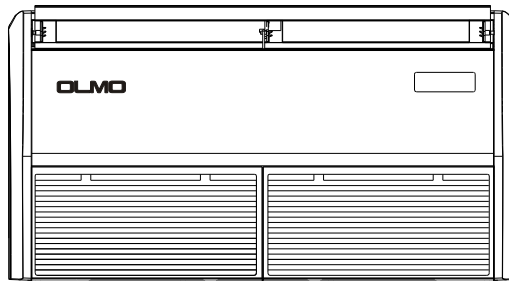




INSTALLATION & OPERATION MANUAL

CEILING & FLOOR TYPE



MODEL:

OSH-V18HRK3/OSH-OU18HRK3
OSH-V24HRK3/OSH-OU24HRK3
OSH-V36HRK3/OSH-OU36HFK3
OSH-V48HRK3/OSH-OU48HFK3
OSH-V60HRK3/OSH-OU60HFK3

This instruction manual contains important information and recommendations that we would ask you to comply with to obtain best results from air conditioner.

Thank you once again.

PRECAUTION

- Read the following “ PRECAUTIONS” carefully before installation.
- The air conditioner must be installed by professional technicians.
- The installation should be done in accordance with the manual.
- Please forgive delay of notice in case of any advancement.

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USAGE

PRECAUTIONS

- Read the following " PRECAUTIONS" carefully before installation.
- The caution items stated here must be followed because these important contents are related to safety. The meaning of each indication used is as below.

Incorrect installation due to ignoring of the instruction will cause harm or damage, and the seriousness is classified by the following indications.

 WARNING	This indication shows the possibility of causing death or serious injury.
 CAUTION	This indication shows the possibility of causing injury or damage to properties only.

Please read the label on the principal unit carefully.

In case of such abnormal situations as abnormal noise, smelliness, smoke, temperature rising, electrical leakage, fire, please cut off the electrical supply quickly and contact the dealer.



Warning

Engage dealer or specialist for installation. If installation done by user is defective, it will cause water leakage, electrical shock or fire.

Professional persons are not allowed to dismantel the unit, otherwise, accident or damage may occur.

Please do not use or store such flammable gas or liquid as hair styling jelly, oil paint, petrol in case of fire.

The major electrical supply should be installed out of children touch .

Please do not spray water or other liquid in case of danger.

Please do not touch the unit with wet hands in case of electric shock.

Please cut off the electrical supply in lightning and rainy days, otherwise, danger or damage may occur.

Please cut off the major electrical supply when it is not used for a long time to avoid accidents.



CAUTION

Never put hands or objects into the air inlet and outlet of the indoor and outdoor unit, in case the fan with high speed may hurt you.

The baffle of the outdoor unit is not allowed to be dismantled because the fan with high speed may cause injury.



Do not let the indoor unit or remote controller be affected with damp, otherwise, Short circuit or damage may occur.

Make sure the is totally closed after the ash screen is cleaned.

Do not let it open for a long time in case of any danger.




- It suits for 18000~60000 Btu/h cooling and heating capacity type. When the outdoor temperature is lower than 6°C, the system should be electrified over 12 hours.



● Description of symbols




Symbol	Meaning
 Warning	Mistaken operation/use may cause death or serious injury.
 Notice	Mistaken operation/use may cause injury or damage of properties only.





1. Injury means causing harmed, burned, electrical shocked, but not serious for hospitalization.
2. Damage of property means disrepair of property, material.

Warning




	 Professional installation	Do not attempt to install this unit by yourself. This unit requires installation by qualified persons, or will cause users harmed, burned electrical shocked.
	 Confirm grounded wire	Confirm if it is grounded properly. If not, it may cause electrical shock.
	 Measures of no less than limited density	When installing in air conditioner a small room, measures should be taken to avoid suffocation, while the leakage of refrigerant accumulates the limited density. Consult our dealers for details.

