a laundry.

(2) Install the unit in a room without naked flame, fire source or the risk of getting the refrigerant on fire.

(3) Select a location that can withstand 4 times the unit weight without increasing operating noise and vibration.

(4) The installation location must be level.

(5) The indoor piping length and wiring length should be within the allowable range.

(6) Select a place that can easily drain condensate and connect to the drain system of the air conditioner.

(7) If hoisting screw bolts are to be used, check whether the installation location is safe enough. If not safe, reinforce the location before installation.

(8) Indoor unit, power cord, connecting wires and communication cords should be at least 1m from television and radio. This is to prevent image interference or noise (Even at a distance of 1m, a very strong electric wave may still generate noise).

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) Install the outdoor unit at a place that is convenient for it to be connected to the indoor unit.

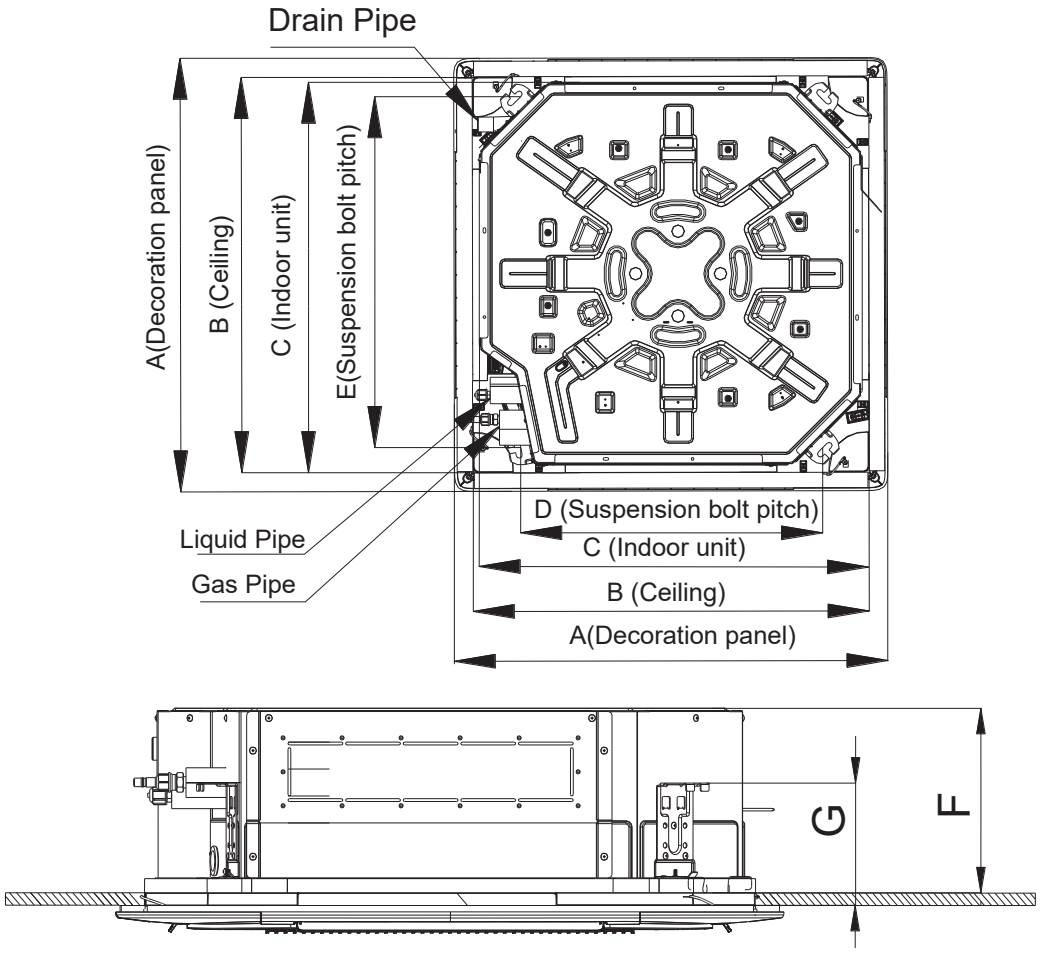
(8) Away from any object that may get the air conditioner generating noise.

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

3.1.3 Unit Dimension

 **WARNING**
①. Install the indoor unit in a location which can withstand a load of at least five times the weight of the main unit and which will not amplify sound or vibration.
②. If the installation location is not strong enough, the indoor unit may fall and cause injuries.
③. If the job is done with the panel frame only, there is a risk that the unit will come loose. Please take care.

(1) Indoor unit



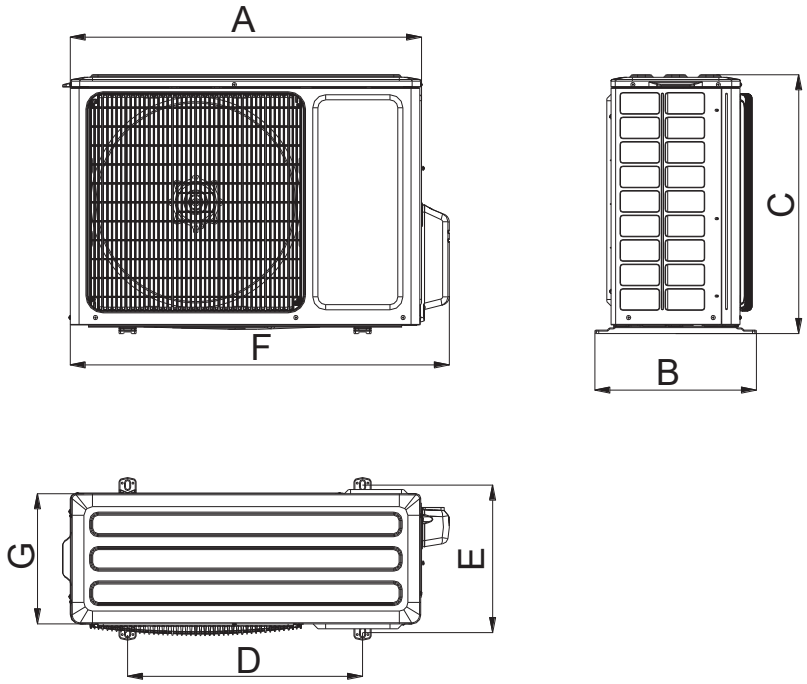
NOTICE
Drilling of ceiling opening and installation of air conditioner must be performed by professionals!

Unit: mm

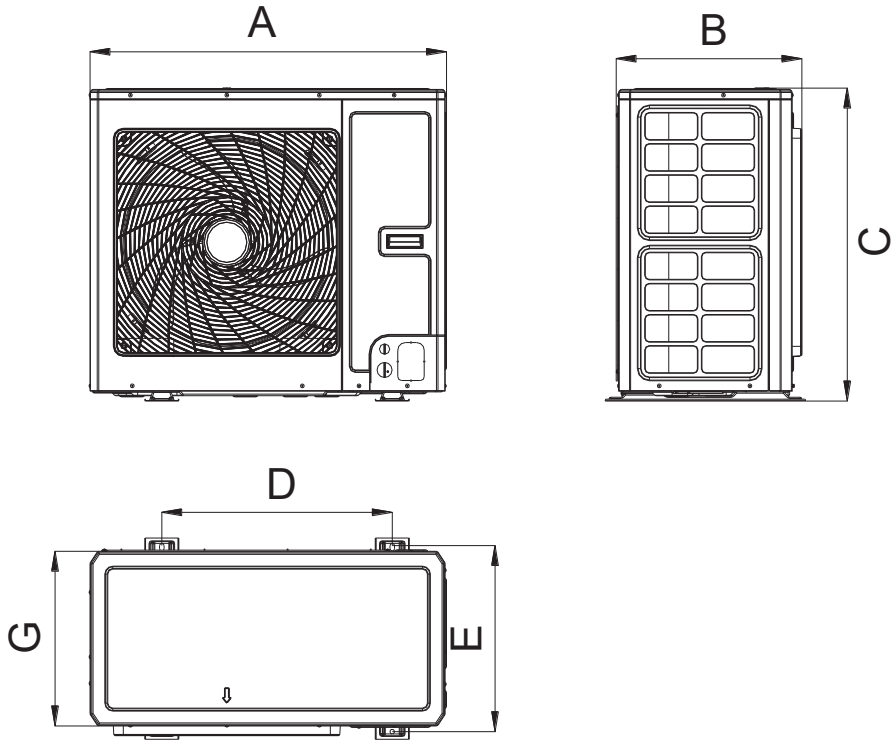
Dimensions / Model	A	B	C	D	E	F	G
35	620	580	570	520	560	265	140
50	620	580	570	520	560	265	140
70	950	870	840	660	790	240	134
85	950	870	840	660	790	240	134
100	950	870	840	660	790	240	134
140	950	870	840	660	790	290	134
162	950	870	840	660	790	290	134

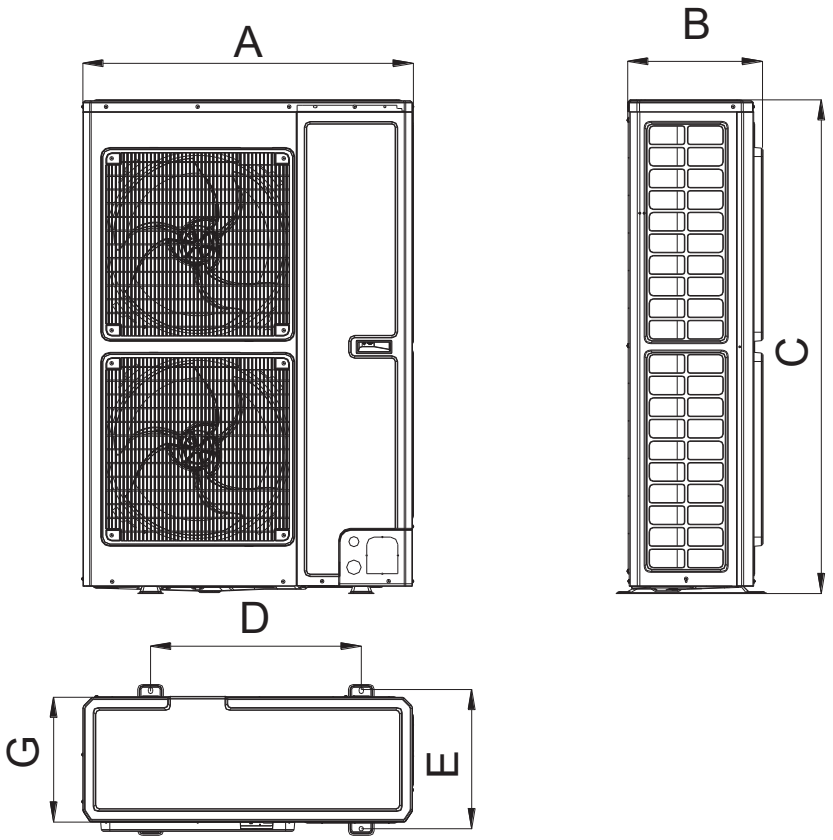
(2) Outdoor unit

35-70-85



100-140





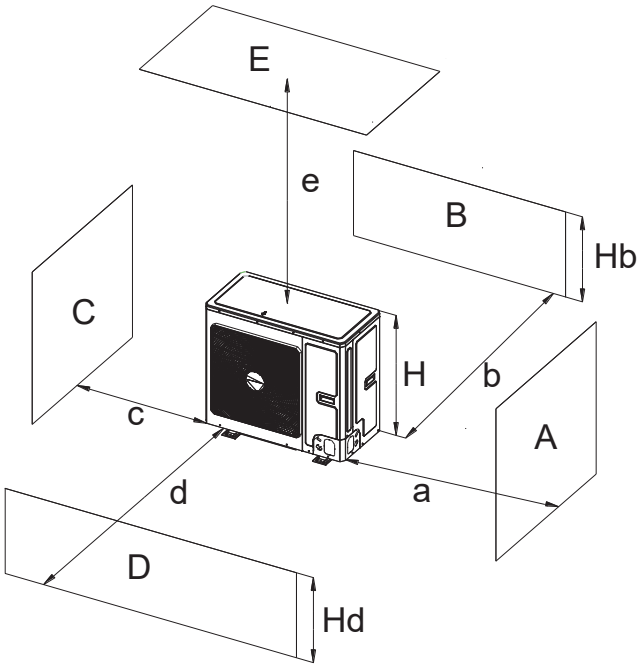
Unit: mm

Dimensions / Model	A	B	C	D	E	F	G
35	818	378	596	550	348	887	302
50	818	378	596	550	348	887	302
70	892	396	698	560	364	952	340
85	920	427	790	610	395	1002	370
100	940	530	820	610	486	/	460
	940	530	820	610	486	/	460
140	940	530	820	610	486	/	460
140	940	530	820	610	486	/	460
	940	530	820	610	486	/	460
	940	530	820	610	486	/	460
160	900	412	1345	572	378	/	340

3.1.4 Diagram of Unit Installation Space and Location

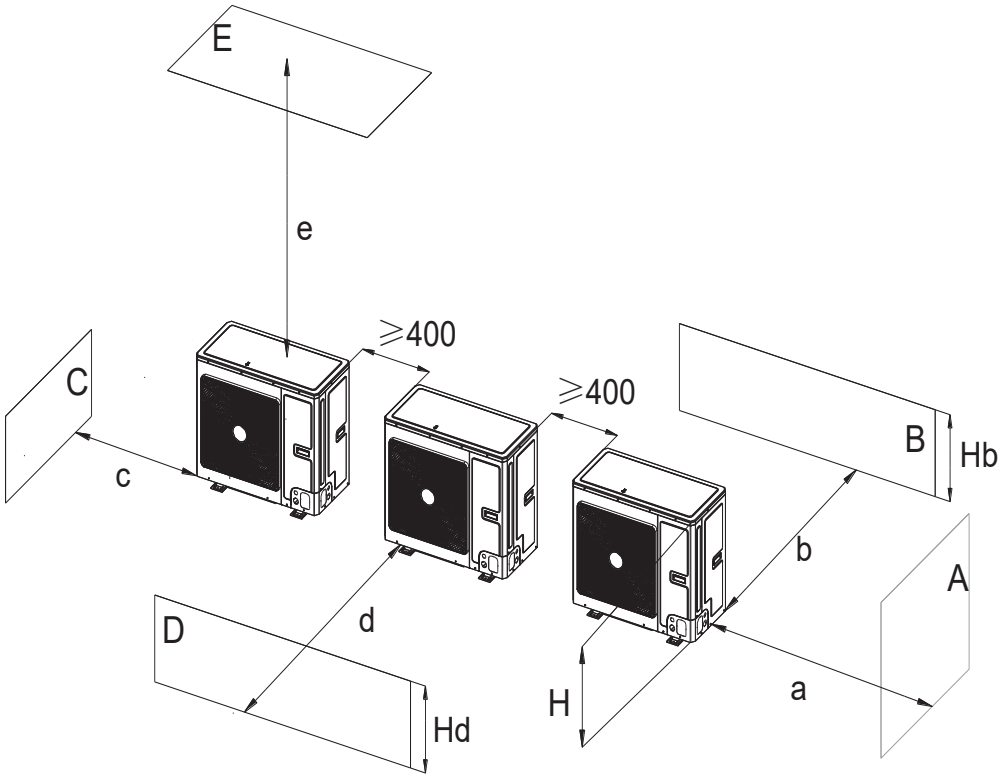
(1) Diagram of installation space and location for outdoor unit (Notice: for best performance of the outdoor unit, make sure its installation space conforms to the following installation dimensions).

1) When one outdoor unit is to be installe,



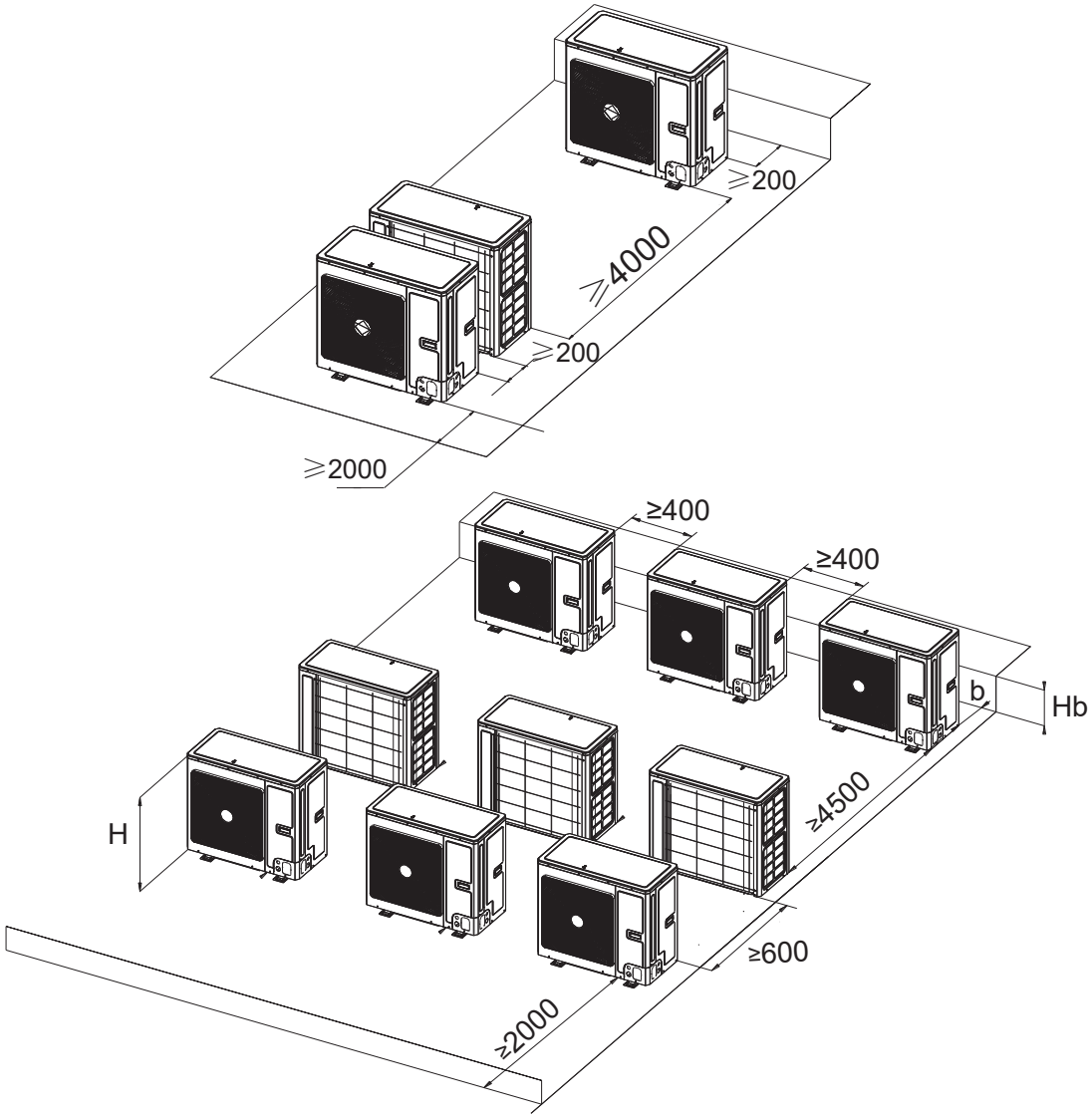
A~E	Hb Hd H		(mm)				
			a	b	c	d	e
B	—			≥100			
A,B,C,	—		≥300	≥100	≥100		
B,E	—			≥100			≥1000
A,B,C,E	—		≥300	≥150	≥150		≥1000
D	—					≥1000	
D,E	—					≥1000	≥1000
B,D	H_B< H_D	H_D> H		≥100		≥1000	
	H_B>H_D	H_D< H		≥100		≥1000	
B,D,E	H_B< H_D	H_B≤1/2 H		≥250		≥2000	≥1000
		1/2 H< H_B≤H		≥250		≥2000	≥1000
		H_B>H	Prohibited				
	H_B> H_D	H_D≤1/2 H		≥100		≥2000	≥1000
		1/2 H< H_D≤H		≥200		≥2000	≥1000
		H_D>1/2 H	Prohibited				

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



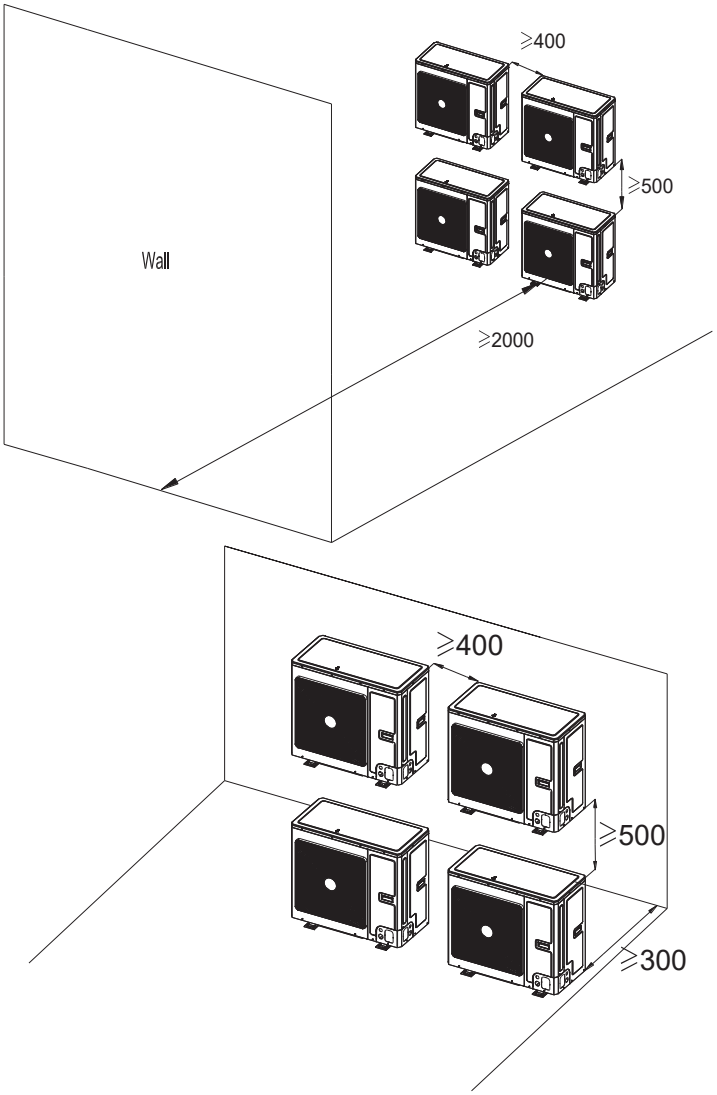
A~E	H_B H_D H		(mm)				
			a	b	c	d	e
A,B,C	—		≥300	≥300	≥1000		
A,B,C,E	—		≥300	≥300	≥1000		≥1000
D	—					≥2000	
D,E	—					≥2000	≥1000
B,D	HB< HD	H_D> H		≥300		≥2000	
	HB＞ HD	H_D≤1/2 H		≥250		≥2000	
		1/2 H＜H_D≤H		≥300		≥2500	
B,D,E	HB< HD	H_B≤1/2 H		≥300		≥2000	≥1000
		1/2 H＜H_B≤H		≥300		≥2500	≥1000
		H_B＞H	Prohibited				
	HB＞ HD	H_D≤1/2 H		≥250		≥2500	≥1000
		1/2 H＜H_D≤H		≥300		≥2500	≥1000
		H_D＞1/2 H	Prohibited				

3) When outdoor units are installed in rows,

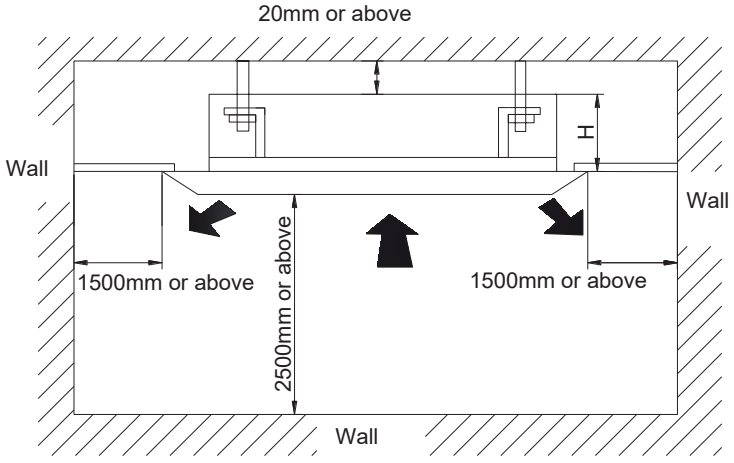


H_B H	B(mm)
$H_B \leq 1/2$ H	b≥250
1/2 H＜$H_B \leq$H	b≥300
H_B＞H	Prohibited

4) When outdoor units are installed one above another.



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

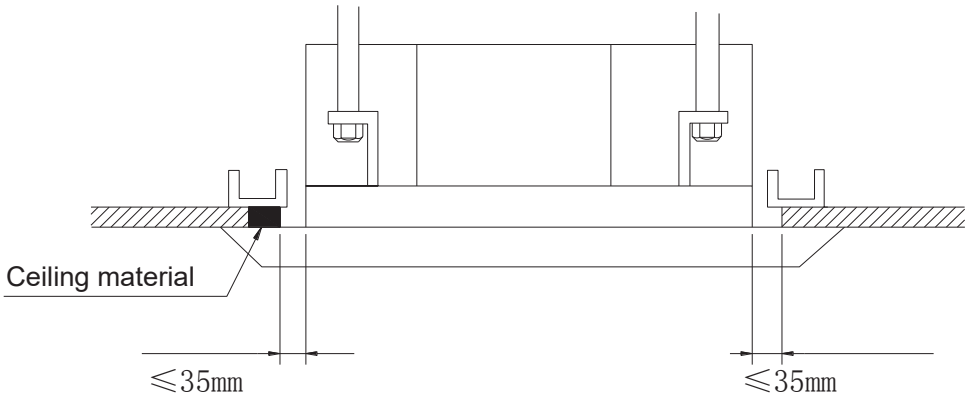


Model	H(mm)
35	285
50	285
70	260
85	260
100	260
	310
140	310
160	310

3.2 Unit Installation

3.2.1 Indoor Unit Installation

In order to make the front panel cover 20mm of the ceiling, the distance between the ceiling and the unit should be 35mm or less. If the distance between the ceiling and the unit is above 35mm, add some ceiling material to shorten the distance. See the following diagram.

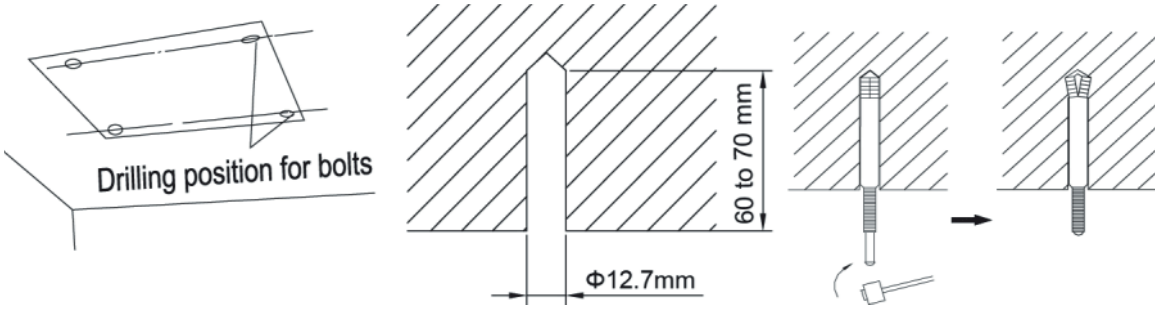


3.2.1.1 Hoisting the Main Body Unit

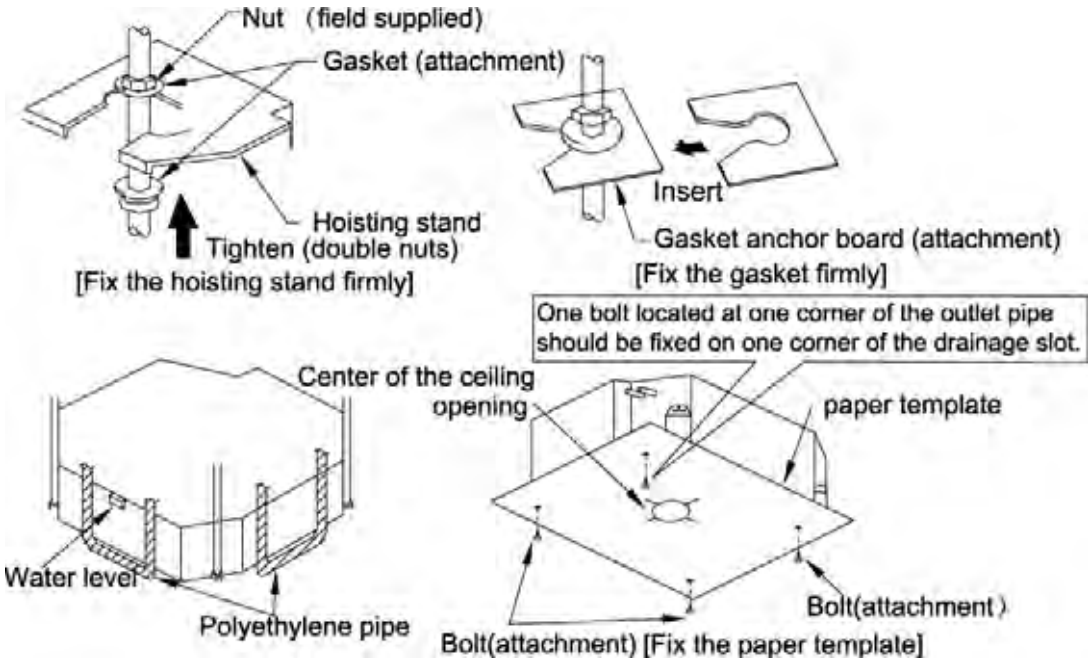
NOTICE
Please tightly screw up the nuts and bolts to prevent the air conditioner from falling.

(1) Installing the Suspension Bolts.

1) Using the installation template, drill holes for bolts (four holes).
2) Install the bolts to the ceiling at a place strong enough to hang the unit. Mark the bolt positions from the installation template. With a concrete drill, drill for 12.7 mm (1/2") diameter holes.
3) Insert the anchor bolts into the drilled holes, and drive the pins completely into the anchor bolts with a hammer.



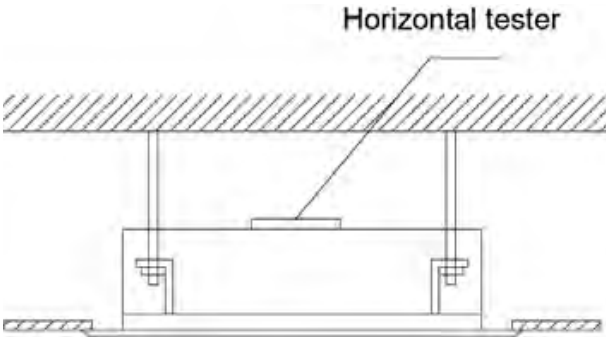
(2) Installing the Main Body Unit.



1) Install the hoisting stand on the hoisting screw by using nuts and gaskets at both the upper and lower sides of the hoisting stand. To prevent the gasket from breaking off, a gasket anchor board can be helpful.
2) Install the paper template on the unit, and fix the drain pipe at the outlet vent.
3) Adjust the unit to the best position.
4) Check if the unit is installed horizontally at four directions. If not, the water pump and the float switch would function improperly and even lead to water leakage.
5) Remove the gasket anchor board and tighten the nut remained.
6) Remove the paper template.

3.2.1.2 Leveling

The water level test must be done after installing the indoor unit to make the unit is horizontal, as shown below.



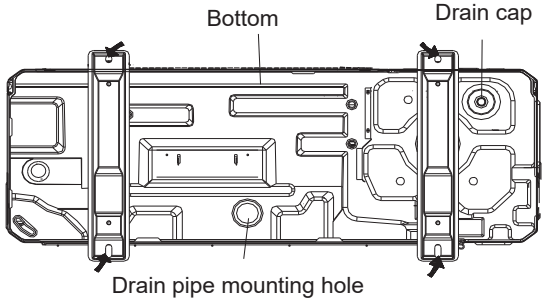
3.2.2 Outdoor Unit Installation

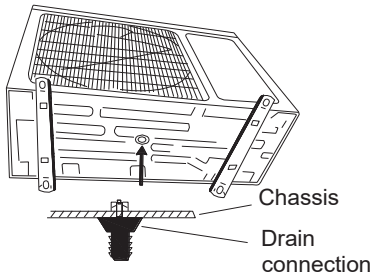
(1) If the outdoor unit is installed on a solid ground such as concrete, use M10 screw bolts and nuts to secure the unit and make sure the unit stands erect and level.

(2) Do not install it on top of the building.

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

(4) 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 figures below.

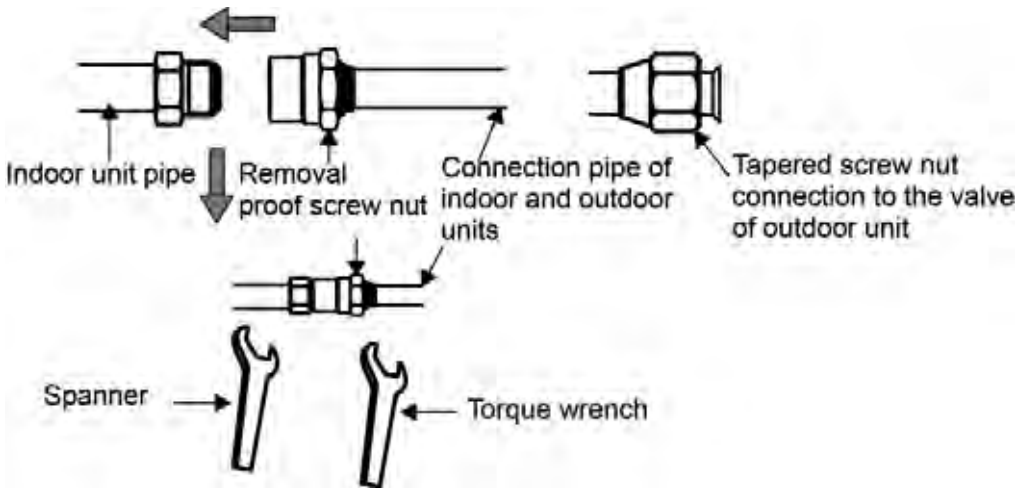




3.2.3 Connection Pipe Installation

3.2.3.1 Installation Notice and Requirement on Connection Pipe

NOTICE
①. Indoor unit adopts special joints that can't be disassembled. The installation method is the same as the unit with ordinary joints. However, because the joints can't be removed, if the connection is not good and causes leakage, the joints need to be cut and welded again for replacement.
②. The removal-proof screw nut must be connected to the indoor unit.



Installation method: Connect the connection pipes first to the indoor unit and then to the outdoor 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(in.)		Maximum pipe length(m)	Biggest drop between indoor and outdoor units (m)	Drain pipe (outer dimension x wall thickness) (mm)
	Liquid pipe	Gas pipe			
35 IU 35 OU	1/4	3/8	30	15	Φ25×1.5
50 IU 50 OU		1/2	35	20	
70 IU 70 OU	3/8	5/8	50	25	
85 IU 85 OU			50	25	
100 IU 100 OU 100 3PH OU			65	30	
			75	30	
140 IU 140 OU 140 3PH OU			75	30	
160 IU 160 3 PH OU			75	30	

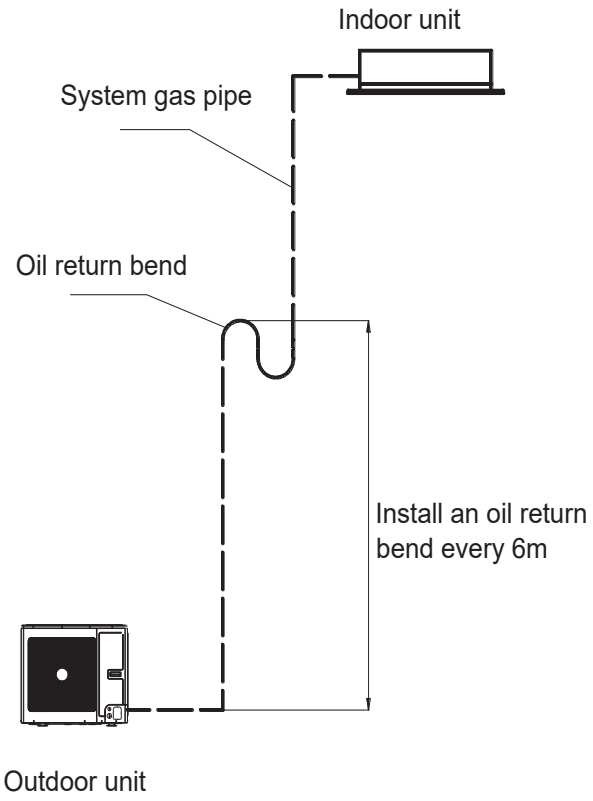
Connection pipe should adopt water-proof insulating material. Its wall thickness should be 0.5-1.0mm and the pipe wall should be able to withstand 6.0MPa. The longer the connection pipe is, the worse cooling and heating performance it has.

When the drop between indoor and outdoor units is larger than 10m, an oil return bend should be added every 6 meters.

The requirement on the adding of oil return bend is as below:

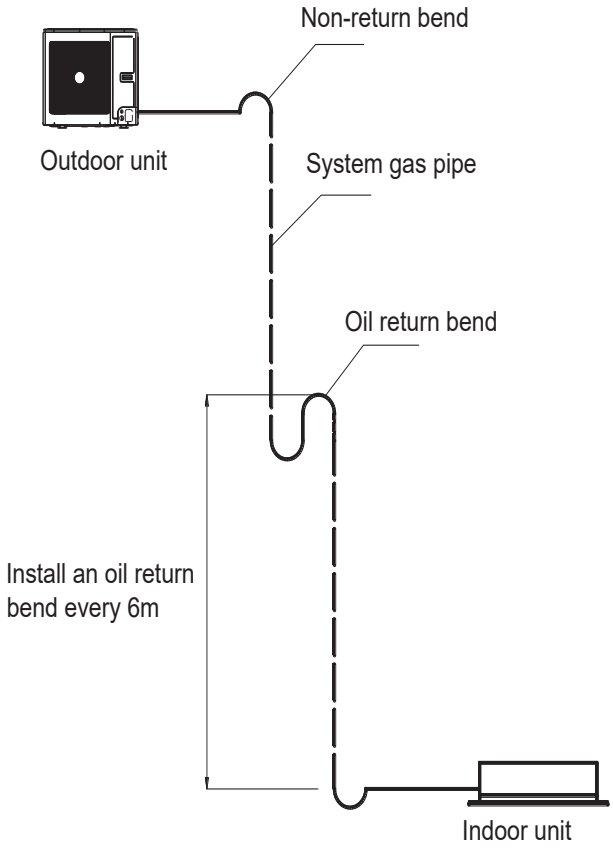
(1) Outdoor unit is beneath the indoor unit.

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

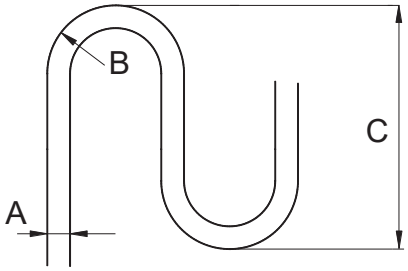


(2) Outdoor unit is above the indoor unit.

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



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



A		B(mm)	C(mm)
mm	in.		
Φ12	1/2	≥26	≤150
Φ16	5/8	≥33	≤150

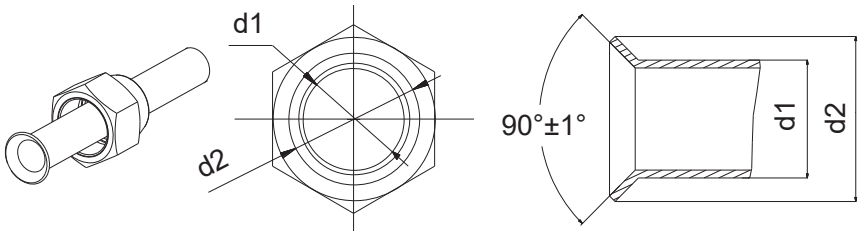
3.2.3.2 Pipe Flaring

(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.

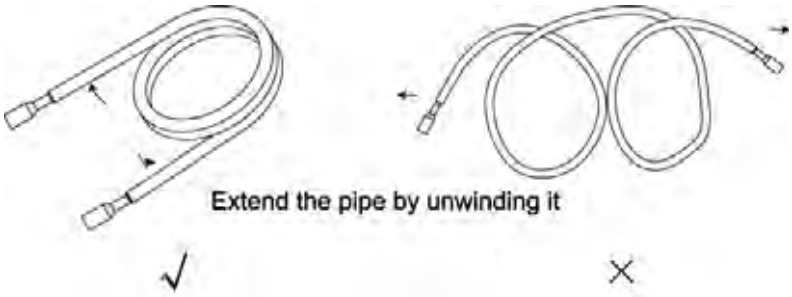
(3) Remove the cut-off valve of outdoor unit and take out the flare nut from the bag of indoor unit accessories. Then fit the flare nut on the pipe and use a flaring tool to flare the mouth of connection pipe.

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



3.2.3.3 Pipe Bending

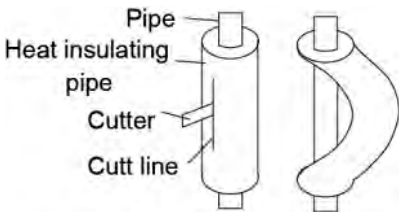
(1) The pipes are shaped by your hands. Be careful not to collapse them.



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

(3) When pipes are repeatedly bent or stretched, the material will harden, making it difficult to bend or stretch them any more. Do not bend or stretch the pipes more than three times.

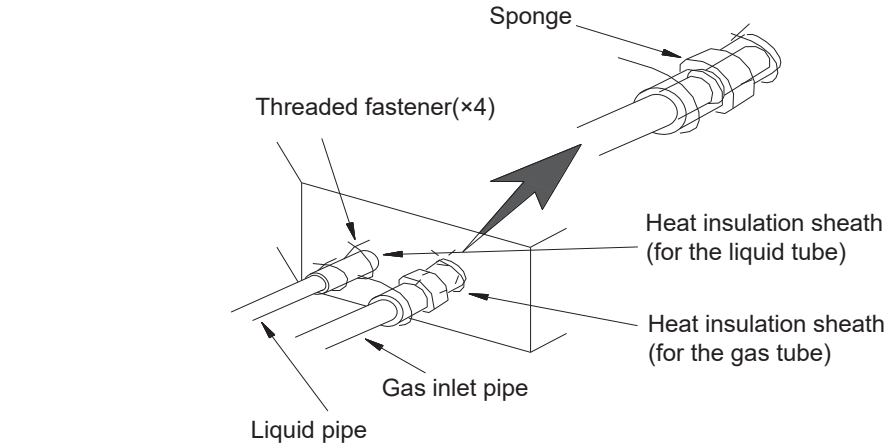
(4) When bending the pipe, do not bend it as is. The pipe will be collapsed. In this case, cut the heat insulating pipe with a sharp cutter as shown in Fig.15, and bend it after exposing the pipe. After bending the pipe as you want, be sure to put the heat insulating pipe back on the pipe, and secure it with tape.

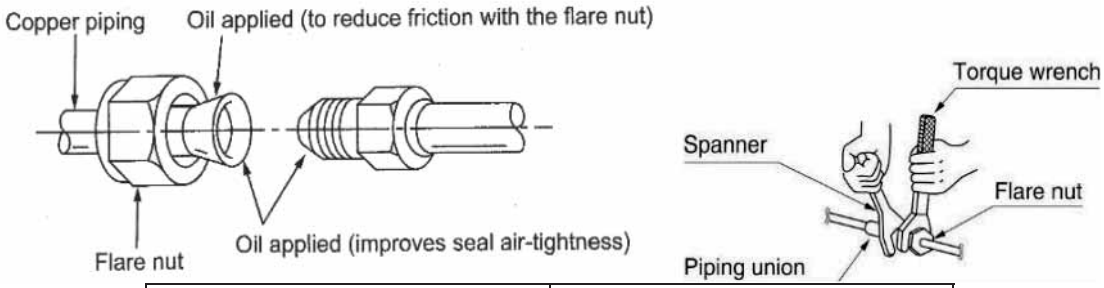


3.2.3.4 Connection Pipe of Indoor and Outdoor Units

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.

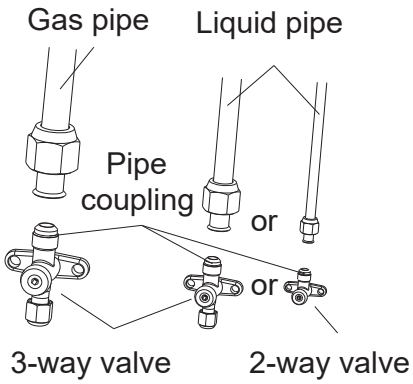




Pipe diameter (in.)	Tightening torque (N·m)
1/4	15-30
3/8	35-40
1/2	45-50
5/8	60-65
3/4	70-75
7/8	80-85

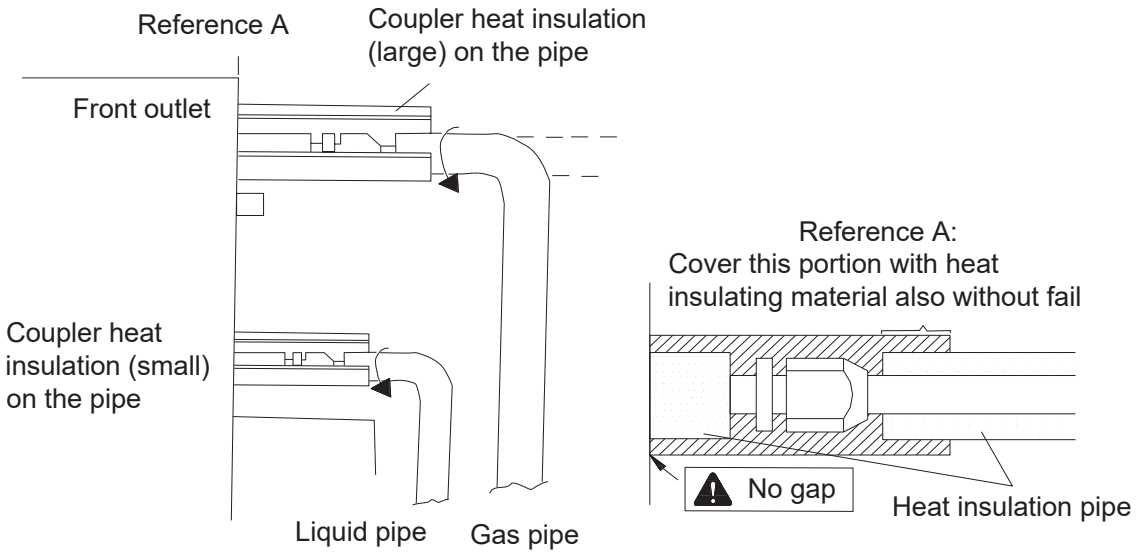
Screw on the flare nut of the flaring connecting pipe on the outdoor unit valve.

The method of screwing the flare nut is the same with that for indoor unit.



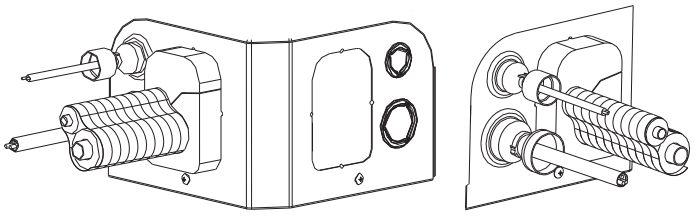
3.2.3.5 Thermal Insulation of Pipe Joint (Only for Indoor Unit)

Stick coupler heat insulation (large and small) to the place where connecting pipes.



3.2.3.6 Sealing of the Knock-off Hole

As for the built-in valve model, during the installation process for connection pipe, when the connection pipe is passing through the knock-off hole, conduct sealing with insulated cotton in the knock-off hole of outdoor unit to prevent small animals from entering. See the following figure.



Notice: Only for the 100 140, 100 3PH, 140 3PH, 160 3PH units.

3.2.4 Connection Pipe Vacuum Pumping and Leak Detection

3.2.4.1 Vacuum Pumping

NOTICE
Make sure the outlet of vacuum pump is away from fire source and is well-ventilated.

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

(2) Connect the hose at the low pressure side of the manifold valve assembly to the service port of the unit's gas 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.

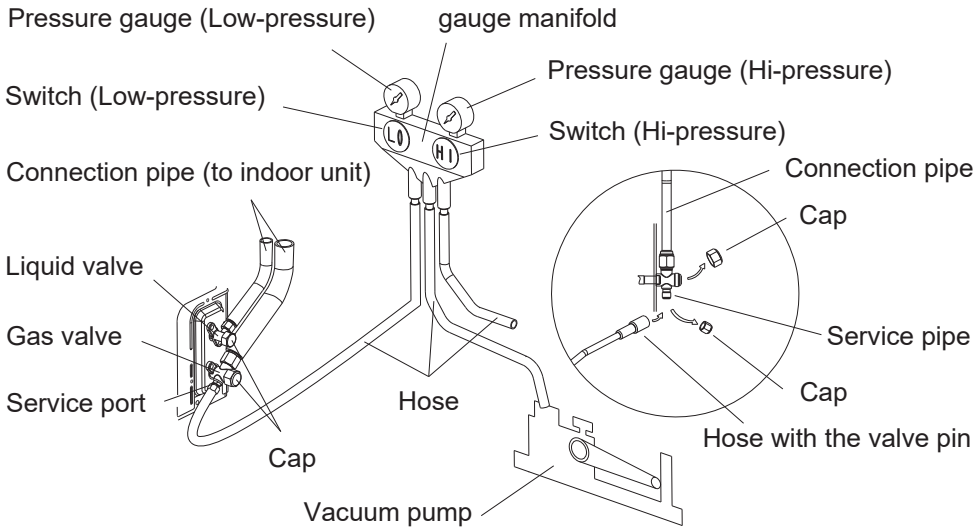
Model	Time(min)
35 OU	15
50 OU	20
70-85-100 1PH	30
140 1PH - 140 3PH - 160 3PH	45

And verify if the pressure gauge at the low pressure side of the manifold valve assembly reads -1.0Mp (-75cmHg), 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 0.005Mp (0.38cmHg).

(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.



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.

3.2.4.2 Leak Detection Methods

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

Electronic leak detectors shall be used to detect flammable refrigerants, but the sensitivity may not be adequate, or may need re-calibration. (Detection equipment shall be calibrated in a refrigerant-free area).

Ensure that the detector is not a potential source of ignition and is suitable for the refrigerant used. Leak detection equipment shall be set at a percentage of the LFL of the refrigerant and shall be calibrated to the refrigerant employed and the appropriate percentage of gas (25 % maximum) is confirmed.

Leak detection fluids are suitable for use with most refrigerants but the use of detergents containing chlorine shall be avoided as the chlorine may react with the refrigerant and corrode the copper pipe-work.

If a leak is suspected, all naked flames shall be removed/extinguished. If a leakage of refrigerant is found which requires brazing, all of the refrigerant shall be recovered from the system, or isolated (by means of shut off valves) in a part of the system remote from the leak. Oxygen free nitrogen (OFN) shall then be purged through the system both before and during the brazing process.

3.2.5 Refrigerant Adding

NOTICE
Before and during operation, use an appropriate refrigerant leak detector to monitor the operation area and make sure the technicians can be well aware of any potential or actual leakage of inflammable gas. Make sure the leak detecting device is applicable to inflammable refrigerant. For example, it should be free of sparks, completely sealed and safe in nature.

See the following table for the amount of additional refrigerant.

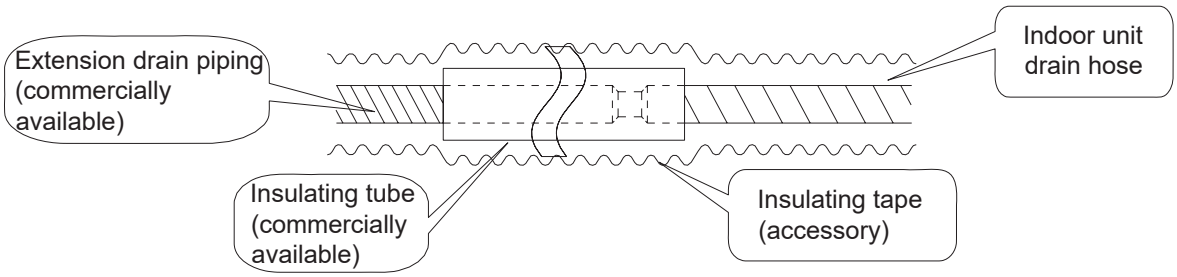
Item / Model	Standard Pipe Length	Unnecessary Charge Pipe Length	Additional Refrigerant Amount for Extra Pipe
35	5.0m	⩽7.0m	16g/m
50			
70			40g/m
85			
100			
100 3PH			
140 1PH	7.5m	⩽9.5m	
140 3PH			
160 3PH			

3.2.6 Installation of Drain Pipe

3.2.6.1 Indoor Side Drainage Pipe

(1) Keep pipe size equal to or greater than that of the connecting pipe

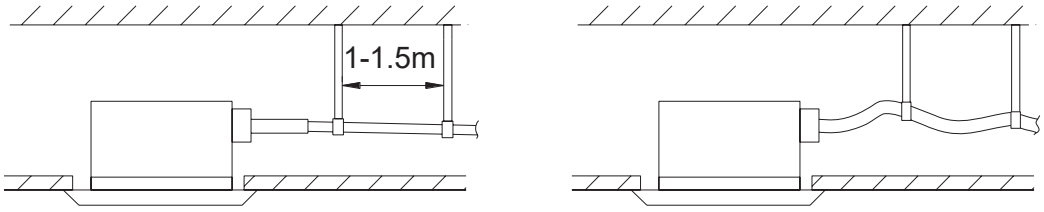
(2) Install the drain piping as shown and take measures against condensation.



(3) Keep piping as short as possible and slope it downwards at a gradient of at least 1/100 so that air may not remain trapped inside the pipe.。

(4) If the drain pipe can't be installed at a proper inclination, then add drain lift pipe.

(5) In order to make sure the drain hose is straight, the hangers should keep a distance of 1~1.5m from one another.



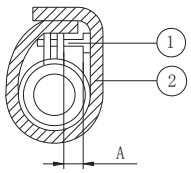
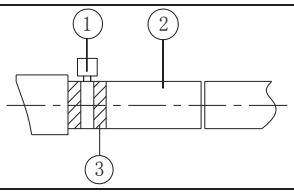
√ （Correct）1/100 or more gradient　　x (wrong)

(6) Use the drain hose that is delivered together with the unit.

(7) Insert the drain hose into the drain faucet.

(8) For the purpose of thermal insulation, wind a large piece of sponge around the clamp of drain hose.

(9) Apply thermal insulation for the indoor drain hose.

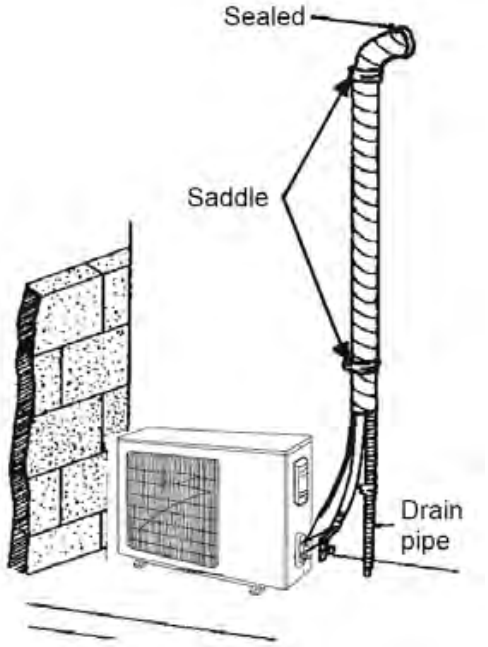
	
During the installation, distance from soft drain pipe to the gasket is A mm when the bolt is tightened. It is not allowed to apply PVC or other related glue in the joints of two ends of drain pipe. ①. Metal clamp (accessory) ②. Insulation sponge (accessory)	Insulate the pipe clamp and the drain hose using heat insulation sponge. ①. Metal clamp ②. Drain hose (accessory) ③. Grey tape (accessory)

Indoor Unit	A mm
35	≤12
50	≤12
70	≤15
85	≤15
100	≤15
	≤15
140	≤15
160	≤15

3.2.6.2 Outdoor Side Drainage Pipe

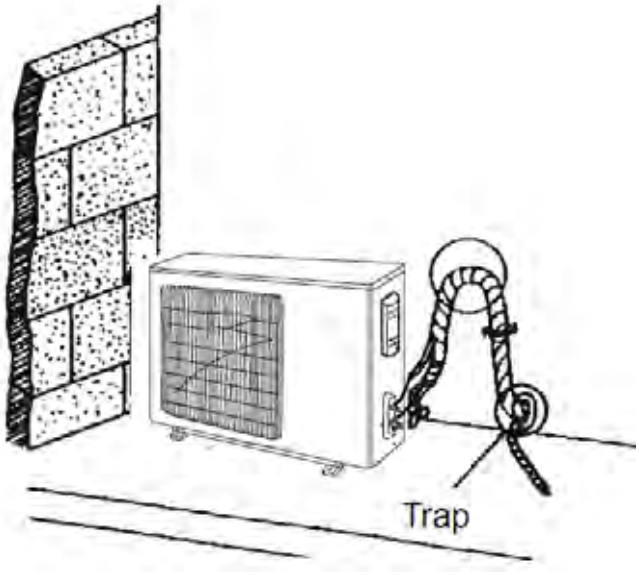
(1) If the outdoor unit is underneath the indoor unit, arrange the pipeline according to the following diagram.

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.



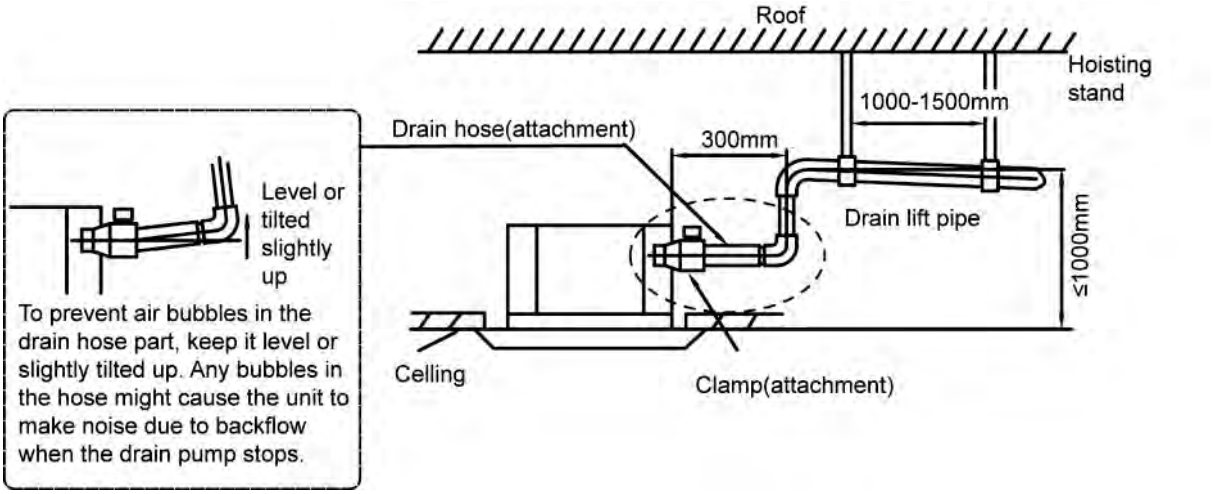
(2) If the outdoor unit is above the indoor unit, arrange the pipeline according to the following diagram.

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.

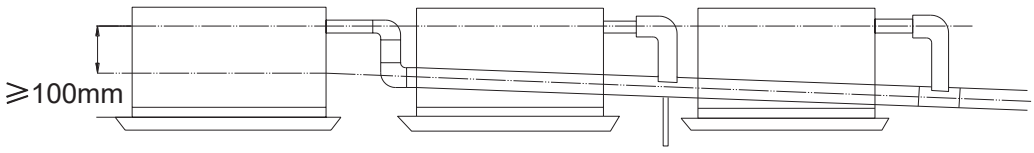


3.2.6.3 Notice on Drain Lift Pipe

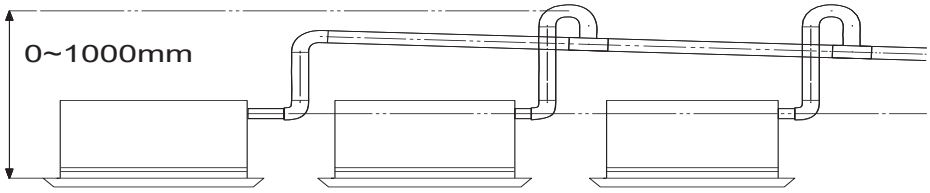
(1) The drain lift pipe should be 1000mm or less away from ground, as shown below.



(2) If multiple drain pipes are to be converged, please install according to the following process. Make sure the main drain pipe is laid downward at a certain angle:



T-joint converging drain pipes



T-joint converging drain pipes

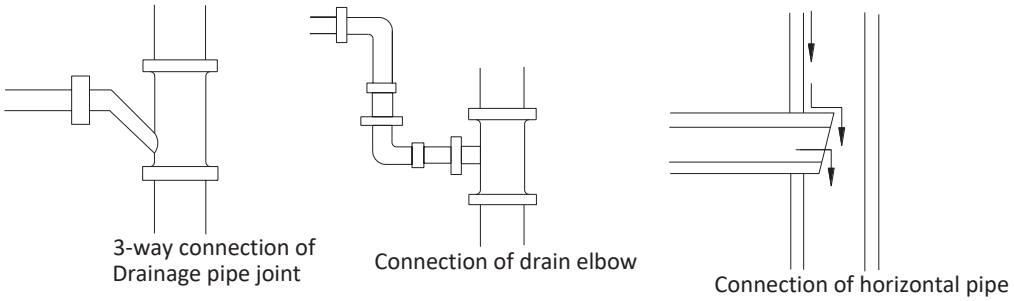
Notice: Specifications of the converging drain pipes should be applicable to the operating capacity of the units.

(1) Drain branch should be connected to the vertical or horizontal part of the main drain pipe.

(2) Horizontal pipe should not be connected to the vertical pipe that is on the same level. It should be connected in the following way:

1) Install 3-way connector of drainage pipe joint, as shown in the left figure.
2) Install drain elbow as shown in the middle figure.

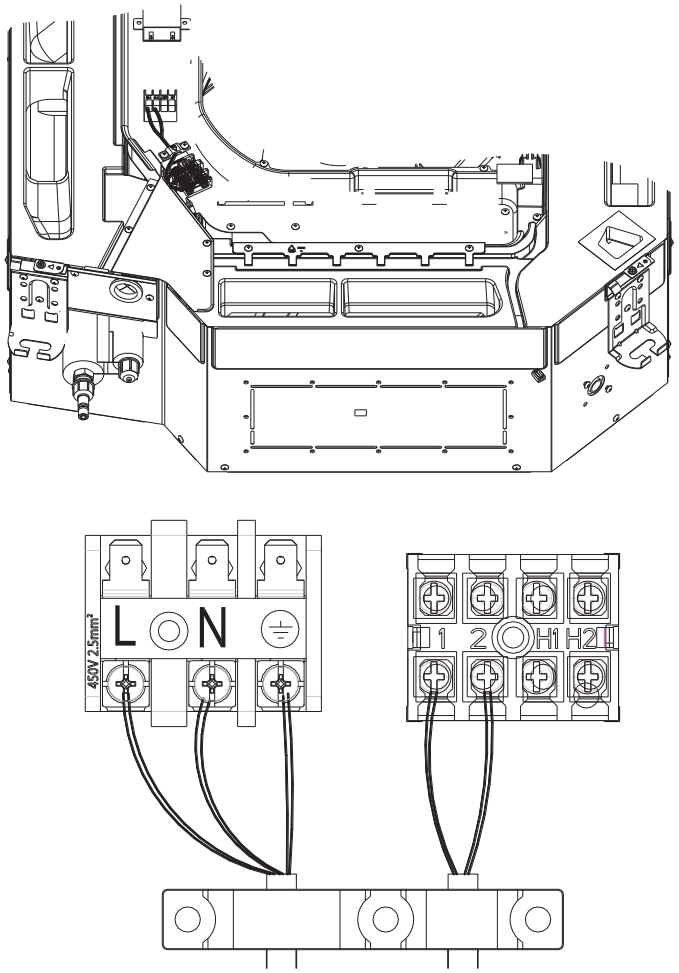
3) Install horizontal pipe as shown in the right figure.



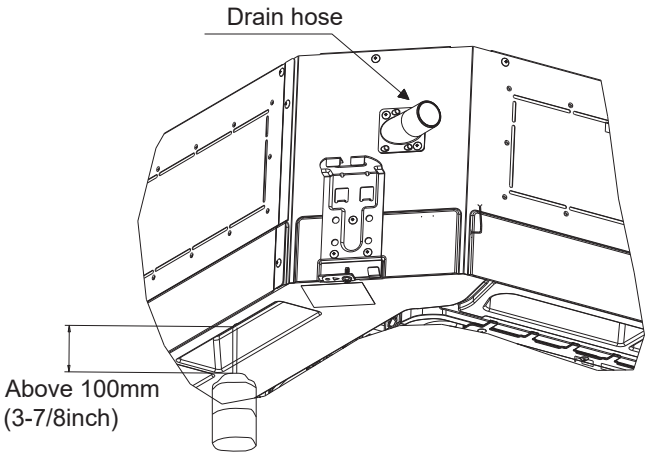
3.2.6.4 Check Drainage

After the pipeline work is finished, check whether the drainage can go smoothly.

(1) Add slowly about 1L of water into the water tray. After the electric circuit is completed, check the drainage condition during refrigerating operation.



(2) See the following diagram for the method of water filling.



3.2.7 Installing the Front Panel

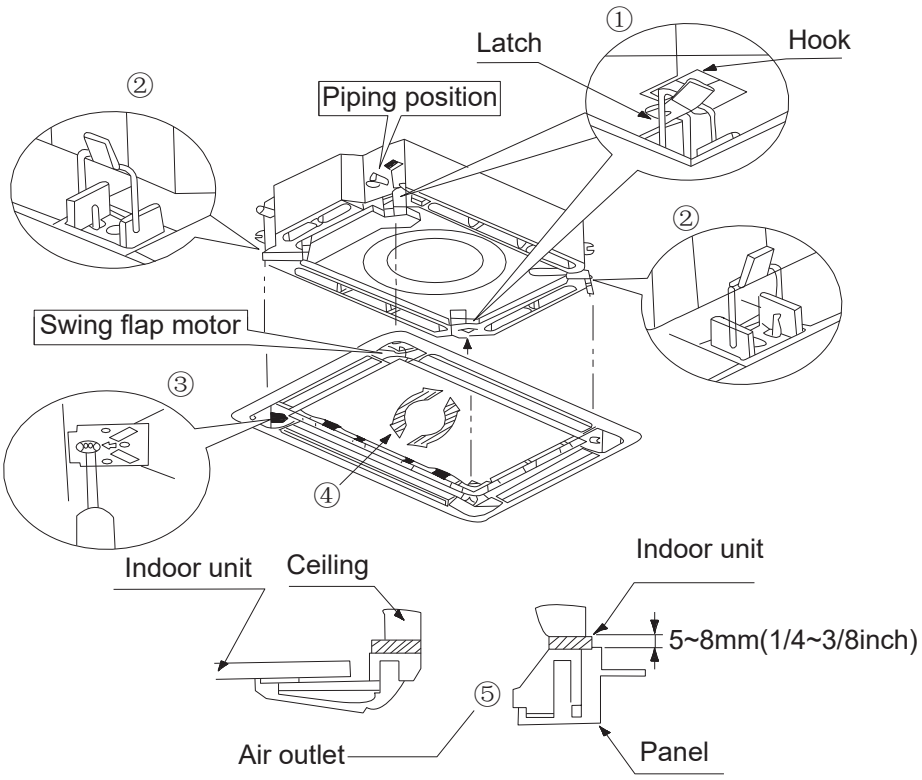
As shown below, take off the 4 corner covers from the front panel and loose the hexagon screw bolts on the 4 fasteners to the maximum. The position marked with “PIPING SIDE” on the front panel will direct right at the pipe mouth of the indoor unit.

(1) Temporarily hang the 4 fasteners on the corresponding hooks of the main body of the indoor unit (Do not let the conducting wires get involved into the sealing material).

(2) Screw in the hexagon screws beneath the 4 fasteners by about 15mm (front panel will rise).

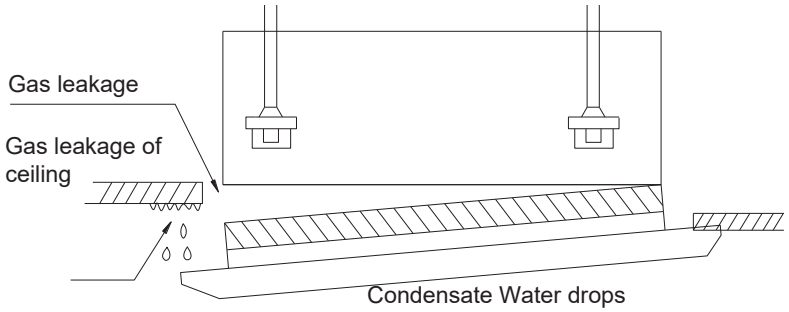
(3) As shown below, turn the front panel according to the arrow direction so that the front panel can be well connected with the ceiling.

(4) Screw up the screws until the thickness of the sealing material between the front panel and the ceiling is 5-8mm.



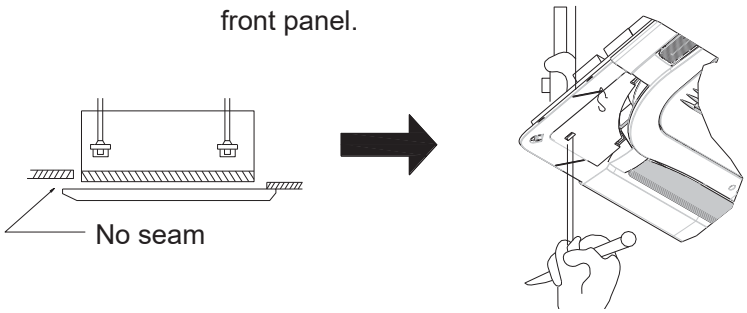
Notice

(1) Improper screw looseness will lead to the following problem.



(2) After the screws are tightened, if there is still a gap between the ceiling and the decorative front panel, adjust the height of the unit again (as shown below).

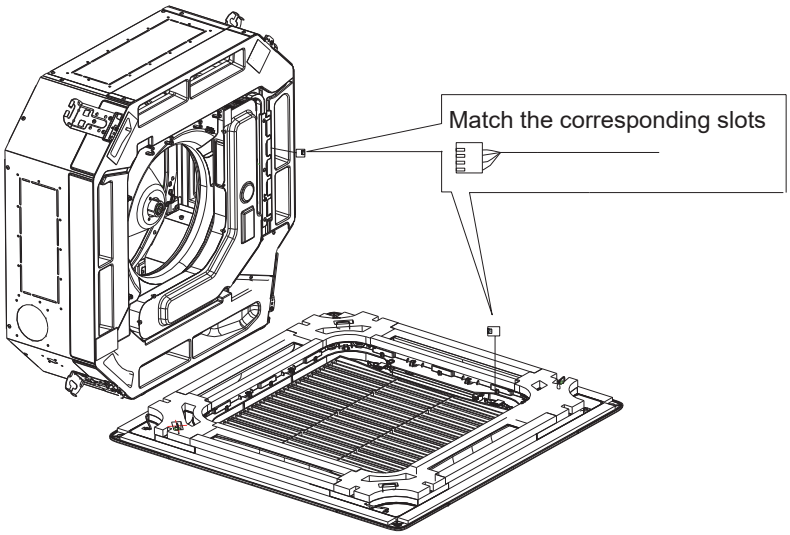
If the lifting level of indoor unit and the drain pipeline won't be affected, it's fine to adjust the height of indoor unit through the holes on the corners of the front panel.

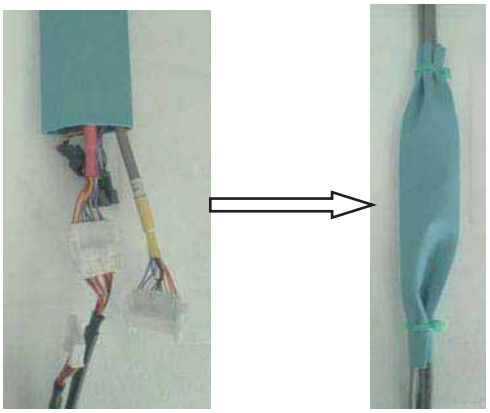


(3) After installing the front panel, make sure there's no gap between the unit and the front panel.

(4) Circuit of the decorative front panel.

Connect the front panel to the main body through the corresponding slots. Match the slots according to their different size.





Warning
After installing the panel, the insulated protective cover with the thickness of 1mm shall be used to wrap the wiring terminal, Tighten the insulated glue cover on both sides with bonding tie to fix it.

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. Never extend the power cord. 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 cord, connection wire of indoor and outdoor units and the communication cords must be effectively fixed.
⑤. The external power cord, connection wire of indoor and outdoor units and the communication cords 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 cord, communication cords, and the connection wire of indoor and outdoor units must not be squeezed. Never pull, stretch or bend the wires.
⑦. The external power cord, communication cords and the connection wire of indoor and outdoor units 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. Please use the power cables that are delivered along with the air conditioner. Do not change the power cables arbitrarily. Do not change the length and terminals of the power cables. If you want to change the power cables, please contact Gree's local service center.
⑩. Wiring terminals should be connected firmly to the terminal board. Loose connection is forbidden.
⑪. After the electrical installation is finished, please use wire clamps to secure the power cord, connection wire of indoor and outdoor units and the communication cords. Make sure the wires are not clamped too tight.
⑫. The wire gauge of power cord should be large enough. Damaged power cord or other wires must be replaced by specialized wires. Wiring work must be done according to national wiring rules and regulations.

3.3.2 Electrical Parameters

Model	Power supply	Fuse capacity	Circuit breaker capacity	Min. sectional area of power cord
	V/Ph/Hz	A	A	mm^2
Indoor unit	220-240V/50Hz/1ph 208-230V/60Hz/1ph	3.15	6	1.0

Model	Power supply	Circuit breaker capacity	Min. sectional area of power cord
	V/Ph/Hz	A	mm^2
35	220-240V/50Hz/1ph 208-230V/60Hz/1ph	13	1.5
50		16	1.5
70		16	1.5
85		20	2.5
100 1PH		32	6.0
		40	6.0
140 3PH		40	6.0
100 3 PH	380-415V/50Hz/60Hz/3ph	20	2.5
		20	2.5
140 3PH		20	2.5
160 3PH		25	4.0

NOTICE:

①. Fuse is located on the main board.

②. Install a circuit breaker at every power terminal near the units (indoor and outdoor units) with at least 3mm contact gap. The units must be able to be plugged or unplugged.

③. Circuit breaker and power cord specifications listed in the above table are determined based on the maximum power input of the units.

④. Specifications of power cords listed in the above table are applicable in a working condition where ambient temperature is 40℃ and multi-core copper cable (e.g. YJV copper cable, with insulated PE and PVC sheath) is protected by a conduit, and is resistant to 90℃ in maximum (See IEC 60364-5-52). If working condition changes, please adjust the specifications according to national standards.

⑤. Specifications of circuit breaker are based on a working condition where

the working temperature is 40℃. If working condition changes, please adjust the specifications according to national standards.

⑥. Adopt 2pc of 0.75mm² power cords to be the communication cords between indoor and outdoor units. The maximum length is 100m. Please select a proper length according to local conditions. Communication cords must not be twisted together. To be in compliance EN 55014, it is necessary to use 8 meters long wire.

⑦. Adopt 2pc of 0.75mm² power cords to be the communication cords between wired control and indoor unit. The maximum length is 30m. Please select a proper length according to local conditions. Communication cords must not be twisted together. To be in compliance EN 55014, it is necessary to use 7.5 meters long wire.

⑧. The wire gauge of communication cord should not be less than 0.75mm². It's recommended to use 0.75mm² power cords as the communication cords.

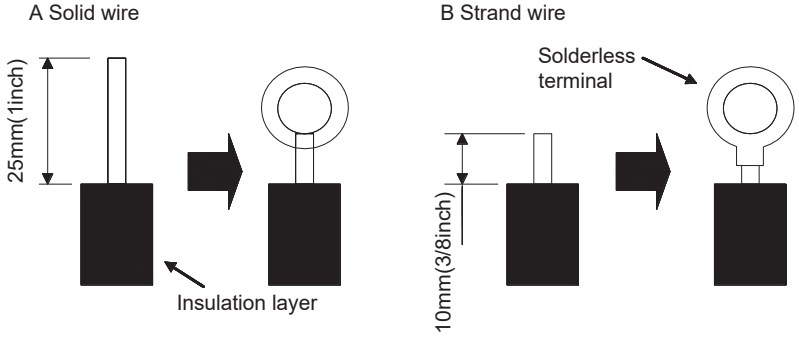
3.3.3 Connection of Power Cord and Communication Cord

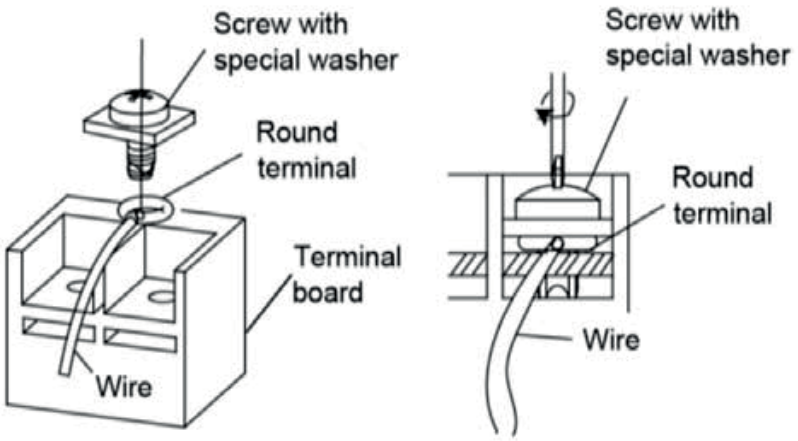
(1) For solid wires (as shown below):

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):

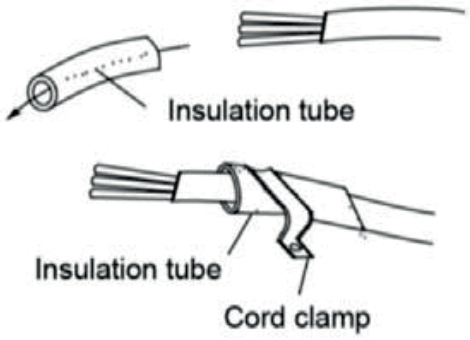
1) Use wire cutters to cut off the wire end and then peel away about 10mm of the insulation layer.
2) Use a screwdriver to unscrew the terminal screw on the terminal board.
3) Use a round terminal fastener or clamp to fix the round terminal firmly on the peeled wire end.
4) Locate the round terminal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





(3) How to connect the connection wire and power cord.

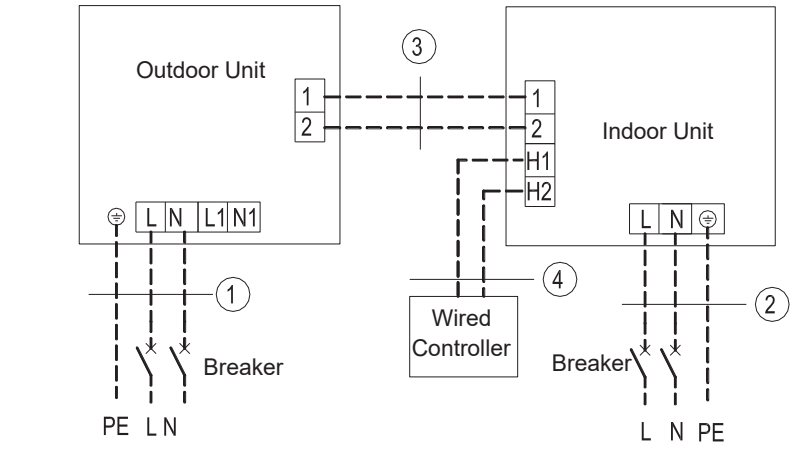
Lead the connection wire and power cord through the insulation tube. Then fix the wires with wire clamps (as shown in the following figure).



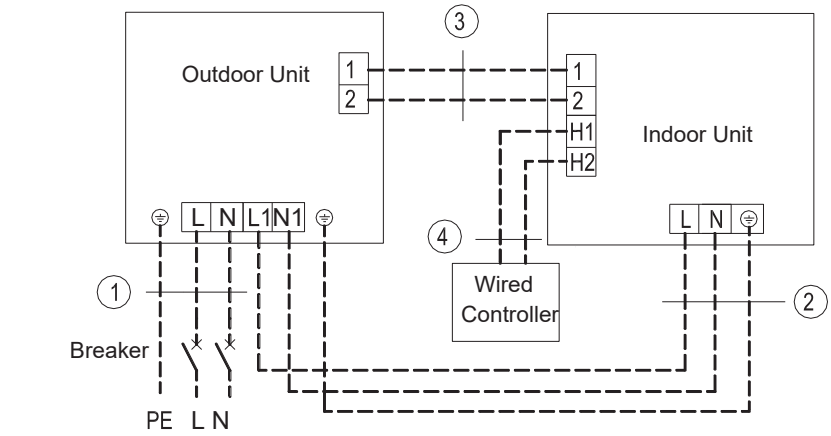
Warning	
①.	Before working, please check whether the indoor and outdoor units are powered on.
②.	Match the terminal numbers and wire colors with the colors indicated in the indoor unit.
③.	Wrong wire connection may burn the electrical components.
④.	Connect the wires firmly to the wiring box. Incomplete installation may lead to fire hazard.
⑤.	Please use wire clamps to secure the external covers of connecting wires. (Insulators must be clamped securely; otherwise, electric leakage may occur.)
⑥.	Ground wire should be connected.

(4) Wire between indoor and outdoor units.

Single-phase unit: 35-50-70-85



Power:220-240V~50Hz/208-230V~60Hz Power:220-240V~50Hz/208-230V~60Hz

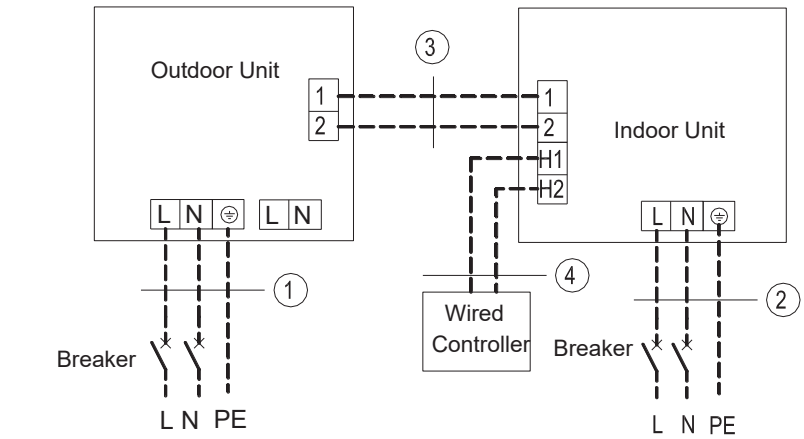


Power:220-240V~50Hz/208-230V~60Hz Power:220-240V~50Hz/208-230V~60Hz

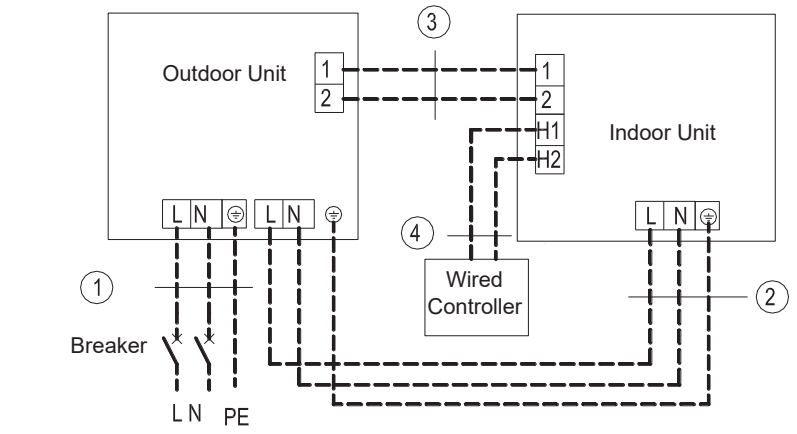
35 IU + 35 OU
50 IU + 50OU
70 IU + 70 OU
①. Power cord 3×1.5mm²
②. Power cord 3×1.0mm²
③. Communication Cords 2×0.75mm²
④. Communication Cords 2×0.75mm²

85 IU + 85 OU
①. Power cord 3×2.5mm²
②. Power cord 3×1.0mm²
③. Communication Cords 2×0.75mm²
④. Communication Cords 2×0.75mm²

Single-phase unit: 100-140.



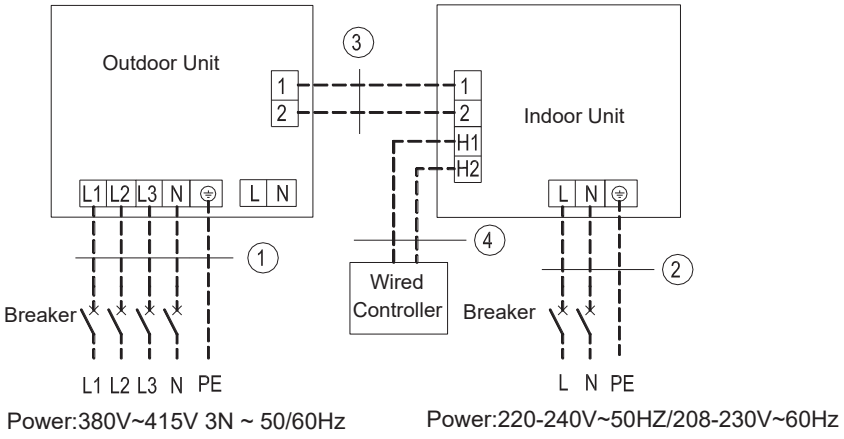
Power:220-240V~50Hz/208-230V~60Hz Power:220-240V~50Hz/208-230V~60Hz

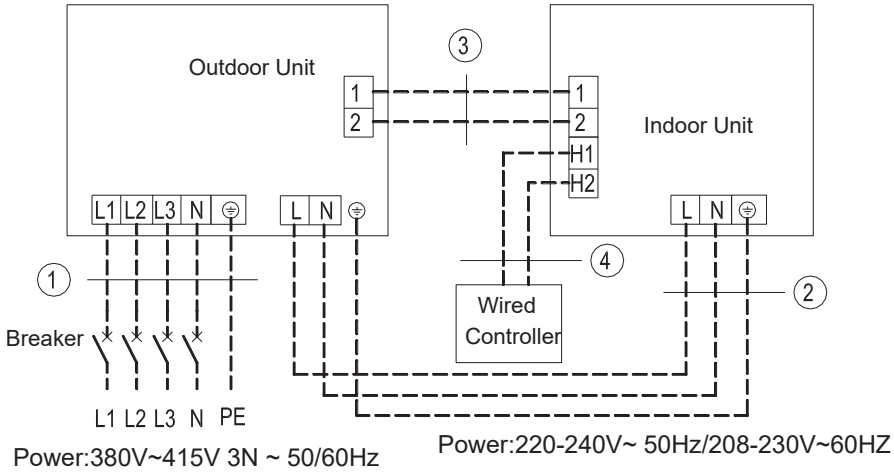


Power:220-240V~50Hz/208-230V~60Hz Power:220-240V~50Hz/208-230V~60Hz

100 UI + 100 OU 1PH
140 IU + 140 OU 1PH
① Power cord 3×6.0mm²
② Power cord 3×1.0mm²
③ Communication Cords 2×0.75mm²
④ Communication Cords 2×0.75mm²

Three-phase unit:100-140-160 3PH





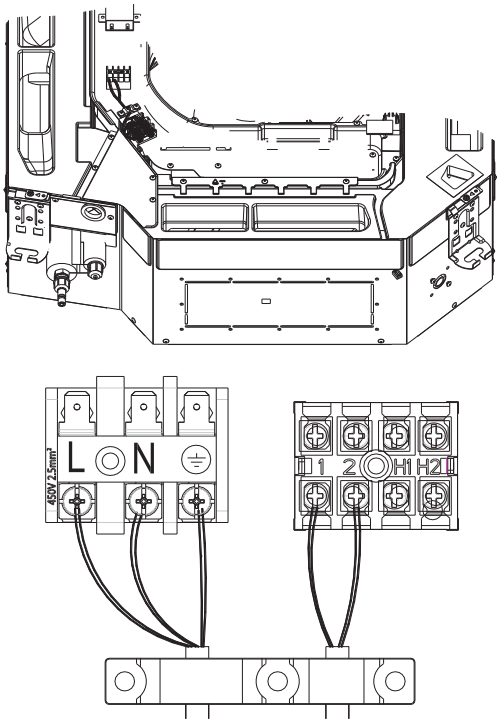
100 IU + 100 OU 3PH
140 IU + 140 OU 3PH
① Power cord 5×2.5mm²
② Power cord 3×1.0mm²
③ Communication Cords 2×0.75mm²
④ Communication Cords 2×0.75mm²
160 IU + 160 OU 3PH
① Power cord 5×4.0mm²
② Power cord 3×1.0mm²
③ Communication Cords 2×0.75mm²
④ Communication Cords 2×0.75mm²

(5) Electrical wiring of indoor unit and Electrical wiring of outdoor unit.

Warning
①. High and low voltage wires should be led through different rubber rings of the electric box cover.
②. Do not bundle up the connection wire and communication wire of wired control or lay them side by side, otherwise errors will occur.
③. High and low voltage wires should be secured separately. Secure the former ones with big clamps and the latter ones with small clamps.
④. Use screws to tighten up the connection wires and power cords of indoor and outdoor units on the terminal board. Wrong connection may lead to fire hazard.
⑤. If the connection wires of indoor unit (outdoor unit) and power cords are not correctly connected, the air conditioner may get damaged.
⑥. Ground the indoor and outdoor 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 cord, make sure the phase sequence of the power supply matches with the corresponding terminals, otherwise the compressor will get reversed and operate abnormally.

1) Indoor side.

Take off the electric box cover from the sub-assembly of electric box. Then connect the wires. Connect the connection wires of indoor unit according to the corresponding marks.

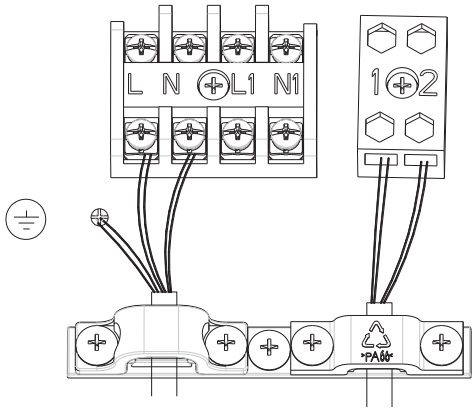


2) Outdoor side.

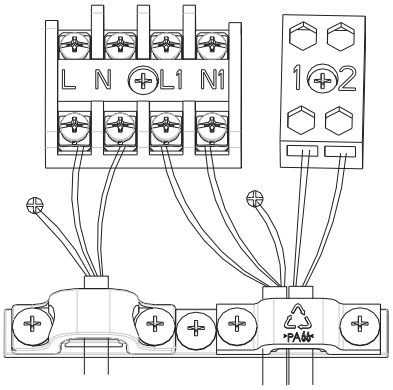
Remove the big handle/front panel of the outdoor unit and insert one end of the communication cord and the power cord to the terminal board.

Single-phase: 35-50-70-85

a) Wire routing of separated power supply:

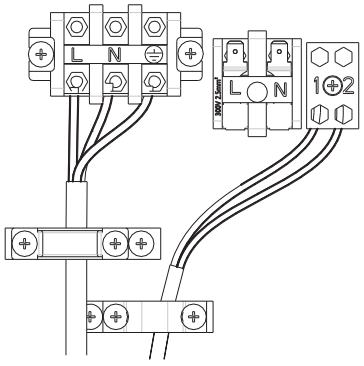


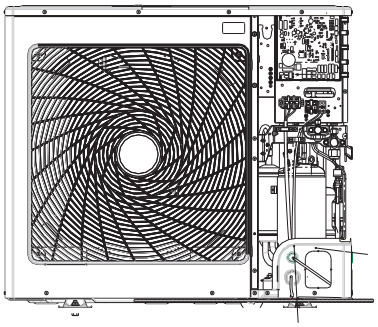
b) Wire routing of unified power supply：



Single-phase 100-140

a) Wire routing of separated power supply for single phase.

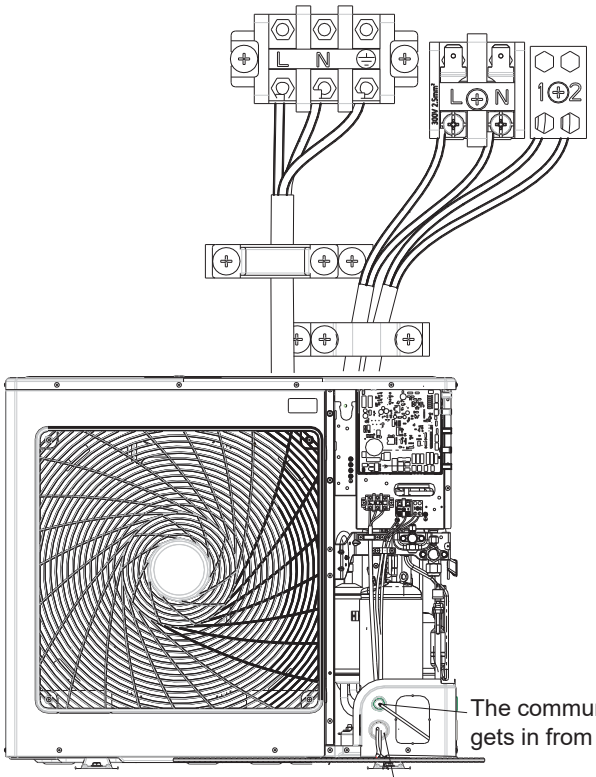




The communication wire gets in from the upper hole

The power cords of outdoor unit and indoor unit get in from the lower hole.

b) Wire routing of unified power supply for single phase.

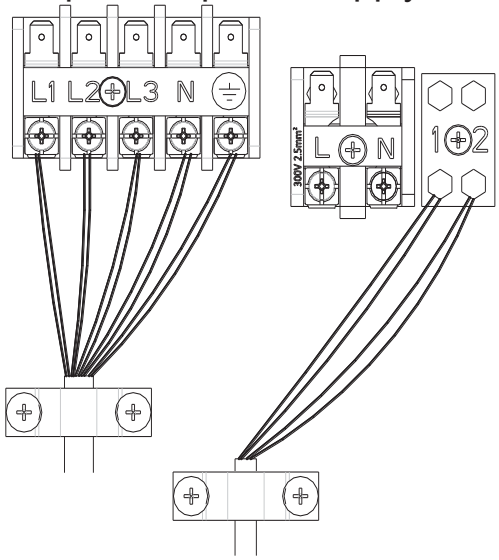


The communication wire gets in from the upper hole

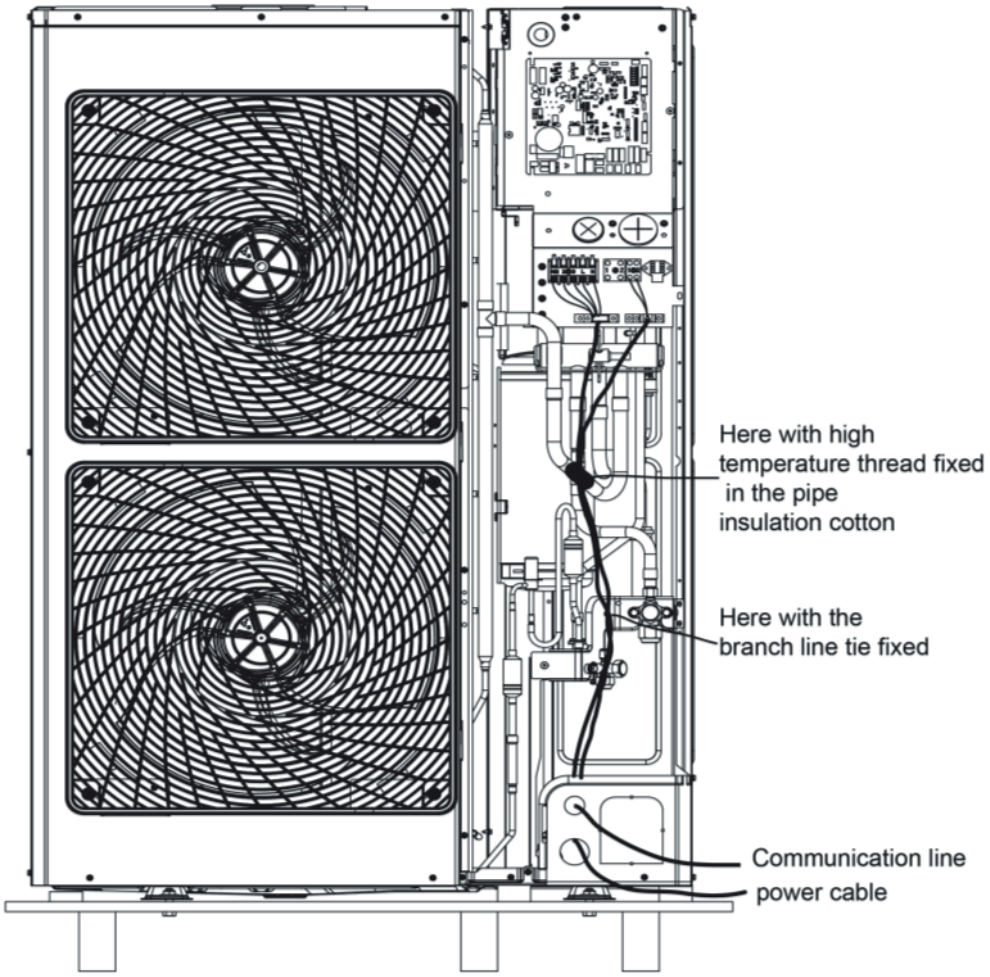
The power cords of outdoor unit and indoor unit get in from the lower hole.