	 Prohibition	Never put hands or objects into the air outlet/inlet of indoor or outdoor units. These units are installed with a fan running at high speed. To touch the moving fan will cause serious injury.
	 Poweroff	When exceptions occurring, such as smelling odors, power should be switched off at once and contact our dealers, or may cause person injury or fire

Installation	 Confirm Location	Do not install the AC in the place where flammable gas is prone to leaking. If flammable gas leaks and surrounds the AC, fire may be caused.
	 Confirm Fixture	Ensure that the base of installation is firm. If not firm, the accident of AC's crush may occur.
	 Confirm electric leakage protector	Ensure that electric system has installed creepage protector. Lack of creepage protector may cause electric shock or fire.

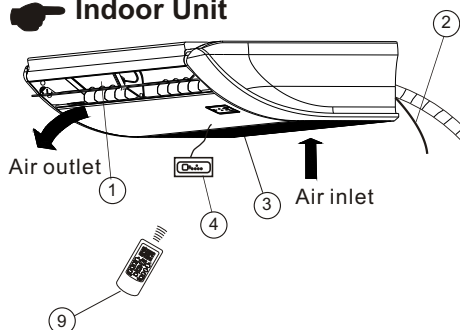
Usage	 Check installation base	Please check the base of installation is firm and perfect when running for a long time. If not, the accident of AC's crush may occur and cause injury or death of persons.
	 Disconnect manual switch	Please disconnect manual switch to stop running while sweeping. If not, high speed fan may cause damage.
	 prohibition	Please choose the proper fuse. It is prohibited to use substitution or it may cause obstacle or fire.
	 Prohibition	Prohibit spraying flammable spray to outdoor unit, or may cause fire.

● Description of icon

Icon	Meaning
	Contents prohibited are represented by notes or figures.
	Execution in force. Items forcibly executed are represented by notes or figures.
	Notices (including warning) items noticed and warned are represented by the notes or figures.

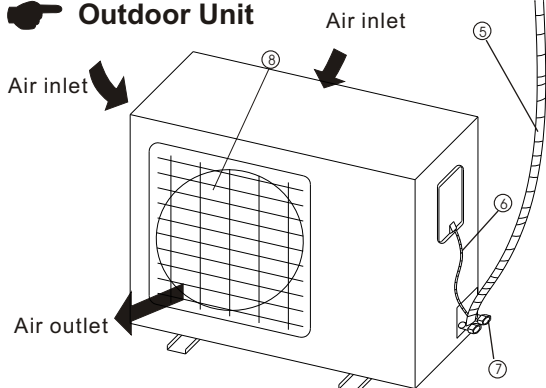
PARTS AND FUNCTIONS

Indoor Unit



- ① Air Outlet
- ② Refrigerant Pipe Junction
- ③ Filter
- ④ Remote controller receiver
- ⑤ Refrigerant connection pipe
- ⑥ Connecting cord
- ⑦ Stop valve
- ⑧ Air Outlet grille
- ⑨ Remote controller

Outdoor Unit



Requirements

- Do not run the unit until it has been electrified for 2 hours. Besides, if the unit stops for a day and night, please do not disconnect the power.
- Attention not to block the air outlet and inlet. It may cause the performance decreasing or start the protection device so that the unit cannot run.

DISPLAY PANEL

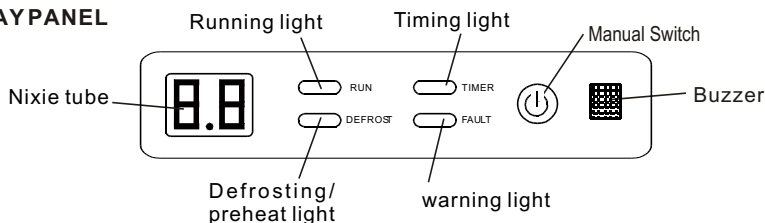
Infrared signal receiver: receive the signal from the remote controller.

To make your remote controller operation more efficient, please let remote controller emitter aim at infrared signal receiver.

Buzzer: firstly powersupplied or any of remote controller operations will make the buzzer sound once.

Some obstacles occurring in the system will be recognized by intelligent recognition system of unit, lighting on the DISPLAY PANEL flashing show the type of obstacles.

DISPLAY PANEL



3 minutes protection

- Restart the unit at once after stopping or turning it off, compressor will not operate in the first 3min ,this phenomena is one of system functions(self-protection)。

Feature of heating

- When indoor unit operate in the heat mode, no heat air blows out till 3-5min after heat exchanger being warm
- The outdoor fan motor may stop running during operation if outdoor temperature is high.

Defrost in the process of HEAT mode

- Under the condition that indoor unit operate in heat mode and heat exchanger of outdoor unit frosts.
The system will defrost for 2-10 minutes to improve heat effect, at this time drain water from outdoor unit.
- During defrosting, outdoor and indoor fan motors stop running.

Air conditioner operation conditions

The unit can be operated properly within temp range listed below.

Cooling	Outside temp	-15℃ above 43℃ below
	Room temp	17℃ above
	Room humidity	If the AC runs for a long time in COOL mode at air relative humidity higher than 80% (doors or windows opened), dew may generate and drip near air outlet.
Heating	Extertal temp	-7℃ above 24℃ below
	Room temp	31℃ below

The protective device maybe trip and stop the unit beyond temp range listed above.

Protection Device (high-pressure)

It refers to the device which stop automatically when the air conditioner is enforced to run. The indicator light still flashes when the protection device is on though running has stopped. the checking dictator lamp flashes when

protection device is on. Protection device may start under situations as follows

▲ Refrigeration is running.

- The air inlet and outlet of the outdoor unit are choked.
- Strong wind goes on blowing outlet of the outdoor unit .

▲ Heating is running

- Ash filter of the indoor .unit is overwhelmed with ashes and garbage.
- The air outlet of the indoor unit is choked.

When the protection device is running, please cut off manually operated mains switch and restart the unit after the troubles are solved.

CUT OFF ELECTRICITY

- If cut off the electricity during operation, all the running will be stopped.
- Electrify and restart the unit after the electricity is cut off, the running indicator lamp of the indoor is flashing to inform you.

■ Restart the unit till the power recovers.

When the mistaken action occur during operation, please cut off the manual switch in case the mistaken action occur during operation which is caused by thunder and wireless automobile. After turn it on again, restart the unit.

HEATING CAPACITY

- Heating is a way that heat pump absorbs heat from outside and release inside.
- Once the outside temperature decrease, the heating capacity also decrease.
- It is suggest that other heating equipments be used together when outdoor temperature is lower.
- The result will be better if the electric auxiliary heater is purchased additionally especially in the low temperature district.

OPERATION AND PERFORMANCE

CHECKS BEFORE OPERATION

- Check if the ground wire is connected well.
- Check if the air filter is installed well.
- You must clean the filter and then start the air conditioner when it is not used for a long time.
- Check that the air outlet or inlet of outdoor unit is not blocked.

BEST OPERATION

Notice the following items to ensure the system operate at best. The specific operation ways refers to the corresponding content.

Set the temperature properly to make the environment comfortable; avoid overheating or overcooling.

Use window curtain or shutter to avoid penetrated sunshine during COOL mode running.


Please close the door and window. If they are open, the cooling & heating efficiency will be worse.


Please preset the running timer by pressing TIMER key of the remote controller.


Do not put objects near the air outlet & inlet ,otherwise air conditioner efficiency will be lower and even the system will stop running.

The cooling & heating result will be influenced if the air filter is blocked. Please clean the air filter periodically.

SAFETY RULE

 **NOTICE** The unit must be installed by professional technician and users cannot installed by themselves. Otherwise it may damage the air conditioner or it is dangerous to you.
For proper performance, please refers to the installation manual ,otherwise it may cause self-protection or dripping, the cooling & heating result reduce.
Please adjust room temperature properly, especially when the old man, children, patients stay at home. Lightening and other electromagnetic radiation may cause ill effect. If it is, please plug off the power

 **WARNING** The power plug should not be install at the places where the children can touch, in case they play with the power plug.
In the stormy weather, please disconnect the power switch, otherwise lightening may damage it.
If the unit not be used for a long time, please cut off the power.
Before cleaning and maintaining the unit, it is safe to disconnect the power switch.