Three-phase: 100-140-160

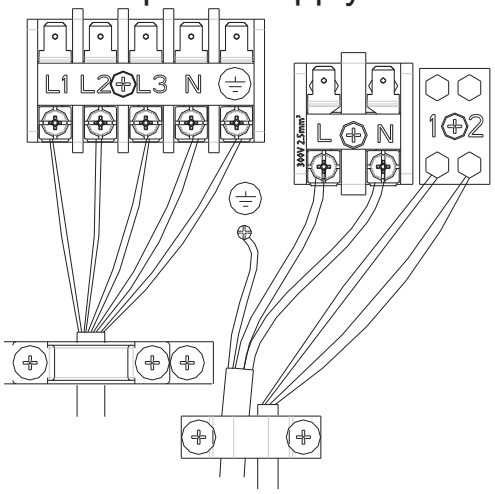
a) Wire routing of separated power supply for three phase.



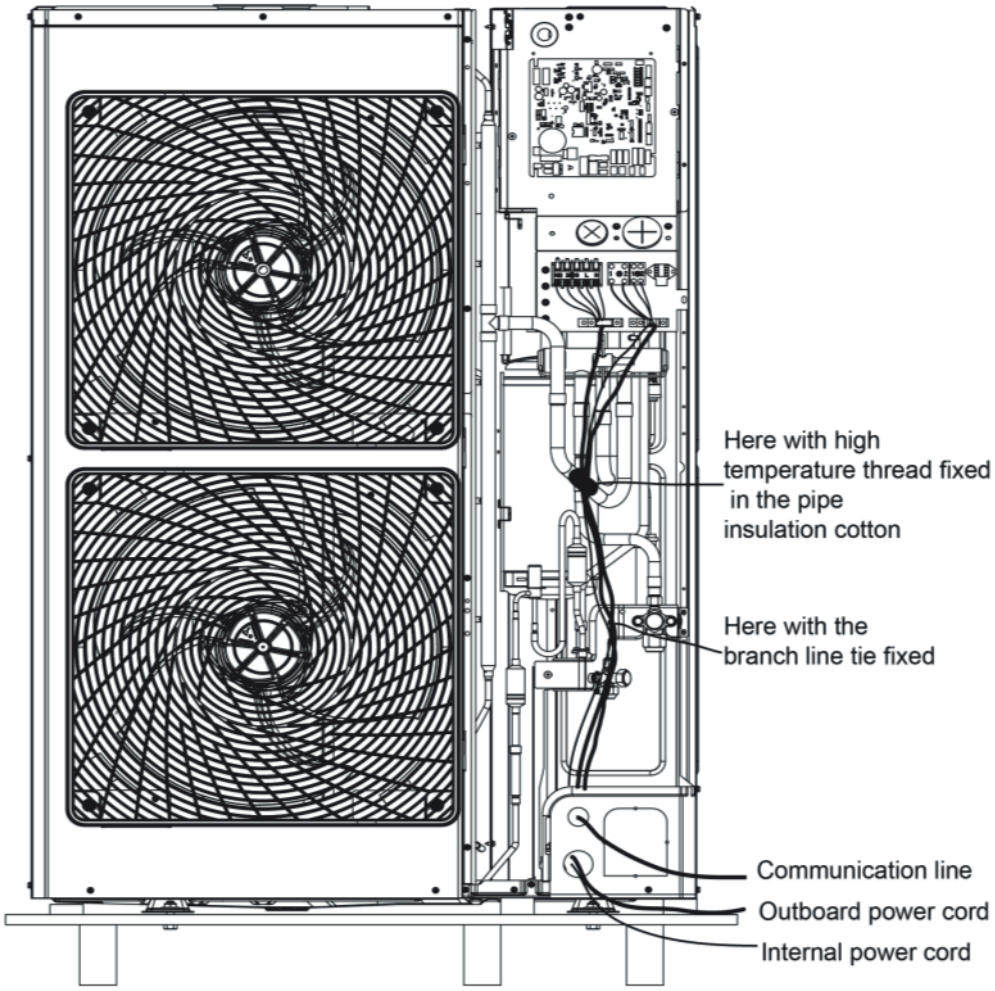
Only for 160



b) Wire routing of unified power supply for three-phase.



Only for 160



Power cord should be secured along with the right side plate and fixed to the hook with a wire clamp so as to avoid contacting the pipeline. The communication line between indoor and outdoor units should also be laid along with the right side plate but away from the power cord.

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 indoor or outdoor 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℃, heating mode can't be enabled.

(3) Make sure the indoor and outdoor units can run normally.

(4) 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.

(5) Feel the air flow of the indoor unit to see if it is normal.

(6) Press the swing button or speed control button on remote control or wired control to see if the fan can run normally.

 Notice:

①. If you use remote control to turn off the unit, compressor will continue to run for 6min.

②. If you use remote control 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 remote control, it won’t be started up right away.

③. If there’s no display on the wired control, it’s probably because the connection wire between the indoor unit and wired control is not connected. Please check again.

4 Operation Specification

Refer to the wired controller or remote controller manual.

5 Maintenance

5.1 Failures Not Caused by Faults of the AC

(1) 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.
	Remote control has low battery.	Replace the batteries.
Bad cooling or heating effect.	Air inlet and outlet of indoor or outdoor units have been blocked.	Clear the obstacles and keep the room for indoor and outdoor 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 indoor and outdoor units.

(2) 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.
Mist comes from the air conditioner.	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.	Temperature control 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 indoor unit comes 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 indoor unit.

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.

5.2 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 display panel or wired control displays an error code, please refer to the error code meaning stated in the following table.

Number	Error code	Error
1	E1	Compressor high pressure protection
2	E2	Indoor anti-freeze protection
3	E3	Compressor low pressure protection, refrigerant lack protection and refrigerant colleting mode
4	E4	Compressor air discharge high-temperature protection
5	E6	Communication error
6	E8	Indoor fan error
7	E9	Water-full protection
8	F0	Indoor ambient temperature sensor error
9	F1	Evaporator temperature sensor error
10	F2	Condenser temperature sensor error
11	F3	Outdoor ambient temperature sensor error
12	F4	Discharge temperature sensor error
13	F5	Wired control temperature sensor error
14	C5	IDU jumper cap error
15	EE	IDU or ODU memory chip error
16	PF	Electric box sensor error

Number	Error code	Error
17	H3	Compressor overload protection
18	H4	Overload
19	H5	IPM protection
20	H6	DC fan error
21	H7	Driver out-of-step protection
22	HC	Pfc protection
23	Lc	Startup failure
24	Ld	Compressor phase-sequence protection
25	LF	Power protection
26	Lp	IDU and ODU unmatched
27	U7	4–way valve switch-over error
28	P0	Driver reset protection
29	P5	Over-current protection
30	P6	Master control and driver communication error
31	P7	Driver module sensor error
32	P8	Driver module high temperature protection
33	P9	Zero-crossing protection
34	PA	AC current protection
35	Pc	Driver current error
36	Pd	Sensor connection protection
37	PE	Temperature drift protection
38	PL	Bus low-voltage protection
39	PH	Bus high-voltage protection
40	PU	Charge loop error
41	PP	Input voltage error
42	ee	Drive memory chip error
43	C4	ODU jumper cap error
44	dJ	Phase-loss and anti-phase protection
45	oE	ODU error, for specific error please see the status of ODU indicator
46	EL	Emergency Stop(Fire alarm)

Notice: When the unit is connected with the wired controller, the error

code will be simultaneously shown on it.

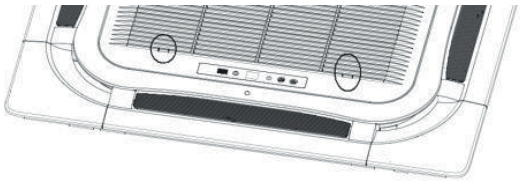
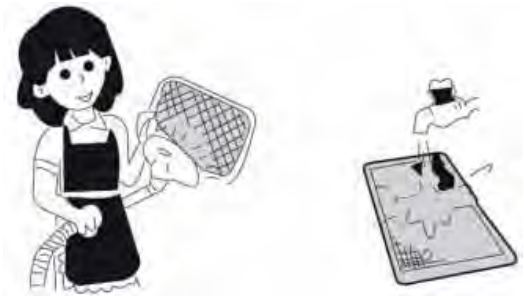
5.3 Unit Maintenance

	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.
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.

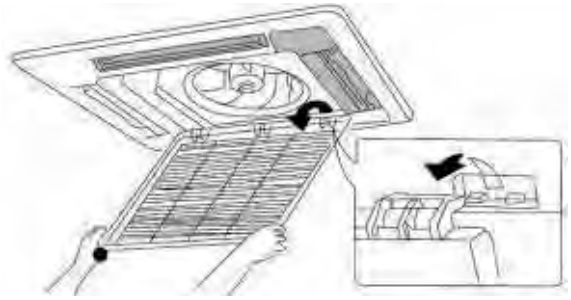
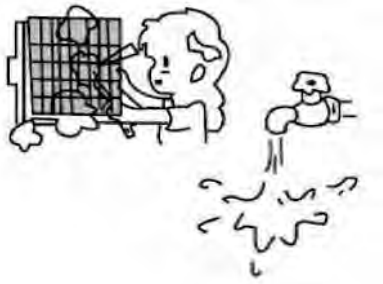
	Notice
①.	Before cleaning, please make sure the unit is stopped. Cut the circuit breaker and remove the power socket, otherwise, electric shock may occur.
②.	Do not wash the air conditioner with water, otherwise fire hazard or electric shock may occur.
③.	When cleaning the filter, please be careful of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

5.3.1 Clean Air Filter

If the air conditioner is used at a dusty place, clean the air filter regularly. (Once every half a year)

How to clean the air filter	
1) Open the air intake grill. Push the clasps outward and then open the air intake grill.	---
2) Remove the air filter. Pull the handle at the back of air intake grill. Lift up the filter and then detach it. Then remove the 3 cleaners that are fixed on the filter.	
3) Cleaning Use vacuum cleaner to remove dust or rinse the filter. If the filter is very dirty (greasy), use warm water (below 45℃) with neutral detergent to clean it. Then dry the filter at a cool place. Notice: do not use hot water (above 45℃) to clean, otherwise the filter may be discolored or out of shape. Do not dry it with fire, otherwise the filter will catch fire or become out of shape.	
4) Fix the 3 cleaners on the filter and then re-install the filter by fitting it into the protruding parts on top of the air intake grill. Pull the handle at the back of the air intake grill to secure the filter.	---
5) Close the air intake grill. Push the clasps outward and then match the air intake grill with the main body. Loose the clasps and then close it.	---

5.3.2 Clean Air Intake Grill

How to clean the air intake grill	
1) Open the air intake grill.	Same with step 1 in “Clean Air Filter”.
2) Take out the air filter.	Same with step 2 in “Clean Air Filter”.
3) Take out the air intake grill. (Open the air intake grill at an angle of 45 degrees, and then lift it up).	
4) Cleaning Use soft brush, water, neutral detergent to clean. After cleaning, shake off the water or let it dry. Notice: do not use hot water (above 45℃) to clean, otherwise the filter may be discolored or out of shape.	
5) Install the air intake grill.	Refer to step 3.
6) Install the air filter.	Same with step 4 in “Clean Air Filter”.
7) Close the air intake grill.	Refer to step 1.

5.3.3 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.

5.3.4 Drainage Pipe

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

5.3.5 Notices at the Beginning of the Using Season

(1) Check if the air inlet/outlet of indoor/outdoor unit is blocked.
(2) Check if the ground connection is reliable.
(3) Check if the battery of remote controller is replaced.
(4) Check if the air filter screen is properly installed.
(5) 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.
(6) Check if the installation of outdoor unit is firm, if not, please contact with ArgoClima appointed maintenance center.

5.3.6 Maintenance at the End of the Using Season

(1) Cut off the main power of air conditioner.
(2) Clean the filter screen, indoor and outdoor unit.
(3) Clean the dust and sundries in indoor and outdoor unit.
(4) If the outdoor unit is rusty, coat the rusty location with paint to prevent it from expanding.

5.3.7 Components Replacement

Components could be ordered by a ArgoClima assistance service

5.4 Notice on Maintenance

5.4.1 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.

5.4.1.1 Checks to the Area

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

5.4.1.2 Work Procedure

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

5.4.1.3 General Work Area

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

5.4.1.4 Checking for Presence of Refrigerant

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

5.4.1.5 Presence of Fire Extinguisher

If any hot work is to be conducted on the refrigeration equipment or any associated parts, appropriate fire extinguishing equipment shall be available to hand. Have a dry powder or CO2 fire extinguisher adjacent to the charging area.

5.4.1.6 No Ignition Sources

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

5.4.1.7 Ventilated area

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

5.4.1.8 Checks to the Refrigeration Equipment

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

The following checks shall be applied to installations using flammable refrigerants:

(1) The charge size is in accordance with the room size within which the refrigerant containing parts are installed.

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

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

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

(5) 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.

5.4.1.9 Checks to Electrical Devices

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

used. This shall be reported to the owner of the equipment so all parties are advised.

Initial safety checks shall include:

(1) That 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.

5.4.2 Repairs to Sealed Components

5.4.2.1 During repairs to sealed components, all electrical supplies shall be disconnected

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.

5.4.2.2 Particular attention shall be paid to the following to ensure that by working on

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 notmade 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.

5.4.3 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.

5.4.4 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.

5.4.5 Detection of Flammable Refrigerants

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

5.4.6 Removal and Evacuation

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

(1) Remove refrigerant.

(2) Purge the circuit with inert gas.

(3) Evacuate.

(4) Purge again with inert gas.

(5) Open the circuit by cutting or brazing.

The refrigerant charge shall be recovered into the correct recovery cylinders. The system shall be “flushed” with OFN to render the unit safe. This process may need to be repeated several times. Compressed air or oxygen shall not be used for this task.

Flushing shall be achieved by breaking the vacuum in the system with OFN

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

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

5.4.7 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.

5.4.8 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 re-use of reclaimed refrigerant. It is essential that electrical power is available before the task is commenced:

(1) Become familiar with the equipment and its operation;

(2) Isolate system electrically.:

(3) Before attempting the procedure ensure that:

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.

5.4.9 Labelling

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

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

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

The recovered refrigerant shall be returned to the refrigerant supplier in the correct recovery cylinder, and the relevant Waste Transfer 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. Only electric heating to the compressor body shall be employed to accelerate this process. When oil is drained from a system, it shall be carried out safely.

5.5 After-Sales Services

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

REGULATION (EU) No. 517/2014 - F-GAS

The unit contains R32, a fluorinated greenhouse gas with global warming potential (GWP) = 675. Do not release R32 into the atmosphere.

35PH	Kg. 0,78 = 0,53 Tonn CO_2 equiv.
50PH	Kg. 1,0 = 0,68 Tonn CO_2 equiv.
70PH	Kg. 1,6 = 1,08 Tonn CO_2 equiv.
85PH	Kg. 1,8 = 1,22 Tonn CO_2 equiv.
100PH	Kg. 2,5 = 1,69 Tonn CO_2 equiv.
140PH	Kg. 2,8 = 1,89 Tonn CO_2 equiv.
100PIH3	Kg. 2,5 = 1,69 Tonn CO_2 equiv.
140PIH3	Kg. 2,8 = 1,89 Tonn CO_2 equiv.
160PIH3	Kg. 3,6 = 2,43 Tonn CO_2 equiv.

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PACKAGE DCI R32
Duct Type Indoor Units

User and installation manual

Models:

Indoor Unit :		Outdoor Unit:
ADG ECO 35PH		AEG ECO 35PIH
ADG ECO 50PH		AEG ECO 50PIH
ADG ECO 70PH	ADG ECO 70PHB	AEG ECO 70PIH
ADG ECO 85PH	ADG ECO 85PHB	AEG ECO 85PIH
ADG ECO 100PH		AEG ECO 100PH
ADG ECO 140PH		AEG ECO 140PIH
ADG ECO 160PH		AEG ECO 160PIH3
ADG ECO 100PH		AEG ECO 100PIH3
ADG ECO 140PH		AEG ECO 140PIH3

To Users

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 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.

(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 has gone through strict inspection and operational test before leaving the factory. In order to avoid damage due to improper disassembly and inspection, which may impact the normal operation of unit, please do not disassemble the unit by yourself. You can contact with the special maintenance center of our company if necessary.

(5) When the product is faulted and cannot be operated, please contact with our maintenance center as soon as possible by providing the following information.

   1) Contents of nameplate of product (model, cooling/heating capacity, product No, ex-factory date).
   2) Malfunction status (specify the situations before and after the error occurs).

(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. We have the right to make

necessary revision to the product from time to time due to the reason of sales or production, and reserve the right to revise the contents without further notice.

(7) Indoor unit must not be installed in a laundry.

(8) 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.

(9) ArgoClima assumes no responsibility for personal injury, property loss or equipment damage caused by improper installation and commissioning, unnecessary maintenance, or not following relevant national rules and regulations, industrial standards and requirements in this instruction manual.

(10) The final right to interpret for this instruction manual belongs to ArgoClima.

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 Notice (Please be sure to abide)

SPECIAL WARNING:

(1) Be sure to comply with national gas regulations.

(2) Do not pierce or burn.

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

(4) Be aware that refrigerants may not contain an odor.

(5) Appliance shall be installed, operated and stored in a room with a floor area larger than"X" m^2 ("X"see section 3.1.1).

(6) The appliance shall be stored in a room without continuously operating ignition sources (for example: open flames, an operating gas appliance or an operating electric heater).

PROHIBITED: This sign indicates that the operation must be prohibited. Improper operation may cause severe damage or death to people.

WARNING: If not abide strictly, it may cause severe damage to the unit or the people.

NOTE: If not abide strictly, it may cause slight or medium damage to the unit or the people.

OBSERVED: This sign indicates that the items must be observed. Improper operation may cause damage to people or property.

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.

Please read this operating manual carefully before operating the unit.

The air conditioner is charged with inflammable refrigerant R32 (GWP: 675).

Before using the air conditioner, please read the instruction manual.

Before installing the air conditioner, please read the instruction manual.

Before repairing the air conditioner, please read the instruction manual.

The figures in this manual may be different with the material objects, please refer to the material objects for reference.

	PROHIBITED!
(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. Maintenance and repair requiring the assistance of other skilled personnel shall be carried out under the supervision of the person competent in the use of flammable refrigerants.
(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.

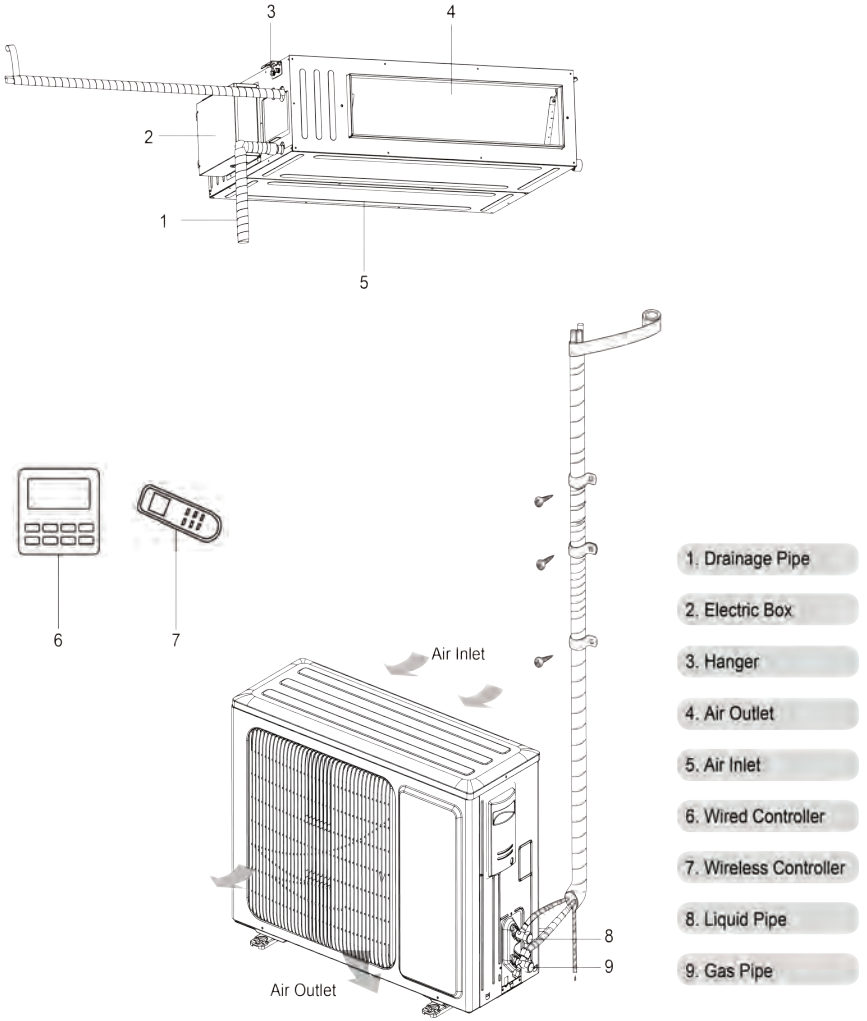
	WARNING!
(8)	During installation, use the specialized accessories and components, otherwise water leakage, electric shock or fire hazard may occur.
(9)	Please install the air conditioner in a secure place that can withstand the weight of air conditioner. Insecure installation may cause the air conditioner falling down and lead to injury.
(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.
(18)	Only professionals are allowed to carry on daily maintenance.
(19)	Before contacting any wire, make sure power is cut off.
(20)	Do not let any inflammable objects near the unit.
(21)	Do not use organic solvent to clean the air conditioner.
(22)	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.
(23)	Improper operation may get the unit broken, hit by electric shock or cause fire.
(24)	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.
(25)	When you do not connect the duct, you need to provide an extra protective net to avoid touching the basic insulation.

NOTES!
(1) Do not put a finger or other objects into the air inlet or air return 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) Indoor unit can only be installed indoors while outdoor unit can be installed either indoors or outdoors. Never install the air conditioner in the following places: 1) Places with oil smoke or volatile liquid: plastic parts may deteriorate and fall off or even cause water leakage. 2) 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.
(8) Before cleaning, please make sure the unit is stopped. Cut the circuit breaker and remove the power socket, otherwise, electric shock may occur.
(9) Do not wash the air conditioner with water, otherwise fire hazard or electric shock may occur.
(10) When cleaning the filter, please be careful of your steps. If you need to work high above the ground, please be extremely careful.

OBSERVED!
(1) If wired control is to be used, it should be connected first before powering up the unit, otherwise the wired control may not be able to use.
(2) When installing the indoor unit, keep it away from television, wireless waves, and fluorescent.
(3) Only use soft dry cloth or slightly wet cloth with neutral detergent to clean the casing of the air conditioner.
(4) 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).

2 Product Introduction

2.1 Overall Layout



NOTES:

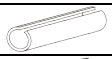
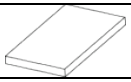
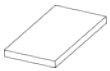
(1) The connection pipe, drain pipe, power cord, and duct for this unit should be prepared by the user.

(2) The unit is standard equipped with rectangular duct.

2.2 Operating Range

	Cooling	Heating
Outdoor temperature DB(°C)	-20~48	-20~24
Indoor temperature DB/WB(°C)(Maximum)	32/23	27/-

2.3 Standard Accessories

Indoor Unit Accessories				
No.	Name	Appearance	Q'ty	Usage
1	Wired Controller		1	To control the indoor unit.
2	Nut with Washer		4	To fix the hook on the cabinet of the unit.
3	Nut		4	To be used together with the hanger bolt for installing the unit.
4	Washer		4	To be used together with the hanger bolt for installing the unit.
5	Insulation		1	To insulate the gas pipe.
6	Insulation		1	To insulate the liquid pipe.
7	Fastener		8	To fasten the sponge.
8	Sponge		2	To insulate the drain pipe.
9	Sponge		1	To insulate the Fresh air inlet (Only for GUD100-160PH/A-T and GUD100-160PHS/A-T).
10	Removal-Proof screw Nut		1	To connect gas pipe.
11	Removal-Proof screw Nut		1	To connect liquid pipe.

Outdoor Unit Accessories				
No.	Name	Appearance	Q'ty	Usage
1	Drain Plug		1 or 3	To plug the unused drain hole.
2	Drainage Connector	 or	1	To connect with the hard PVC drain pipe.

3 Installation

3.1 Installation Preparation

3.1.1 Notice on Installation

(1) Notice on Refrigerant Concentration before Installation.

This air conditioner uses R32 refrigerant. The construction area for installation, operation and storage of the air conditioner must be larger than the minimum construction area. The minimum area for installation is determined by:

1) Refrigerant charging quantity for the entire system (ex-factory charging quantity + additional charging quantity).
2) Checking out in the applicable tables:
   A. For indoor unit, confirm the model of indoor unit and check the corresponding table.
   B. For outdoor unit that is installed or placed indoors, select the corresponding table according to the height of the room.

Height of the room	Select the applicable table
< 1.8m	Floor standing type
≥1.8m	Wall mounted type

3) Refer to the following table to check out the minimum construction area

Ceiling type		Wall mounted type		Floor standing type	
Weight(kg)	Area (m^2)	Weight(kg)	Area (m^2)	Weight (kg)	Area (m^2)
< 1.224	—	< 1.224	—	< 1.224	—
1.224	0.956	1.224	1.43	1.224	12.9
1.4	1.25	1.4	1.87	1.4	16.8
1.6	1.63	1.6	2.44	1.6	22.0
1.8	2.07	1.8	3.09	1.8	27.8
2.0	2.55	2.0	3.81	2.0	34.3
2.2	3.09	2.2	4.61	2.2	41.5
2.4	3.68	2.4	5.49	2.4	49.4
2.6	4.31	2.6	6.44	2.6	58.0
2.8	5.00	2.8	7.47	2.8	67.3
3.0	5.74	3.0	8.58	3.0	77.2

Ceiling type		Wall mounted type		Floor standing type	
Weight(kg)	Area (m^2)	Weight(kg)	Area (m^2)	Weight (kg)	Area (m^2)
3.2	6.54	3.2	9.76	3.2	87.9
3.4	7.38	3.4	11.0	3.4	99.2
3.6	8.27	3.6	12.4	3.6	111
3.8	9.22	3.8	13.8	3.8	124
4.0	10.2	4.0	15.3	4.0	137
4.2	11.3	4.2	16.8	4.2	151
4.4	12.4	4.4	18.5	4.4	166
4.6	13.5	4.6	20.2	4.6	182
4.8	14.7	4.8	22.0	4.8	198
5.0	16.0	5.0	23.8	5.0	215
5.2	17.3	5.2	25.8	5.2	232
5.4	18.6	5.4	27.8	5.4	250
5.6	20.0	5.6	29.9	5.6	269
5.8	21.5	5.8	32.1	5.8	289
6.0	23.0	6.0	34.3	6.0	309
6.2	24.5	6.2	36.6	6.2	330
6.4	26.1	6.4	39.1	6.4	351
6.6	27.8	6.6	41.5	6.6	374
6.8	29.5	6.8	44.1	6.8	397
7.0	31.3	7.0	46.7	7.0	420
7.2	33.1	7.2	49.4	7.2	445
7.4	34.9	7.4	52.2	7.4	470
7.6	36.9	7.6	55.1	7.6	496
7.8	38.8	7.8	58.0	7.8	522
8.0	40.8	8.0	61.0	8.0	549

(2) When installing an outdoor unit with single or double fans, hold the handle and then lift it up slowly (Do not touch the condenser with your hand or other objects). If you hold only one side of the casing, the casing may be pulled out of shape, so please hold the base of the unit as well. During installation, be sure to use the components specified in the instruction manual.

(3) Please use the charging machine specialized for R32 refrigerant; before charging, keep the refrigerant tank in an upright position. After charging,

stick a label on the air conditioner saying no excessive charging.

(4) The following tools will be used: 1) Liquid-level gauge; 2) Screwdriver; 3) Electric driven rotary hammer; 4) Drill; 5) Pipe expander; 6) Torque wrench; 7) Open-end wrench; 8) Pipe cutter; 9) Leak detector; 10) Vacuum pump; 11) Pressure gauge; 12) Universal meter; 13) Hexagon wrench; 14) Tapeline.

3.1.2 Selection of Installation Location

WARNING!
(1) If the outdoor unit will be exposed in strong wind, it must be securely located, otherwise it may fall down.
(2) Install the air conditioner at a place where the inclination is less than 5°.
(3) Do not install the unit at a place with direct sunlight.
(4) Do not install the unit at a place with leakage of inflammable gas.

Selection of Installation Location for Indoor Unit (Select a location pursuant to the following condition).

(1) Air inlet and outlet of the indoor unit should be away from obstacles to make sure the unit's air flow can reach the entire room. Do not install the unit in a kitchen or a laundry.

(2) Install the unit in a room without naked flame, fire source or the risk of getting the refrigerant on fire.

(3) Select a location that can withstand 4 times the unit weight without increasing operating noise and vibration.

(4) The installation location must be level.

(5) The indoor piping length and wiring length should be within the allowable range.

(6) Select a place that can easily drain condensate and connect to the drain system of the air conditioner.

(7) If hoisting screw bolts are to be used, check whether the installation location is safe enough. If not safe, reinforce the location before installation.

(8) Indoor unit, power cord, connecting wires and communication cords should be at least 1m from television and radio. This is to prevent image

interference or noise (Even at a distance of 1m, a very strong electric wave may still generate noise).

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) Install the outdoor unit at a place that is convenient for it to be connected to the indoor unit.

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

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

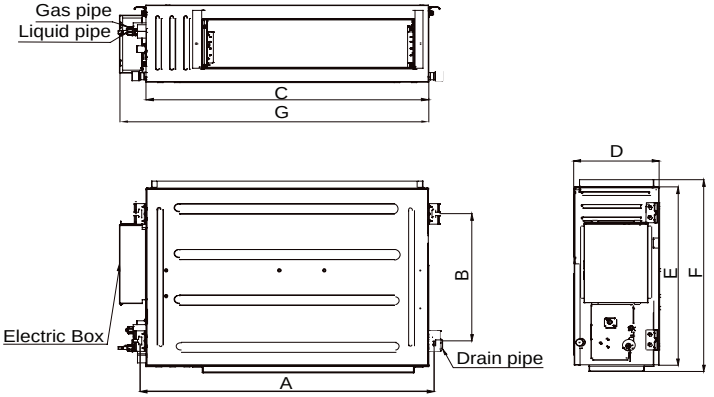
3.1.3 Unit Dimension

WARNING!
(1) Install the indoor unit in a location which can withstand a load of at least five times the weight of the main unit and which will not amplify sound or vibration.
(2) If the installation location is not strong enough, the indoor unit may fall and cause injuries.
(3) If the job is done with the panel frame only, there is a risk that the unit will come loose. Please take care.

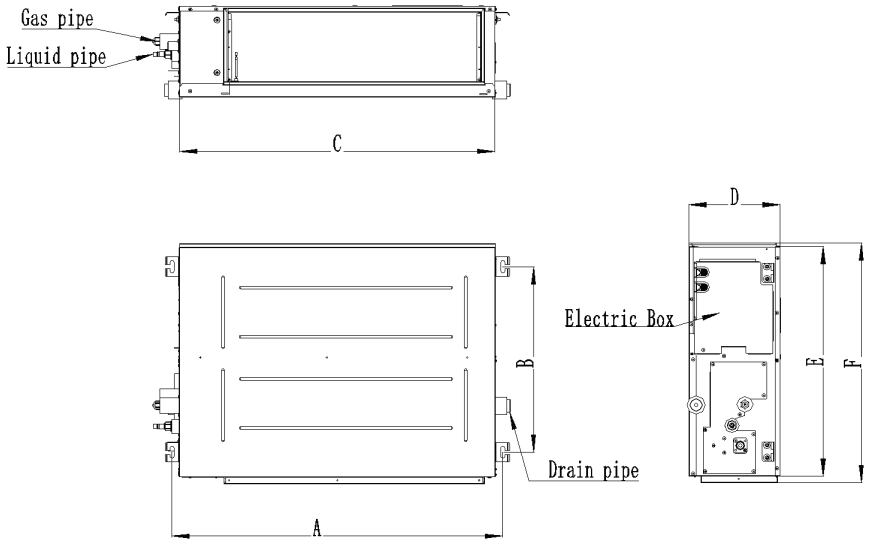
(1) Indoor unit

ADG ECO 35PH, ADG ECO 50PH, ADG ECO 70PH

ADG ECO 85PH, ADG ECO 100PH-T, ADG ECO 140PH, ADG ECO 160PH



ADG ECO 70PH, ADG ECO 70PHB, ADG ECO 85PH, ADG ECO 85PHB



NOTE!

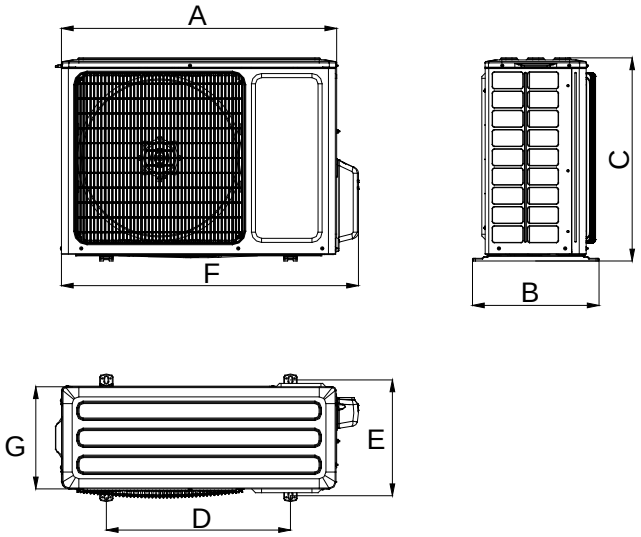
Drilling of ceiling opening and installation of air conditioner must be performed by professionals!

Unit: mm

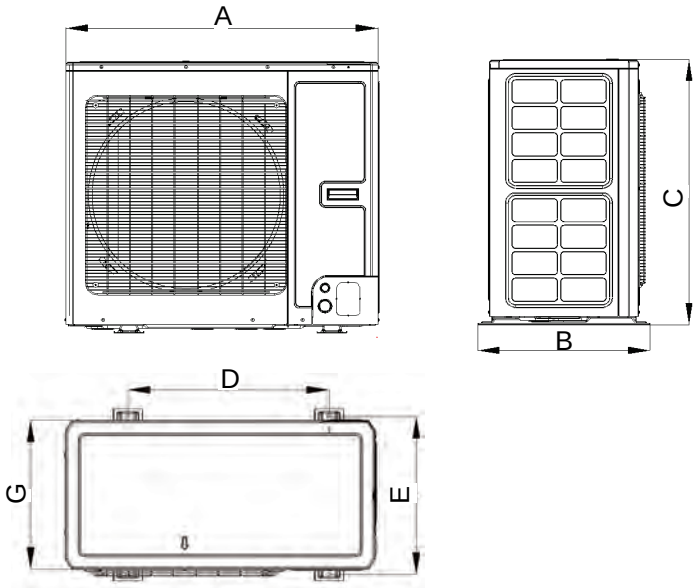
Dimensions / Model	A	B	C	D	E	F	G
ADG ECO 35PH	760	415	700	200	450	474	768
ADG ECO 50PH	1060	415	1000	200	450	474	1068
ADG ECO 70PH	1360	415	1300	220	450	474	1368
ADG ECO 85PH							
ADG ECO 70PHB	942	530	900	260	655	685	—
ADG ECO 85PHB							
ADG ECO 100PH	1040	500	1000	300	700	754	1092
ADG ECO 140PH	1440	500	1400	300	700	754	1492
ADG ECO 160PH	1440	500	1400	300	700	754	1543

(2) Outdoor unit.

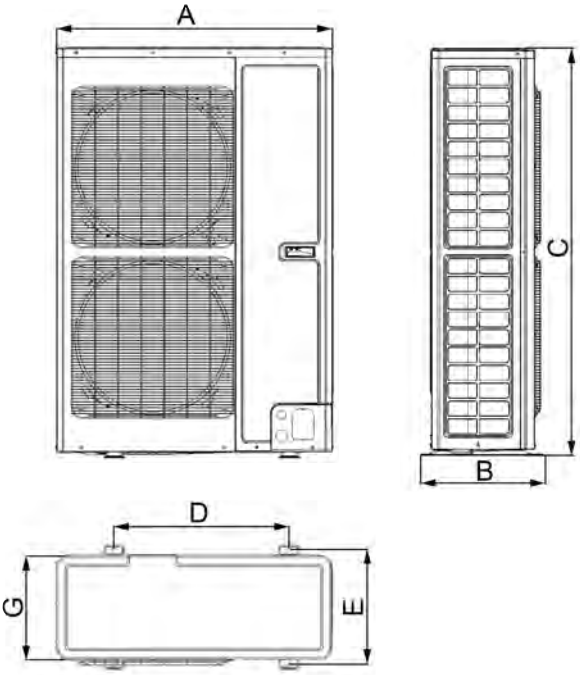
AEG ECO 35PIH, AEG ECO 50PIH, AEG ECO 50PIH, AEG ECO 85PIH.



AEG ECO 100PIH, AEG ECO 140PIH, AEG ECO 100PIH3, AEG ECO 140PIH3



AEG ECO 160PIH3.



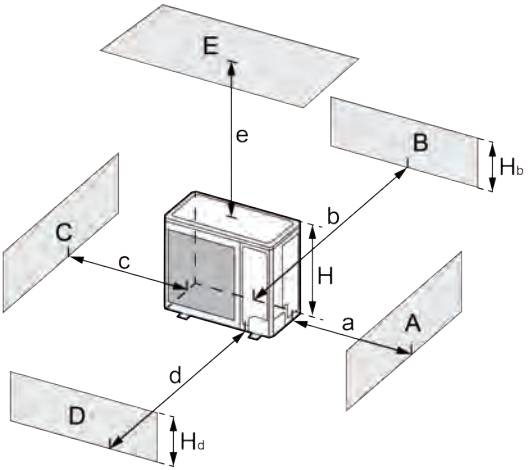
Unit: mm

Dimensions / Model	A	B	C	D	E	F	G
AEG ECO 35PH	818	378	596	550	348	887	302
AEG ECO 50PIH	818	378	596	550	348	887	302
AEG ECO 70PIH	892	396	698	560	364	952	340
AEG ECO 85PH	920	427	790	610	395	1002	370
AEG ECO 100PIH	940	530	820	610	486	—	460
AEG ECO 100PIH3	940	530	820	610	486	—	460
AEG ECO 140PIH	940	530	820	610	486	—	460
AEG ECO 140PIH3	940	530	820	610	486	—	460
AEG ECO 160PIH3	900	412	1345	572	378	—	340

3.1.4 Diagram of Unit Installation Space and Location

(1) 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).

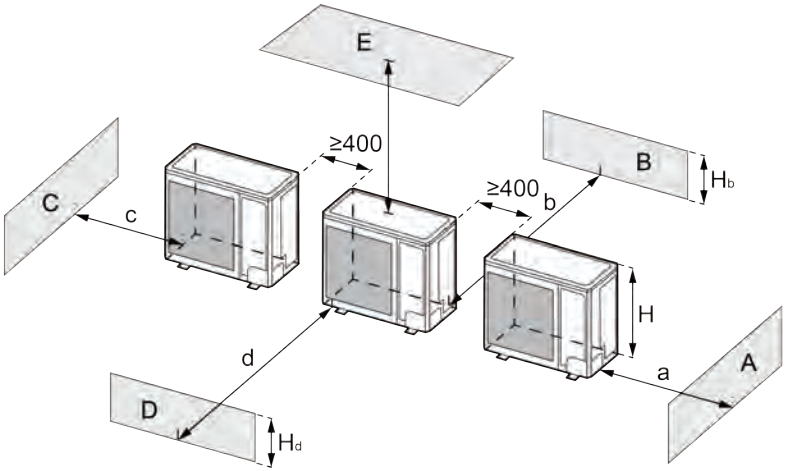
1) When one outdoor unit is to be installed.



A~E	Hb Hd 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	$H_b < H_d$	$H_b \le 1/2H$	—	≥250	—	≥2000	≥1000
		$1/2H < H_b \le H$	—	≥250	—	≥2000	≥1000
		$H_b > H$	Prohibited				
	$H_b > H_d$	$H_d \le 1/2H$	—	≥100	—	≥2000	≥1000
		$1/2H < H_d \le H$	—	≥200	—	≥2000	≥1000
		$H_d > 1/2H$	Prohibited				

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

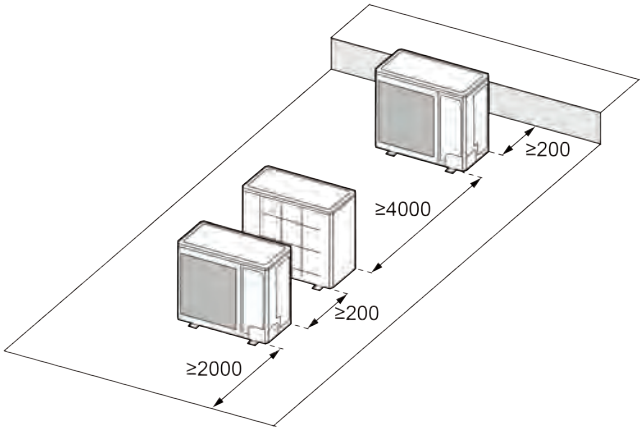
Unit: mm

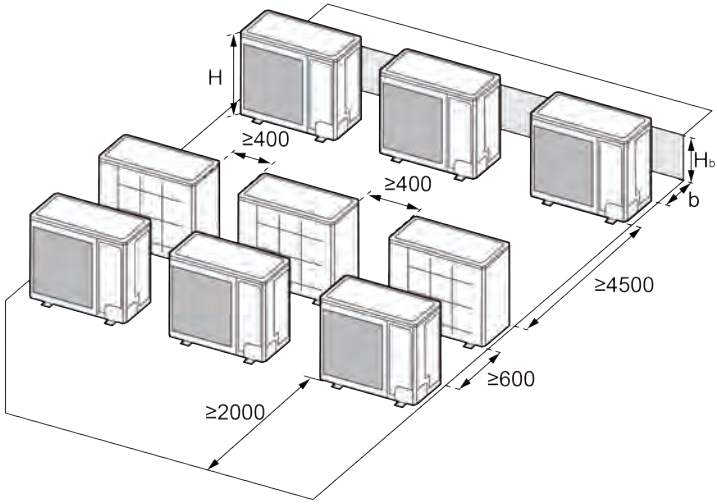


A~E	Hb Hd H		(mm)				
			a	b	c	d	e
A,B,C	—		≥300	≥300	≥1000	—	—
A,B,C,E	—		≥300	≥300	≥1000	—	≥1000
D	—		—	—	—	≥2000	—
D,E	—		—	—	—	≥2000	≥1000
B,D	$H_b < H_d$	$H_d > H$	—	≥300	—	≥2000	—
	$H_b > H_d$	$H_d \leq 1/2H$	—	≥250	—	≥2000	—
		$1/2H < H_d \leq H$	—	≥300	—	≥2500	—
B,D,E	$H_b < H_d$	$H_b \leq 1/2H$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

3) When outdoor units are installed in rows.

Unit: mm

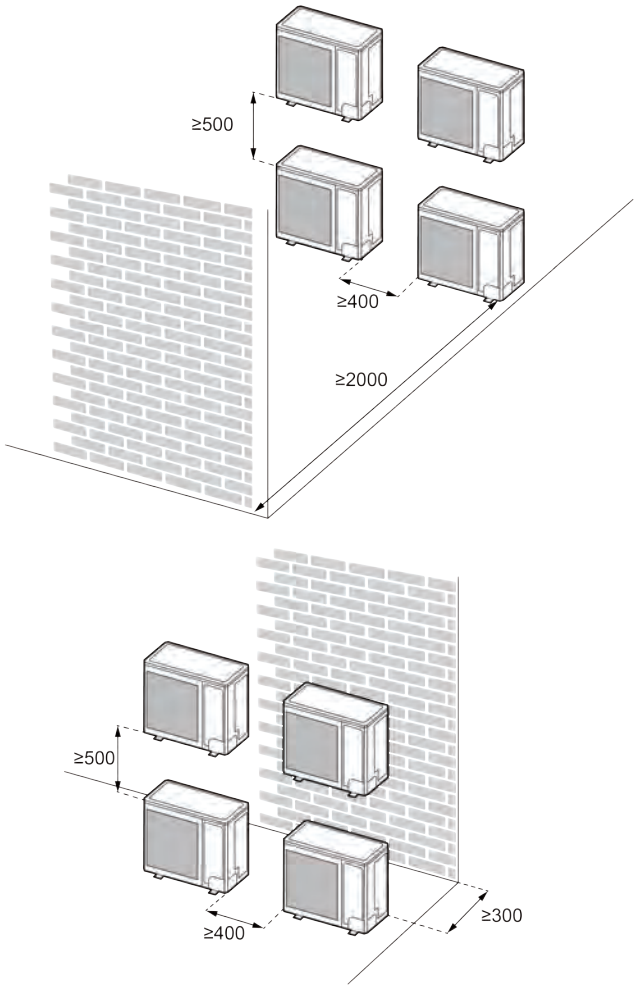




H_b H	(mm)
$H_b \leq 1/2H$	b≥250
$1/2H < H_b \leq H$	b≥300
$H_b > H$	Prohibited

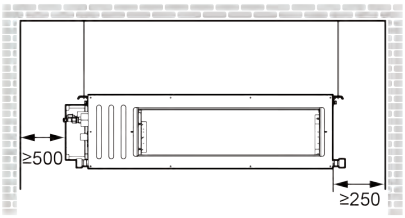
4) When outdoor units are installed one above another.

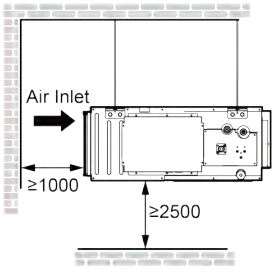
Unit: mm



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

Unit: mm





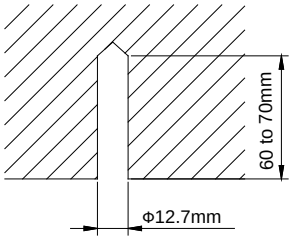
3.2 Unit Installation

3.2.1 Indoor Unit Installation

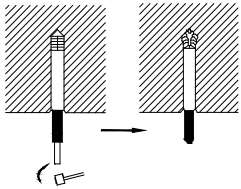
3.2.1.1 Preparation for Installing the Indoor Unit

NOTES!
(1) Please tighten the nut and bolt to prevent the air conditioner from falling down.
(2) The unit might be loose if fixing the panel rack only. Be careful during installation.

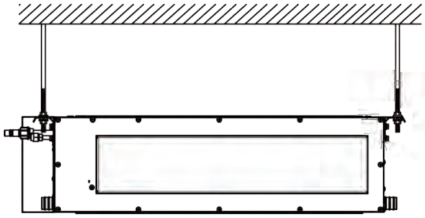
(1) Install the bolts to the ceiling at a place strong enough to hang the unit. Mark the bolt positions from the installation template. With a concrete drill for 12.7mm diameter holes. See the following figure.

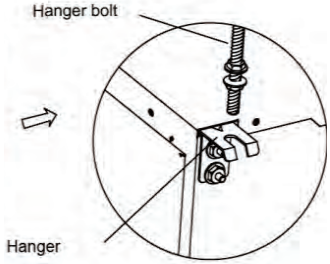


(2) Insert the anchor bolts into the drilled holes, and drive the pins completely into the anchor bolts with a hammer. See the following figure.