 **DANGEROUS**

- Never put hands or objects into the air outlet of indoor or outdoor unit. Otherwise, the moving fan with high speed will cause serious injury.
- **Do not touch the louver when it is running or it may clamp your fingers or damage the louver accessory.**
- Never dismantle the air-in grille of the outdoor unit. To touch the moving fan at a high speed will cause serious injury.
- **It is dangerous for children to play with the air conditioner.**
- **Do not damper the indoor unit and remote controller. Or it may be short circuit and even fire.**
- **Do not use the flammable gas or liquid, such as styling gel, paint, petrol etc. Otherwise fire may take place.**
- **If abnormal situation happens, such as abnormal noise, smell, smog, temperature rising, electricity leaking. Please cut off the power immediately and contact with dealers. Do not attempt to repair the air conditioner yourself.**

MAINTENANCE

Malfuction & Handling Ways

If the following situation happens, please stop running the air conditioner and cut off the power and contact with dealers.

Malfunction Type	" Malfunction " words is shown on the wire controller and give off the sound of buzzer.
	The fuse breaks down or the breaker makes a mistake frequently.
	External material or water enter into the inside of indoor unit.
	Remote controller fail to receive or the switch operation is abnormal.
	Other unusual situation happens.

If the following situation appears, the user should check according to the following request. If the problem cannot be solved ,please contact the dealers.

Malfunction	Reason	Dealing Ways
It cannot start	Power is cut off.	Wait until the power is on.
	Power switch cannot be connected.	Get through the power switch.
	Fuse of power switch breaks down.	Replace the fuse
	The battery of remote controller is exhausted.	Replace the battery
	The time of starting the machine has not got.	Wait or cancel the TIMER setting
Air is blown out but the cooling & heating result is not good.	Temperature is not set properly.	Set the temperature properly and adjust the temperature lower or higher.
	The air filter is blocked by dust.	Clean the air filter.
	The air inlet and outlet of indoor or outdoor unit are blocked.	Clean up the blockage.
	Open the door and window	Close the door and window
Air is blown out but cannot be cooling & heating completely.	Air outlet and inlet are blocked by objects.	Eliminate the blockage first, then operate again.
	Three minutes protection of compressor	Wait
	The temperature setting is not proper.	Set the temperature properly.

⚠ Note: To avoid danger, do not replace the power wire by yourself; do not repair the air conditioner yourself.

These are not failures

Phenomenon following do not indicate any trouble

1.Usual protection

Protective function of compressor.

Compressor can not start within 3 minutes after it stops.

Cold air outlet prevention(In heating mode).

The indoor fan cannot start if indoor heat exchanger can not reach certain temperature.

(1)Heating starts just now.

(2)Defrosting is going on.

(3)Heating in low temperature (temperature is too low outside).

2. Defrosting

In heating mode, the outdoor heat exchanger may be frosted because the outside temperature is too low. The frost cover may ill effect normal heating effect for AC. Thus, AC will automatically defrost after heating mode is running for a while. In the process of defrostation, the compressor is running with the indoor and outdoor fans stop.

3. Indoor unit emit water fog

When the relative humidity is too high in cooling or dehumidity mode, the unit may emit gas like fog because of high relative humidity and great temperature drop.

When the AC return to heating after defrosting, water from defrosting may be evaporated and blown out.

4. Noise

When air conditioner is in operation or stops, sound like flowing water occurs and begins louder after 2-3 minutes.

This is the sound comes from refrigerant flowing or condensed draining water.

When AC is in operation or stops zizi sound occur due to little dilatibility of heat exchange for temperature changing.

5. ERRATIC SMELL from indoor unit

The indoor unit absorbs the odor of all the matters in the room and emits it in operation Cooling or heating

(cooling type has no such function) converts into air flowing.

When the room temperature reaches the default value, the outdoor unit will automatically stop its operation leaving air flowing only, thus, energy can be saved.