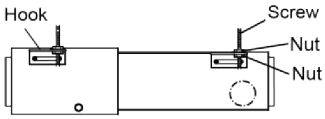


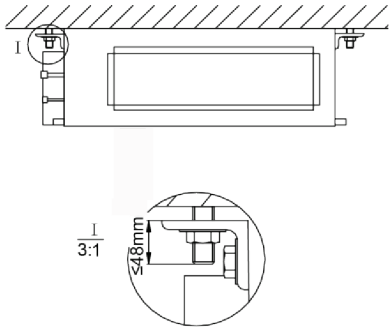
(3) Install the hanger to the unit. See the following figure.





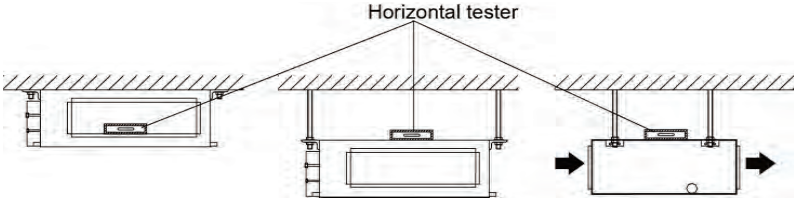
(4) Pass the unit hangers over the bolts installed to the ceiling and install the unit with the special nut. See the following figure.





3.2.1.2 Leveling

After installing the indoor unit, level detection of the unit shall be conducted. Place the unit horizontally and leave the left and right side with a downward slope of 1/100~1/50 in drainage direction, as shown below.



3.2.2 Outdoor Unit Installation

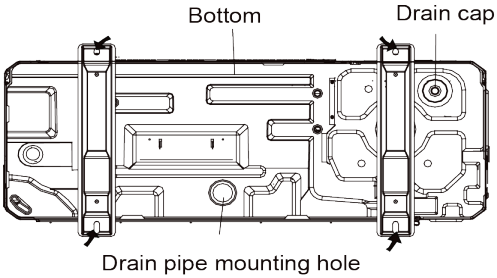
(1) If the outdoor unit is installed on a solid ground such as concrete, use M10 screw bolts and nuts to secure the unit and make sure the unit stands erect and level.

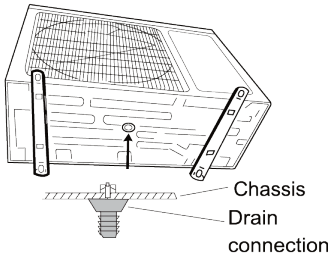
(2) Do not install it on top of the building.

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

(4) 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.

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

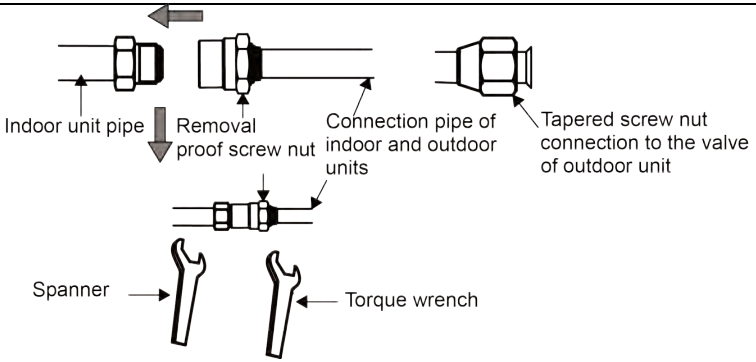




3.2.3 Connection Pipe Installation

3.2.3.1 Installation Notice and Requirement on Connection Pipe

NOTES!
(1) Indoor unit adopts special joints that can't be disassembled. The installation method is the same as the unit with ordinary joints. However, because the joints can't be removed, if the connection is not good and causes leakage, the joints need to be cut and welded again for replacement.
(2) The removal-proof screw nut must be connected to the indoor unit.



Installation method: Connect the connection pipes first to the indoor unit and then to the outdoor 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(m)	Biggest drop between indoor and outdoor units(m)
	Liquid pipe	Gas pipe		
ADG ECO 35PH	Φ1/4	Φ3/8	30	15
ADG ECO 50PH		Φ1/2	35	20
ADG ECO 70PH	Φ3/8	Φ5/8	50	25
ADG ECO 70PHB			50	25
ADG ECO 85PH			50	25
ADG ECO 85PHB			50	25
ADG ECO 100PH			65	30
ADG ECO 140PH			75	30
ADG ECO 160PH			75	30

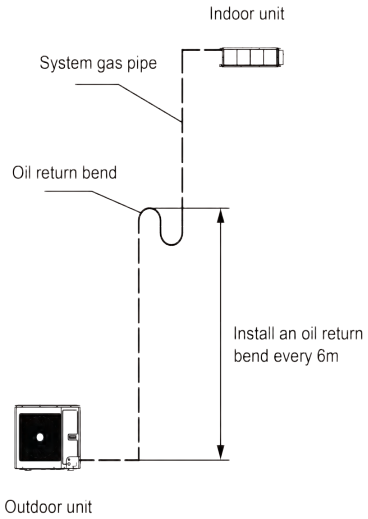
Connection pipe should adopt water-proof insulating material. Its wall thickness should be 0.5-1.0mm and the pipe wall should be able to withstand 6.0MPa. The longer the connection pipe is the worse cooling and heating performance it has.

When the drop between indoor and outdoor units is larger than 10m, an oil return bend should be added every 6 m.

The requirement on the adding of oil return bend is as below:

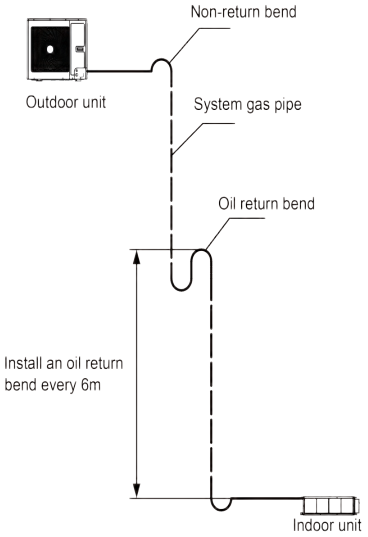
(1) Outdoor unit is beneath the indoor unit.

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

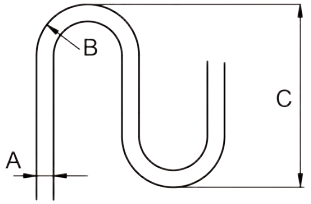


(2) Outdoor unit is above the indoor unit.

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



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



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

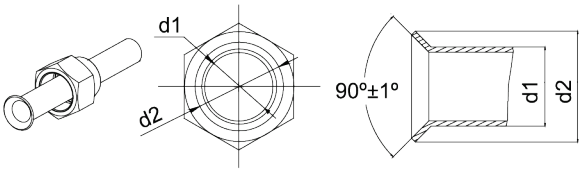
3.2.3.2 Pipe Flaring

(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.

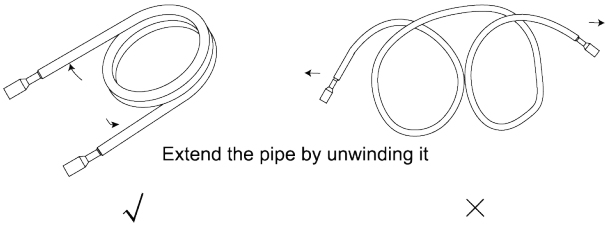
(3) Remove the cut-off valve of outdoor unit and take out the flare nut from the bag of indoor unit accessories. Then fit the flare nut on the pipe and use a flaring tool to flare the mouth of connection pipe.

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



3.2.3.3 Pipe Bending

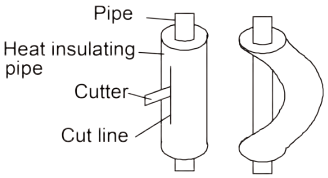
(1) The pipes are shaped by your hands. Be careful not to collapse them.



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

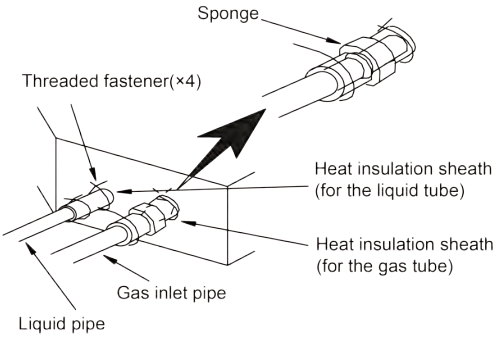
(3) If the pipe is repeatedly bent or extended, it will become hard and difficult to be bent or extended. So do not bend or extend the pipe for more than 3 times.

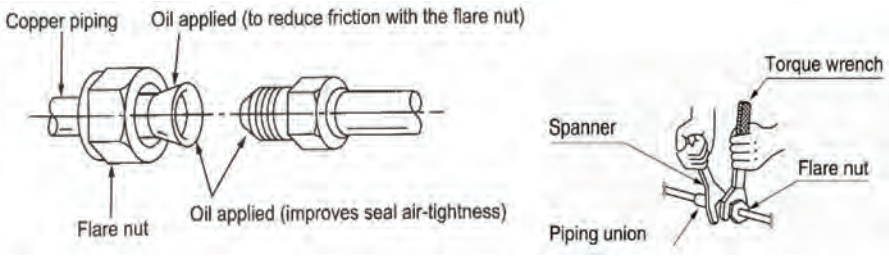
(4) When bending the pipe, do not bend it excessively, otherwise it will get broken. As shown beside, use a sharp cutter to cut the heat insulating pipe and bend it after the pipe is exposed. After bending, place the heat insulating pipe back on the pipeline and fix it with adhesive tape.



3.2.3.4 Connection Pipe of Indoor and Outdoor Units

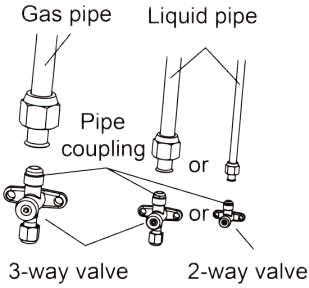
NOTES!
(1) Connect the pipe to the unit. Please follow the instructions stated in the figures below. Use both spanner and torque wrench.
(2) When connecting the tapered screw nut, first apply chilled machine oil on its inner and outer surface and then screw it up for 3~4 circles.
(3) Confirm the tightening 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.





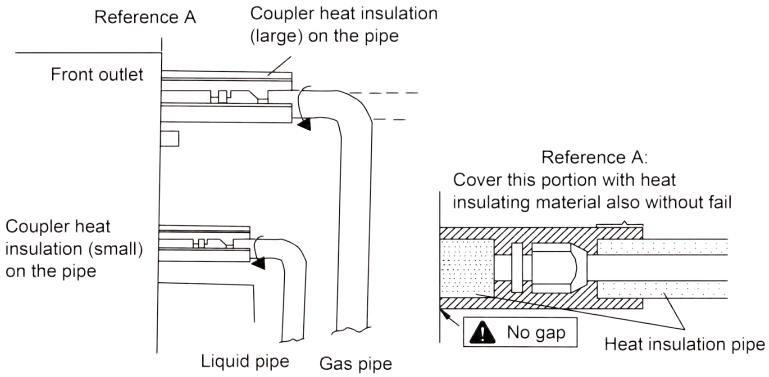
Pipe diameter (inch)	Tightening torque (N·m)
Φ1/4	15-30
Φ3/8	35-40
Φ1/2	45-50
Φ5/8	60-65
Φ3/4	70-75
Φ7/8	80-85

Screw on the flare nut of the flaring connecting pipe on the outdoor unit valve. The method of screwing the flare nut is the same with that for indoor unit.



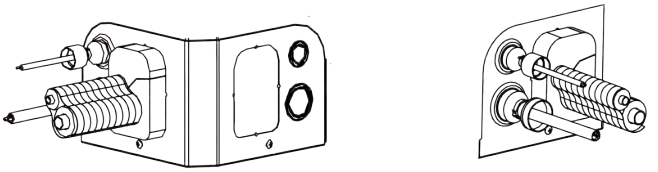
3.2.3.5 Thermal Insulation of Pipe Joint (Only for indoor unit)

Stick coupler heat insulation (large and small) to the place where connecting pipes.



3.2.3.6 Sealing of the Knock-off Hole

As for the built-in valve model, during the installation process for connection pipe, when the connection pipe is passing through the knock-off hole, conduct sealing with insulated cotton in the knock-off hole of outdoor unit to prevent small animals from entering. See the following figures.



NOTE: Only for the AEG ECO 100PIH, AEG ECO 140PIH, AEG ECO 100PIH3, AEG ECO 140PIH3, AEG ECO 160PIH3 units.

3.2.4 Connection Pipe Vacuum Pumping and Leak Detection

3.2.4.1 Vacuum Pumping

NOTE!
Make sure the outlet of vacuum pump is away from fire source and is well-ventilated.

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

(2) Connect the hose at the low pressure side of the manifold valve assembly to the service port of the unit's gas 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)
ADG ECO 35PH ADG ECO 50PH	20
ADG ECO 70PH ADG ECO 70PHB ADG ECO 85PH ADG ECO 85PHB ADHG ECO 100PH	30
ADG ECO 140PH ADG ECO 160PH	45

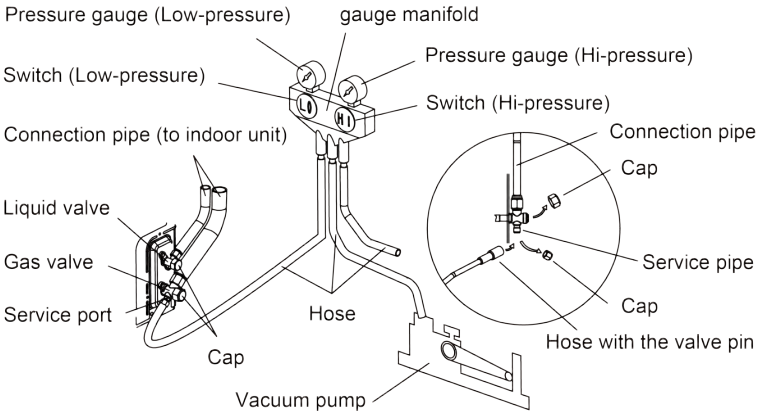
And verify if the pressure gauge at the low pressure side of the manifold valve assembly reads -0.1MPa (-750mmHg), if not, it indicates there is leak somewhere.

Then, close the switch fully and then stop the vacuum pump.

(6) Wait for 10min to see if the system pressure can remain unchanged. If the pressure increase, there may be leakage.

(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.



NOTE:

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.

3.2.4.2 Leak Detection Methods

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

Electronic leak detectors shall be used to detect flammable refrigerants, but the sensitivity may not be adequate, or may need re-calibration (Detection equipment shall be calibrated in a refrigerant-free area).

Ensure that the detector is not a potential source of ignition and is suitable for

the refrigerant used. Leak detection equipment shall be set at a percentage of the LFL of the refrigerant and shall be calibrated to the refrigerant employed and the appropriate percentage of gas (25% maximum) is confirmed.

Leak detection fluids are suitable for use with most refrigerants but the use of detergents containing chlorine shall be avoided as the chlorine may react with the refrigerant and corrode the copper pipe-work.

If a leak is suspected, all naked flames shall be removed / extinguished. If a leakage of refrigerant is found which requires brazing, all of the refrigerant shall be recovered from the system, or isolated (by means of shut off valves) in a part of the system remote from the leak. Oxygen free nitrogen (OFN) shall then be purged through the system both before and during the brazing process.

3.2.5 Refrigerant Adding

NOTE!
Before and during operation, use an appropriate refrigerant leak detector to monitor the operation area and make sure the technicians can be well aware of any potential or actual leakage of inflammable gas. Make sure the leak detecting device is applicable to inflammable refrigerant. For example, it should be free of sparks, completely sealed and safe in nature.

See the following table for the amount of additional refrigerant.

<table>
<tr><th>Item
Model</th><th>Standard Pipe Length</th><th>Unnecessary Charge Pipe Length</th><th>Additional Refrigerant Amount for Extra Pipe</th></tr>
<tr><td>AEG ECO 35PIH</td><td rowspan="6">5.0m</td><td rowspan="6">≤7.0m</td><td rowspan="2">16 g/m</td></tr>
<tr><td>AEG ECO 50PIH</td></tr>
<tr><td>AEG ECO 70PIH</td><td>25 g/m</td></tr>
<tr><td>AEG ECO 85PIH</td><td>30 g/m</td></tr>
<tr><td>AEG ECO 100PIH</td><td rowspan="2">35 g/m</td></tr>
<tr><td>AEG ECO 100PIH3</td></tr>
<tr><td>AEG ECO 140PIH</td><td rowspan="3">7.5m</td><td rowspan="3">≤ 9.5m</td><td rowspan="3">40 g/m</td></tr>
<tr><td>AEG ECO 140PIH3</td></tr>
<tr><td>AEG ECO 160PIH3</td></tr>
</table>

3.2.6 Installation of Drain Pipe

(1) It is not allowed to connect the condensate drain pipe into waste pipe or other pipelines which are likely to produce corrosive or peculiar smell to prevent the smell from entering indoors or corrupt the unit.

(2) It is not allowed to connect the condensate drain pipe into rain pipe to prevent rain water from pouring in and cause property loss or personal injury.

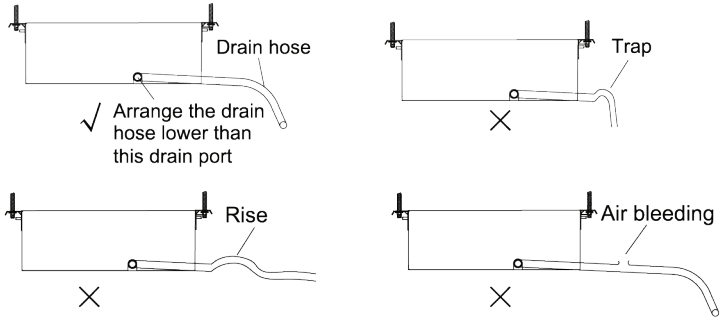
(3) Condensate drain pipe should be connected into special drain system for air conditioner.

3.2.6.1 Indoor Side Drain Pipe

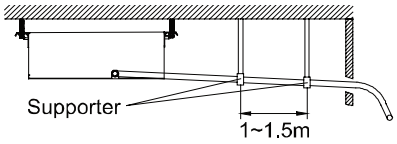
NOTE!
Install the drain hose in accordance with the instructions in this installation manual and keep the area warm enough to prevent condensation. Problems with the piping may lead to water leaks.

(1) Install the drain hose with downward gradient (1/100 to 1/50) and no risers or traps are used for the hose. See the following figure.

(2) Be sure there is no crack or leak on the drain hose to avoid the formation of air pocket. See the following figure.



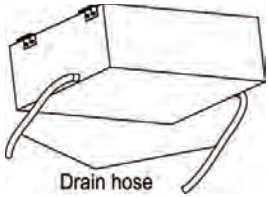
(3) When the hose is long, install supporters. See the following figure.



(4) Always use the drain hose which has been insulated properly.

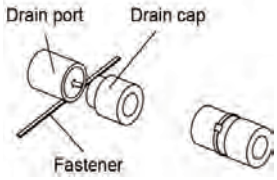
(5) Use a suitable drain hose.

(6) There is a drain port on both the left and right sides. Select the drain port to match the local conditions. See the following figure.

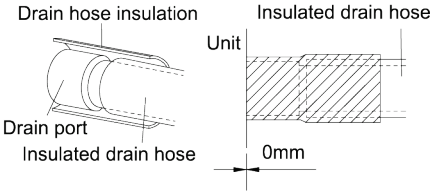


(7) When the unit is shipped from the factory, the drain port is defaulted to be the one on the left side (electric box side).

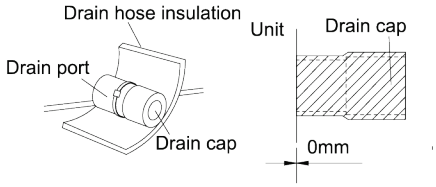
(8) When using the drain port on the right side of the unit, reinstall the drain cap to the left side drain port. See the following figure.



(9) Be sure to insulate where the drain port and the drain hose is connected. See the following figure.



(10) The unused drain port also should be insulated properly. See the following figure.

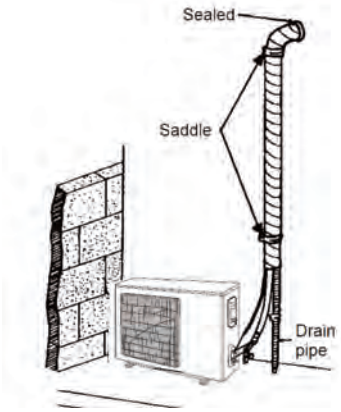


(11) There is adhesive on one side of the insulation so that after removing the protective paper over it the insulation can be directly attached to the drain hose.

3.2.6.2 Outdoor Side Drain Pipe

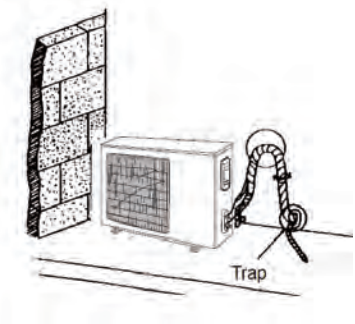
(1) If the outdoor unit is underneath the indoor unit, arrange the pipeline according to the following diagram.

1) Drain hose should be placed on the ground and its end should not be immersed into water. The whole pipeline should be supported and fixed onto the wall.
2) Wind the insulating tape from bottom to top.
3) The whole pipeline should be wound with insulating tape and fixed onto the wall with saddles.



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

1) Wind the insulating tape from bottom to top.
2) The whole pipeline should be wound together to avoid water returning to the room.
3) Use saddles to fix the whole pipeline onto the wall.



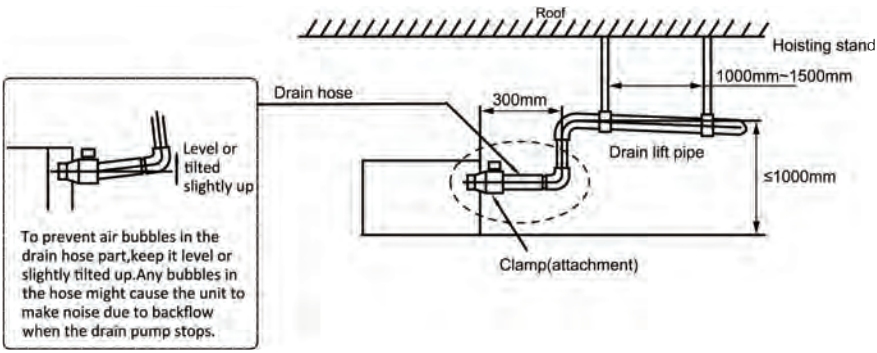
3.2.6.3 Drain Riser with Pump Unit Considerations

(1) For the unit with the condensate pump, only one drain port at the side close to the electric box is prepared and only through it the drain hose can be connected.

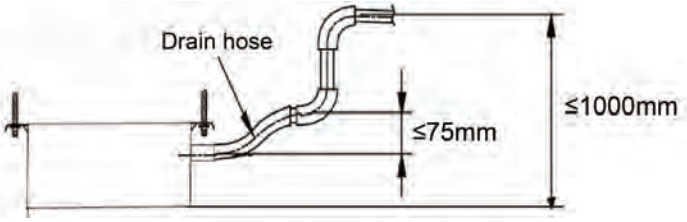
Item / Model	Drain pipe (outer dimension × wall thickness)(mm)
ADG ECO 35PH	Φ26×2.5
ADG ECO 50PH	
ADG ECO 70PH	
ADG ECO 70PHB	
ADG ECO 85PH	
ADG ECO 85PHB	
ADG ECO 100PH	
ADG ECO 140PH	
ADG ECO 160PH	

(2) For the unit with the condensate pump, two drain ports at the bottom are defaulted to be factory plugged with drain caps. After the installation of the drain hose, these two drain ports also need to be insulated properly with the same way aforementioned.

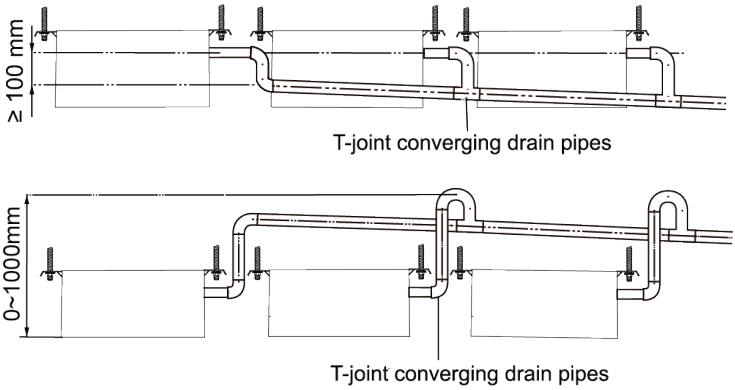
(3) The lifted installation height of drainage pipe is less than 1,000mm, as is shown in the following figure.



The vertical height of the drain hose should be 75mm or less so that it is unnecessary for the drain port to withstand additional force.



When multiple drain hoses are used, their installation should be performed as shown in the figure below.



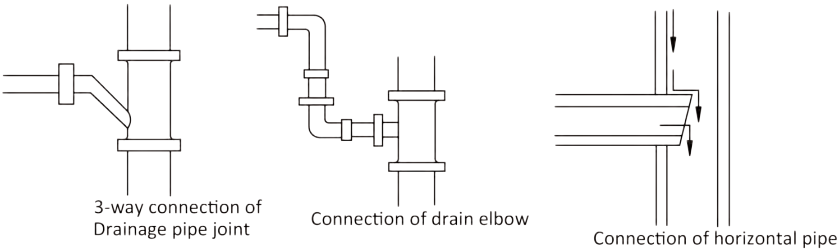
NOTE:

The specification of the selected merged drainage pipe shall be appropriate for the operation capacity of the unit.

(4) Drain branch should be connected to the vertical or horizontal part of the main drain pipe.

(5) Horizontal pipe should not be connected to the vertical pipe that is on the same level. It should be connected in the following way:

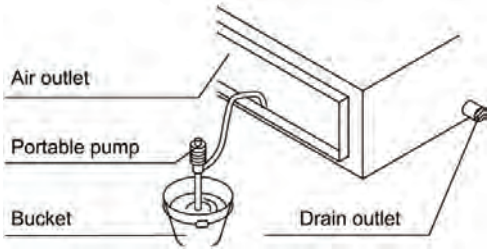
1) Attach the 3-way connection of the drainage pipe joint.
2) Attach the drain elbow.
3) Attach the horizontal pipe.



3.2.6.4 Check Drainage

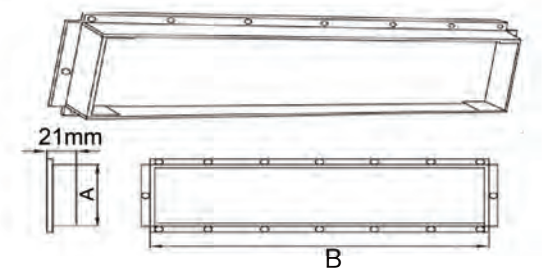
After piping work is finished, check if drainage flows smoothly.

As shown in the figure, add approximately 1liter of water slowly into the drain pan and check drainage flow during COOL running.

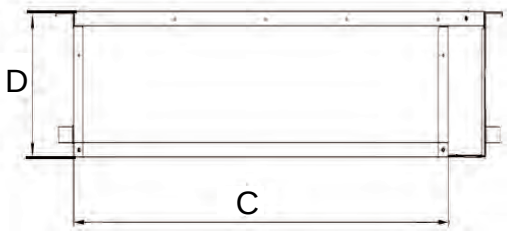


3.2.7 Installation of the Duct

3.2.7.1 Dimensions of the Supply Air Outlet/Return Air Inlet



Supply Air Outlet



Return Air Inlet

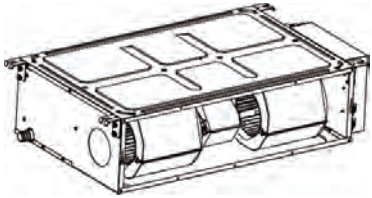
Unit: mm

Item / Model	Supply Air Outlet		Return Air Inlet	
	A	B	C	D
ADG ECO 35PH	122	585	700	200
ADG ECO 50PH	122	885	1000	200
ADG ECO 70PH	142	1185	1300	220
ADG ECO 85PH				
ADG ECO 70PHB	219	743	900	260
ADG ECO 85PHB				
ADG ECO 100PH	195	746	960	264

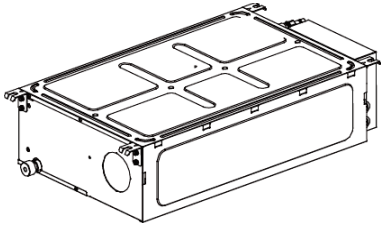
Item / Model	Supply Air Outlet		Return Air Inlet	
	A	B	C	D
ADG ECO 140PH	195	1150	1360	264
ADG ECO 160PH				

3.2.7.2 Return Air Method

(1) The default ex-factory return air method is from the back. The return air cover shall be installed at the bottom of the unit, as is shown in the following figure.



(2) If the downward return air method is adopted, then install the return air cover at the back of the unit after dismantling it.

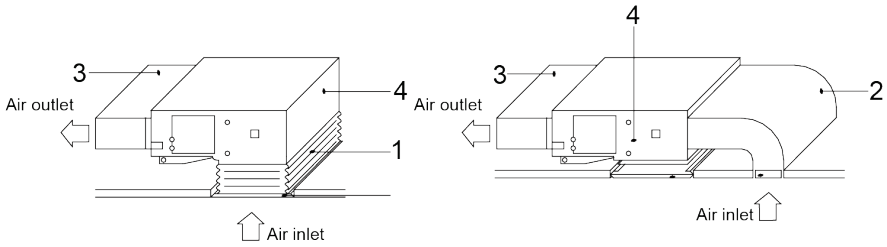


(3) Connect the return duct to the return air inlet of indoor unit with rivet, and the other side shall be connected to the return air inlet. For the convenience of free height adjustment, canvas duct can be made and reinforced with iron wire to a folding shape.

(4) The noise of downward return air is obvious bigger than that of rear return air. For downward return air, silencer and static pressure carton shall be added to conduct noise reduction treatment.

3.2.7.3 Installation of Supply Air Duct and Return Air Duct

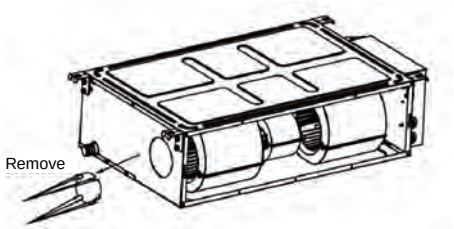
Installation method shall be selected by entirely considering the conditions of buildings, maintenance, etc.as is shown in the following figure.



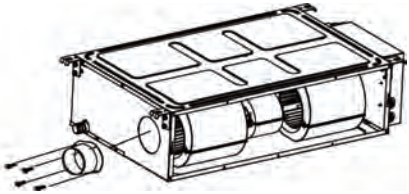
No.	1	2	3	4
Name	canvas duct	return air duct	supply air duct	indoor unit

3.2.7.4 Installation of Fresh Air Duct

(1) While connecting the fresh air duct, cut off the fresh air baffle plate as is shown in the following figure. If the fresh air duct is not used, block the gap of fresh air baffle plate with sponge.



(2) Install the round flange so that it can be connected to the fresh air duct, as is shown in the following figure.



(3) The air duct and round flange duct shall be concealed and kept warm well.

(4) The fresh air is the air after filtration.

NOTES:

①. The supply air duct, return air duct and fresh air duct shall have thermal insulation layer to prevent heat leakage and condensation. Stick the plastic nail to the air duct, then attach the heat preservation cotton with tinfoil and fix it with plastic nail cover, finally, seal the connection joint with tinfoil tape tightly; other materials with good thermal insulation effect can also be used.

②. Each supply air duct and return air duct shall be fixed on the floor prefabricated slab with iron support; the air duct joint shall be tightly sealed with glue to prevent leakage.

③. The design and construction of air duct shall meet related national engineering specifications and requirements.

④. The distance between the edge of return air duct and wall is suggested to be above 150mm, add filter screen for the return air inlet.

⑤. Noise reduction and shock absorption shall be considered in air duct design and construction. Moreover, the noise source shall avoid the crowd, e.g. the return air inlet shall never be designed at the top of the user (office and rest area).

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. Never extend the power cord. 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 cord, connection wire of indoor and outdoor units and the communication cords must be effectively fixed.

⑤. The external power cord, connection wire of indoor and outdoor units and the communication cords 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 cord, communication cords, and the connection wire of indoor and outdoor units must not be squeezed. Never pull, stretch or bend the wires.

⑦. The external power cord, communication cords and the connection wire of indoor and outdoor units 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. Please use the power cables that are delivered along with the air conditioner. Do not change the power cables arbitrarily. Do not change the length and terminals of the power cables. If you want to change the power cables, please contact ArgiClima local service center.

⑩. Wiring terminals should be connected firmly to the terminal board. Loose connection is forbidden.

• . After the electrical installation is finished, please use wire clamps to secure the power cord, connection wire of indoor and outdoor units and the communication cords. Make sure the wires are not clamped too tight.

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

3.3.2 Electrical Parameters

3.3.2.1 Wire Specifications and Fuse Capacity

Model	Power supply	Fuse capacity	Circuit breaker capacity	Min. sectional area of power cord
	V/Ph/Hz	A	A	mm^2
Indoor unit	220-240V ~50Hz 208-230V ~60Hz	3.15	6	1.0

Model	Power supply	Circuit breaker capacity	Min. sectional area of power cord
	V/Ph/Hz	A	mm^2
AEG ECO 35PIH	220-240V ~50Hz 208-230V ~60Hz	16	1.5
AEG ECO 50PIH		16	1.5
AEG ECO 70PIH		20	2.5
AEG ECO 85PIH		25	2.5
AEG ECO 100PIH		32	4.0
AEG ECO 140PIH		40	6.0
AEG ECO 100PIH3	380-415V 3N~50/60Hz	16	1.5
AEG ECO 140PIH3		16	1.5
AEG ECO 160PIH3		16	1.5

NOTES:

①. Fuse is located on the main board.

②. Install a circuit breaker at every power terminal near the units (indoor and outdoor units) with at least 3mm contact gap. The units must be able to be plugged or unplugged.

③. Circuit breaker and power cord specifications listed in the above table are determined based on the maximum power input of the units.

④. Specifications of power cords listed in the above table are applicable in a working condition where ambient temperature is 40°C and multi-core copper cable (e.g. YJV copper cable, with insulated PE and PVC sheath) is protected by a conduit, and is resistant to 90°C in maximum (See IEC 60364-5-52). If working condition changes, please adjust the specifications according to national standards.

⑤. Specifications of circuit breaker are based on a working condition where the working temperature is 40°C. If working condition changes, please adjust the specifications according to national standards.

⑥. Adopt 2pc of 0.75mm² power cords to be the communication cords between indoor and outdoor units. The maximum length is 100m. Please select a

proper length according to local conditions. Communication cords must not be twisted together. To be in compliance EN 55014, it is necessary to use 8 meters long wire.

⑦. Adopt 2pc of 0.75mm^2 power cords to be the communication cords between wired control and indoor unit. The maximum length is 30m. Please select a proper length according to local conditions. Communication cords must not be twisted together. To be in compliance EN 55014,it is necessary to use 7.5 meters long wire.

⑧. The wire gauge of communication cord should not be less than 0.75mm^2. It's recommended to use 0.75mm^2 power cords as the communication cords.

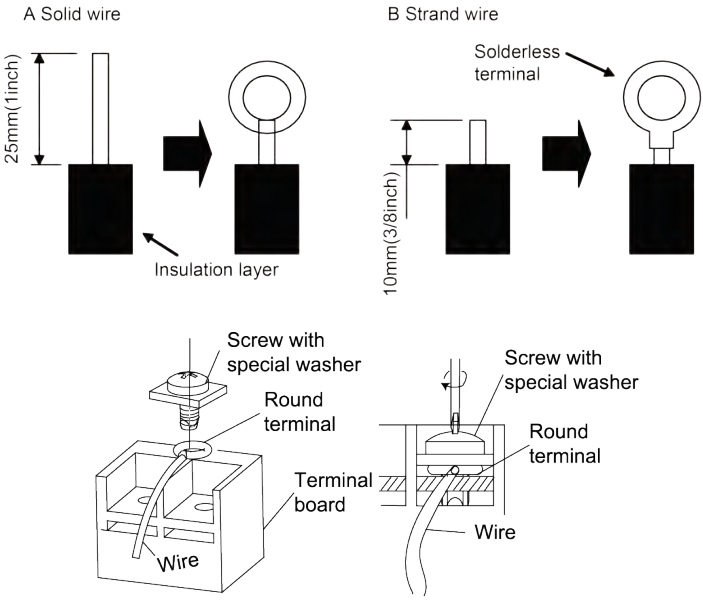
3.3.3 Connection of Power Cord and Communication Cord

(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.

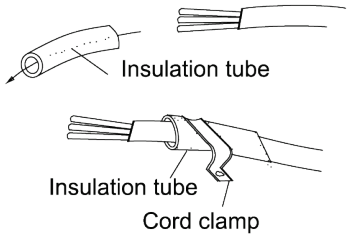
(2) For strand wires (as shown below):

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).



(3) How to connect the connection wire and power cord.

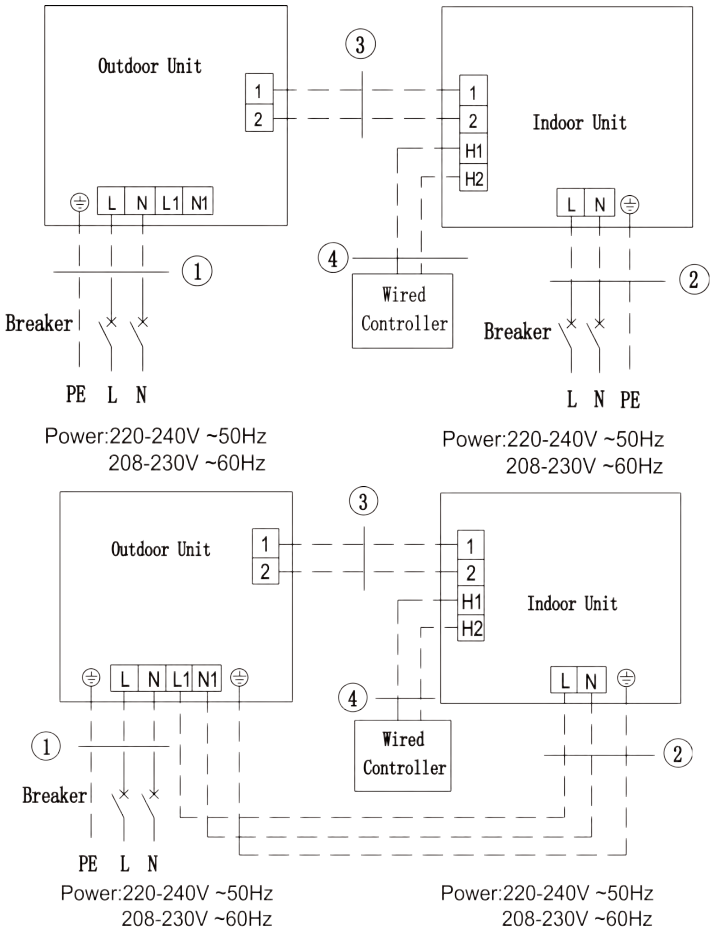
Lead the connection wire and power cord through the insulation tube. Then fix the wires with wire clamps (as shown in the following figure).



WARNING!
(1) Before working, please check whether the indoor and outdoor units are powered on.
(2) Match the terminal numbers and wire colors with the colors indicated in the indoor unit.
(3) Wrong wire connection may burn the electrical components.
(4) Connect the wires firmly to the wiring box. Incomplete installation may lead to fire hazard.
(5) Please use wire clamps to secure the external covers of connecting wires. (Insulators must be clamped securely; otherwise, electric leakage may occur.)
(6) Ground wire should be connected.

(4) Wire between indoor and outdoor units.

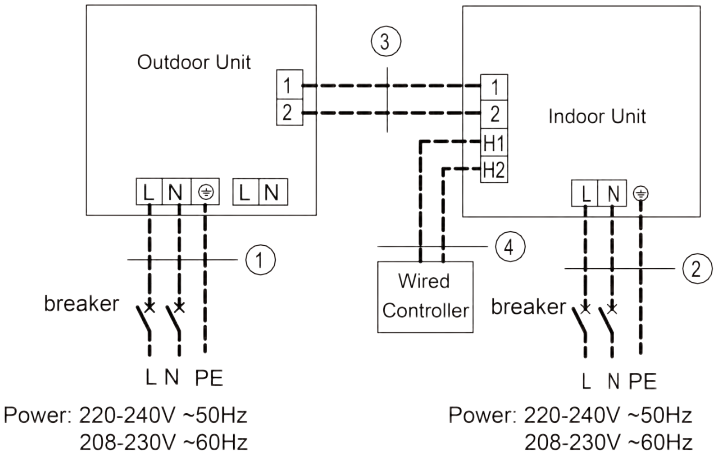
Single-phase unit: AEG ECO 35PIH, AEG ECO 50PIH, AEG ECO 70PIH, AEG ECO 85PIH

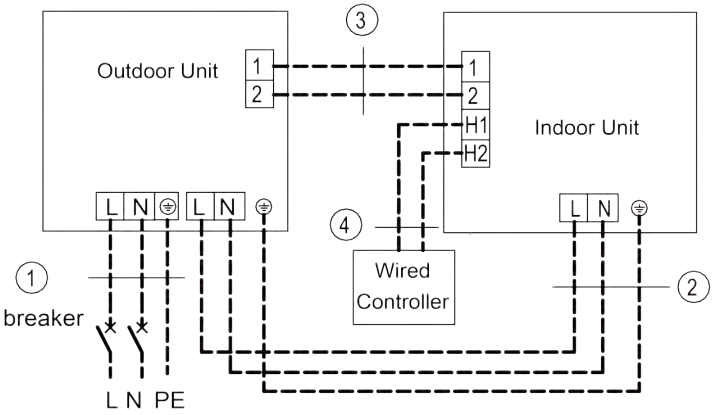


ADG ECO 35PH+AEG ECO 35PIH
ADG ECO 50PH+AEG ECO 50PIH
①. Power cords 3×1.5mm²
②. Power cords 3×1.0mm²
③. Communication cords 2×0.75mm²
④. Communication cords 2×0.75mm²

ADG ECO 70PH+AEG ECO 70PIH
ADG ECO 70PHB+AEG ECO 70PIH
ADG ECO 85PH+AEG ECO 85PIH
ADG ECO 85PHB+AEG ECO 85PIH
①. Power cords 3×2.5mm^2
②. Power cords 3×1.0mm^2
③. Communication cords 2×0.75mm^2
④. Communication cords 2×0.75mm^2

Single-phase Unit: AEG ECO 100PIH, AEG ECO 140PIH.





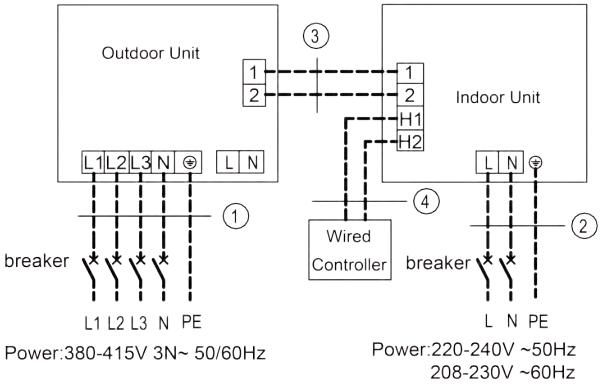
Power: 220-240V ~50Hz
208-230V ~60Hz

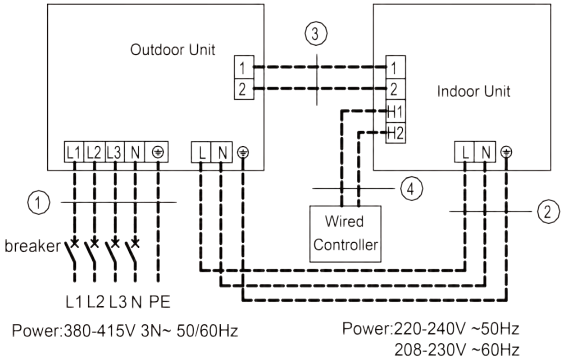
Power: 220-240V ~50Hz
208-230V ~60Hz

ADG ECO 100PH+AEG ECO 100PIH
①.Power cords 3×4.0mm²
②.Power cords 3×1.0mm²
③.Communication cords 2×0.75mm²
④.Communication cords 2×0.75mm²

ADG ECO 140PH+AEG ECO 140PIH
①.Power cords 3×6.0mm²
②.Power cords 3×1.0mm²
③.Communication cords 2×0.75mm²
④.Communication cords 2×0.75mm²

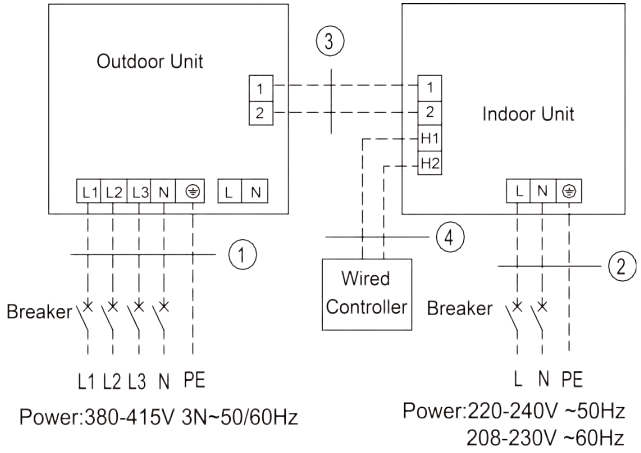
Three-phase unit: AEG ECO 100PIH3,AEG ECO 140PIH3.

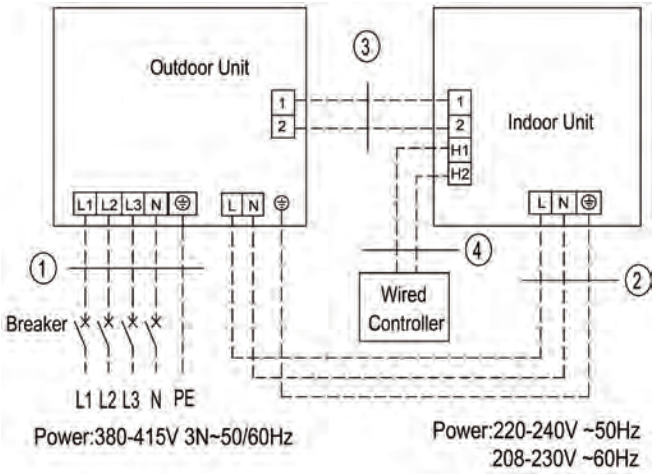




ADG ECO 100PH+AEG ECO 100PIH3
ADG ECO 140PH+AEG ECO140PIH3
①.Power cords 5×1.5mm^2
②.Power cords 3×1.0mm^2
③.Communication cords 2×0.75mm^2
④.Communication cords 2×0.75mm^2

Three-phase unit: AEG ECO 160PIH3





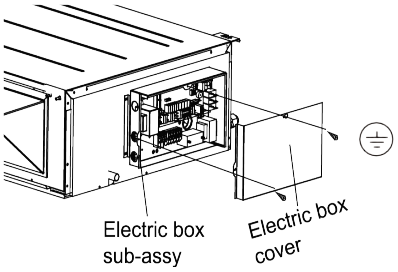
ADG ECO 160PH+AEG ECO 160PIH3
①.Power cords 5×1.5mm²
②.Power cords 3×1.0mm²
③.Communication cords 2×0.75mm²
④.Communication cords 2×0.75mm²

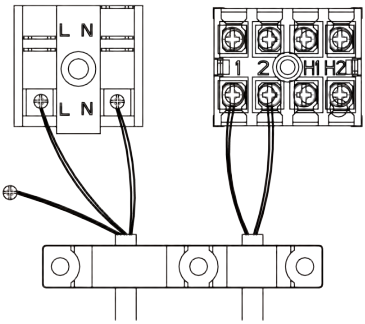
(5) Electrical wiring of indoor unit and outdoor unit.

WARNING!	
(1)	High and low voltage wires should be led through different rubber rings of the electric box cover.
(2)	Do not bundle up the connection wire and communication wire of wired control or lay them side by side, otherwise errors will occur.
(3)	High and low voltage wires should be secured separately. Secure the former ones with big clamps and the latter ones with small clamps.
(4)	Use screws to tighten up the connection wires and power cords of indoor and outdoor units on the terminal board. Wrong connection may lead to fire hazard.
(5)	If the connection wires of indoor unit (outdoor unit) and power cords are not correctly connected, the air conditioner may get damaged.
(6)	Ground the indoor and outdoor 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 cord, make sure the phase sequence of the power supply matches with the corresponding terminals, otherwise the compressor will get reversed and operate abnormally.

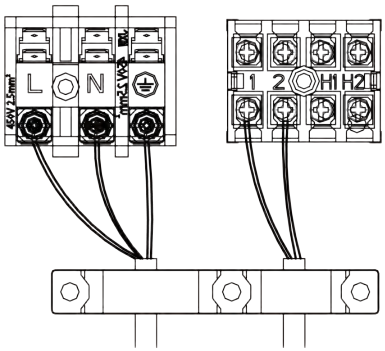
1) Indoor side

Take off the electric box cover from the sub-assembly of electric box. Then connect the wires. Connect the connection wires of indoor unit according to the corresponding marks. (Expect for ADG ECO 160PH





Only for ADGECO160PH

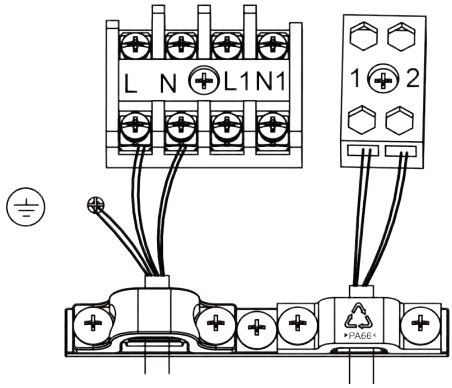


2) Outdoor side

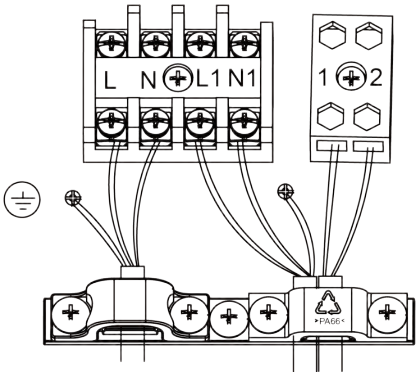
Remove the big handle/front panel of the outdoor unit and insert one end of the communication cord and the power cord to the terminal board.

Single-phase: AEGECO35PIH, AEGECO50PIH, AEGECO70PIH, AEGECO85PIH.

A. Wire routing of separated power supply.

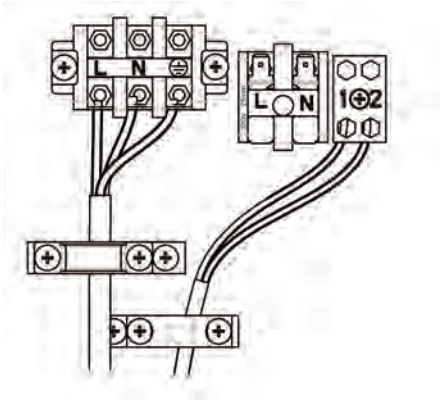


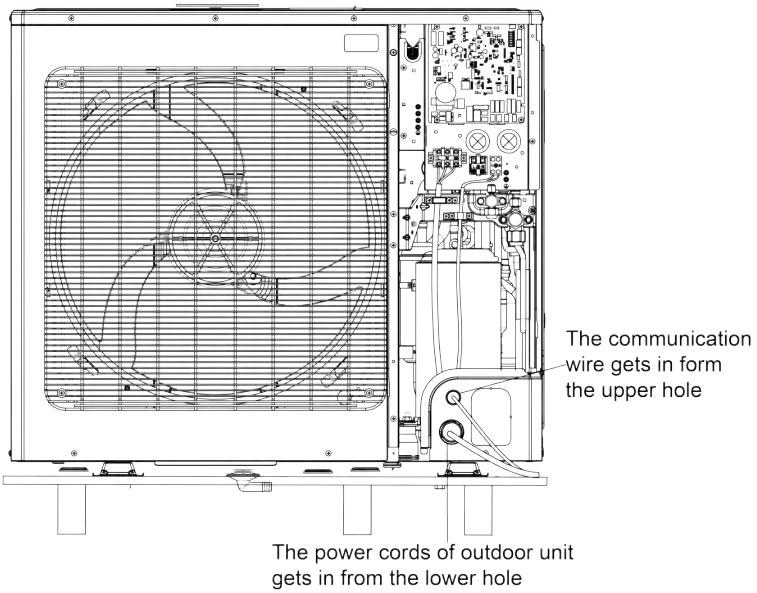
B. Wire routing of unified power supply.



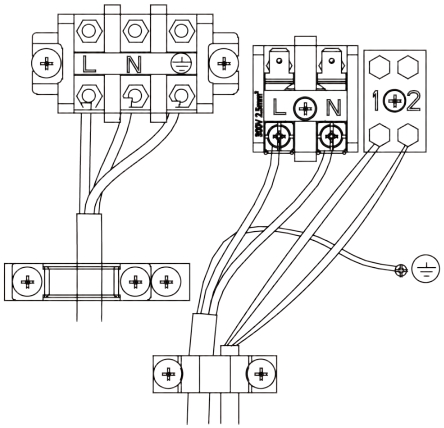
Single-phase: AEG ECO 100PIH, AEG ECO 140PIH

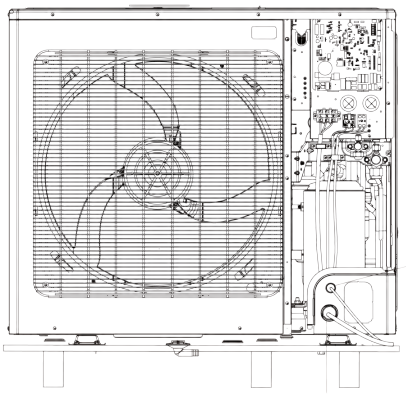
A. Wire routing of separated power supply for single phase.





B. Wire routing of unified power supply for single phase.



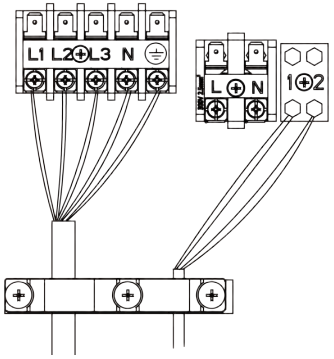


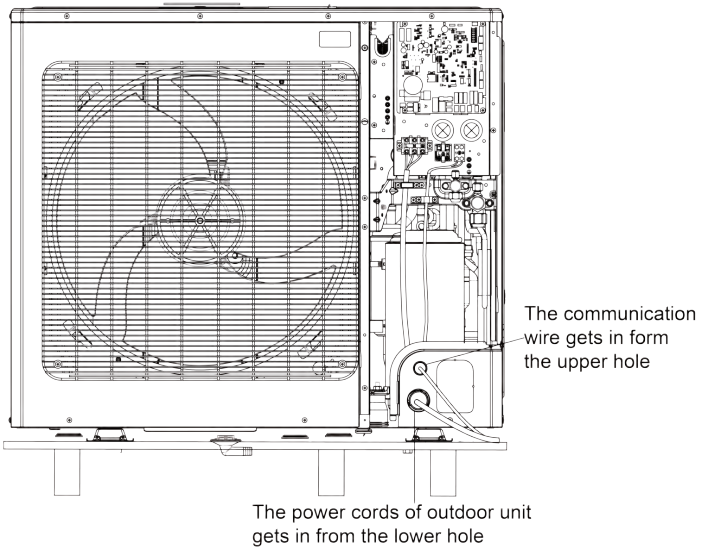
The communication wire gets in from the upper hole

The power cords of outdoor unit and indoor unit get in from the lower hole

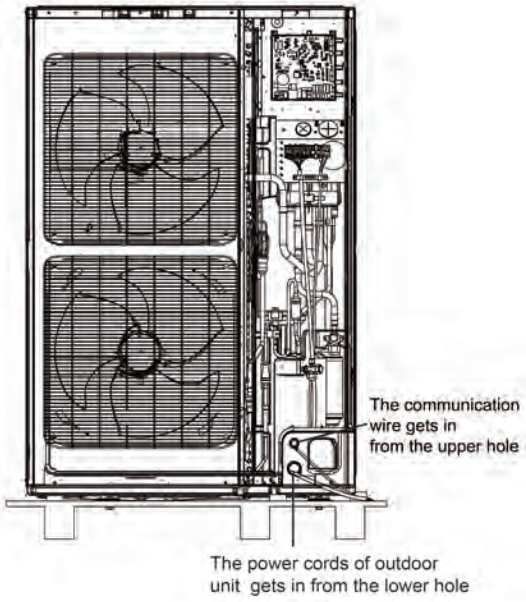
Three-phase: AEG ECO 100PIH3, AEG ECO 140PIH, AEG ECO 160PIH3.

A. Wire routing of separated power supply for three phase.

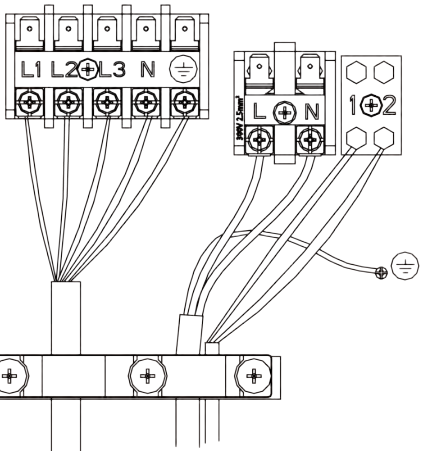


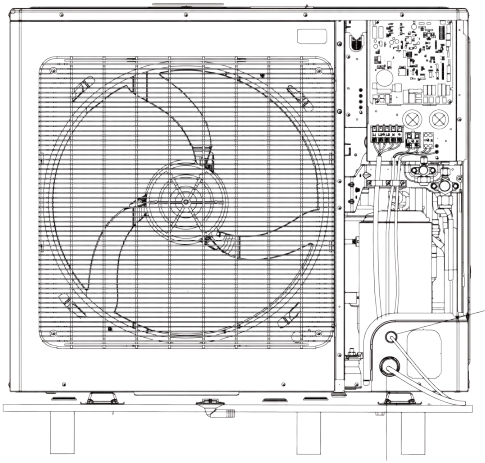


Only for AEG ECO 160PIH3:



B. Wire routing of unified power supply for three-phase.

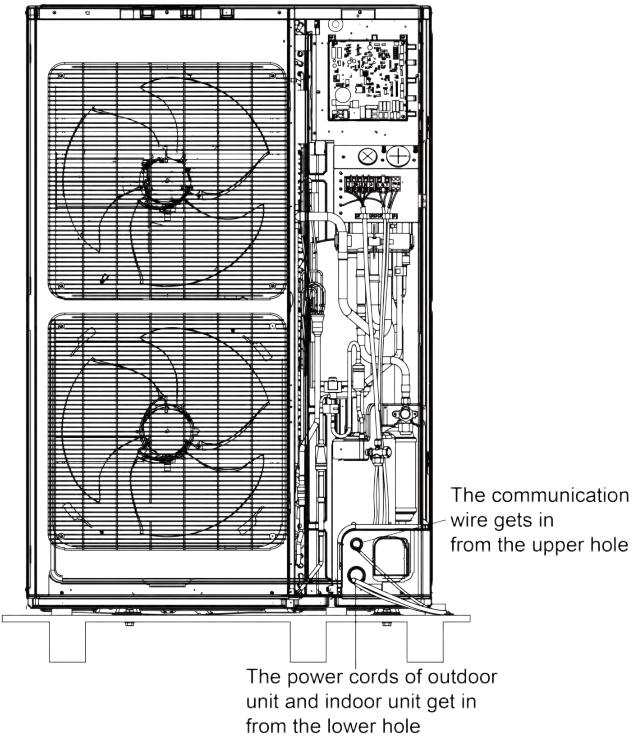




The communication wire gets in from the upper hole

The power cords of outdoor unit and indoor unit get in from the lower hole

Only for AEG ECO 160PIH3:



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 indoor or outdoor 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) Make sure the indoor and outdoor units can run normally.

(4) 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.

(5) Feel the air flow of the indoor unit to see if it is normal.

(6) Press the swing button or speed control button on remote control or wired control to see if the fan can run normally.

NOTES：

①. If you use remote control 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 remote control, it won't be started up right away.

②. If there's no display on the wired control, it's probably because the connection wire between the indoor unit and wired control is not connected. Please check again.

4 Installation of Controller

Refer to the wired controller or remote controller manual.

5 Maintenance

5.1 Failures Not Caused by Faults of the AC

(1) 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.
	Remote control has low battery.	Replace the batteries.
Bad cooling or heating effect.	Air inlet and outlet of indoor or outdoor units have been blocked.	Clear the obstacles and keep the room for indoor and outdoor 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 indoor and outdoor units.

(2) 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.	Temperature control 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 indoor unit comes 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 indoor unit.

NOTE: 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 ArgoClima authorized local service center. Ask our professional service staff to check and repair the unit.

5.2 Error Code

WARNING!	
(1)	If abnormal things (for example, awful smell) occur, please stop the unit immediately and disconnect power. Then contact ArgoClima 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 ArgoClima authorized service center and send for professional service staff to repair.

If the display panel or wired control displays an error code, please refer to the error code meaning stated in the following table.

Number	Error code	Error
1	E1	Compressor high pressure protection
2	E2	Indoor anti-freeze protection
3	E3	Compressor low pressure protection, refrigerant lack protection and refrigerant colleting mode
4	E4	Compressor air discharge high-temperature protection
5	E6	Communication error
6	E8	Indoor fan error
7	E9	Water-full protection
8	F0	Indoor ambient temperature sensor error
9	F1	Evaporator temperature sensor error
10	F2	Condenser temperature sensor error
11	F3	Outdoor ambient temperature sensor error
12	F4	Discharge temperature sensor error
13	F5	Wired control temperature sensor error
14	C5	IDU jumper cap error

Number	Error code	Error
15	EE	ODU memory chip error
16	PF	Electric box sensor error
17	H3	Compressor overload protection
18	H4	Overload
19	H5	IPM protection
20	H6	DC fan error
21	H7	Driver out-of-step protection
22	HC	Pfc protection
23	Lc	Startup failure
24	Ld	Compressor phase-sequence protection
25	LF	Power protection
26	Lp	IDU and ODU unmatched
27	U7	4–way valve switch-over error
28	P0	Driver reset protection
29	P5	Over-current protection
30	P6	Master control and driver communication error
31	P7	Driver module sensor error
32	P8	Driver module high temperature protection
33	P9	Zero-crossing protection
34	PA	AC current protection
35	Pc	Driver current error
36	Pd	Sensor connection protection
37	PE	Temperature drift protection
38	PL	Bus low-voltage protection
39	PH	Bus high-voltage protection
40	PU	Charge loop error
41	PP	Input voltage error
42	ee	Drive memory chip error

Number	Error code	Error
43	C4	ODU jumper cap error
44	dJ	Phase-loss and anti-phase protection
45	oE	ODU error, for specific error please see the status of ODU indicator
46	EL	Emergency Stop(Fire alarm)

NOTE: When the unit is connected with the wired controller, the error code will be simultaneously shown on it.

5.3 Unit Maintenance

NOTES!
(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.

5.3.1 Filter screen cleaning

Increase the frequency of cleaning if the unit is installed in a room where the air is extremely contaminated (As a yardstick for yourself, consider cleaning the filter once a half year).

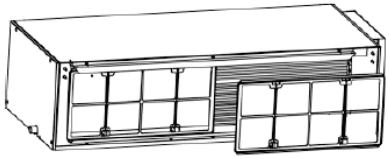
If dirt becomes impossible to clean, change the air filter. (Air filter for exchange is optional.)

(1) Removing the air filter from the duct.

(2) Cleaning the air filter.

Remove dust from the air filter using a vacuum cleaner and gently rinse them in cool water. Do not use detergent or hot water to avoid filter shrinking or deformation. After cleaning dry them in the shade.

(3) Replacing the air filter Reinstall the filter as before.



5.3.2 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.

5.3.3 Drainage Pipe

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

5.3.4 Notices at the Beginning of the Using Season

(1) Check if the air inlet/outlet of indoor/outdoor unit is blocked.
(2) Check if the ground connection is reliable.
(3) Check if the battery of remote controller is replaced.
(4) Check if the air filter screen is properly installed.
(5) 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.
(6) Check if the installation of outdoor unit is firm, if not, please contact with Gree appointed maintenance center.

5.3.5 Maintenance at the End of the Using Season

(1) Cut off the main power of air conditioner.
(2) Clean the filter screen, indoor and outdoor unit.
(3) Clean the dust and sundries in indoor and outdoor unit.
(4) If the outdoor unit is rusty, coat the rusty location with paint to prevent it from expanding.

5.3.6 Components Replacement

Components coulb purchased from ArgoClima autorized service centers.

5.4 Notice on Maintenance

5.4.1 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.

5.4.1.1 Checks to the Area

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

5.4.1.2 Work Procedure

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

5.4.1.3 General Work Area

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

5.4.1.4 Checking for Presence of Refrigerant

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

5.4.1.5 Presence of Fire Extinguisher

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

5.4.1.6 No Ignition Sources

No person carrying out work in relation to a refrigeration system which involves exposing any pipe work that contains or has contained flammable refrigerant shall use any sources of ignition in such a manner that it may lead to the risk of fire or

explosion. All possible ignition sources, including cigarette smoking, should be kept sufficiently far away from the site of installation, repairing, removing and disposal, during which flammable refrigerant can possibly be released to the surrounding space. Prior to work taking place, the area around the equipment is to be surveyed to make sure that there are no flammable hazards or ignition risks. “No Smoking” signs shall be displayed.

5.4.1.7 Ventilated Area

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

5.4.1.8 Checks to the Refrigeration Equipment

Where electrical components are being changed, they shall be fit for the purpose and to the correct specification. At all times the manufacturer’s maintenance and service guidelines shall be followed. If in doubt consult the manufacturer’s technical department for assistance.

The following checks shall be applied to installations using flammable refrigerants:

(1) The charge size is in accordance with the room size within which the refrigerant containing parts are installed.

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

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

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

(5) 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.

5.4.1.9 Checks to electrical devices

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

Initial safety checks shall include:

(1) That 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.

5.4.2 Repairs to Sealed Components

(1) During repairs to sealed components, all electrical supplies shall be disconnected 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.

(2) Particular attention shall be paid to the following to ensure that by working on 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.

NOTE： 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.

5.4.3 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.

5.4.4 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.

5.4.5 Detection of Flammable Refrigerants

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

5.4.6 Removal and Evacuation

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

(1) Remove refrigerant.
(2) Purge the circuit with inert gas.
(3) Evacuate.
(4) Purge again with inert gas.
(5) Open the circuit by cutting or brazing.

The refrigerant charge shall be recovered into the correct recovery cylinders. The system shall be “flushed” with OFN to render the unit safe. This process may need to be repeated several times. Compressed air or oxygen shall not be used for

this task.

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

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

5.4.7 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.

5.4.8 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 re-use of reclaimed refrigerant. It is essential that electrical power is available before the task is commenced:

(1) Become familiar with the equipment and its operation.

(2) Isolate system electrically.

(3) Before attempting the procedure ensure that:

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.

5.4.9 Labelling

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

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

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

The recovered refrigerant shall be returned to the refrigerant supplier in the correct recovery cylinder, and the relevant Waste Transfer 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. Only electric heating to the compressor body shall be employed to accelerate this process. When oil is drained from a system, it shall be carried out safely.

5.5 After-sales Services

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

REGULATION (EU) No. 517/2014 - F-GAS

The unit contains R32, a fluorinated greenhouse gas with global warming potential (GWP) = 675. Do not release R32 into the atmosphere.

AEG ECO 35PIH	Kg. 0,78 = 0,53 Tonn CO_2 equiv.
AEG ECO 50PIH	Kg. 1,0 = 0,68 Tonn CO_2 equiv.
AEG ECO 70PIH	Kg. 1,6 = 1,08 Tonn CO_2 equiv.
AEG ECO 85PIH	Kg. 1,8 = 1,22 Tonn CO_2 equiv.
AEG ECO 100PIH	Kg. 2,5 = 1,69 Tonn CO_2 equiv.
AEG ECO 140PIH	Kg. 2,8 = 1,89 Tonn CO_2 equiv.
AEG ECO 100PIH3	Kg. 2,5 = 1,69 Tonn CO_2 equiv.
AEG ECO 140PIH3	Kg. 2,8 = 1,89 Tonn CO_2 equiv.
AEG ECO 160PIH3	Kg. 3,6 = 2,43 Tonn CO_2 equiv.

PACKAGE DCI R32

FLOOR CEILING UNITS

USER and INSTALLATION MANUAL

OUTDOOR UNITS	INDOOR UNITS
AEG ECO 35PIH	ACG ECO 70PH
AEG ECO 50PIH	ACG ECO 70PH
AEG ECO 70PIH	ACG ECO 85PH
AEG ECO 85PIH	ACG ECO 100PH
AEG ECO 100PI	ADG ECO 140PH
AEG ECO 140PIH	ASG ECO 160PH
AEG ECO 100PIH3	
AEG ECO 140PIH3	
AEG ECO 160PIH3	

INVERTER

Please read this manual carefully before installing and using the air conditioner, and retain for future refeence.

V 06/19

To Users

Thank you for selecting Argo 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 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.

(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 has gone through strict inspection and operational test before leaving the factory. In order to avoid damage due to improper disassembly and inspection, which may impact the normal operation of unit, please do not disassemble the unit by yourself. You can contact with the special maintenance center of our company if necessary.

(5) When the product is faulted and cannot be operated, please contact with our maintenance center as soon as possible by providing the following information.

1）Contents of nameplate of product (model, cooling/heating capacity, product No, ex-factory date).

2）Malfunction status (specify the situations before and after the error occurs).

(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. We have the right to make necessary revision to the product from time to time due to the reason of sales or production, and reserve the right to revise the contents without further notice.

(7) Indoor unit must not be installed in a laundry.

(8) 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.

(9) Gree Electric Appliances Inc. of Zhuhai assumes no responsibility for personal injury, property loss or equipment damage caused by improper installation and commissioning, unnecessary maintenance, or not following relevant national rules and regulations, industrial standards and requirements in this instruction manual.

(10) The final right to interpret for this instruction manual belongs to Gree Electric Appliances Inc. of Zhuhai.

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 Notices (Please be sure to abide)

SPECIAL WARNING:

(1) Be sure to comply with national gas regulations.

(2) Do not pierce or burn.

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

(4) Be aware that refrigerants may not contain an odor.

(5) Appliance shall be installed, operated and stored in a room with a floor area larger than"X" m^2（"X" see section 3.1.1）.

(6) The appliance shall be stored in a room without continuously operating ignition sources (for example: open flames, an operating gas appliance or an operating electric heater).

PROHIBITED: This sign indicates that the operation must be prohibited. Improper operation may cause severe damage or death to people.

WARNING: If not abide strictly, it may cause severe damage to the unit or the people.

NOTICE: If not abide strictly, it may cause slight or medium damage to the unit or the people.

OBSERVED: This sign indicates that the items must be observed. Improper operation may cause damage to people or property.

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.

Please read this operating manual carefully before operating the unit.

The air conditioner is charged with inflammable refrigerant R32 (GWP: 675).

Before using the air conditioner, please read the instruction manual.

Before installing the air conditioner, please read the instruction manual.

Before repairing the air conditioner, please read the instruction manual.

The figures in this manual may be different with the material objects, please refer to the material objects for reference.

PROHIBITED
(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. Maintenance and repair requiring the assistance of other skilled personnel shall be carried out under the supervision of the person competent in the use of flammable refrigerants.
(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.

WARNING
(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.
(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 air return 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.

NOTICE

(6) Indoor unit can only be installed indoors while outdoor unit can be installed either indoors or outdoors. Never install the air conditioner in the following places:
   a) Places with oil smoke or volatile liquid: plastic parts may deteriorate and fall off or even cause water leakage.
   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.

OBSERVED

(1) If wired control is to be used, it should be connected first before powering up the unit, otherwise the wired control may not be able to use.

(2) When installing the indoor unit, keep it away from television, wireless waves, and fluorescent.

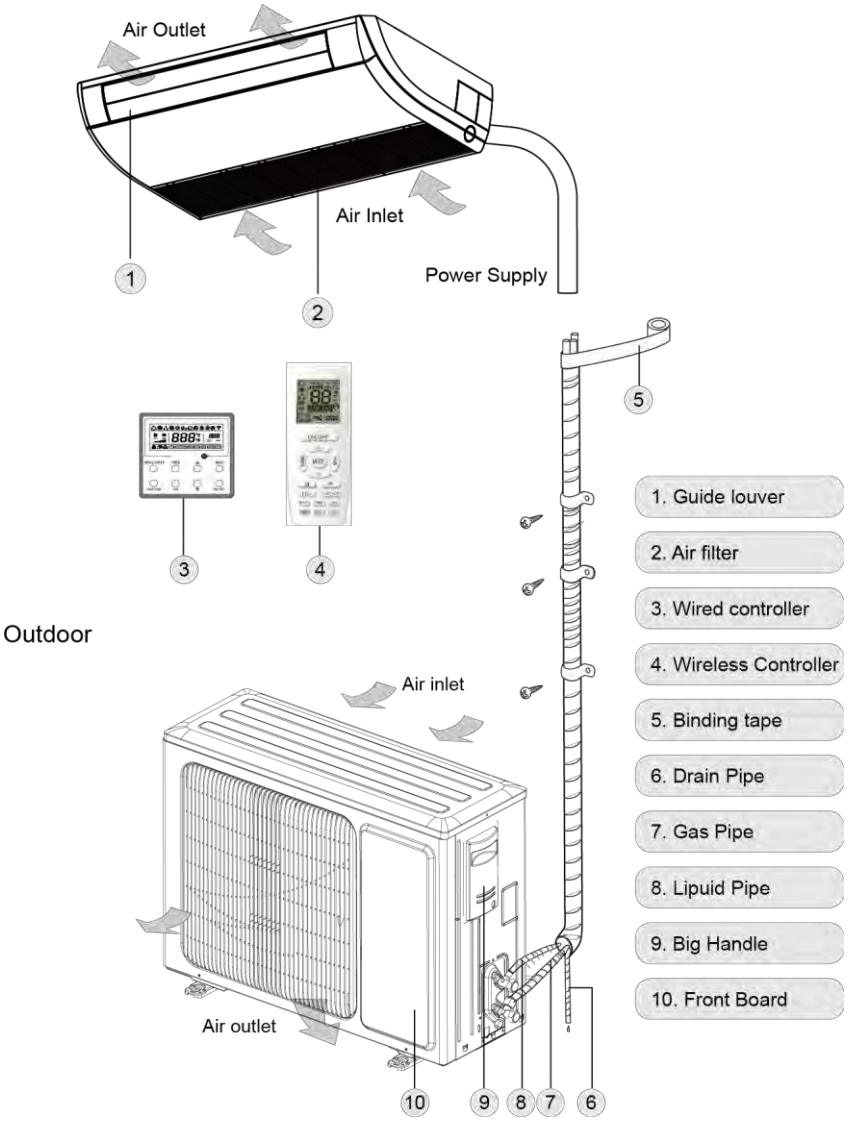
(3) Only use soft dry cloth or slightly wet cloth with neutral detergent to clean the casing of the air conditioner.

(4) 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).

2 Product Introduction

2.1 Overall Layout

Indoor

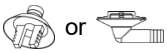


2.2 Product Operating Range

	Cooling	Heating
Outdoor temperature DB(℃)	-20∽48	-20∽24
Indoor temperature DB/WB(℃)（Maximum）	32/23	27/-

2.3 Standard Accessories

Indoor Unit Accessories				
No.	Name	Appearance	Q'ty	Usage
1	Nut with Washer		8	To fix the hook on the cabinet of the unit.
2	Wireless Controller + Battery		1+2	To control the indoor unit
3	Insulation		1	To insulate the gas pipe
4	Insulation		1	To insulate the liquid pipe
5	Fastener		4	To fasten the sponge
6	Removal-Proof Screw Nut		1	To connect gas pipe
7	Removal-Proof Screw Nut		1	To connect liquid pipe

Outdoor Unit Accessories				
No	Name	Appearance	Q'ty	Usage
1	Drain Plug		1or 3	To plug the unused drain hole.
2	Drainage Connecter		1	To connect with the hard PVC drain pipe

3 Installation

3.1 Installation Preparation

3.1.1 Notice on Installation

(1) Notice on Refrigerant Concentration before Installation.

This air conditioner uses R32 refrigerant. The construction area for installation, operation and storage of the air conditioner must be larger than the minimum construction area. The minimum area for installation is determined by:

1) Refrigerant charging quantity for the entire system (ex-factory charging quantity + additional charging quantity);

2) Checking out in the applicable tables:

a) For indoor unit, confirm the model of indoor unit and check the corresponding table.

b) For outdoor unit that is installed or placed indoors, select the corresponding table according to the height of the room.

Height of the room	Select the applicable table
＜1.8m	Floor standing type
≥1.8m	Wall mounted type

3) Refer to the following table to check out the minimum construction area.

Ceiling type			Wall mounted type			Floor standing type	
Weight(kg)	Area (m^2)		Weight(kg)	Area (m^2)		Weight (kg)	Area (m^2)
＜1.224	—		＜1.224	—		＜1.224	—
1.224	0.956		1.224	1.43		1.224	12.9
1.4	1.25		1.4	1.87		1.4	16.8
1.6	1.63		1.6	2.44		1.6	22.0
1.8	2.07		1.8	3.09		1.8	27.8
2.0	2.55		2.0	3.81		2.0	34.3
2.2	3.09		2.2	4.61		2.2	41.5
2.4	3.68		2.4	5.49		2.4	49.4
2.6	4.31		2.6	6.44		2.6	58.0
2.8	5.00		2.8	7.47		2.8	67.3
3.0	5.74		3.0	8.58		3.0	77.2
3.2	6.54		3.2	9.76		3.2	87.9
3.4	7.38		3.4	11.0		3.4	99.2
3.6	8.27		3.6	12.4		3.6	111
3.8	9.22		3.8	13.8		3.8	124

Ceiling type		Wall mounted type		Floor standing type	
Weight(kg)	Area (m^2)	Weight(kg)	Area (m^2)	Weight(kg)	Area (m^2)
4.0	10.2	4.0	15.3	4.0	137
4.2	11.3	4.2	16.8	4.2	151
4.4	12.4	4.4	18.5	4.4	166
4.6	13.5	4.6	20.2	4.6	182
4.8	14.7	4.8	22.0	4.8	198
5.0	16.0	5.0	23.8	5.0	215
5.2	17.3	5.2	25.8	5.2	232
5.4	18.6	5.4	27.8	5.4	250
5.6	20.0	5.6	29.9	5.6	269
5.8	21.5	5.8	32.1	5.8	289
6.0	23.0	6.0	34.3	6.0	309
6.2	24.5	6.2	36.6	6.2	330
6.4	26.1	6.4	39.1	6.4	351
6.6	27.8	6.6	41.5	6.6	374
6.8	29.5	6.8	44.1	6.8	397
7.0	31.3	7.0	46.7	7.0	420
7.2	33.1	7.2	49.4	7.2	445
7.4	34.9	7.4	52.2	7.4	470
7.6	36.9	7.6	55.1	7.6	496
7.8	38.8	7.8	58.0	7.8	522
8.0	10.8	8.0	61.0	8.0	549

(2) When installing an outdoor unit with single or double fans, hold the handle and then lift it up slowly (Do not touch the condenser with your hand or other objects). If you hold only one side of the casing, the casing may be pulled out of shape, so please hold the base of the unit as well. During installation, be sure to use the components specified in the instruction manual.

(3) Please use the charging machine specialized for R32 refrigerant; Before charging, keep the refrigerant tank in an upright position. After charging, stick a label on the air conditioner saying no excessive charging.

(4) The following tools will be used: 1) Liquid-level gauge; 2) Screwdriver; 3) Electric driven rotary hammer; 4) Drill; 5) Pipe expander; 6) Torque wrench; 7) Open-end wrench; 8) Pipe cutter; 9) Leak detector; 10) Vacuum pump; 11) Pressure gauge; 12) Universal meter; 13) Hexagon wrench; 14) Tapeline.

3.1.2 Selection of Installation Location

WARNING
①. If the outdoor unit will be exposed in strong wind, it must be securely located, otherwise it may fall down.
②. Install the air conditioner at a place where the inclination is less than 5°.
③. Do not install the unit at a place with direct sunlight.
④. Do not install the unit at a place with leakage of inflammable gas.

Selection of Installation Location for Indoor Unit (Select a location pursuant to the following condition)

(1) Air inlet and outlet of the indoor unit should be away from obstacles to make sure the unit's air flow can reach the entire room. Do not install the unit in a kitchen or a laundry.

(2) Install the unit in a room without naked flame, fire source or the risk of getting the refrigerant on fire.

(3) Select a location that can withstand 4 times the unit weight without increasing operating noise and vibration.

(4) The installation location must be level.

(5) The indoor piping length and wiring length should be within the allowable range.

(6) Select a place that can easily drain condensate and connect to the drain system of the air conditioner.

(7) If hoisting screw bolts are to be used, check whether the installation location is safe enough. If not safe, reinforce the location before installation.

(8) Indoor unit, power cord, connecting wires and communication cords should be at least 1m from television and radio. This is to prevent image interference or noise (Even at a distance of 1m, a very strong electric wave may still generate noise).

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) Install the outdoor unit at a place that is convenient for it to be connected to the indoor unit.

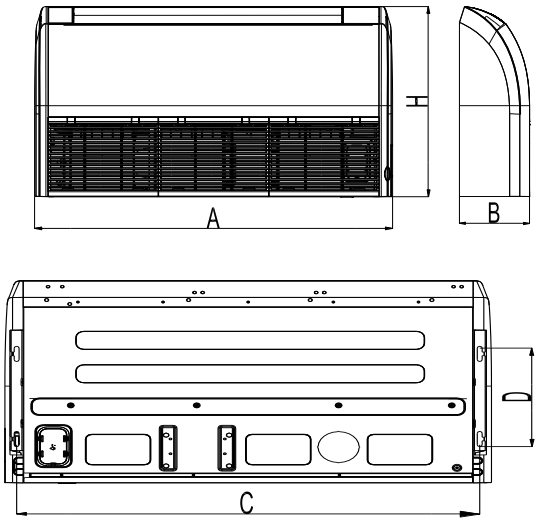
(8) Away from any object that may get the air conditioner generating noise.

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

3.1.3 Unit Dimension

WARNING
①. Install the indoor unit in a location which can withstand a load of at least five times the weight of the main unit and which will not amplify sound or vibration.
②. If the installation location is not strong enough, the indoor unit may fall and cause injuries.
③. If the job is done with the panel frame only, there is a risk that the unit will come loose. Please take care.

(1) Indoor Unit



NOTICE

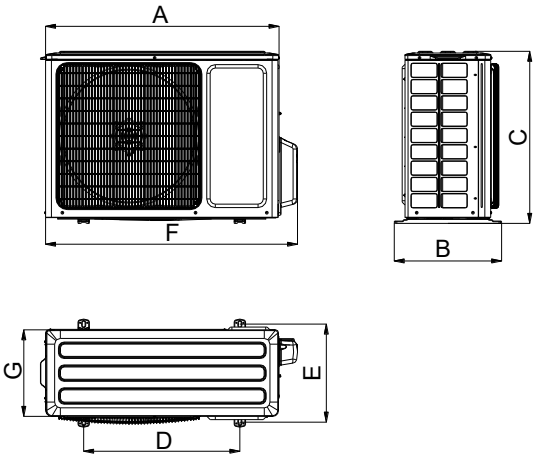
Drilling of ceiling opening and installation of air conditioner must be performed by professionals!

Unit：mm

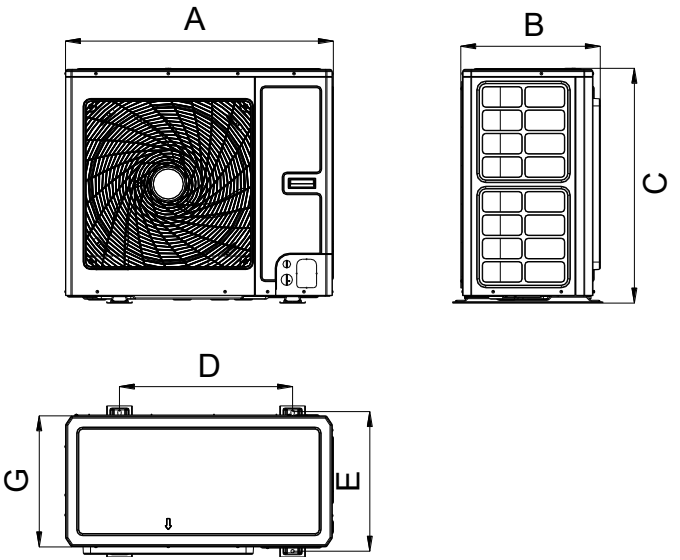
Dimensions / Model	A	B	C	D	H
35	870	235	812	318	665
50	870	235	812	318	665
70	1200	235	1142	318	665
85	1200	235	1142	318	665
100	1200	235	1142	318	665
	1570	235	1512	318	665
140	1570	235	1512	318	665
160	1570	235	1512	318	665

(2) Outdoor Unit

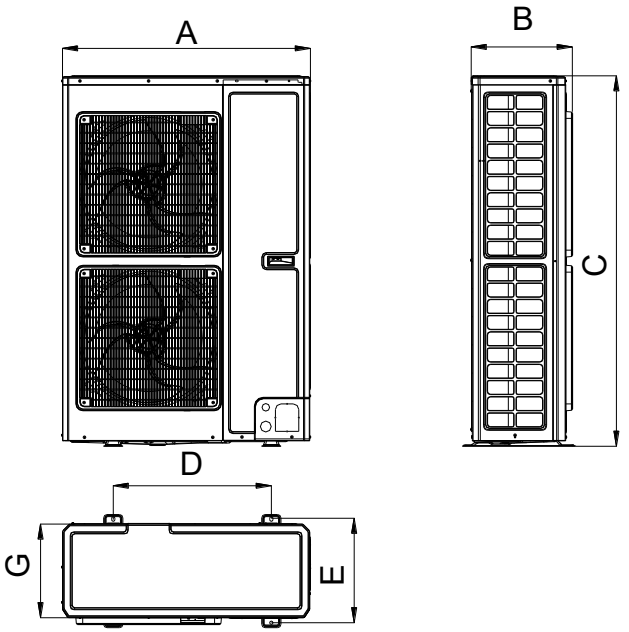
35-50-70-85



100-140



160



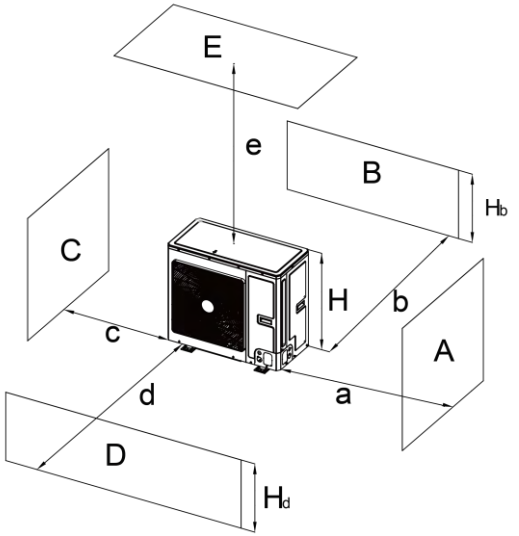
Unit: mm

Dimensions / Model	A	B	C	D	E	F	G
35	818	378	596	550	348	887	302
50	818	378	596	550	348	887	302
70	892	396	698	560	364	952	340
85	920	427	790	610	395	1002	370
100 1PH	940	530	820	610	486	/	460
100 3PH	940	530	820	610	486	/	460
	940	530	820	610	486	/	460
	940	530	820	610	486	/	460
140 1PH	940	530	820	610	486	/	460
140 3PH	940	530	820	610	486	/	460
160 3PH	900	412	1345	572	378	/	340

3.1.4 Diagram of Unit Installation Space and Location

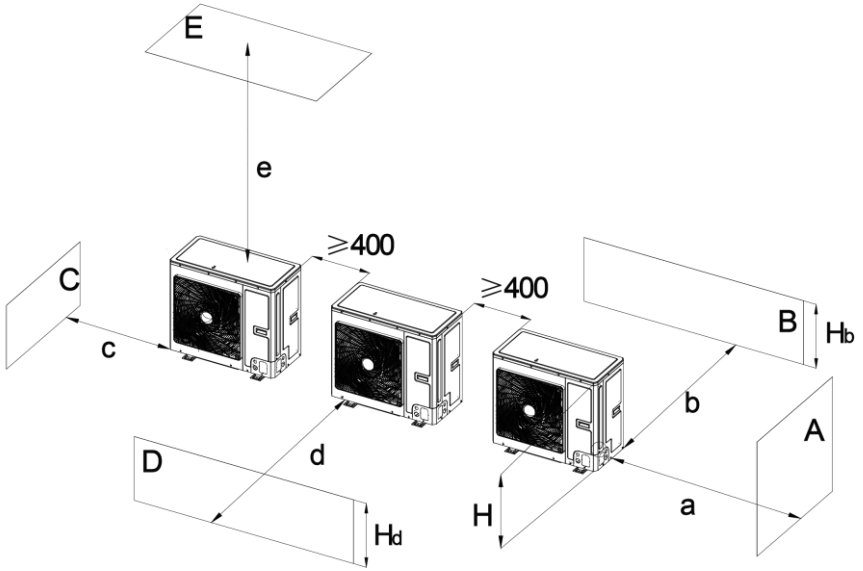
(1) Diagram of installation space and location for outdoor unit (Notice: for best performance of the outdoor unit, make sure its installation space conforms to the following installation dimensions).

1) When one outdoor unit is to be installed.



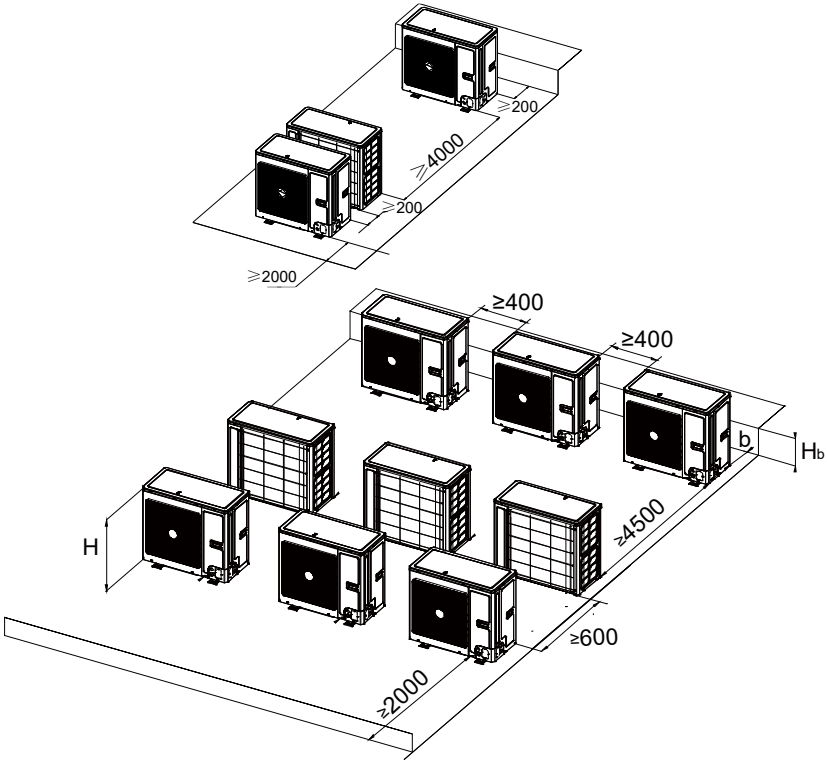
A~E	H_b H_d H		(mm)				
			a	b	c	d	e
B	—			⩾100			
A,B,C,	—		⩾300	⩾100	⩾100		
B,E	—			⩾100			⩾1000
A,B,C,E	—		⩾300	⩾150	⩾150		⩾1000
D	—					⩾1000	
D,E	—					⩾1000	≥1000
B,D	H_b＜H_d	H_d> H		⩾100		⩾1000	
	H_b＞H_d	H_d< H		⩾100		⩾1000	
B,D,E	H_b＜H_d	H_b⩽1/2 H		⩾250		⩾2000	⩾1000
		1/2 H＜H_b⩽H		⩾250		⩾2000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

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



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	
	$H_b>H_d$	$H_d\leqslant 1/2\ H$		⩾250		⩾2000	
		$1/2\ H<H_d\leqslant H$		⩾300		⩾2500	
B,D,E	$H_b<H_d$	$H_b\leqslant 1/2\ H$		⩾300		⩾2000	⩾1000
		$1/2\ H<H_b\leqslant H$		⩾300		⩾2500	⩾1000
		$H_b>H$	Prohibited				
	$H_b>H_d$	$H_d\leqslant 1/2\ H$		⩾250		⩾2500	⩾1000
		$1/2\ H<H_d\leqslant H$		⩾300		⩾2500	⩾1000
		$H_d>1/2\ H$	Prohibited				

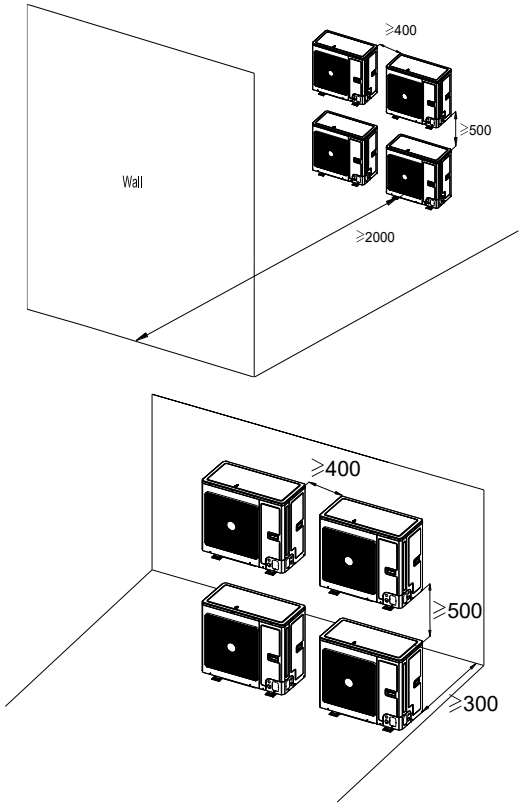
3) When outdoor units are installed in rows.



H_b H	B(mm)
$H_b \leqslant 1/2$ H	b≥250
1/2 H＜$H_b \leqslant$H	b≥300
H_b＞H	Prohibited

4) When outdoor units are installed one above another.

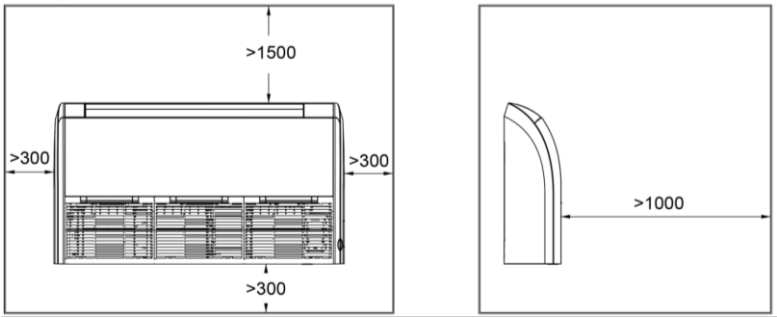
Unit: mm



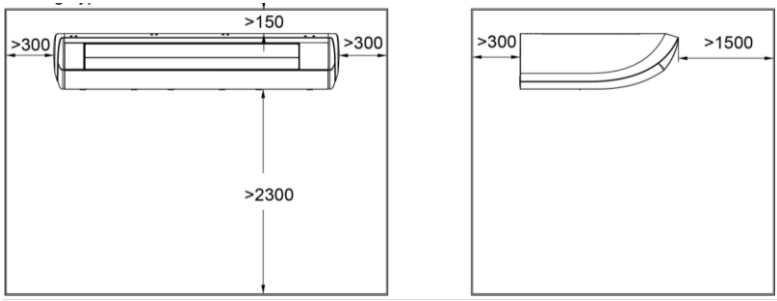
(2) Diagram of installation location and space for indoor unit (Notice: for the best performance of indoor unit, make sure its installation space conforms to the following installation dimensions).

1) Install the unit at a place where is strong enough to withstand the weight of the unit.
2) The air inlet and outlet of the unit should never be clogged so that the airflow can reach every corner of the room.
3) Leave service space around the unit.