The outdoor unit will not restart until the room temperature rises (cooling mode) or lowers (heating mode) to some extent.

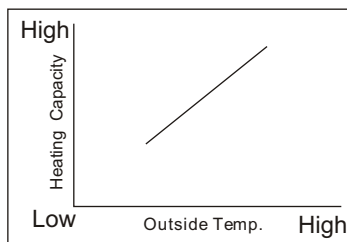
6. Condensation appears on the panel of the indoor unit

When it is overly humid in the room (beyond 80%), starting cooling or drying mode may bring out condensation around the air outlet of the panel.

7. Air outlet temperature of HEAT mode is not comfortable.

Air conditioner absorbs caloric from outdoor and releases to indoor in order to heat up the room air during heating process. This is the principle that the heat pump works.

Heating absorption decreases when the external temperature is reduce. Its heating ability is therefore lower (refers to the right diagram). At the same time, temperature difference of indoor & outdoor strengthens and then the heating charges is heavier. If the air conditioner operation cannot attain a satisfactory result, We suggest that you can use other heating device for assistant.



Maintenance

1. Please do the following job well if the air conditioner is not used for a long time.

In order to dry the unit completely, set the FAN mode and run for 3-4 hours.

Shut down the air conditioner and cut off the power supply.

2. When used again after the unit stops for a long period:

When cleaning the filter and indoor unit, you must stop the unit and cut off power supply. Wipe the indoor unit with soft cloth. It is forbidden to push the machine with petrol, benzene, lye, powder, detergent, insecticide etc., Which will damage the unit.

Ensure air in let and outlet of indoor and outdoor unit are not blocked by rubbish.




Check whether the grounded wire is loose and flexible, then connect the power.

After-sales service

When your air conditioner can not run in order, please shut down the machine and cut off the power supply immediately. Then contact dealers.

TROUBLE SHOOTING

Please refer to the following table before declaring repair service.

<div><ul style="list-style-type: none">● White fog or water appear.● Zizi sound often occur● Bad smell● Running lamp flashing● Non priority or waiting lamp flashes</div>	<ul style="list-style-type: none">● Begin defrosting and stop fan motor running● Electromagnetic valve make sounds while defrosting begins or end● When air conditioner is in operation or stops, sound like flowing water occurs and begins louder after 2-3 minutes. This is the sound comes from refrigerant flowing or condensed draining water.● When air conditioner is in operation or stop, su sound occur due to little dilatibility of heat exchange for temperature changing.● Dust from wall carpet ,clothes, cigarette, cosmetic, etc attached on the air conditioner.● Switch on the power supply after power failure, running lamp is flashing● It does not run in the mode of cooling due to other indoor units in the mode of heating● When the set mode is contrary to default mode (heating)● Fan stops for preventing cool air blows out.● When used as multi-drive unit, indicator lamp flashing and running stop.
<div><p>Auto stop or auto start</p><ul style="list-style-type: none">● No running</div>	<ul style="list-style-type: none">● Whether use TIMER ON button without intention● Whether power fail;● whether manual switch is on;● whether the fuse breaks;● whether the protector starts● whether setting time of "TIMER" approach
<div><ul style="list-style-type: none">● Cooling&heating effect is not good.</div>	<ul style="list-style-type: none">● Whether air inlet or outlet of outdoor unit is blocked● Whether door or windows are open● Whether the filter is accumulated by dust● Whether the position of louver is proper;● Whether FAN mode is set too low or whether MODE is set to END● Whether the temperature is set properly.● If choose the COOL and HEAT at the same time.

INSTALLATION

Important safety information

Please go through all the IMPORTANT SAFETY INFORMATION before installation.

Please install according to the installation manual.

Please read the label on the machine carefully before installation.

WARNING

Users must engage dealer or authorized specialist for installation.

Any structure modification must comply with specific construction standard.

The unit must be hung over ceilings that can bear its weight.

Power cord that is prescribed or complied with the requirement should be used.

All the electric manipulation should be done by authorized specialists according to current specification or this installation manual.