Floor type Unit: mm



Ceiling type



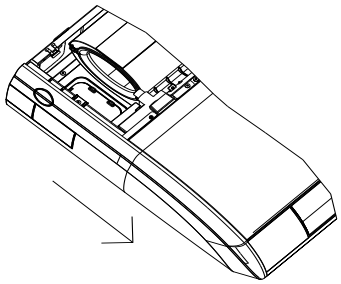
4) Install the unit where the drain pipe can be easily installed.
5) The space from the unit to the ceiling should be kept as much as possible so as for more convenient service.

3.2 Unit Installation

3.2.1 Indoor Unit Installation

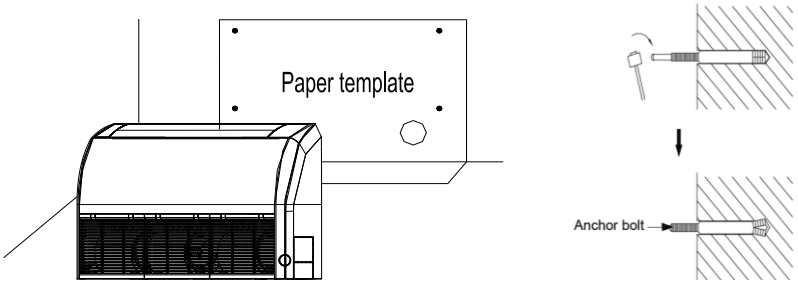
3.2.1.1 Preparation for Installing the Indoor Unit

(1) Dismantle the clasp in the left and right grille and take down the screws.
(2) Take down the fixed screws in the left and right side plate.
(3) Turn on the left and right side plate in arrow direction.



3.2.1.2 Indoor Unit Installation

(1) Determine the location of the hanger through the paper template, and then remove the paper template.



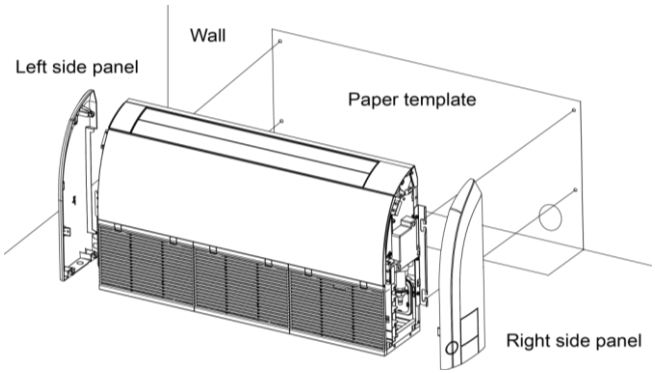
(2) Insert the anchor bolts into the drilled holes, and drive the pins completely into the anchor bolts with a hammer.

(3) Remove the right and left side panels.

(4) Put the hanger bolt into the clasp of the indoor unit and tighten screws on the hanger to prevent the indoor unit from moving.

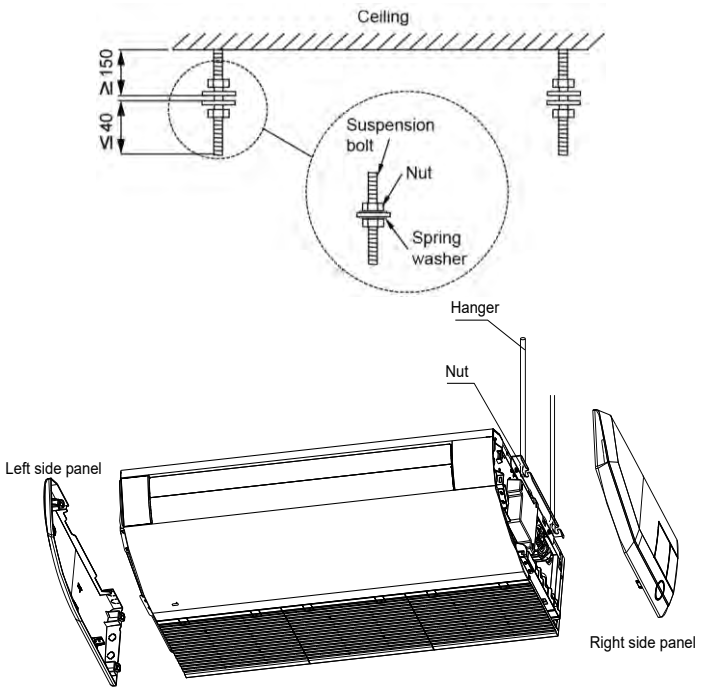
(5) Reinstall and tighten the right and left side panels.

Floor type



Ceiling type

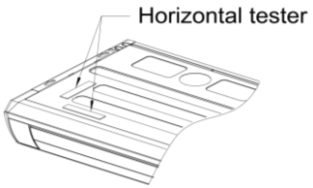
Unit: mm



(6) Adjust the height of the unit to make the drain pipe slant slightly downward so that the drainage will become much smoother.

3.2.1.3 Leveling

The water level test must be done after installing the indoor unit to make the unit is horizontal, as shown below.



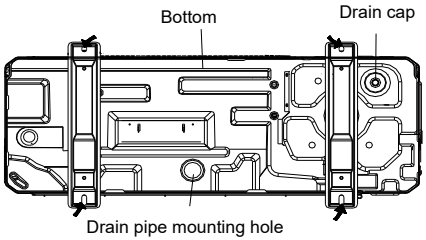
3.2.2 Outdoor Unit Installation

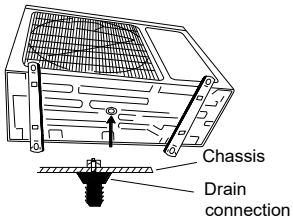
(1) If the outdoor unit is installed on a solid ground such as concrete, use M10 screw bolts and nuts to secure the unit and make sure the unit stands erect and level.

(2) Do not install it on top of the building.

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

(4) 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 figures below.

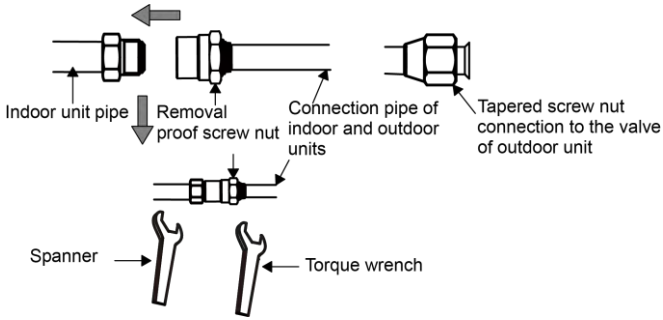




3.2.3 Connection Pipe Installation

3.2.3.1 Installation Notice and Requirement on Connection Pipe

NOTICE
① Indoor unit adopts special joints that can't be disassembled. The installation method is the same as the unit with ordinary joints. However, because the joints can't be removed, if the connection is not good and causes leakage, the joints need to be cut and welded again for replacement.
② The removal-proof screw nut must be connected to the indoor unit.



Installation method: Connect the connection pipes first to the indoor unit and then to the outdoor 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(m)	Biggest drop between indoor and outdoor units (m)	Drain pipe (outer dimension x wall thickness) (mm)
	Liquid pipe	Gas pipe			
35 IU 35 OU	1/4	3/8	30	15	Φ17×1.5
50 IU 50 OU		1/2	35	20	
70 IU 70 OU	3/8	5/8	50	25	
85 IU 85 OU			50	25	
100 IU 100 OU 1PH 100 OU 3PH			65	30	
			75	30	
140 IU 140 OU 1PH 140 OU 3PH			75	30	
160 IU 160 OU 3PH			75	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

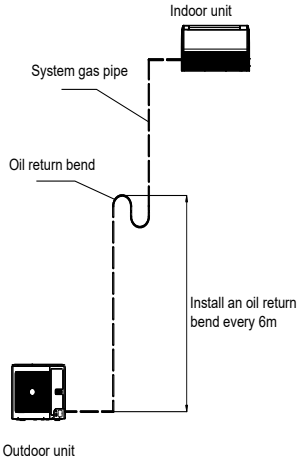
longer the connection pipe is, the worse cooling and heating performance it has.

When the drop between indoor and outdoor units is larger than 10m, an oil return bend should be added every 6 meters.

The requirement on the adding of oil return bend is as below:

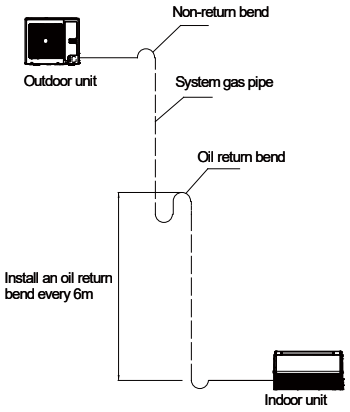
(1) Outdoor unit is beneath the indoor unit.

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

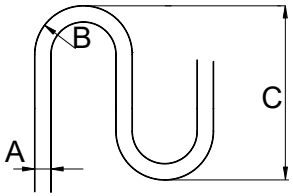


(2) Outdoor unit is above the indoor unit.

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



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



A		B(mm)	C(mm)
mm	In.		
Φ12	1/2	≥26	≤150
Φ16	5/8	≥33	≤150

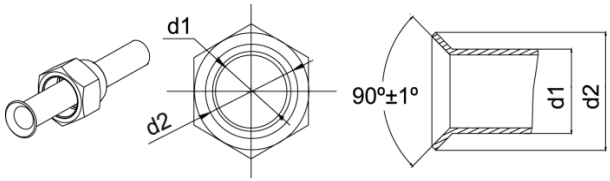
3.2.3.2 Pipe Flaring

(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.

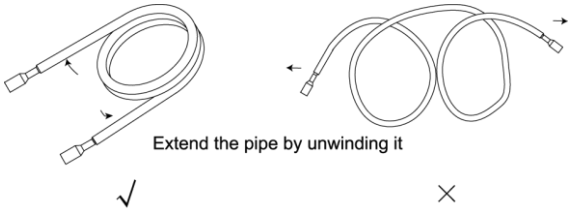
(3). Remove the cut-off valve of outdoor unit and take out the flare nut from the bag of indoor unit accessories. Then fit the flare nut on the pipe and use a flaring tool to flare the mouth of connection pipe.

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



3.2.3.3 Pipe Bending

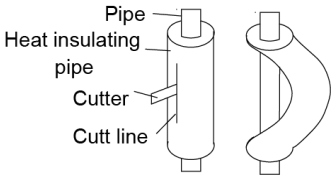
(1). The pipes are shaped by your hands. Be careful not to collapse them.



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

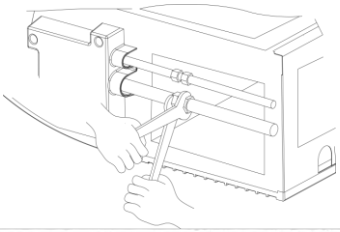
(3). If the pipe is repeatedly bent or extended, it will become hard and difficult to be bent or extended. So do not bend or extend the pipe for more than 3 times.

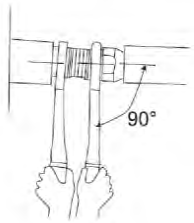
(4). When bending the pipe, do not bend it excessively, otherwise it will get broken. As shown beside, use a sharp cutter to cut the heat insulating pipe and bend it after the pipe is exposed. After bending, place the heat insulating pipe back on the pipeline and fix it with adhesive tape.

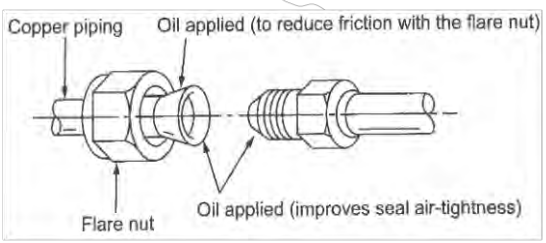


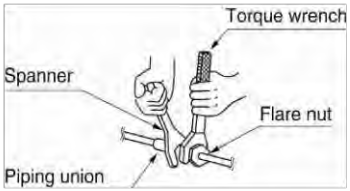
3.2.3.4 Connection Pipe of Indoor and Outdoor Units

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.



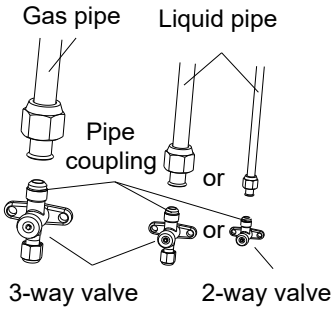






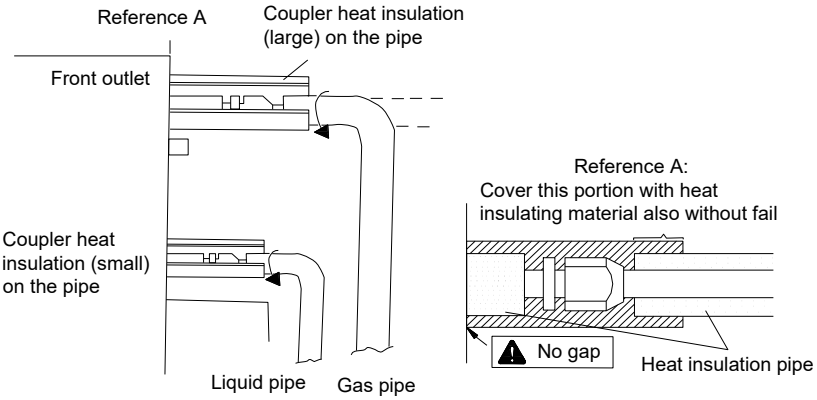
Pipe diameter (in.)	Tightening torque (N·m)
1/4	15-30
3/8	35-40
1/2	45-50
5/8	60-65
3/4	70-75
7/8	80-85

Screw on the flare nut of the flaring connecting pipe on the outdoor unit valve. The method of screwing the flare nut is the same with that for indoor unit.



3.2.3.5 Thermal Insulation of Pipe Joint (Only for Indoor Unit)

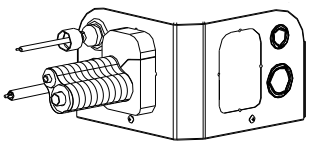
Stick coupler heat insulation (large and small) to the place where connecting pipes.

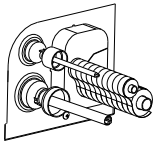


3.2.3.6 Sealing of the Knock-off Hole

As for the built-in valve model, during the installation process for connection pipe, when the connection pipe is passing through the knock-off hole, conduct

sealing with insulated cotton in the knock-off hole of outdoor unit to prevent small animals from entering. See the following figure.





Notice: Only for the 100 -140 OU 1PH - 3PH

3.2.4 Connection Pipe Vacuum Pumping and Leak Detection 3.2.4.1 Vacuum Pumping

NOTICE
Make sure the outlet of vacuum pump is away from fire source and is well-ventilated.

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

(2) Connect the hose at the low pressure side of the manifold valve assembly to the service port of the unit's gas 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.

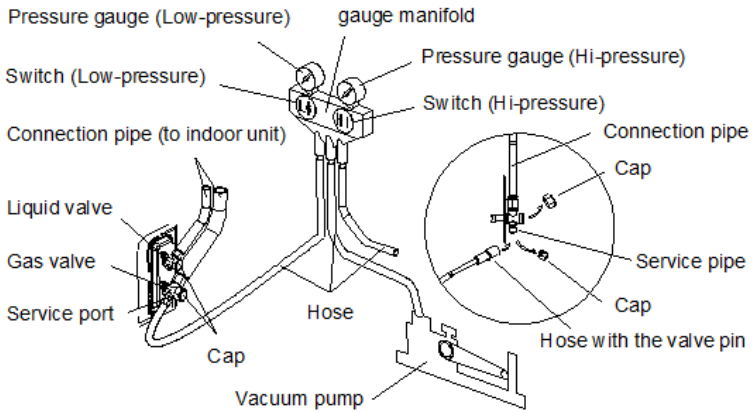
Model	Time(min)
35	15
50	20
70-85-100 1PH - 100 3PH	30
140 1PH - 140 3PH - 160 3PH	45

And verify if the pressure gauge at the low pressure side of the manifold valve assembly reads -1.0Mp (-75cmHg), 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 0.005Mp (0.38cmHg).

(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.



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.

3.2.4.2 Leak Detection Methods

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

Electronic leak detectors shall be used to detect flammable refrigerants, but the sensitivity may not be adequate, or may need re-calibration. (Detection equipment shall be calibrated in a refrigerant-free area).

Ensure that the detector is not a potential source of ignition and is suitable for the refrigerant used. Leak detection equipment shall be set at a percentage of the LFL of the refrigerant and shall be calibrated to the refrigerant employed and the appropriate percentage of gas (25 % maximum) is confirmed.

Leak detection fluids are suitable for use with most refrigerants but the use of detergents containing chlorine shall be avoided as the chlorine may react with the refrigerant and corrode the copper pipe-work.

If a leak is suspected, all naked flames shall be removed/extinguished. If a leakage of refrigerant is found which requires brazing, all of the refrigerant shall be recovered from the system, or isolated (by means of shut off valves) in a part of the system remote from the leak. Oxygen free nitrogen (OFN) shall then be purged through the system both before and during the brazing process.

3.2.5 Refrigerant Adding

NOTICE
Before and during operation, use an appropriate refrigerant leak detector to monitor the operation area and make sure the technicians can be well aware of any potential or actual leakage of inflammable gas. Make sure the leak detecting device is applicable to inflammable refrigerant. For example, it should be free of sparks, completely sealed and safe in nature.

See the following table for the amount of additional refrigerant.

<table>
<tr><th>Item
Model</th><th>Standard Pipe Length</th><th>Unnecessary Charge Pipe Length</th><th>Additional Refrigerant Amount for Extra Pipe</th></tr>
<tr><td>35</td><td rowspan="8">5.0m</td><td rowspan="8">≤7.0m</td><td rowspan="2">16 g/m</td></tr>
<tr><td>50</td></tr>
<tr><td>70</td><td rowspan="8">40 g/m</td></tr>
<tr><td>85</td></tr>
<tr><td>100 1PH</td></tr>
<tr><td>100 3PH</td></tr>
<tr><td></td></tr>
<tr><td></td></tr>
<tr><td>140 1PH</td><td rowspan="3">7.5m</td><td rowspan="3">≤9.5m</td></tr>
<tr><td>140 3PH</td></tr>
<tr><td>160 3PH</td></tr>
</table>

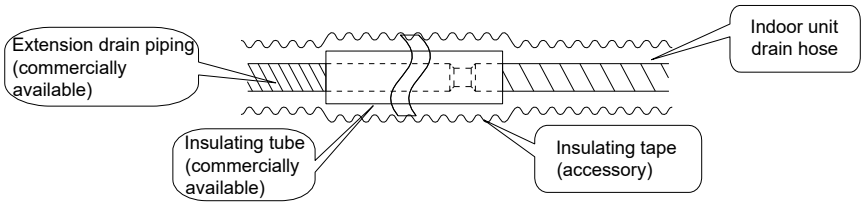
3.2.6 Installation of Drain Pipe

3.2.6.1 Indoor Side Drainage Pipe

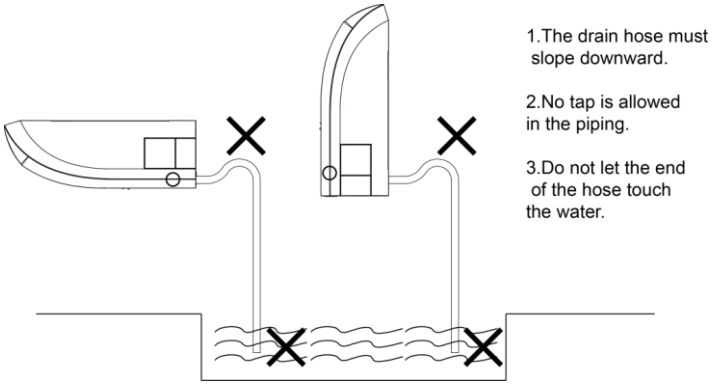
(1) Keep piping as short as possible and slope it downwards at a gradient of at least 1/100 so that air may not remain trapped inside the pipe.

(2) Keep pipe size equal to or greater than that of the connecting pipe.

(3) Install the drain piping as shown and take measures against condensation. Improperly rigged piping could lead to leaks and eventually wet furniture and belongings.



(4) Connect the drain hose.

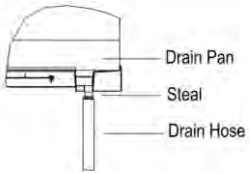


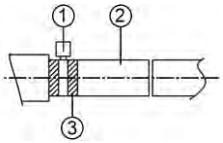
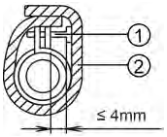
(5) Installing the Drain Pipes

1) For determining the position of the drain hose, perform the following procedures.

2) Insert the drain pipe to the drain outlet of the unit and then tighten the clamp securely with tape.

3) Connect the extension drain pipe to the drain pipe and then tighten the clamp with tape.



	
Tighten the clamp until the screw head is less than 4 mm from the hose ①. - Metal clamp ②. - Drain hose ③. - Grey tape	Insulate the pipe clamp and the drain hose using heat insulation sponge. ①. - Metal clamp ②. - Insulation sponge

4) When drain hose requires extension, obtain an extension hose commercially available.

5) After connecting the local drain hose, tape the slits of the heat insulation tube.

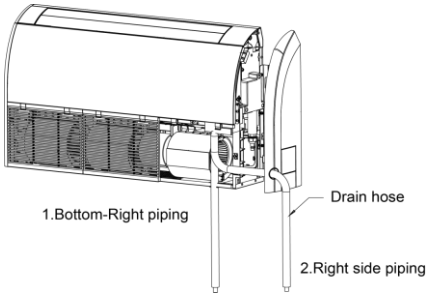
6) Connect the drain hose to the local drain pipe. Position the inter connecting wire in the same direction as the piping.

3.2.6.2 Connecting the Drain Hose

(1) Connect the extension auxiliary pipe to the local piping.

(2) Prepare the local piping at the connection point for the drain pipe, as shown in the installation drawings.

Notice: Be sure to place the drain hose as shown in the diagram below, in a downward sloping direction.



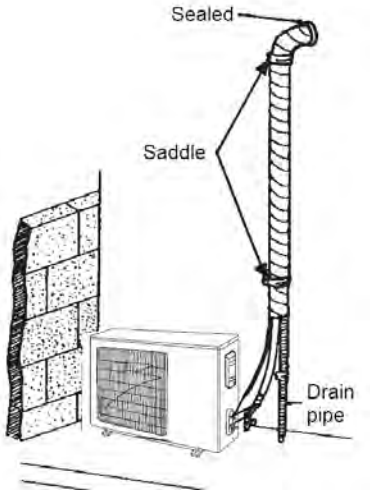
3.2.6.3 Outdoor Side Drainage Pipe

(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.

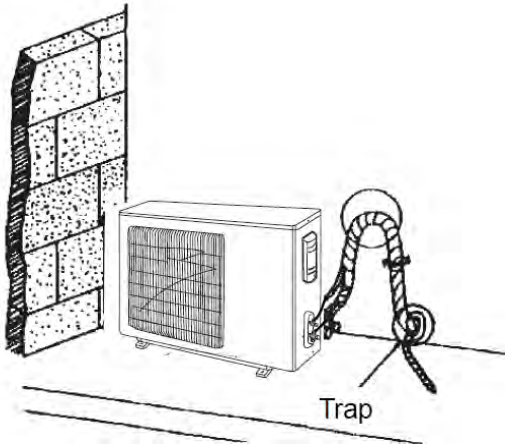


(2) If the outdoor unit is above the indoor unit, arrange the pipeline according to the following diagram.

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.

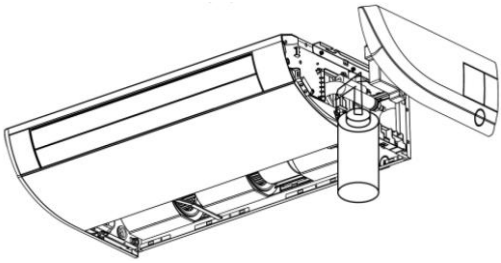


3.2.6.4 Testing of Drain Piping

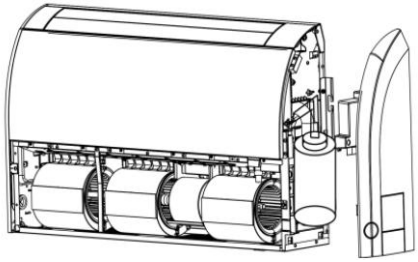
(1) After piping work is finished, check if drainage flows smoothly.

(2) As shown in the figure, pour water into the drain pan from the right side to check that water flows smoothly from the drain hose.

Ceiling type



Floor type



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. Never extend the power cord. 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 cord, connection wire of indoor and outdoor units and the communication cords must be effectively fixed.

⑤. The external power cord, connection wire of indoor and outdoor units and the communication cords 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 cord, communication cords, and the connection wire of indoor and outdoor units must not be squeezed. Never pull, stretch or bend the wires.

⑦. The external power cord, communication cords and the connection wire of indoor and outdoor units 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. Please use the power cables that are delivered along with the air conditioner. Do not change the power cables arbitrarily. Do not change the length and terminals of the power cables. If you want to change the power cables, please contact Gree's local service center.

⑩. Wiring terminals should be connected firmly to the terminal board. Loose connection is forbidden.

⑪. After the electrical installation is finished, please use wire clamps to secure the power cord, connection wire of indoor and outdoor units and the communication cords. Make sure the wires are not clamped too tight.

⑫. The wire gauge of power cord should be large enough. Damaged power cord or other wires must be replaced by specialized wires. Wiring work must be done according to national wiring rules and regulations.

3.3.2 Electrical Parameters

3.3.2.1 Wire Specifications and Fuse Capacity

Model	Power supply	Fuse capacity	Circuit breaker capacity	Min. sectional area of power cord
	V/Ph/Hz	A	A	mm^2
Indoor unit	220-240V 1N~50Hz 208-230V 1N~60Hz	3.15	6	1.0

Model	Power supply	Circuit breaker capacity	Min. sectional area of power cord
	V/Ph/Hz	A	mm^2
35	220-240V 1N~50Hz 208-230V 1N~60Hz	16	1.5
50		16	1.5
70		20	2.5
85		25	2.5
100		32	4.0
		32	4.0
140		40	6.0
100	380-415V 3N~50Hz/60Hz	16	1.5
		16	1.5
140		16	1.5
160		16	1.5

NOTICE:

① Fuse is located on the main board.

② Install a circuit breaker at every power terminal near the units (indoor and outdoor units) with at least 3mm contact gap. The units must be able to be plugged or unplugged.

③ Circuit breaker and power cord specifications listed in the above table are determined based on the maximum power input of the units.

④ Specifications of power cords listed in the above table are applicable in a working condition where ambient temperature is 40℃ and multi-core copper cable (e.g. YJV copper cable, with insulated PE and PVC sheath) is protected by a conduit, and is resistant to 90℃ in maximum (See IEC 60364-5-52).If working condition changes, please adjust the

specifications according to national standards.

⑤ Specifications of circuit breaker are based on a working condition where the working temperature is 40℃. If working condition changes, please adjust the specifications according to national standards.

⑥ Adopt 2pc of 0.75mm² power cords to be the communication cords between indoor and outdoor units. The maximum length is 100m. Please select a proper length according to local conditions. Communication cords must not be twisted together. To be in compliance EN 55014, it is necessary to use 8 meters long wire.

⑦ Adopt 2pc of 0.75mm² power cords to be the communication cords between wired control and indoor unit. The maximum length is 30m. Please select a proper length according to local conditions. Communication cords must not be twisted together. To be in compliance EN 55014,it is necessary to use 7.5 meters long wire.

⑧ The wire gauge of communication cord should not be less than 0.75mm². It's recommended to use 0.75mm² power cords as the communication cords.

3.3.3 Connection of Power Cord and Communication Cord

(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):

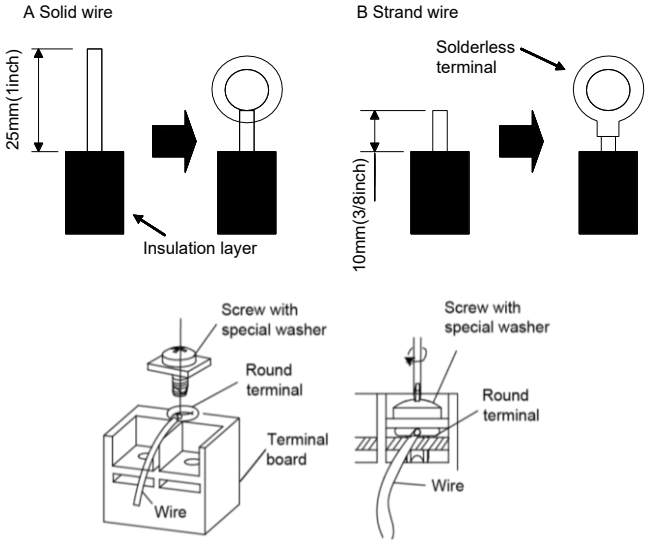
1). Use wire cutters to cut off the wire end and then peel away about 10mm of the insulation layer.

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.

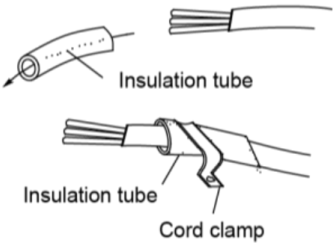
4). Locate the round terminal conduit. Use a screwdriver to replace it and

tighten up the terminal screw (as shown below).



(3) How to connect the connection wire and power cord:

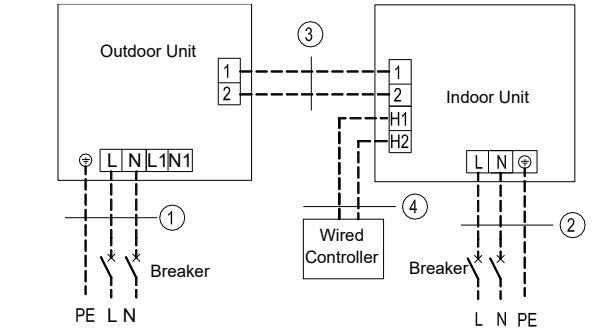
Lead the connection wire and power cord through the insulation tube. Then fix the wires with wire clamps (as shown in the next figure.)



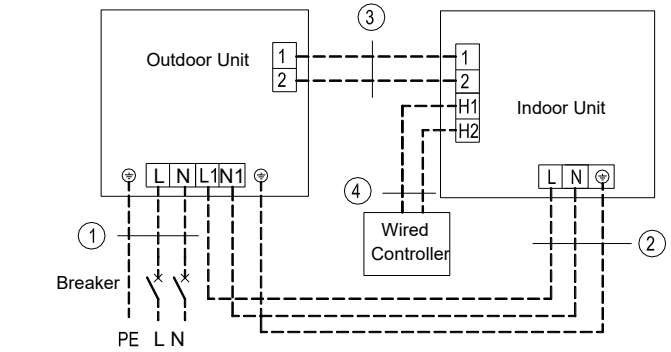
Warning
①. Before working, please check whether the indoor and outdoor units are powered on.
②. Match the terminal numbers and wire colors with the colors indicated in the indoor unit.
③. Wrong wire connection may burn the electrical components.
④. Connect the wires firmly to the wiring box. Incomplete installation may lead to fire hazard.
⑤. Please use wire clamps to secure the external covers of connecting wires. (Insulators must be clamped securely; otherwise, electric leakage may occur.)
⑥. Ground wire should be connected.

(4) Wire between indoor and outdoor units.

Single-phase unit: 35-50-70-85



Power:220-240V~50Hz/208-230V~60Hz Power:220-240V~50Hz/208-230V~60Hz

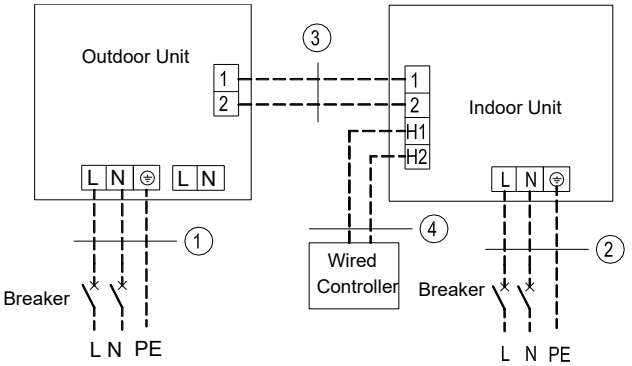


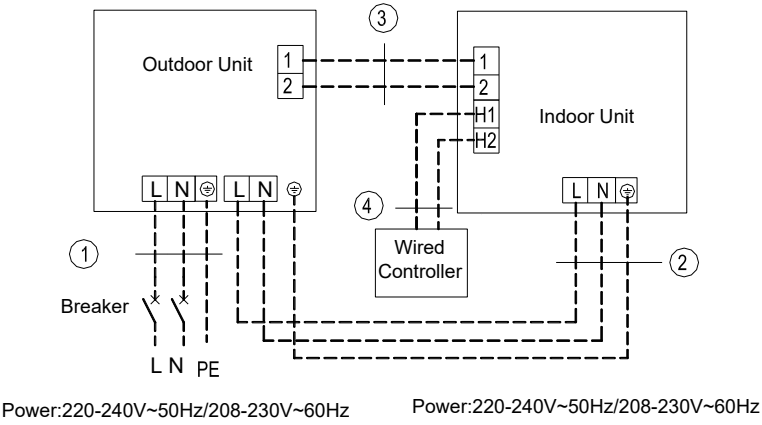
Power:220-240V~50Hz/208-230V~60Hz Power:220-240V~50Hz/208-230V~60Hz

35 IU + 35 OU
50 IU + 50 OU
① Power cord 3×1.5mm²
② Power cord 3×1.0mm²
③ Communication Cords 2×0.75mm²
④ Communication Cords 2×0.75mm²

GUD71ZD/A-T+GUD71W/NhA-T
GUD85ZD/A-T+GUD85W/NhA-T
① Power cord 3×2.5mm²
② Power cord 3×1.0mm²
③ Communication Cords 2×0.75mm²
④ Communication Cords 2×0.75mm²

Single-phase unit: 100-140

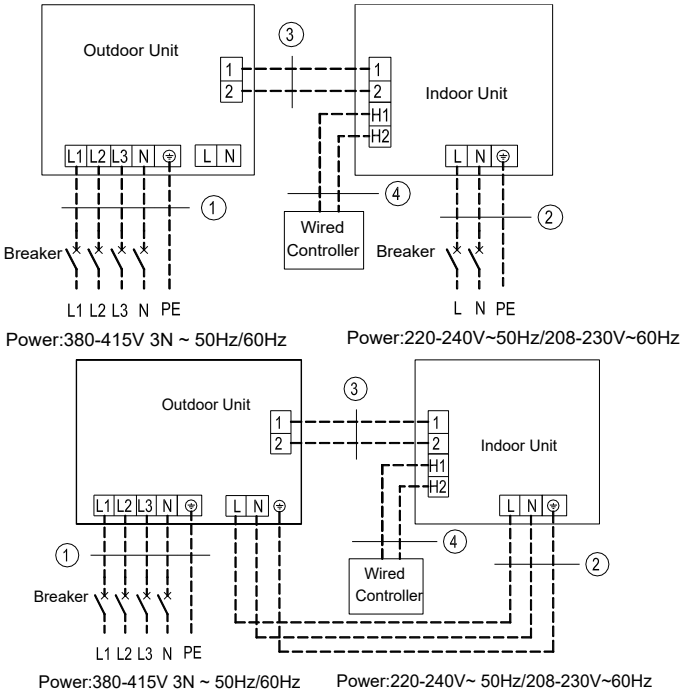




100 IU + 100 OU
① Power cord 3×4.0mm²
② Power cord 3×1.0mm²
③ Communication Cords 2×0.75mm²
④ Communication Cords 2×0.75mm²

GUD140ZD/A-T+GUD140W/NhA-T
① Power cord 3×6.0mm²
② Power cord 3×1.0mm²
③ Communication Cords 2×0.75mm²
④ Communication Cords 2×0.75mm²

Three-phase unit: 100-140-160



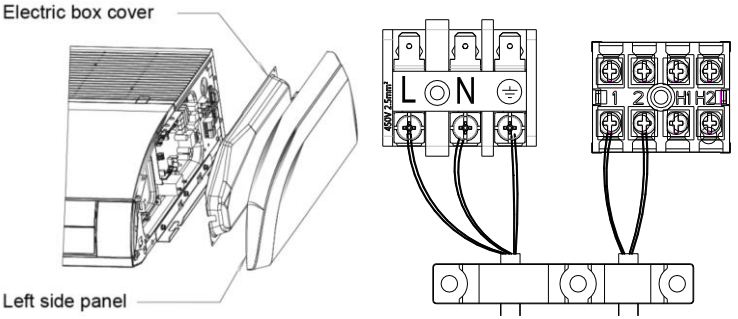
100 IU + 100 OU 3PH
140 IU + 140 OU 3PH
160 IU + 160 OU 3PH
① Power cord 5×1.5mm²
② Power cord 3×1.0mm²
③ Communication Cords 2×0.75mm²
④ Communication Cords 2×0.75mm²

(5) Electrical wiring of indoor unit and Electrical wiring of outdoor unit

Warning	
①.	High and low voltage wires should be led through different rubber rings of the electric box cover.
②.	Do not bundle up the connection wire and communication wire of wired control or lay them side by side, otherwise errors will occur.
③.	High and low voltage wires should be secured separately. Secure the former ones with big clamps and the latter ones with small clamps.
④.	Use screws to tighten up the connection wires and power cords of indoor and outdoor units on the terminal board. Wrong connection may lead to fire hazard.
⑤.	If the connection wires of indoor unit (outdoor unit) and power cords are not correctly connected, the air conditioner may get damaged.
⑥.	Ground the indoor and outdoor 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 cord, make sure the phase sequence of the power supply matches with the corresponding terminals, otherwise the compressor will get reversed and operate abnormally

1) Indoor side

Take off the electric box cover from the sub-assembly of electric box. Then connect the wires. Connect the connection wires of indoor unit according to the corresponding marks.

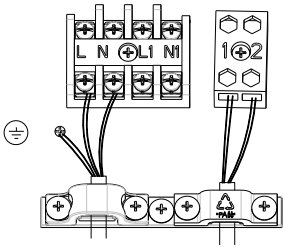


2）Outdoor side

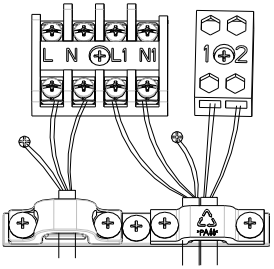
Remove the big handle/front panel of the outdoor unit and insert one end of the communication cord and the power cord to the terminal board.

Single-phase: 35-50-70-85

a) Wire routing of separated power supply:

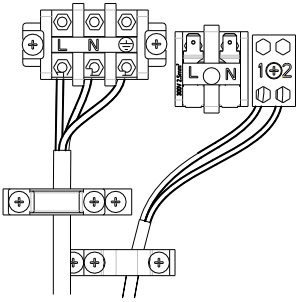


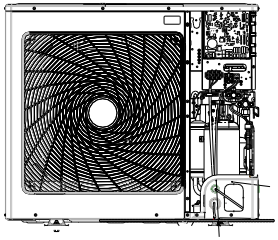
b) Wire routing of unified power supply：



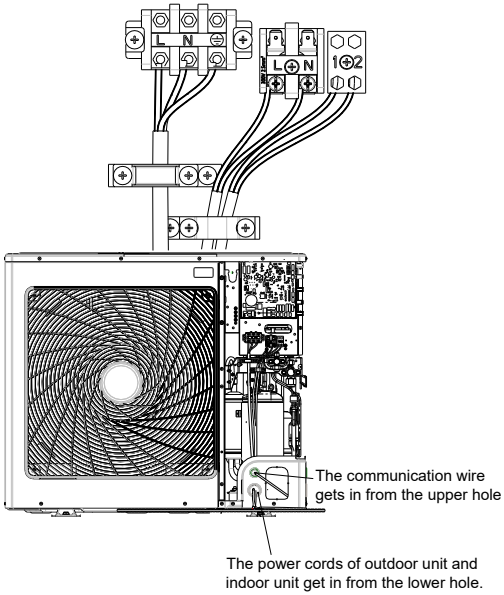
Single-phase: 100-140

a) Wire routing of separated power supply for single phase.



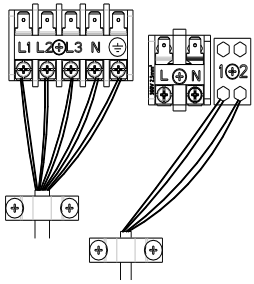


b) Wire routing of unified power supply for single phase.

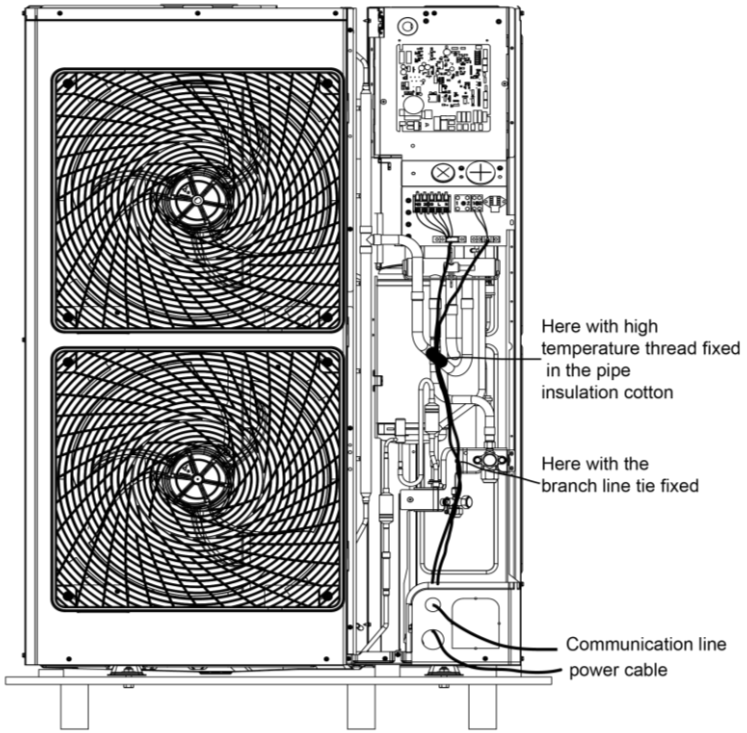


Three-phase: 100-140-160

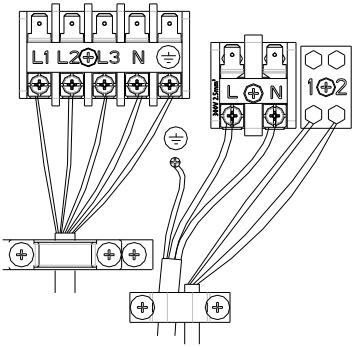
a) Wire routing of separated power supply for three phase.



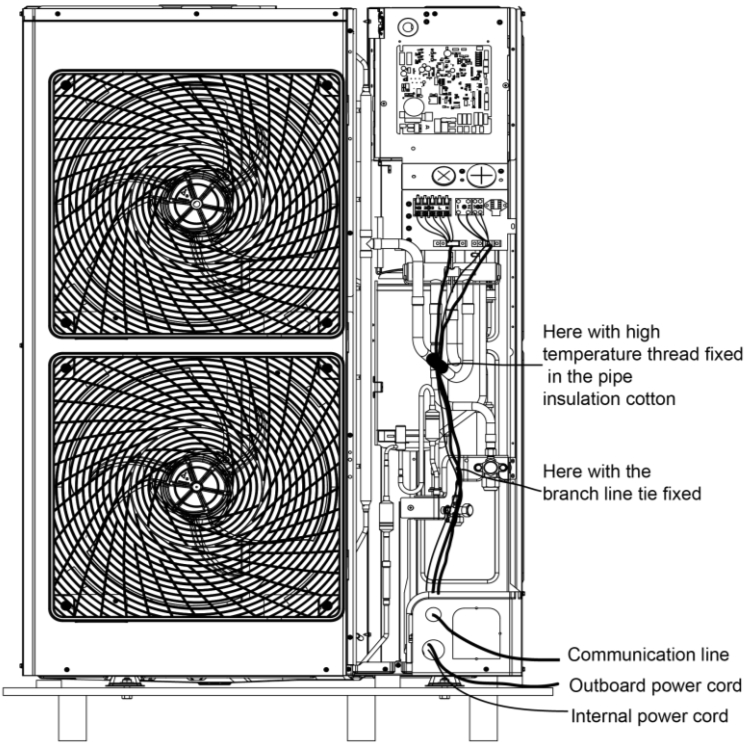
Only for 160 3PH



b) Wire routing of unified power supply for three-phase



Only for 160 3PH



Power cord should be secured along with the right side plate and fixed to the hook with a wire clamp so as to avoid contacting the pipeline. The communication line between indoor and outdoor units should also be laid along with the right side plate but away from the power cord.

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 indoor or outdoor 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℃, heating mode can't be enabled.

(3) Make sure the indoor and outdoor units can run normally.

(4) 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.

(5) Feel the air flow of the indoor unit to see if it is normal.

(6) Press the swing button or speed control button on remote control or wired control to see if the fan can run normally.

NOTICE：

① If you use remote control 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 remote control, it won’t be started up right away.

② If there’s no display on the wired control, it’s probably because the connection wire between the indoor unit and wired control is not connected. Please check again.

4 Operation Specification

Refer to the wired controller or remote controller manual.

5 Maintenance

5.1 Failures Not Caused by Faults of the AC

(1) 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.
	Remote control has low battery.	Replace the batteries.
Bad cooling or heating effect.	Air inlet and outlet of indoor or outdoor units have been blocked.	Clear the obstacles and keep the room for indoor and outdoor 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 indoor and outdoor units.

(2) 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.
Mist comes from the air conditioner.	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.	Temperature control 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 indoor unit comes 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 indoor unit.

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.

5.2 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 display panel or wired control displays an error code, please refer to the error code meaning stated in the following table.

Number	Error code	Error
1	E1	Compressor high pressure protection
2	E2	Indoor anti-freeze protection
3	E3	Compressor low pressure protection, refrigerant lack protection and refrigerant colleting mode
4	E4	Compressor air discharge high-temperature protection
5	E6	Communication error
6	E8	Indoor fan error
7	E9	Water-full protection
8	F0	Indoor ambient temperature sensor error
9	F1	Evaporator temperature sensor error
10	F2	Condenser temperature sensor error
11	F3	Outdoor ambient temperature sensor error
12	F4	Discharge temperature sensor error
13	F5	Wired control temperature sensor error
14	C5	IDU jumper cap error
15	EE	IDU or ODU memory chip error
16	PF	Electric box sensor error
17	H3	Compressor overload protection
18	H4	Overload
19	H5	IPM protection

Number	Error code	Error
20	H6	DC fan error
21	H7	Driver out-of-step protection
22	HC	Pfc protection
23	Lc	Startup failure
24	Ld	Compressor phase-sequence protection
25	LF	Power protection
26	Lp	IDU and ODU unmatched
27	U7	4–way valve switch-over error
28	P0	Driver reset protection
29	P5	Over-current protection
30	P6	Master control and driver communication error
31	P7	Driver module sensor error
32	P8	Driver module high temperature protection
33	P9	Zero-crossing protection
34	PA	AC current protection
35	Pc	Driver current error
36	Pd	Sensor connection protection
37	PE	Temperature drift protection
38	PL	Bus low-voltage protection
39	PH	Bus high-voltage protection
40	PU	Charge loop error
41	PP	Input voltage error
42	ee	Drive memory chip error
43	C4	ODU jumper cap error
44	dJ	Phase-loss and anti-phase protection
45	oE	ODU error, for specific error please see the status of ODU indicator
46	EL	Emergency Stop(Fire alarm)

Notice: When the unit is connected with the wired controller, the error code will be simultaneously shown on it.

Instructions to the Error Indicating Lamps on the Panel of the Floor Ceiling Type Unit.

States of the Indicating Lamps:

(1) Indicating Lamp of “POWER”: The indicating lamp will shine when power on, while it will go out when power off.

(2) Indicating Lamp of “COOL”: The indicating lamp will shine when “COOL” is activated, while it will go out when “COOL” is deactivated.

(3) Indicating Lamp of “HEAT”: The indicating lamp will shine when “HEAT” is activated, while it will go out when “HEAT” is deactivated.

(4) Indicating Lamp of “TIMER”: The indicating lamp will shine when “TIMER” is activated, while it will go out when “TIMER” is deactivated or the set.

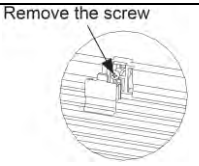
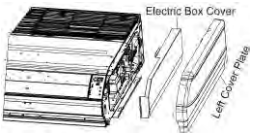
5.3 Unit Maintenance

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.
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.

5.3.1 Clean Air Filter

(1) Disassembly method of filter screen and electric box cover

<table>
<tr><th colspan="2">How to clean the air filter</th></tr>
<tr><td rowspan="2">① Open the air inlet grille.
a) Firstly unfix two buckles on the grille as shown on the picture.
b) Remove the screws under the buckles by a screwdriver and then open the inlet grille.</td><td>  </td></tr>
<tr><td> 
</td></tr>
<tr><td>② Clean the filer screen.
Clean the filer screen by a vacuum cleaner or wash it by flashing water. If the oil stain on the filter can not be removed or cleaned up, wash it by warm water meld with the detergent. Dry the filer in the shadow.
Notice:
a) Never use hot water over 45°C in case of color fading or turning yellow.
b) Never dry it by fire so as to prevent the filter caught fire or deformation.</td><td>  </td></tr>
<tr><td>③ Disassemble the left and right side board.
a) After the grille is removed, use a screwdriver to remove the screws shown on the picture.
b) Push the side plate as per the arrowed direction and take it down.</td><td> 
</td></tr>
<tr><td>④ Disassemble the right side board.</td><td>Disassembly method of right side board Step 3.</td></tr>
<tr><td>⑤ Disassemble the electric box cover
After the right side board is removed, the electric box cover will be shown up and disassemble the fixed screws on it.</td><td> 
</td></tr>
</table>

(2) At the Start of the Seasonal Use.

1) Check if there is blockage at the inlet or outlet vent of air conditioner.
2) Check if the earth wire has been attached reliably by the skilled serviceman.
3) Check if the exhausted batteries of the wireless controller have been replaced.
4) Check if the air filter had been installed well by professional.

Keep the power switch “On” 8 hours before the startup of the unit which has not been used for a long period.

 **Notice**: all above should be operated by the skilled serviceman.

(3) At the End of the Seasonal Use.

1) Cut off the power supply main switch
2) Clean the air filters and other parts by the skilled serviceman.
3) Leave the fan running for 2-3 hours to dry the inside of the unit.

 **Notice:** all above should be operated by the skilled serviceman.

5.3.2 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.

5.3.3 Drainage Pipe

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

5.3.4 Notices at the Beginning of the Using Season

(1) Check if the air inlet/outlet of indoor/outdoor unit is blocked;
(2) Check if the ground connection is reliable;
(3) Check if the battery of remote controller is replaced;
(4) Check if the air filter screen is properly installed;
(5) 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;

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

5.3.5 Maintenance at the end of the Using Season

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

(2) Clean the filter screen, indoor and outdoor unit;

(3) Clean the dust and sundries in indoor and outdoor unit;

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

5.3.6 Components Replacement

Components are available in Gree agency or Gree distributors nearby.

5.4 Notice on Maintenance

5.4.1 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.

5.4.1.1 Checks to the Area

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

5.4.1.2 Work Procedure

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

5.4.1.3 General Work Area

All maintenance staff and others working in the local area shall be instructed on the nature of work being carried out. Work in confined spaces shall be

avoided. The area around the workspace shall be sectioned off. Ensure that the conditions within the area have been made safe by control of flammable material.

5.4.1.4 Checking for Presence of Refrigerant

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

5.4.1.5 Presence of Fire Extinguisher

If any hot work is to be conducted on the refrigeration equipment or any associated parts, appropriate fire extinguishing equipment shall be available to hand. Have a dry powder or CO2 fire extinguisher adjacent to the charging area.

5.4.1.6 No Ignition Sources

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

5.4.1.7 Ventilated Area

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

5.4.1.8 Checks to the Refrigeration Equipment

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

maintenance and service guidelines shall be followed. If in doubt consult the manufacturer's technical department for assistance.

The following checks shall be applied to installations using flammable refrigerants:

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

(2) The ventilation machinery and outlets are operating adequately and are not obstructed;

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

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

(5) 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.

5.4.1.9 Checks to Electrical Devices

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

Initial safety checks shall include:

(1) That 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.

5.4.2 Repairs to Sealed Components

5.4.2.1 During repairs to sealed components, all electrical supplies shall be disconnected

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.

5.4.2.2 Particular attention shall be paid to the following to ensure that by working on

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 notmade 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.

5.4.3 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.

5.4.4 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.

5.4.5 Detection of Flammable Refrigerants

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

5.4.6 Removal and Evacuation

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

(1) Remove refrigerant;
(2) Purge the circuit with inert gas;
(3) Evacuate;
(4) Purge again with inert gas;
(5) Open the circuit by cutting or brazing.

The refrigerant charge shall be recovered into the correct recovery cylinders. The system shall be “flushed” with OFN to render the unit safe. This process may need to be repeated several times. Compressed air or oxygen shall not be used for this task.

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

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

5.4.7 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.

5.4.8 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 re-use of reclaimed refrigerant. It is essential that electrical power is available before the task is commenced:

(1) Become familiar with the equipment and its operation.

(2) Isolate system electrically.

(3) Before attempting the procedure ensure that:

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.

5.4.9 Labelling

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

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

The recovery equipment shall be in good working order with a set of instructions concerning the equipment that is at hand and shall be suitable for the recovery of flammable refrigerants. In addition, a set of calibrated weighing scales shall be available and in good working order. Hoses shall be complete

with leak-free disconnect couplings and in good condition. Before using the recovery machine, check that it is in satisfactory working order, has been properly maintained and that any associated electrical components are sealed to prevent ignition in the event of a refrigerant release. Consult manufacturer if in doubt.

The recovered refrigerant shall be returned to the refrigerant supplier in the correct recovery cylinder, and the relevant Waste Transfer 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. Only electric heating to the compressor body shall be employed to accelerate this process. When oil is drained from a system, it shall be carried out safely.

5.5 After-Sales Services

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

REGULATION (EU) No. 517/2014 - F-GAS

The unit contains R32, a fluorinated greenhouse gas with global warming potential (GWP) = 675. Do not release R32 into the atmosphere.

35 1PH	Kg. 0,78 = 0,53 Tonn CO_2 equiv.
50 1PH	Kg. 1,0 = 0,68 Tonn CO_2 equiv.
70 1PH	Kg. 1,6 = 1,08 Tonn CO_2 equiv.
85 1PH	Kg. 1,8 = 1,22 Tonn CO_2 equiv.
100 1PH	Kg. 2,5 = 1,69 Tonn CO_2 equiv.
140 1PH	Kg. 2,8 = 1,89 Tonn CO_2 equiv.
100 3PH	Kg. 2,5 = 1,69 Tonn CO_2 equiv.
140 3PH	Kg. 2,8 = 1,89 Tonn CO_2 equiv.
160 3PH	Kg. 3,6 = 2,43 Tonn CO_2 equiv.

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PACKAGE DCI R32

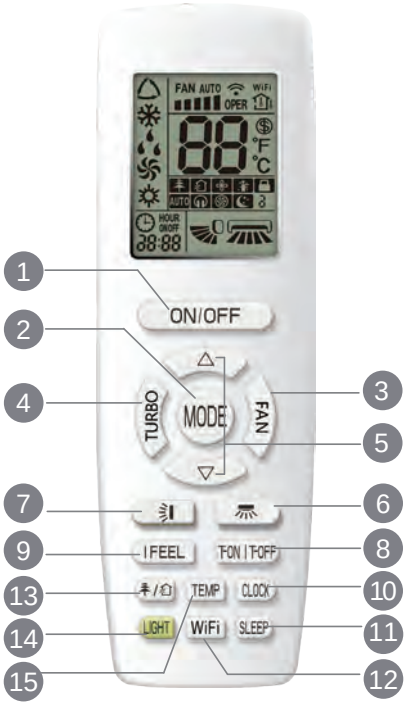
Wireless Remote Controller

Please read this manual carefully before installing and using the air conditioner, and retain for future refeence.

V 01/20

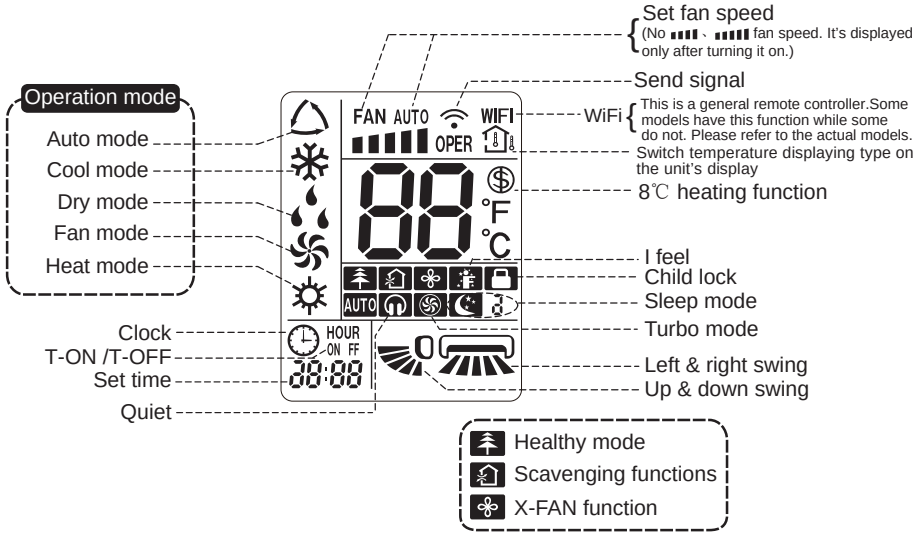
Content

Buttons on remote controller



1. ON/OFF button
2. MODE button
3. FAN button
4. TURBO button
5. ▲/ ▼ button
6. button
7. button
8. T-ON / T-OFF button
9. I FEEL button
10. CLOCK button
11. SLEEP button
12. WiFi button
13. /⌂ button
14. LIGHT button
15. TEMP button

Introduction for icons on display screen



Introduction for buttons on remote controller

Note:

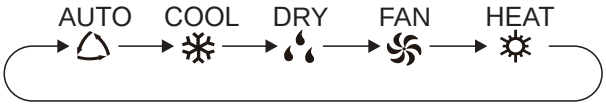
- This is a general use remote controller, it could be used for the air conditioners with multifunction; For some function, which the model doesn't have, if press the corresponding button on the remote controller that the unit will keep the original running status.
- After putting through the power, the air conditioner will give out a sound. Operation indictor "⏻" is ON (red indicator, the colour is different for different models). After that, you can operate the air conditioner by using remote controller.
- Under on status, pressing the button on the remote controller, the signal icon "📶" on the display of remote controller will blink once and the air conditioner will give out a “de” sound, which means the signal has been sent to the air conditioner.

1 ON/OFF button

Press this button to turn on the unit. Press this button again to turn off the unit.

2 MODE button

Press this button to select your required operation mode.



- When selecting auto mode, air conditioner will operate automatically according to ex-factory setting. Set temperature can’t be adjusted and will not be displayed as well. Press "FAN" button can adjust fan speed. Press "💨" / "↕" button can adjust fan blowing angle.
- After selecting cool mode, air conditioner will operate under cool mode. Cool indicator "❄" on indoor unit is ON. (This indicator is not available for some models.) Press "▲" or "▼ " button to adjust set temperature. Press "FAN" button to adjust fan speed. Press "💨" / "↕" button to adjust fan blowing angle.
- When selecting dry mode, the air conditioner operates at low speed under dry mode. Dry indicator "💧" on indoor unit is ON. (This indicator is not available for some models.) Under dry mode, fan speed can’t be adjusted. Press "💨 " / "↕ " button to adjust fan blowing angle.
- When selecting fan mode, the air conditioner will only blow fan, no cooling and no heating. All indicators are OFF. Press "FAN" button to adjust fan speed. Press "💨" / "↕" button to adjust fan blowing angle.
- When selecting heating mode, the air conditioner operates under heat mode. Heat indicator "☼" on indoor unit is ON. (This indicator is not available for some models.) Press "▲" or "▼" button to adjust set temperature. Press "FAN" button to adjust fan speed. Press "💨" / "↕" button to adjust fan blowing angle. (Cooling only unit won’t receive heating mode signal. If setting heat mode with remote controller, press ON/OFF button can’t start up the unit).

Introduction for buttons on remote controller

Note:

- For preventing cold air, after starting up heating mode, indoor unit will delay 1~5 minutes to blow air (actual delay time is depend on indoor ambient temperature).
- Set temperature range from remote controller: 16~30℃ (61-86°F);
  Fan speed: auto, low speed, low-medium speed,medium speed, medium-high speed,high speed.

3 FAN button

Pressing this button can set fan speed circularly as: auto (AUTO), low(▮), medium (▮▮), high(▮▮▮).

Note:

- Under AUTO speed, air conditioner will select proper fan speed automatically according to ex-factory setting.
- It's Low fan speed under Dry mode.
- X-FAN function: Hold fan speed button for 2s in COOL or DRY mode, the icon "✣" is displayed and the indoor fan will continue operation for a few minutes in order to dry the indoor unit even though you have turned off the unit. After energization, X-FAN OFF is defaulted. X-FAN is not available in AUTO, FAN or HEAT mode.

  This function indicates that moisture on evaporator of indoor unit will be blowed after the unit is stopped to avoid mould.
  - Having set X-FAN function on: After turning off the unit by pressing ON/OFF button indoor fan will continue running for a few minutes. at low speed. In this period, Hold fan speed button for 2s to stop indoor fan directly.
  - Having set X-FAN function off: After turning off the unit by pressing ON/OFF button, the complete unit will be off directly.

4 TURBO button

Under COOL or HEAT mode, press this button to turn to quick COOL or quick HEAT mode. "㊋" icon is displayed on remote controller. Press this button again to exit turbo function and "㊋" icon will disappear.
If start this function, the unit will run at super-high fan speed to cool or heat quickly so that the ambient temp. approachs the preset temp. as soon as possible.

5 ▲/ ▼button

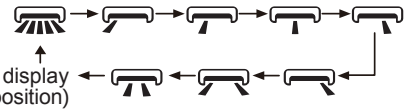
- Press "▲" or "▼" button once increase or decrease set temperature 1℃ (°F). Holding "▲" or "▼" button, 2s later, set temperature on remote controller will change quickly. On releasing button after setting is finished, temperature indicator on indoor unit will change accordingly.

Introduction for buttons on remote controller

● When setting T-ON, T-OFF or CLOCK, press "▲" or "▼" button to adjust time. (Refer to CLOCK, T-ON, T-OFF buttons) When setting T-ON, T-OFF or CLOCK press "▲" or "▼" button to adjust time. (Refer to CLOCK,T-ON, T-OFF buttons)

6 button

Press this button can select left & right swing angle. Fan blow angle can be selected circularly as below:



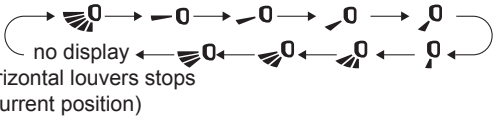
Note:

● Press this button continuously more than 2s, the main unit will swing back and forth from left to right, and then loosen the button, the unit will stop swinging and present position of guide louver will be kept immediately.

● Under swing left and right mode, when the status is switched from off to , if press this button again 2s later, status will switch to off status directly; if press this button again within 2s, the change of swing status will also depend on the circulation sequence stated above.

7 button

Press this button can select up & down swing angle. Fan blow angle can be selected circularly as below:



● When selecting " ", air conditioner is blowing fan automatically. Horizontal louver will automatically swing up & down at maximum angle.

● When selecting " 、 、 、 、 ", air conditioner is blowing fan at fixed position. Horizontal louver will stop at the fixed position.

● When selecting " 、 、 ", air conditioner is blowing fan at fixed angle. Horizontal louver will send air at the fixed angle.

● Hold " " button above 2s to set your required swing angle. When reaching your required angle, release the button.

Note:

● " 、 、 " may not be available. When air conditioner receives this signal, the air conditioner will blow fan automatically.

● Press this button continuously more than 2s, the main unit will swing back and forth from up to down, and then loosen the button, the unit will stop swinging and present position of guide louver will be kept immediately.

● Under swing up and down mode, when the status is switched from off to , if press this button again 2s later, status will switch to off status directly; if press this button again within 2s, the change of swing status will also depend on the circulation sequence stated above.

Introduction for buttons on remote controller

8 T-ON / T-OFF button

- T-ON button
  "T-ON" button can set the time for timer on. After pressing this button, "🕒" icon disappears and the word "ON" on remote controller blinks. Press "▲" or "▼" button to adjust T-ON setting. After each pressing "▲" or "▼" button, T-ON setting will increase or decrease 1min. Hold "▲" or "▼" button, 2s later, the time will change quickly until reaching your required time. Press "T-ON" to confirm it. The word "ON" will stop blinking. "🕒" icon resumes displaying. Cancel T-ON: Under the condition that T-ON is started up, press "T-ON" button to cancel it.
- T-OFF button
  "T-OFF" button can set the time for timer off. After pressing this button,"🕒" icon disappears and the word "OFF" on remote controller blinks. Press "▲" or "▼" button to adjust T-OFF setting. After each pressing "▲" or "▼" button, T-OFF setting will increase or decrease 1min. Hold "▲" or " ▼" button, 2s later, the time will change quickly until reaching your required time. Press "T-OFF" word "OFF" will stop blinking. "🕒" icon resumes displaying. Cancel T-OFF. Under the condition that T-OFF is started up, press "T-OFF" button to cancel it.

Note:

- Under on and off status, you can set T-OFF or T-ON simultaneously.
- Before setting T-ON or T-OFF, please adjust the clock time.
- After starting up T-ON or T-OFF, set the constant circulating valid. After that, air conditioner will be turned on or turned off according to setting time. ON/OFF button has no effect on setting. If you don't need this function, please use remote controller to cancel it.

9 I FEEL button

Press this button to start I FEEL function and "🧍" will be displayed on the remote controller. After this function is set, the remote controller will send the detected ambient temperature to the controller and the unit will automatically adjust the indoor temperature according to the detected temperature. Press this button again to close I FEEL function and "🧍" will disappear.

- Please put the remote controller near user when this function is set. Do not put the remote controller near the object of high temperature or low temperature in order to avoid detecting inaccurate ambient temperature.

Introduction for buttons on remote controller

10 CLOCK button

Press this button to set clock time. "🕒" icon on remote controller will blink. Press "▲" or "▼" button within 5s to set clock time. Each pressing of "▲" or "▼" button, clock time will increase or decrease 1 minute. If hold "▲" or "▼" button, 2s later, time will change quickly. Release this button when reaching your required time. Press "CLOCK" button to confirm the time. "🕒" icon stops blinking.

Note:

- Clock time adopts 24-hour mode.
- The interval between two operation can't exceeds 5s. Otherwise, remote controller will quit setting status. Operation for T-ON/T-OFF is the same.

11 SLEEP button

Under COOL, or HEAT mode, press this button to start up sleep function. "☾" icon is displayed on remote controller. Press this button again to cancel sleep function and "☾" icon will disappear.After powered on, Sleep Off is defaulted. After the unit is turned off, the Sleep function is canceled.
In this mode, the time of time can be adjusted. Under Fan、DRY and Auto modes, this function is not available.

12 WiFi button

Press " WiFi " button to turn on or turn off WiFi function. When WiFi function is turned on, the " WiFi " icon will be displayed on remote controller; Under status of remote controller off, press "MODE" and " WiFi " buttons simultaneously for 1s, WiFi module will restore to factory default setting.

- This function is only available for some models.

13 🌲/🏠 button

Press this button to achieve the on and off of healthy and scavenging functions in operation status. Press this button for the first time to start scavenging function; LCD displays "🏠". Press the button for the second time to start healthy and scavenging functions simultaneously; LCD displays "🏠" and "🌲". Press this button for the third time to quit healthy and scavenging functions simultaneously. Press the button for the fourth t ime to start healthy function; LCD display "🌲". Press this button again to repeat the operation above.

- This function is applicable to partial of models.

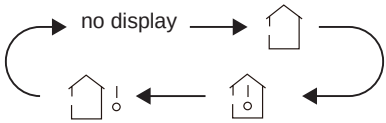
Introduction for buttons on remote controller

14 LIGHT button

Press this button to turn off display light on indoor unit. " " icon on remote controller disappears. Press this button again to turn on display light. " " icon is displayed.

15 TEMP button

By pressing this button, you can see indoor set temperature, indoor ambient temperature or outdoor ambient temperature on indoor unit's display. The setting on remote controlleris selected circularly as below:



- When selecting " " or no display with remote controller, temperature indicator on indoor unit displays set temperature.
- When selecting " " with remote controller, temperature indicator on indoor unit displays indoor ambient temperature.
- When selecting " " with remote controller, temperature indicator on indoor unit displays outdoor ambient temperature.

Note:

- Outdoor temperature display is not available for some models. At that time, indoor unit receives " " signal, while it displays indoor set temperature.
- It's defaulted to display set temperature when turning on the unit.There is no display in the remote controller.
- Only for the models whose indoor unit has dual-8 display.
- When selecting displaying of indoor or outdoor ambient temperature, indoor temperature indicator displays corresponding temperature and automatically turn to display set temperature after three or five seconds.

Function introduction for combination buttons

Energy-saving function

Under cooling mode, press "TEMP" and " CLOCK" buttons simultaneously to start up or turn off energy-saving function. When energy-saving function is started up, "SE" will be shown on remote controller, and air conditioner will adjust the set temperature automatically according to ex-factory setting to reach to the best energy-saving effect. Press "TEMP" and "CLOCK" buttons simultaneously again to exit energy-saving function.

Note:

- Under energy-saving function, fan speed is defaulted at auto speed and it can't be adjusted.
- Under energy-saving function, set temperature can't be adjusted. Press "TURBO" button and the remote controller won't send signal.
- Sleep function and energy-saving function can't operate at the same time. If energy-saving function has been set under cooling mode, press sleep button will cancel energy-saving function. If sleep function has been set under cooling mode, start up the energy-saving function will cancel sleep function.

8℃ heating function

Under heating mode, press "TEMP" and "CLOCK" buttons simultaneously to start up or turn off 8℃ heating function. When this function is started up, "Ⓢ" and "8℃ " will be shown on remote controller, and the air conditioner keep the heating status at 8℃ . Press "TEMP" and "CLOCK" buttons simultaneously again to exit 8℃ heating function.

Note:

- Under 8℃ heating function, fan speed is defaulted at auto speed and it can't be adjusted.
- Under 8℃ heating function, set temperature can't be adjusted. Press "TURBO" button and the remote controller won't send signal.
- Sleep function and 8℃ heating function can't operate at the same time. If 8℃ heating function has been set under cooling mode, press sleep button will cancel 8℃ heating function. If sleep function has been set under cooling mode, start up the 8℃ heating function will cancel sleep function.
- Under ℉ temperature display, the remote controller will display 46 ℉ heating.

Child lock function

Press "▲" and " ▼" simultaneously to turn on or turn off child lock function. When child lock function is on, "🔒" icon is displayed on remote controller. If you operate the remote controller, the "🔒" icon will blink three times without sending signal to the unit.

Temperature display switchover function

Under OFF status, press "▼" and "MODE" buttons simultaneously to switch temperature display between ℃ and ℉ .

Operation guide

1. After putting through the power, press "ON/OFF" button on remote controller to turn on the air conditioner.

2. Press "MODE" button to select your required mode: AUTO, COOL, DRY, FAN, HEAT.

3. Press "▲" or "▼" button to set your required temperature. (Temperature can't be adjusted under auto mode).

4. Press "FAN" button to set your required fan speed: auto, low speed, low-medium speed,medium speed, medium-high speed,high speed.

5. Press " " button to select fan blowing angle.

Replacement of batteries in remote controller

1. Lift the cover along the direction of arrow (as shown in Fig 1 ①).
2. Take out the original batteries (as shown in Fig 1 ②).
3. Place two 7# (AAA 1.5V) dry batteries, and make sure the position of "+" polar and "-" polar is correct (as shown in Fig 2③).
4. Reinstall the cover (as shown in Fig 2 ④).

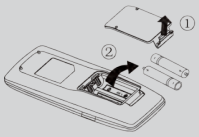


Fig.1

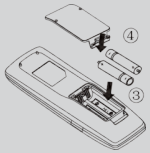


Fig.2

NOTICE

- During operation, point the remote control signal sender at the receiving window on indoor unit.
- The distance between signal sender and receiving window should be no more than 8m, and there should be no obstacles between them.
- Signal may be interfered easily in the room where there is fluorescent lamp or wireless telephone; remote controller should be close to indoor unit during operation.
- Replace new batteries of the same model when replacement is required.
- When you don't use remote controller for a long time, please take out the batteries.
- If the display on remote controller is fuzzy or there's no display, please replace batteries.

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User and installation Manual

Wired Controller with weekly timer

Thank you for choosing commercial air conditioners. Please read this Owner' s Manual carefully before operation and retain it for future reference.

To Users

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 responsibility for their safety. Children should be supervised to ensure that they do not play with the appliance.

(2) This instruction manual is a universal manual, some functions are only applicable to particular product. All the illustrations and information in the instruction manual are only for reference, and control interface should be subject to actual operation.

(3) In order to make the product better, we will continuously conduct improvement and innovation. We have the right to make necessary revision to the product from time to time due to the reason of sales or production, and reserve the right to revise the contents without further notice.

(4) For personal injury or property loss and damage caused by improper operation such as improper installation and debugging, unnecessary maintenance, violation of related national laws and rules and industrial standard, and violation of this instruction manual, etc., we will bear no liability.

(5) The final right to interpret for this instruction manual belongs to ArgoClima.

Contents

1 Safety Notices (Please be sure to abide)

	Warning: If not abide strictly, it may cause severe damage to the unit or the people.
	Note: If not abide strictly, it may cause slight or medium damage to the unit or the people.
	This sign indicates that the operation must be prohibited. Improper operation may cause severe damage or death to people.
	This sign indicates that the items must be observed. Improper operation may cause damage to people or property.

 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 product with anti-corrosive or anti-explosion function.

2 Display

2.1 Appearance

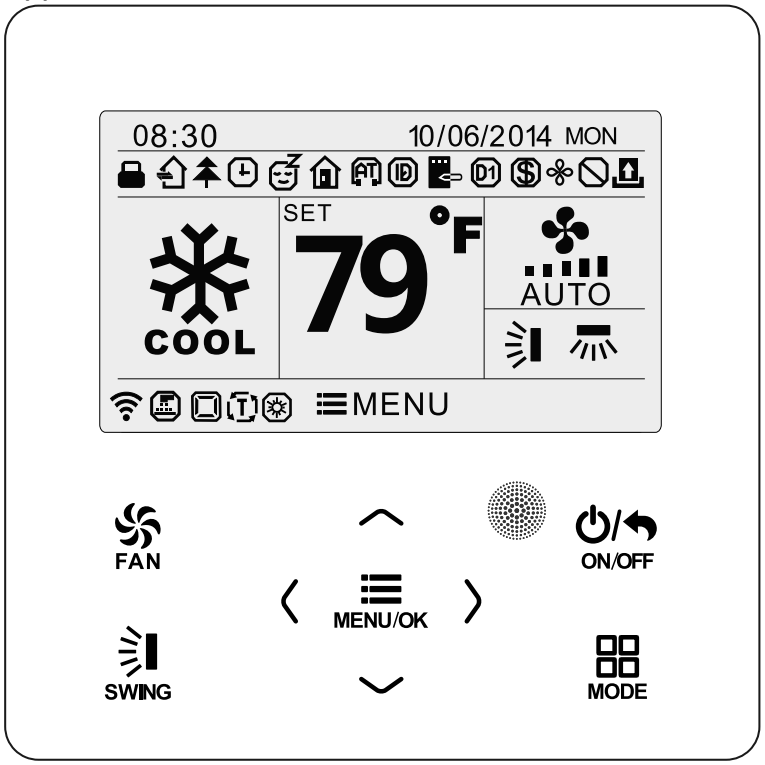


Figure 2-1 Appearance of wired controller

2.2 Instructions for Related Displayed Symbols

Table 2.2.1 Instructions for Related Displayed Symbols

No.	Symbols	Instructions
1		Up and down swing function
2		Left and right swing function
3		Fresh air function
4		Sleep function
5		Auto mode
6		Cooling mode
7		Dry mode
8		Fan mode
9		Heating mode
10		Health function
11		I-Demand function
12		Holiday function
13		Shielding status (Buttons, temperature, ON/OFF, mode or energy saving is shielded by remote monitor)

Wired Controller

No.	Symbols	Instructions
14		Current set fan speed
15		Memory function (Memory in power failure)
16		Save function
17		Dry function
18		Remind to clean the filter
19		Timer on status
20		Gate card pulled-off status or nobody presented status
21		Quiet function
22		Function lock
23		WiFi is turned on
24		Independent swing is turned on
25		Setback function is turned on

No.	Symbols	Instructions
26		Auxiliary heating status
27		Display of set temperature: the temperature shown in the diagrams of this manual is in Fahrenheit scale(°F). Temperature display in Fahrenheit scale and Celsius scale can be selected. Please refer to the setting by the user.

3 Buttons

3.1 Button Graphics

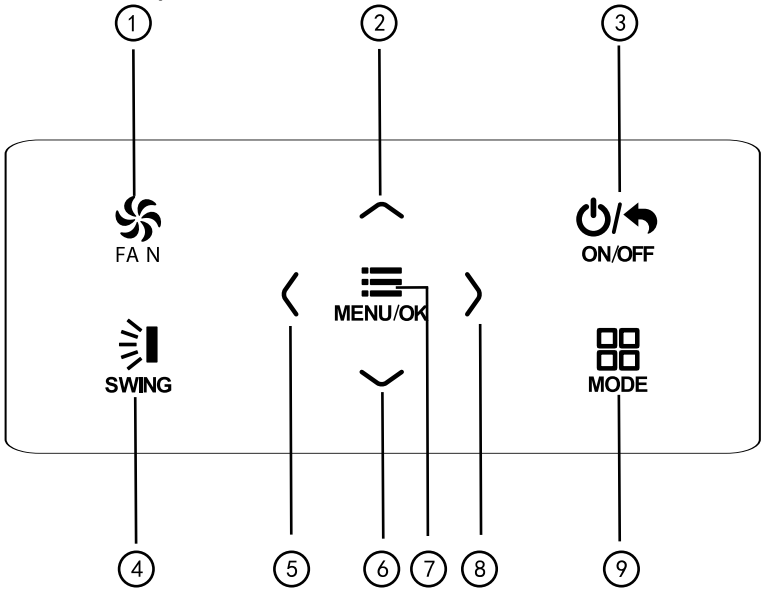


Figure 3-1 Button graphics

3.2 Function Instructions of Buttons

Table 3.2.1 Function Instructions of Buttons

No.	Button name	Button Function
1	FAN	Set low speed, low-medium speed, medium speed, medium-high speed, high speed, turbo and auto speed.
2	∧	(1) Set temperature (2) Set parameter (3) Move option cursor
6	∨	
3	ON/OFF	(1) Turn on or turn off unit (2) Return to previous page
4	SWING	Set up&down swing and set left&right swing
5	<	(1) Set related function on or off (2) Move option cursor (3) Set parameter
8	>	
7	MENU/OK	(1) Enter menu page (2) Confirm setting
9	MODE	Set auto, cooling, dry, fan and heating modes for indoor unit.

4 Operation Instructions

4.1 Menu Structure

Normal setting of wired controller can be set directly on the main page, including fan speed, swing, set temperature, mode, ON/OFF. The setting and status view of

other functions can be set in corresponding submenu. Detailed menu structure is as shown in the Fig. as below.

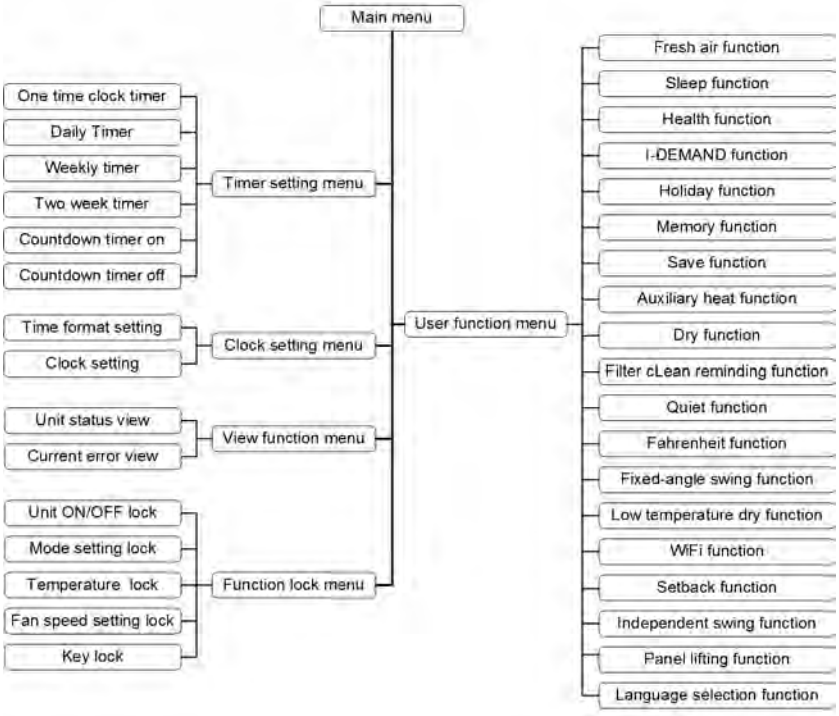


Figure 4-1 Menu structure

4.2 On/Off

When the wired control is on main page, press “ON/OFF” button to turn on the unit. Press “ON/OFF” button again to turn off the unit. The interfaces of On/Off status are shown in the Fig. as below.

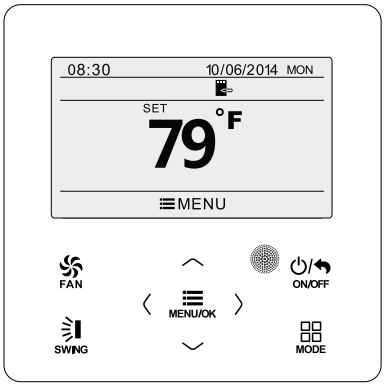


Figure 4-2 Unit off page

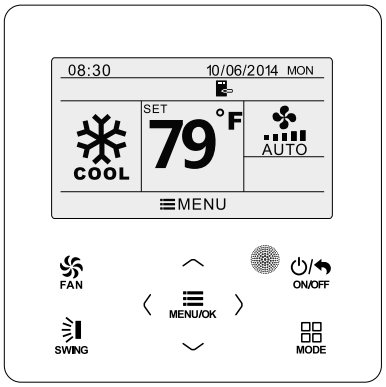


Figure 4-3 Unit on page

4.3 Mode Setting

Under on status, press “MODE” button on the main page can set mode circularly as below.

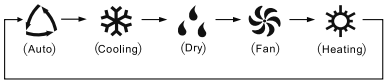


Figure 4-4 Mode Setting

Note：

(1) If save function is turned on, auto mode is not available.

(2) Heating mode is not avaiable for the cooling only unit.

4.4 Temperature Setting

Under on status, press “∧” or “∨” button on the main page to increase or decrease set temperature by 1℃(1℉); hold “∧” or “∨” button to increase or decrease set temperature by 1℃(1℉) every 0.3s.

In cooling, dry, fan and heating mode, temperature setting range is 16℃~30℃ (61℉ ~ 86℉). There are two circumstances under auto mode: （1）temperature can be set and the setting ragne is 16℃ ~ 30℃（61℉ ~ 86℉）; (2) temperature can’t be set. It deeps on the unit model.

4.5 Fan Setting

Under on status, press “FAN” button can set fan speed circularly as below.

Low→Medium low→Medium→Medium high→High→Turbo→Auto→Low

Symbols displayed are as shown in the Fig.as below.

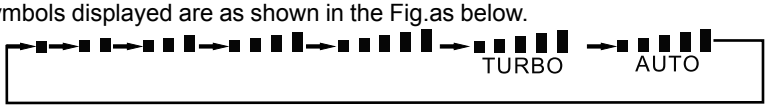


Figure 4-5 Fan Setting

4.6 Swing Setting

Under on status, press “SWING” button for swing setting. Two swing modes are available: fixed-angle swing and simple swing.

Fixed-angle swing: when fixed-angle swing mode is set, swing operation is as follows:

Under on status,press “SWING” button to select up&down swing ,,then press “SWING” button, Up&down swing angle will be adjusted circularly as below:

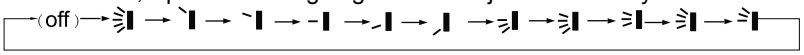


Figure 4-6 up&down swing

Select up&down swing and left&right swing through " < " or " > " button. When left&right swing is selected. Left&right swing angle will be adjusted circularly as below:

Figure 4-7 left&right swing

Note：

(1) Turn on fixed-angle swing mode in function setting page.

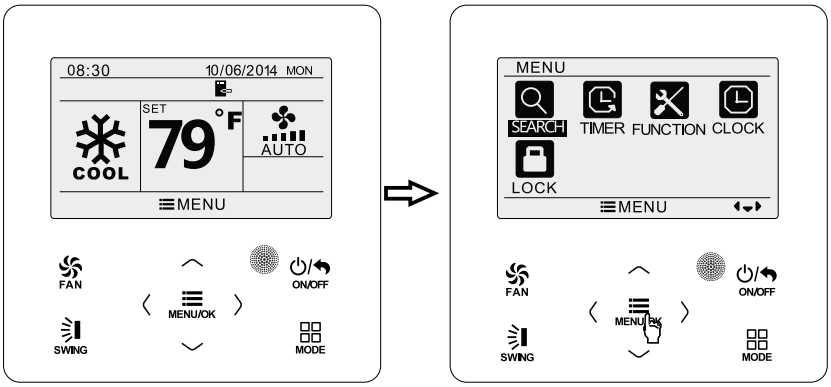
(2) If fixed-angle swing is not available for the model, fixed-angle swing will be invalid when the wired controller turns on fixed-angle swing mode.

Simple swing mode: when fixed-angle swing mode is turned off, swing operation is as below:

Under on status, press "SWING" button and the focus frame will appear. Press " < " or " > " button to select up&down swing or left&right swing. Press SWING button to turn on or turn off up&down swing or left&right swing. Swing icon will be displayed when swing function is turned on. Otherwise, swing icon will not be displayed.

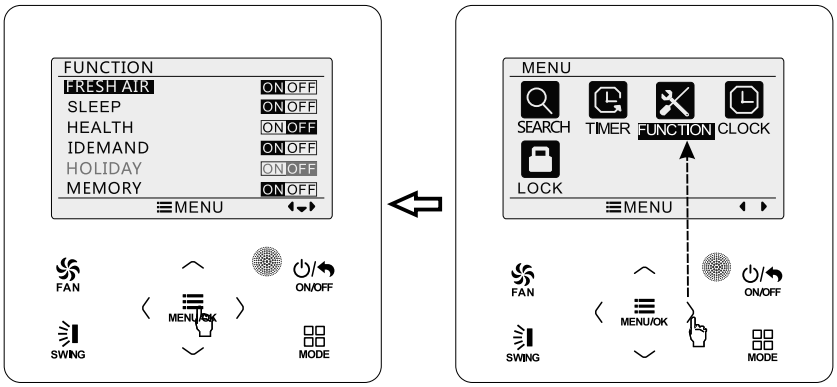
4.7 Functions Setting

Press "MENU/OK" button on main page to enter main menu page. Press " < " or " > " button to select the function setting symbol. Then press "MENU/OK" button to enter user function setting page. Press "∧" or "∨" button to select specific function item. Press " < " or " > " button to turn on or turn off this function, or enter into the next step setting of the function by pressing "MENU/OK" button. If the function is displayed in grey, it indicates this function item can't be set under current mode or off status. The operation is shown in the Fig.as below.



In main page

Press MENU/OK button to enter main menu page



Press MENU/OK button to enter function setting page; press "∧"or "V"to select function item, and press "<"or ">"button to set the function

Press ">"button to select function setting item

Figure 4-8 Function setting

Function introduction is shown in the table as below.

Table 4.7.1 Function introduction

Function	Instruction
Fresh air function	Adjust indoor fresh air volume to improve air quality and keep indoor air fresh. (The unit needs to be installed with a new damper).
Sleep function	The indoor unit enters a sleep state and operates according to a preset sleep temperature curve to create a comfortable sleeping environment and improve sleep quality.
Health function	Generate negative ions to ensure that the health.

Function	Instruction
I-Demand function	Unit will operate under save mode to save energy.
Holiday function	In the heating mode, when the user goes out, it is used to maintain the indoor ambient temperature to ensure turbo heating when the user comes back.
Memory function	When the power is restored after power failure, the indoor unit resumes the original status.
Save function	Set the lower limit of set temperature for cooling and dry mode and set the upper limit of set temperature for heating mode to let the air conditioner operate in a smaller temperature range for saving energy.
Auxiliary Heating function	In the heating mode, auxiliary heat function is started up to improve the heating efficiency.
Dry function	It used to blow off the moisture of the indoor unit's evaporator after shutdown to avoid mold. The drying function can only be turned on under the cooling or dry mode.
Filter clean reminder function	The air conditioning unit will record its own running time. When the user set time is reached, it will remind the user to clean the filter, so as to avoid problems such as poor cooling and heating effect, abnormal protection and bacterial growth.
Quiet function	Decrease the noise of the indoor unit and achieve the mute effect.

Function	Instruction
Fixed-angle swing mode	Switch between simple swing and fixed-angle swing to satisfy user's requirement.
Low-temperature drying function	The unit runs the dry mode at a lower set temperature to improve the drying capacity.
Setback function	After shutdown, the unit will automatically run to ensure that the indoor ambient temperature is within the set temperature range.
Independent swing function	It can set the swing mode with 4 swing air outlets to satisfy the users in different air outlet directions.
Panel lifting function	The panel can come down to let the user to clean the filter.

4.7.1 Fresh Air Function Setting

Under on status, after entering into user function page, press "∧" or "∨" button to select fresh air function and press " < " or " > " button to turn on or turn off air function. Press "MENU/OK" button to enter into the setting page of fresh air mode.

After entering into the setting page of fresh air, press "∧" or "∨" button to adjust the mode. There are 10 setting modes. Once setting is finished, press "MENU/OK" button to save the setting.

Table 4.7.2 Mode Instruction

Mode	Instruction
1	The unit continuously runs for 60min, and fresh air valve runs for 6 min.
2	The unit continuously runs for 60min, and fresh air valve runs for 12 min.
3	The unit continuously runs for 60min, and fresh air valve runs for 18 min.
4	The unit continuously runs for 60min, and fresh air valve runs for 24 min.
5	The unit continuously runs for 60min, and fresh air valve runs for 30 min.
6	The unit continuously runs for 60min, and fresh air valve runs for 36 min.
7	The unit continuously runs for 60min, and fresh air valve runs for 42 min.
8	The unit continuously runs for 60min, and fresh air valve runs for 48 min.
9	The unit continuously runs for 60min, and fresh air valve runs for 54 min.
10	All on

4.7.2 Sleep Function Setting

Under on status, after entering into user function page, press “∧” or “∨” button to select sleep function and press “ < ” or “ > ” button to turn on or turn off sleep function with auto saving.

Note：

(1) Under fan or auto mode, sleep function is not available.

(2) Sleep function will be canceled when turning off the unit or switching mode.

4.7.3 Health Function Setting

Under on status, after entering into user function page, press “∧” or “∨” button to select health function and press “ < ” or “ > ” button to turn on or turn off health function with auto saving.

4.7.4 I-DEMAND Function Setting

Under on status, after entering into user function page, press “∧” or “∨” button to select IDEMAND function option and press “ < ” or “ > ” button to turn on or turn off this function with auto saving.

Note：

(1) This function is only available in cooling mode.

(2) When this function has been set, fan speed setting will be shielded.

(3) This function will be cancelled when turning off the unit or switching modes.

(4) This function and sleep function cannot be turned on simultaneously. If I-demand function is set firstly and then sleep function is set, I-demand function will be cancelled while sleep function will be valid, and vice versa.

4.7.5 Holiday Function Setting

Under on status, after entering into user function page, press “∧” or “∨” button to

select holiday function option and press “ < ” or “ > ” button to turn on or turn off this function with auto saving.

Note：

(1) This function is only available in heating mode.

(2) When this function has been set, set temperature is displayed in 8℃(46℉). In this case, temperature setting and fan speed setting are shielded.

(3) This function will be cancelled when switching modes.

(4) This function and sleep function cannot be on simultaneously. If this function is set firstly and then sleep function is set, it will be cancelled while sleep function will be valid, and vice versa.

4.7.6 Memory Function Setting

After entering into user function page, press “∧” or “∨” button to select memory function and press “ < ” or “ > ” button to turn on or turn off memory function with auto saving.

4.7.7 Save Function Setting

Under on status, after entering into user function page, press “∧” or “∨” button to select save function and press “ < ” or “ > ” button to turn on or turn off save function. Press “MENU/OK” button to enter save function setting page.

After entering save function setting page, press “ < ” or “ > ” button to select cooling or heating limitation temperature. After that, press “∧” or “∨” button to adjust limitation temperature value. Once setting is finished, press “MENU/OK” button to save the setting.

Note：

When save function has been set, auto mode cannot be set.

4.7.8 Auxiliary Heating Function Setting

Under on status, after entering into user function page, press “∧” or “∨” button to select auxiliary heating function and press “ < ” or “ > ” button to turn on or turn off this function with auto saving.

Note：

This function can be set only in heating mode.

4.7.9 Dry Function Setting

Under on status, after entering into user function page, press “∧” or “∨” button to select dry function and press “ < ” or “ > ” button to turn on or turn off this function with auto saving.

Note：

This function can be set only in cooling and dry mode.

4.7.10 Filter Clean Reminder Setting

After entering into user function page, press “∧” or “∨” button to select filter clean function and press “ < ” or “ > ” button to turn on or turn off this function. Press “MENU/OK” button to enter the setting page of filter clean reminder function.

After entering the setting page of filter clean reminder function, press “∧” or “∨” button to select pollution level and then press “ < ” or “ > ” button to set pollution level; press “∧” or “∨” button to select accumulating time setting and then press “ < ” or “ > ” button to set required time. Once setting is finished, press “MENU/OK” button to save the setting.

When level 1 is selected, the adjusting range of accumulating operating time is 5,500~10,000 hours, with 500 hours in each increase or decrease.

When level 2 is selected, the adjusting range of accumulating operating time is 1,400~5,000 hours, with 400 hours in each increase or decrease.

When level 3 is selected, the adjusting range of accumulating operating time is 100~1,000 hours, with 100 hours in each increase or decrease.

Whenever you turn off this function, the unit's operating time will be zero clearing.

4.7.11 Quiet Function Setting

Under on status, after entering into user function page, press "∧" or "∨" button to select quiet function and press " < " or " > " button to turn on or turn off this function with auto saving.

Note：

(1) This function is only available in cooling mode, heating mode and auto mode.

4.7.12 Fahrenheit Temperature Setting

After entering into user function page, press "∧" or "∨" button to select Fahrenheit temperature function and press " < " or " > " button to turn on or turn off this function with auto saving. Once this function is turned off, Celsius temperature will be displayed.

4.7.13 Fixed-angle Swing Mode Setting

After entering into user function page, press "∧" or "∨" button to select fixed-angle swing function and press " < " or " > " button to turn on or turn off this function with auto saving.

Note：

If fixed-angle swing function is not available for the connected unit, this function will be cancelled automatically after setting.

4.7.14 Low-temperature Drying Function Setting

Under on status, after entering into user function page, press "∧" or "∨" button to

select low-temperature drying function and press “ < ” or “ > ” button to turn on or turn off this function with auto saving.

Note：

(1) This function is only available in dry mode.

(2) When low-temperature drying function is turned on, the displayed set temperature in dry mode is 12℃(54℉). This function will be off automatically after readjusting set temperature.

4.7.15 WiFi Function Setting

After entering into user function page, press “∧” or “∨” button to select WiFi function and press “ < ” or “ > ” button to turn on or turn off this function. Press “MENU/OK” button to enter into WiFi reset page.

Once it enters into WIFI reset setting page, press “ < ” or “ > ” button to select reset or not. After that, press “MENU/OK” button to confirm it.

4.7.16 SETBACK Function Setting

After entering into user function page, press “∧” or “∨” button to select SETBACK function and press “ < ” or “ > ” button to turn on or turn off this function. Press “MENU/OK” button to enter into SETBACK function setting page.

Once it has entered into SETBACK function setting page, press “ < ” or “ > ” button to select upper or lower limit temperature; Press “∧” or “∨” button to adjust the limit temperature value. After that, press “MENU/OK” button to save setting.

4.7.17 Independent Swing Function Setting

Under on status, after entering into user function page, press “∧” or “∨” button to select the independent swing function. Press“MENU/OK” button to enter into independent swing function setting page.

Press “∧” or “∨” button can select independent swing setting, reset independent swing and view independent swing setting list. After that, press “MENU/OK” button to enter into corresponding item setting page.

（1）Once it have entered into independent swing setting page, press “∧” or “∨” button to select the air outlet (there are four air outlet on the panel marked by the circles. The number is 1, 2, 3 and 4. The number of “0” of air outlet is corresponding to the number of circles of air outlet on the panel) and then press “ < ” or “ > ” button to turn on or turn off the independent swing function for this air outlet . Press “MENU/OK” button can set the detailed swing mode for this air outlet. Press “∧” or “∨” button to set the detailed mode. The swing mode is circulating according to the sequence in the Fig. as below. Once setting is finished, press“MENU/OK” button to save it.

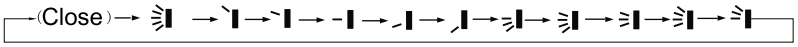


Figure 4-9 swing setting

（2）Once it has entered into the setting page of reset independent swing, press “ < ” or “ > ” button to select whether reset independent swing or not. Once selection is finished, press “MENU/OK” button to confirm it. If select to reset independent swing, the independent swing function of all air outlets will be turned off.

（3）Once it has entered into the independent swing setting list page, on/off status of independent swing function and swing mode for each air outlet can be viewed.

Note：

(1) Only up&down swing is available for independent swing function.

(2) Only one air outlet at the most can be closed for the independent swing.

(3) Turn off independent swing function can resume to original up&down swing setting.

4.7.18 Panel Lifting Function Setting

Under on status, after entering into user function page, press “∧” or “∨” button to select panel lifting function. Press “MENU/OK” button to enter into the panel lifting

function setting page. Press “∧” or “∨” button to control the up, down or stop for the panel.

Press “ON/OFF”button to reset the panel. The reset window is displayed, which indicates the reset is processing. Once the panel reset is finished, it will resume to the main page automatically.

Note:

(1) Once it has entered into the function, operation mode will be switched to the fan mode.

(2) Because the panel lifting is realized by changing the set temperature, if press “∧” or “∨” button continuously, it will reach to the limit value. At this time, press the button in the opposite direction consecutively to control it again.

(3) Once panel reset is finished, the unit is at off status.

4.7.19 Language Setting

After entering into user function page, press “∧”or “∨” button to select language setting. Press “MENU/OK” button to enter into language setting page. Press “∧” or “∨” button to select your required language and then press “MENU/OK”button to save the setting.

4.8 Unit Status View

Press “MENU/OK” button to enter into the menu and select the function symbol to be viewed. Then press “MENU/OK” button to enter view function page. Press “∧” or “∨” button to select status view function. Press “MENU/OK” button to enter unit status view page. Press “ON/OFF” button to return to the previous page. Please refer to the Fig. as below.

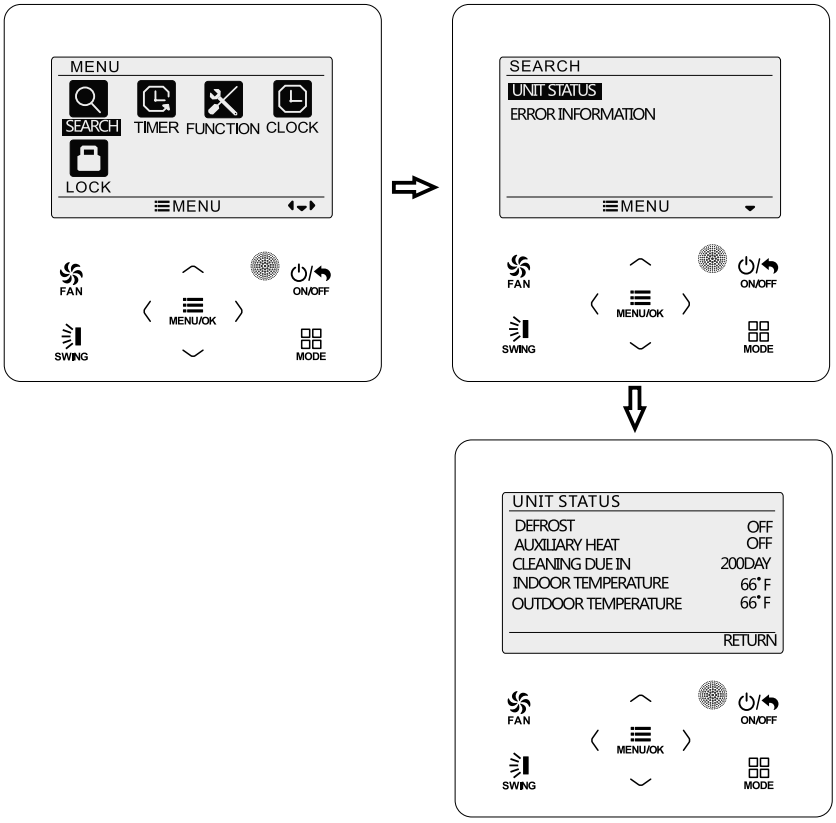


Figure 4-10 Status View

The following statuses can be viewed: if defrosting is operating; if auxiliary heating is operating; residual time of filter cleaning reminder; indoor ambient temperature; outdoor ambient temperature.

Note：

(1) The residual time of filter cleaning reminder is valid only when the cleaning reminder function is turned on.

(2) If there isn't outdoor ambient temperature sensor for the unit or the sensor detection hasn't started to work, the outdoor ambient temperature view parameter is invalid.

4.9 Current Error View

When error occurs in the unit, error symbol will be displayed on the main page of wired controller. In this case, you can enter error view page to view the current error.

Press "MENU/OK" button to enter the menu and select the function symbol to be viewed. Then press "MENU/OK" button to enter view function page. Press "∧" or "∨" button to select error information. Press"MENU/OK" button to enter error information page. When there are many errors, press "∧" or "∨" to turn pages. Press "ON/OFF" button to return to the previous page. Please see the Fig. as below.

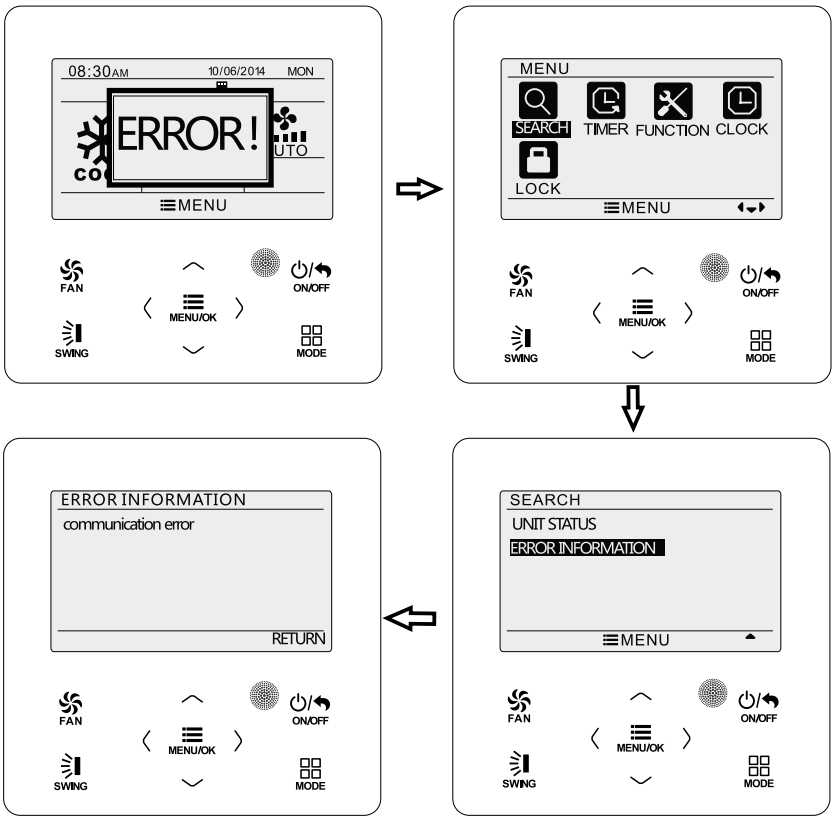


Figure 4-11 Current Error View

4.10 Timer Setting

The wired controller can set 6 kinds of timer: one time clock timer, everyday timer, one week timer, two week timer, countdown timer on and countdown timer off. Select timer symbol after entering menu page. Press“MENU/OK” button to enter timer setting page. Press “∧” or “∨” button to select one kind of timer. Press “ < ” or “ > ” button to turn on or turn off this timer. Please refer to the Fig. as below.

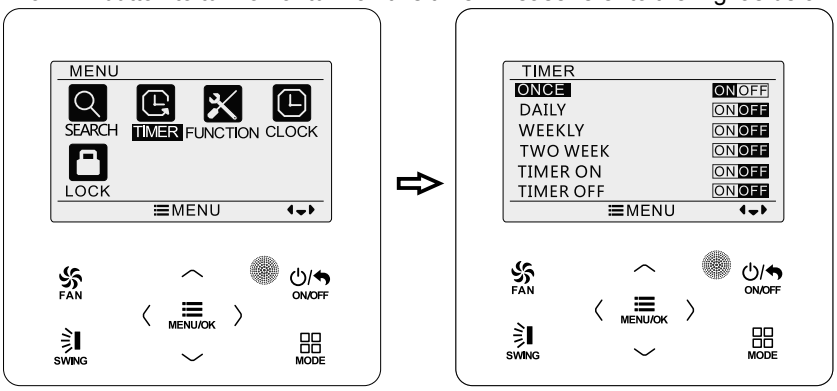


Figure 4-12 Turn on or turn off timer

4.10.1 One Time Clock Timer

The wired controller can set one time clock timer. Timer on can be set when the unit is under off status. Timer off can be set when the unit is under on status. This timer will be carried out for only once when timer time is reached and then the timer will be off automatically.

In timer function setting page, when one time timer is selected, press “ < ” or “ > ”

button to turn on or turn off it. Press “MENU/OK” button to enter timer time setting page. Please refer to the Fig. as below.

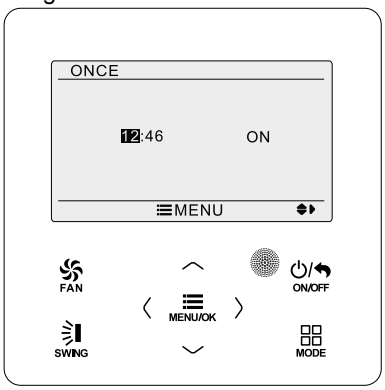


Figure 4-13 one time clock timer

Press “ < ” or “ > ” button to select timer hour or minute and press “∧” or “∨” button to adjust time. Holding “∧” or “∨” button increases or decreases time rapidly. Once setting is finished, press “MENU/OK” button to save timer time.

Note:

(1) If this timer function is turned on, when the unit is turned on or turned off, this timer function will be cancelled automatically.

4.10.2 Daily Timer

In daily timer, user can set eight segments of timer individually. The individual segment will be valid only when it is turned on. In each segment, you can set time, unit ON/OFF, set temperature in cooling (it is valid only when the current mode is

cooling), set temperature in heating (it is valid only when the current mode is heating). Please refer to the Fig. as below.

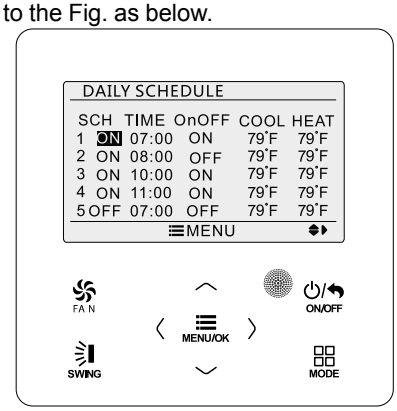


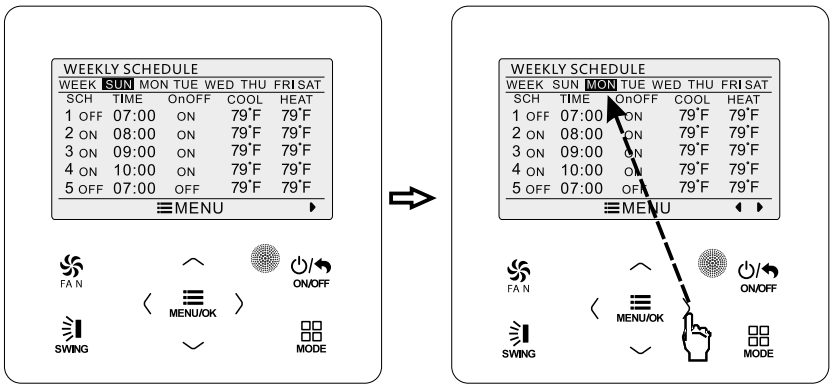
Figure 4-14 Daily timer setting

After entering daily timer setting page, press " < " or " > " button to select setting item. Press "∧" or "∨" button to adjust the value. Press "MENU/OK" button to save setting.

4.10.3 Weekly Timer

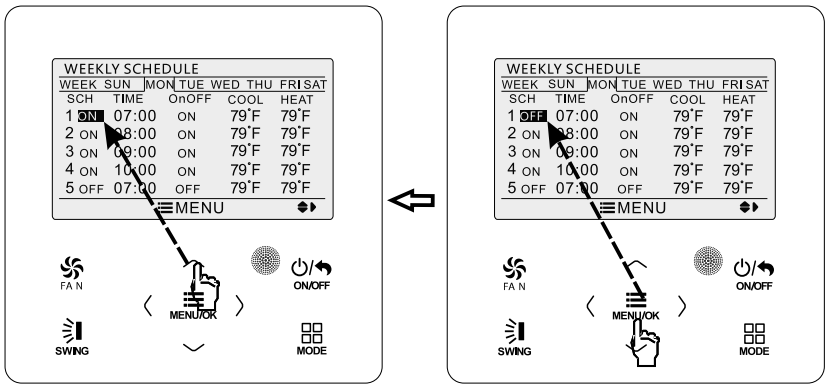
The user can set the everyday timer content for a week. In each day, the user can set eight segments of timer content. The unit will execute corresponding timer setting in a week.

After entering weekly timer setting page, press " < " or " > " button to select the day to be set. Then press "MENU/OK" button to enter timer programming of that day. Press " < " or " > " button to select the item to be set. Press "∧" or "∨" button to adjust the content. Press "MENU/OK" button to save setting. Please refer to the Fig. as below.



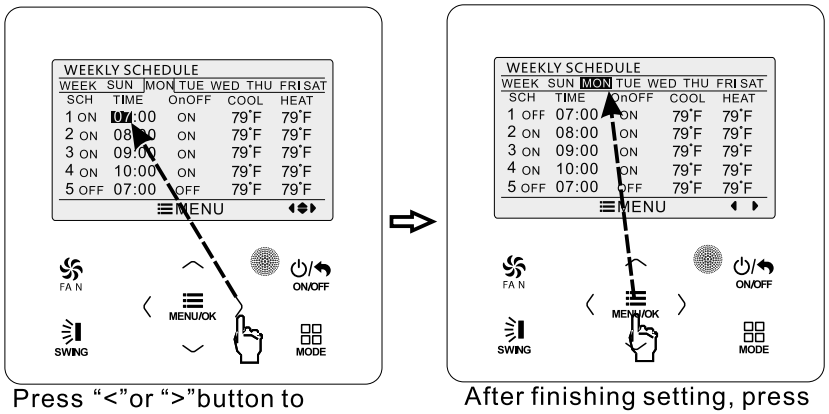
Enter weekly timer schedule setting page

Press “<” or “>” button to select the day to be set



Press “∧”or “v”button to adjust the content

Press MENU/OK button to enter timer programming of that day



Press “<”or “>”button to select the item to be set

After finishing setting, press MENU/OK button to save timer setting.Then the cursor will turn back to day selection

Figure 4-15 Weekly timer setting

4.10.4 Two Week Timer

The user can set the everyday timer content for two weeks. In each day, the user can set eight segments of timer content. The unit will execute corresponding timer setting in two weeks.

In the timer setting page, press “∧” or “∨” button to select two week timer setting and then press “MENU/OK” button to enter two week timer menu page. Press “∧”

or “v” button to select current week and then press “ < ” or “ > ” button to set current week as first week or second week. Please refer to the Fig. as below.

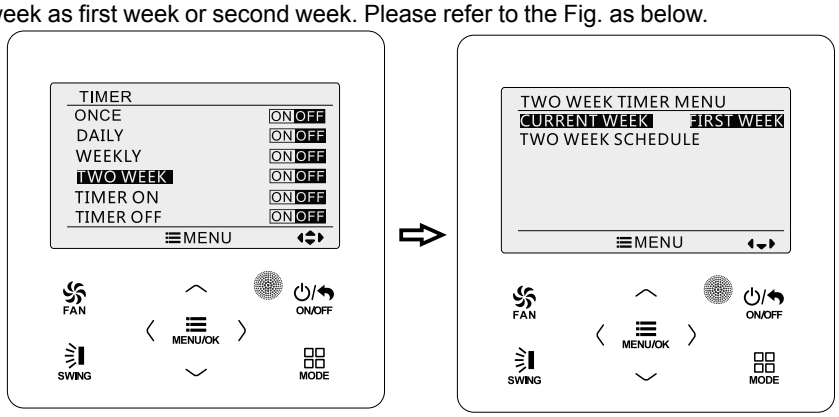


Figure 4-16 Setting of current week

After entering two week timer menu page, press “∧” or “v” button to select the two week schedule and then press “MENU/OK” button to enter two week timer programming. After entering two week timer setting page, press “ < ” or “ > ” button to select the day to be set. Then press “MENU/OK” button to enter timer programming of that day. Press “ < ” or “ > ” button to select the item to be set. Press “∧” or “v” button to adjust the content. Press “MENU/OK” button to save setting. Press “ON/OFF” button to exit this page. Please refer to weekly timer setting for symbols setting.

4.10.5 Countdown Timer

Countdown timer includes timer on and timer off. Unit On/Off after a desired hour can be set. Under on status, timer off can be set, or timer off and timer on can be set simultaneously. Under off status, timer on can be set, or timer off and timer

on can be set simultaneously. If timer off in “x” hours and timer on in “y” hours are set simultaneously in unit on status, the unit will be off in “x” hours and then the unit will be on in “y” hours after timer off.

After entering into timer on setting page, press “∧” or “∨” button to increases or decreases time by 0.5h. Press “ON/OFF” button to return to the previous page. Please refer to the Fig. as below.

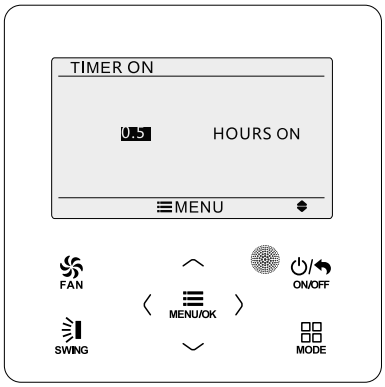


Figure 4-17 Countdown timer on

After entering into timer off setting page, press “∧” or “∨” button to increases or

decreases time by 0.5h. Press“ON/OFF” button to return to the previous page. Please refer to the Fig. as below.

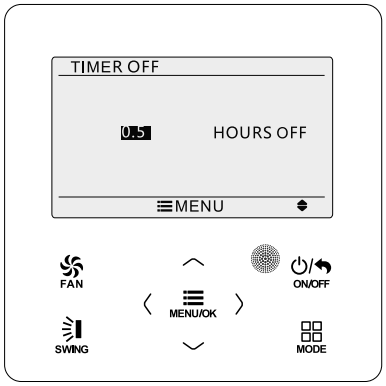


Figure 4-18 Countdown timer off

If timer function is turned on, the set hours will decrease as the unit operation time increases. In this case, residual hours can be viewed after entering timer setting page. This timer function will be executed for only once and then it will be cancelled automatically.

Note：

If this timer function is turned on, when the unit is turned on or turned off, this timer function will be cancelled automatically.

4.11 Clock Setting

4.11.1 Time Format Setting

The user can set the time format in 12-hour system or 24-hour system. Select clock symbol in menu page and then press “MENU/OK” button to enter clock setting page. Press “∧” or “∨” button to select time format and then press “ < ” or

“ > ” button to select 12-hour system or 24-hour system. Please refer to the Fig. as below.

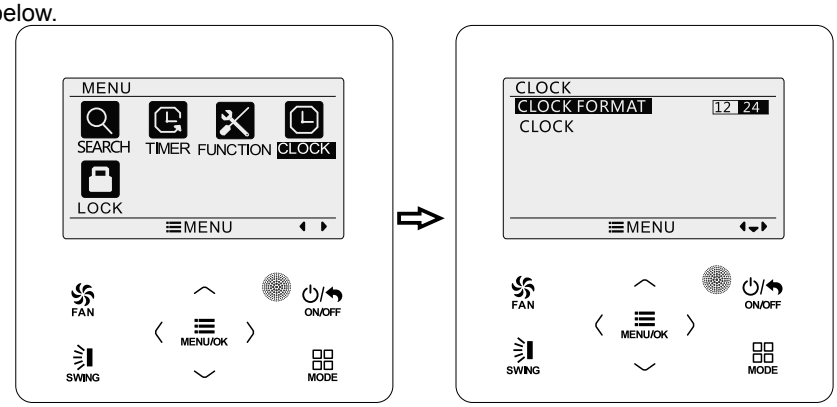


Figure 4-19 Time format selection

4.11.2 Clock Setting

Select clock symbol in menu page and then press “MENU/OK” button to enter clock setting page. Press “∧” or “∨” button to select time set and then press “MENU/OK” button to enter into time setting page.

Press “ < ” or “ > ” button to select setting items: hour, minute, year, month, day; press “∧” or “∨” button to set the value and then press “MENU/OK” button to save setting. Please refer to the Fig. as below.

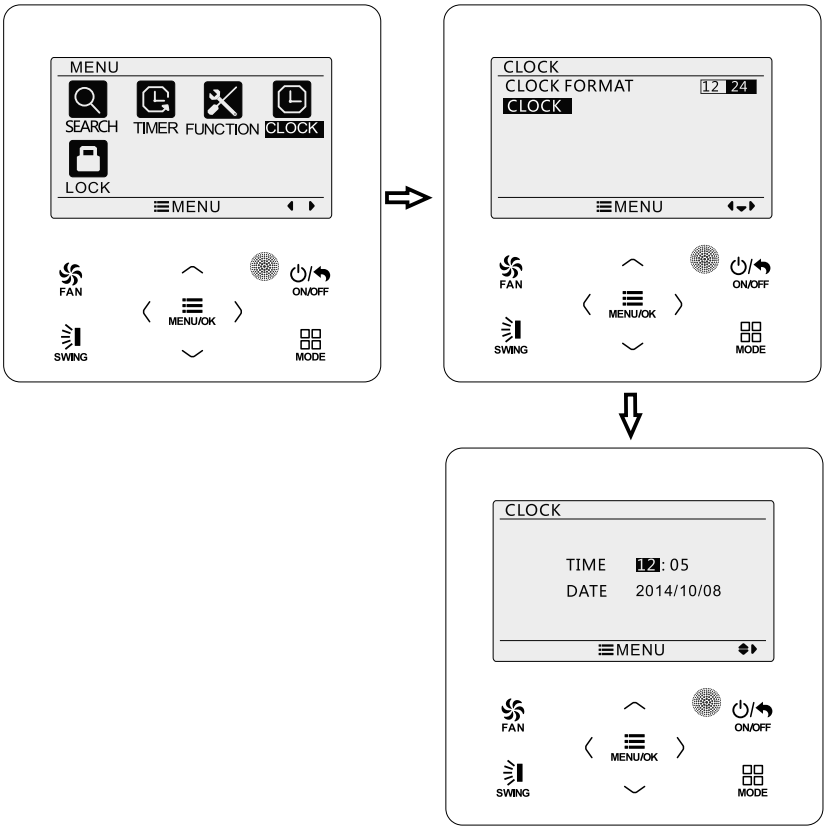


Figure 4-20 Clock setting

4.12 Lock Setting

Select lock symbol in menu page and then press “MENU/OK” button to enter into the lock setting page. Press “∧” or “∨” button to select the item to be locked and then press “ < ” or “ > ” button to lock or unlock. Please refer to the Fig. as below.

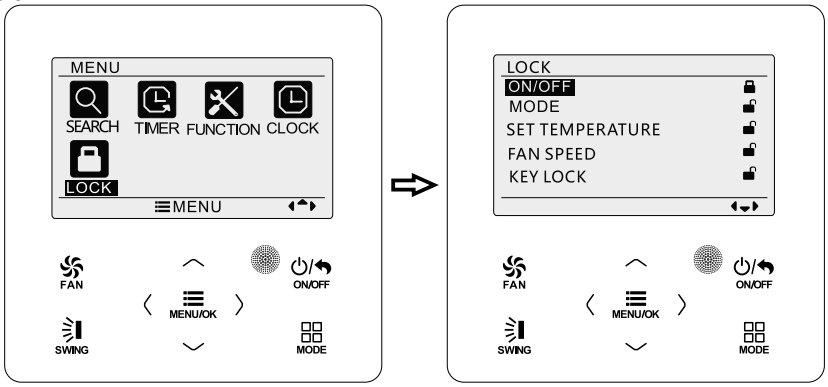


Figure 4-21 Lock setting

Items can be locked: ON/OFF, mode setting, temperature setting, fan speed setting, key lock. Once locking is finished, the corresponding item cannot be set through buttons.

If the keys are locked, all keys cannot be operated after returning to the main page. Please unlock according to the instructions on main page. During unlocking, press “MENU/OK” button, press “ < ” button and then press “ > ” button to unlock keys.

5 Installation Instructions

5.1 Parts and Dimension of Wired Controller

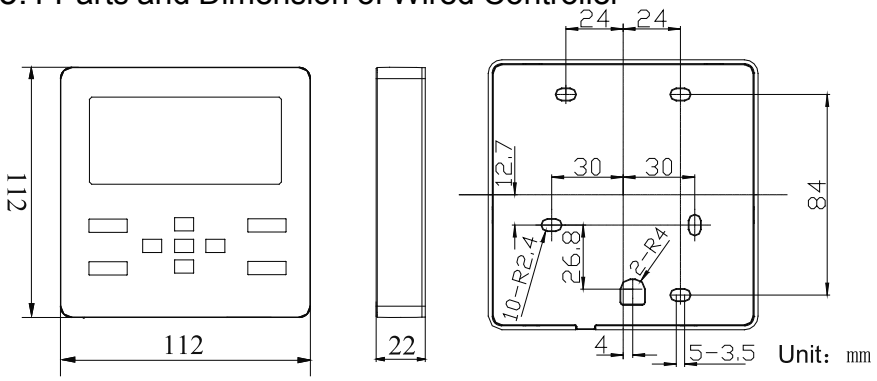


Figure 5-1 Dimension of wired controller

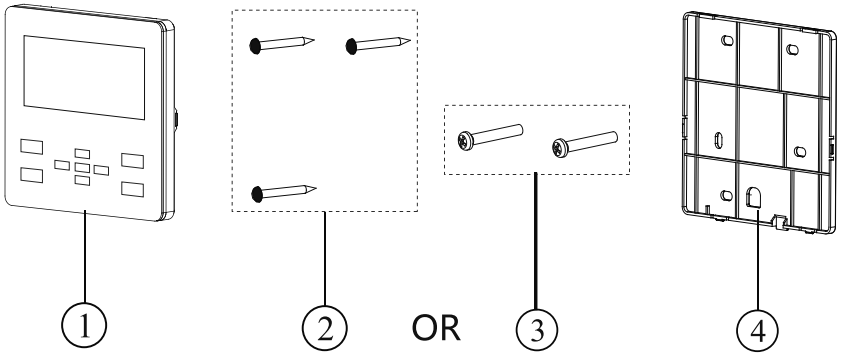


Figure 5-2 Parts of wired controller

Table 5.1.1 Standard parts

No.	1	2	3	4
Name	Panel of wired controller	Tapping screw ST3.9X25 MA	Screw M4×25	Soleplate of wired controller
Quantity	1	3	2	1

5.2 Installation Requirements

(1) Prohibit installing the wired controller at wet places.
(2) Prohibit installing the wired controller at the places with direct sunshine.
(3) Prohibit installing the wired controller at the place near high temperature objects or water-splashing places.
(4) Select proper signal wire of wired controller: two-core signal wire (wire diameter>=0.75mm; length<30m;suggested length is 8m) .

5.3 Installation Methods

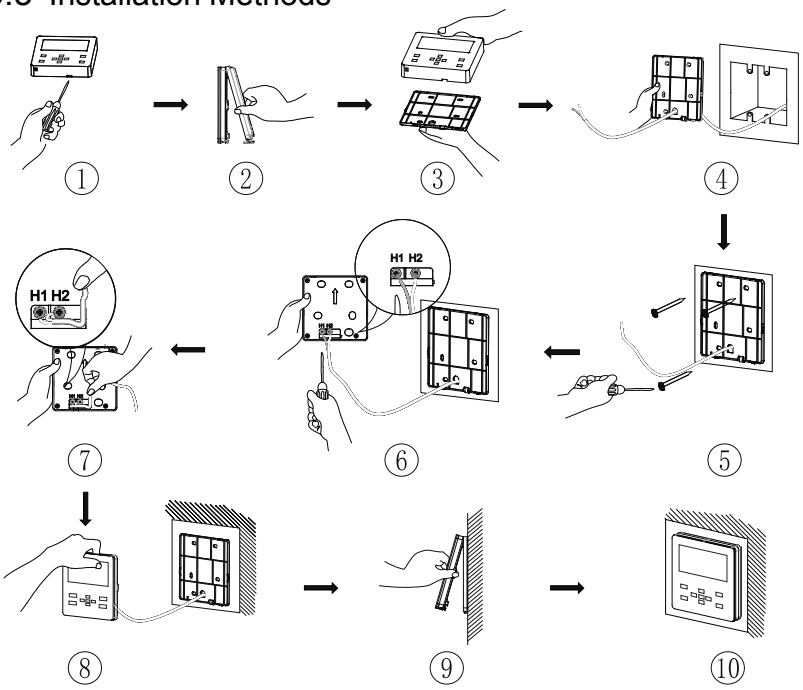


Figure 5-3 Installation diagram for wired controller

The above Fig. is the simple installation process of wired controller; please pay attention to the following items:

(1) Before installation, please cut off the power for indoor unit.

(2) Pull out the 2-core twisted pair wire from the installation hole on wall, and pull this wire through the "∩" hole at the rear side of the soleplate of wired controller
(3) Stick the soleplate of wired controller on the wall and then use tapping screw ST3.9X25 MA or screw M4×25 to fix soleplate and installation hole on wall together.
(4) Connect two-core twisted pair wire to H1 and H2 wiring column and then fix the screws.
(5) Tidy up the wires at the back wire groove of panel and bundle the front panel of wired controller to its soleplate.

Note：

If the procedures in point 2 and point 5 mentioned above is hard to be done as the diameter of selected communication wire is big, please peel off the sheathed layer in appropriate length according to actual situation.

5.4 Disassembly

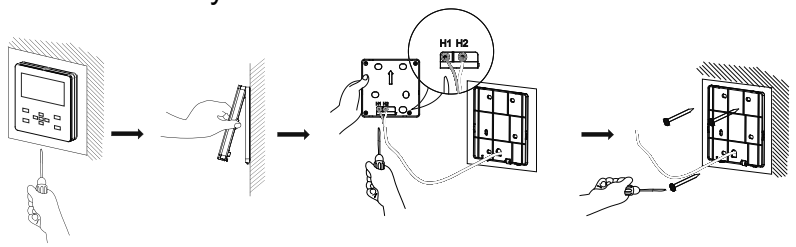


Figure 5-4 Disassembly diagram for wired controller

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PACKAGE DCI R32

Wireless Remote Controller

Please read this manual carefully before installing and using the air conditioner, and retain for future refeence.

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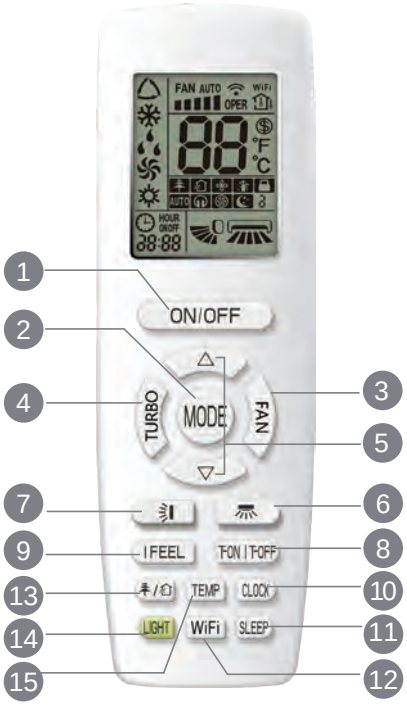
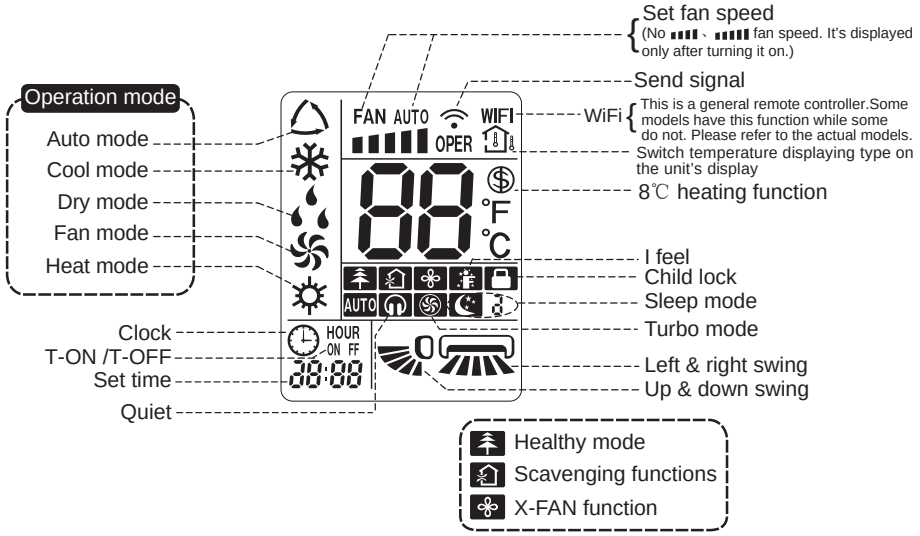
Content

Buttons on remote controller



1. ON/OFF button
2. MODE button
3. FAN button
4. TURBO button
5. ▲/ ▼ button
6. button
7. button
8. T-ON / T-OFF button
9. I FEEL button
10. CLOCK button
11. SLEEP button
12. WiFi button
13. /⌂ button
14. LIGHT button
15. TEMP button

Introduction for icons on display screen



Introduction for buttons on remote controller

Note:

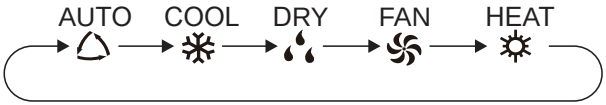
- This is a general use remote controller, it could be used for the air conditioners with multifunction; For some function, which the model doesn't have, if press the corresponding button on the remote controller that the unit will keep the original running status.
- After putting through the power, the air conditioner will give out a sound. Operation indictor "⏻" is ON (red indicator, the colour is different for different models). After that, you can operate the air conditioner by using remote controller.
- Under on status, pressing the button on the remote controller, the signal icon "📶" on the display of remote controller will blink once and the air conditioner will give out a “de” sound, which means the signal has been sent to the air conditioner.

1 ON/OFF button

Press this button to turn on the unit. Press this button again to turn off the unit.

2 MODE button

Press this button to select your required operation mode.



- When selecting auto mode, air conditioner will operate automatically according to ex-factory setting. Set temperature can’t be adjusted and will not be displayed as well. Press "FAN" button can adjust fan speed. Press "💨" / "↕" button can adjust fan blowing angle.
- After selecting cool mode, air conditioner will operate under cool mode. Cool indicator "❄" on indoor unit is ON. (This indicator is not available for some models.) Press "▲" or "▼ " button to adjust set temperature. Press "FAN" button to adjust fan speed. Press "💨" / "↕" button to adjust fan blowing angle.
- When selecting dry mode, the air conditioner operates at low speed under dry mode. Dry indicator "💧" on indoor unit is ON. (This indicator is not available for some models.) Under dry mode, fan speed can’t be adjusted. Press "💨 " / "↕ " button to adjust fan blowing angle.
- When selecting fan mode, the air conditioner will only blow fan, no cooling and no heating. All indicators are OFF. Press "FAN" button to adjust fan speed. Press "💨" / "↕" button to adjust fan blowing angle.
- When selecting heating mode, the air conditioner operates under heat mode. Heat indicator "☼" on indoor unit is ON. (This indicator is not available for some models.) Press "▲" or "▼" button to adjust set temperature. Press "FAN" button to adjust fan speed. Press "💨" / "↕" button to adjust fan blowing angle. (Cooling only unit won’t receive heating mode signal. If setting heat mode with remote controller, press ON/OFF button can’t start up the unit).

Introduction for buttons on remote controller

Note:

- For preventing cold air, after starting up heating mode, indoor unit will delay 1~5 minutes to blow air (actual delay time is depend on indoor ambient temperature).
- Set temperature range from remote controller: 16~30℃ (61-86°F);
  Fan speed: auto, low speed, low-medium speed,medium speed, medium-high speed,high speed.

3 FAN button

Pressing this button can set fan speed circularly as: auto (AUTO), low(▮), medium (▮▮), high(▮▮▮).

Note:

- Under AUTO speed, air conditioner will select proper fan speed automatically according to ex-factory setting.
- It's Low fan speed under Dry mode.
- X-FAN function: Hold fan speed button for 2s in COOL or DRY mode, the icon "✣" is displayed and the indoor fan will continue operation for a few minutes in order to dry the indoor unit even though you have turned off the unit. After energization, X-FAN OFF is defaulted. X-FAN is not available in AUTO, FAN or HEAT mode.

  This function indicates that moisture on evaporator of indoor unit will be blowed after the unit is stopped to avoid mould.
  - Having set X-FAN function on: After turning off the unit by pressing ON/OFF button indoor fan will continue running for a few minutes. at low speed. In this period, Hold fan speed button for 2s to stop indoor fan directly.
  - Having set X-FAN function off: After turning off the unit by pressing ON/OFF button, the complete unit will be off directly.

4 TURBO button

Under COOL or HEAT mode, press this button to turn to quick COOL or quick HEAT mode. "㊋" icon is displayed on remote controller. Press this button again to exit turbo function and "㊋" icon will disappear.
If start this function, the unit will run at super-high fan speed to cool or heat quickly so that the ambient temp. approachs the preset temp. as soon as possible.

5 ▲/ ▼button

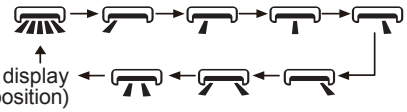
- Press "▲" or "▼" button once increase or decrease set temperature 1℃ (°F). Holding "▲" or "▼" button, 2s later, set temperature on remote controller will change quickly. On releasing button after setting is finished, temperature indicator on indoor unit will change accordingly.

Introduction for buttons on remote controller

● When setting T-ON, T-OFF or CLOCK, press "▲" or "▼" button to adjust time. (Refer to CLOCK, T-ON, T-OFF buttons) When setting T-ON, T-OFF or CLOCK press "▲" or "▼" button to adjust time. (Refer to CLOCK,T-ON, T-OFF buttons)

6 button

Press this button can select left & right swing angle. Fan blow angle can be selected circularly as below:



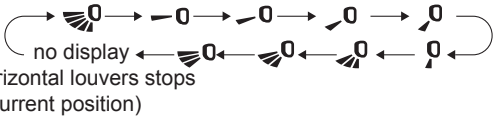
Note:

● Press this button continuously more than 2s, the main unit will swing back and forth from left to right, and then loosen the button, the unit will stop swinging and present position of guide louver will be kept immediately.

● Under swing left and right mode, when the status is switched from off to , if press this button again 2s later, status will switch to off status directly; if press this button again within 2s, the change of swing status will also depend on the circulation sequence stated above.

7 button

Press this button can select up & down swing angle. Fan blow angle can be selected circularly as below:



● When selecting " ", air conditioner is blowing fan automatically. Horizontal louver will automatically swing up & down at maximum angle.

● When selecting " 、 、 、 、 ", air conditioner is blowing fan at fixed position. Horizontal louver will stop at the fixed position.

● When selecting " 、 、 ", air conditioner is blowing fan at fixed angle. Horizontal louver will send air at the fixed angle.

● Hold " " button above 2s to set your required swing angle. When reaching your required angle, release the button.

Note:

● " 、 、 " may not be available. When air conditioner receives this signal, the air conditioner will blow fan automatically.

● Press this button continuously more than 2s, the main unit will swing back and forth from up to down, and then loosen the button, the unit will stop swinging and present position of guide louver will be kept immediately.

● Under swing up and down mode, when the status is switched from off to , if press this button again 2s later, status will switch to off status directly; if press this button again within 2s, the change of swing status will also depend on the circulation sequence stated above.

Introduction for buttons on remote controller

8 T-ON / T-OFF button

- T-ON button
  "T-ON" button can set the time for timer on. After pressing this button, "🕒" icon disappears and the word "ON" on remote controller blinks. Press "▲" or "▼" button to adjust T-ON setting. After each pressing "▲" or "▼" button, T-ON setting will increase or decrease 1min. Hold "▲" or "▼" button, 2s later, the time will change quickly until reaching your required time. Press "T-ON" to confirm it. The word "ON" will stop blinking. "🕒" icon resumes displaying. Cancel T-ON: Under the condition that T-ON is started up, press "T-ON" button to cancel it.
- T-OFF button
  "T-OFF" button can set the time for timer off. After pressing this button,"🕒" icon disappears and the word "OFF" on remote controller blinks. Press "▲" or "▼" button to adjust T-OFF setting. After each pressing "▲" or "▼" button, T-OFF setting will increase or decrease 1min. Hold "▲" or " ▼" button, 2s later, the time will change quickly until reaching your required time. Press "T-OFF" word "OFF" will stop blinking. "🕒" icon resumes displaying. Cancel T-OFF. Under the condition that T-OFF is started up, press "T-OFF" button to cancel it.

Note:

- Under on and off status, you can set T-OFF or T-ON simultaneously.
- Before setting T-ON or T-OFF, please adjust the clock time.
- After starting up T-ON or T-OFF, set the constant circulating valid. After that, air conditioner will be turned on or turned off according to setting time. ON/OFF button has no effect on setting. If you don't need this function, please use remote controller to cancel it.

9 I FEEL button

Press this button to start I FEEL function and "🧍" will be displayed on the remote controller. After this function is set, the remote controller will send the detected ambient temperature to the controller and the unit will automatically adjust the indoor temperature according to the detected temperature. Press this button again to close I FEEL function and "🧍" will disappear.

- Please put the remote controller near user when this function is set. Do not put the remote controller near the object of high temperature or low temperature in order to avoid detecting inaccurate ambient temperature.

Introduction for buttons on remote controller

10 CLOCK button

Press this button to set clock time. "🕒" icon on remote controller will blink. Press "▲" or "▼" button within 5s to set clock time. Each pressing of "▲" or "▼" button, clock time will increase or decrease 1 minute. If hold "▲" or "▼" button, 2s later, time will change quickly. Release this button when reaching your required time. Press "CLOCK" button to confirm the time. "🕒" icon stops blinking.

Note:

- Clock time adopts 24-hour mode.
- The interval between two operation can't exceeds 5s. Otherwise, remote controller will quit setting status. Operation for T-ON/T-OFF is the same.

11 SLEEP button

Under COOL, or HEAT mode, press this button to start up sleep function. "☾" icon is displayed on remote controller. Press this button again to cancel sleep function and "☾" icon will disappear.After powered on, Sleep Off is defaulted. After the unit is turned off, the Sleep function is canceled.
In this mode, the time of time can be adjusted. Under Fan、DRY and Auto modes, this function is not available.

12 WiFi button

Press " WiFi " button to turn on or turn off WiFi function. When WiFi function is turned on, the " WiFi " icon will be displayed on remote controller; Under status of remote controller off, press "MODE" and " WiFi " buttons simultaneously for 1s, WiFi module will restore to factory default setting.

- This function is only available for some models.

13 🌲/🏠 button

Press this button to achieve the on and off of healthy and scavenging functions in operation status. Press this button for the first time to start scavenging function; LCD displays "🏠". Press the button for the second time to start healthy and scavenging functions simultaneously; LCD displays "🏠" and "🌲". Press this button for the third time to quit healthy and scavenging functions simultaneously. Press the button for the fourth t ime to start healthy function; LCD display "🌲". Press this button again to repeat the operation above.

- This function is applicable to partial of models.

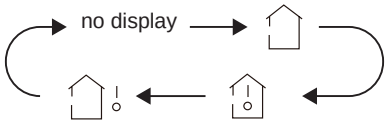
Introduction for buttons on remote controller

14 LIGHT button

Press this button to turn off display light on indoor unit. " " icon on remote controller disappears. Press this button again to turn on display light. " " icon is displayed.

15 TEMP button

By pressing this button, you can see indoor set temperature, indoor ambient temperature or outdoor ambient temperature on indoor unit's display. The setting on remote controlleris selected circularly as below:



- When selecting " " or no display with remote controller, temperature indicator on indoor unit displays set temperature.
- When selecting " " with remote controller, temperature indicator on indoor unit displays indoor ambient temperature.
- When selecting " " with remote controller, temperature indicator on indoor unit displays outdoor ambient temperature.

Note:

- Outdoor temperature display is not available for some models. At that time, indoor unit receives " " signal, while it displays indoor set temperature.
- It's defaulted to display set temperature when turning on the unit.There is no display in the remote controller.
- Only for the models whose indoor unit has dual-8 display.
- When selecting displaying of indoor or outdoor ambient temperature, indoor temperature indicator displays corresponding temperature and automatically turn to display set temperature after three or five seconds.

Function introduction for combination buttons

Energy-saving function

Under cooling mode, press "TEMP" and " CLOCK" buttons simultaneously to start up or turn off energy-saving function. When energy-saving function is started up, "SE" will be shown on remote controller, and air conditioner will adjust the set temperature automatically according to ex-factory setting to reach to the best energy-saving effect. Press "TEMP" and "CLOCK" buttons simultaneously again to exit energy-saving function.

Note:

- Under energy-saving function, fan speed is defaulted at auto speed and it can't be adjusted.
- Under energy-saving function, set temperature can't be adjusted. Press "TURBO" button and the remote controller won't send signal.
- Sleep function and energy-saving function can't operate at the same time. If energy-saving function has been set under cooling mode, press sleep button will cancel energy-saving function. If sleep function has been set under cooling mode, start up the energy-saving function will cancel sleep function.

8℃ heating function

Under heating mode, press "TEMP" and "CLOCK" buttons simultaneously to start up or turn off 8℃ heating function. When this function is started up, "Ⓢ" and "8℃ " will be shown on remote controller, and the air conditioner keep the heating status at 8℃ . Press "TEMP" and "CLOCK" buttons simultaneously again to exit 8℃ heating function.

Note:

- Under 8℃ heating function, fan speed is defaulted at auto speed and it can't be adjusted.
- Under 8℃ heating function, set temperature can't be adjusted. Press "TURBO" button and the remote controller won't send signal.
- Sleep function and 8℃ heating function can't operate at the same time. If 8℃ heating function has been set under cooling mode, press sleep button will cancel 8℃ heating function. If sleep function has been set under cooling mode, start up the 8℃ heating function will cancel sleep function.
- Under ℉ temperature display, the remote controller will display 46 ℉ heating.

Child lock function

Press "▲" and " ▼" simultaneously to turn on or turn off child lock function. When child lock function is on, "🔒" icon is displayed on remote controller. If you operate the remote controller, the "🔒" icon will blink three times without sending signal to the unit.

Temperature display switchover function

Under OFF status, press "▼" and "MODE" buttons simultaneously to switch temperature display between ℃ and ℉ .

Operation guide

1. After putting through the power, press "ON/OFF" button on remote controller to turn on the air conditioner.

2. Press "MODE" button to select your required mode: AUTO, COOL, DRY, FAN, HEAT.

3. Press "▲" or "▼" button to set your required temperature. (Temperature can't be adjusted under auto mode).

4. Press "FAN" button to set your required fan speed: auto, low speed, low-medium speed,medium speed, medium-high speed,high speed.

5. Press " " button to select fan blowing angle.

Replacement of batteries in remote controller

1. Lift the cover along the direction of arrow (as shown in Fig 1 ①).
2. Take out the original batteries (as shown in Fig 1 ②).
3. Place two 7# (AAA 1.5V) dry batteries, and make sure the position of "+" polar and "-" polar is correct (as shown in Fig 2③).
4. Reinstall the cover (as shown in Fig 2 ④).

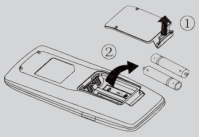


Fig.1

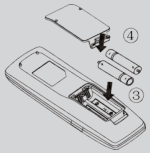


Fig.2

NOTICE

- During operation, point the remote control signal sender at the receiving window on indoor unit.
- The distance between signal sender and receiving window should be no more than 8m, and there should be no obstacles between them.
- Signal may be interfered easily in the room where there is fluorescent lamp or wireless telephone; remote controller should be close to indoor unit during operation.
- Replace new batteries of the same model when replacement is required.
- When you don't use remote controller for a long time, please take out the batteries.
- If the display on remote controller is fuzzy or there's no display, please replace batteries.

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