Please do not connect electric supply before installation is finished.

Please assure good ventilation when refrigerant leaks to prevent its density going beyond safety standard.

NOTICE

After the air conditioner is finished, please explain to the user about right ways of usage and maintenance. Besides, ask the user to read and keep the manual carefully.

Keep away from place with volatile oil (including engine oil) or vitriolic mist, otherwise, the inner component will be damaged with the performance greatly impaired.

Dimension of the fuse must be no less than the prescribed capacity.

Make sure an earthing breaker is installed.

Make sure a earth wire is installed.

If this air conditioner is installed on the mental part of architecture, electric installation must be done in accordance with concerning technology standard.

PREPARATION BEFORE INSTALLATION

Key points of inspection

INSTALLATION

- Be sure of machine type and name to avoid wrong installation.

Refrigerant Pipe

- Refrigerant pipe diameter must comply with the prescription.
- Refrigerant pipe must be heat-insulated.

Air purging

- Vacuum pump or refrigerant jar should be used in air purging of the connection pipe or refrigerant can be used at the gas side.

Charge additional refrigerant

- The refrigerant charge volume is based on 5m connecting pipe. If the connecting length is longer than 5m, please refer to the followings.
- please keep record of additional refrigerant charge, pipe length and height drop of indoor&outdoor unit (stick inside right panel)

Electric wiring

- Choose the electric capacity and circuit according to the design manual. The diameter of the electric supply line must be more than that of ordinary electromotor.
- Connect the electric supply after air is vacuumed.
- Wiring Specification

INDOOR UNIT INSTALLATION

Choose installation location

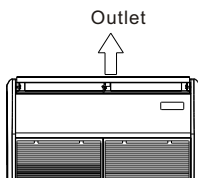
1. A place where there are sufficient space for repair.
2. Hung ceiling that can bear the weight of the machine.
3. A place without air inlet and outlet is not hindered and without influence from outdoor air.
4. A place without heat source like smoke, fire or toxic pullution.
5. A place where air flow can be transmitted everywhere in the room.
6. A place convenient for installation.

Installation Space

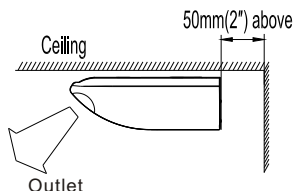
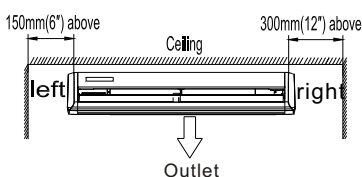
Ensure sufficient space for installation and repair.

GENERAL: This INSTALLATION INSTRUCTION SHEET briefly outlines where and how to install the air conditioning system. Please read over the entire set of instructions for the indoor and outdoor units and make sure all accessory parts listed are with the system before beginning.

● Floor console

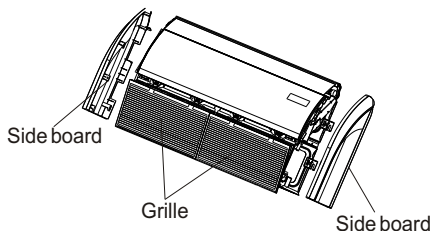


● Under ceiling



Installation procedure

Please remove the grille and the side board.

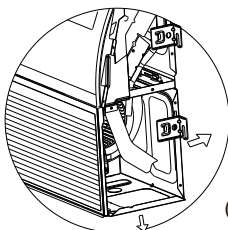


FLOOR CONSOLE TYPE

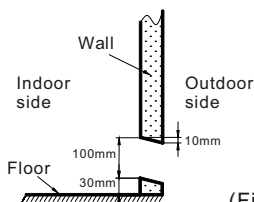
1. Select the piping and drainage directions.

The piping and drain can be made in two directions as shown below (fig.1).

When the direction is selected, please drill a 100mm (4") diameter hole on the wall, and the hole must be tilted downward towards the outdoor for smooth water flow. When the pipe is led out from the rear, make a hole in figure, at the position shown (fig.2).



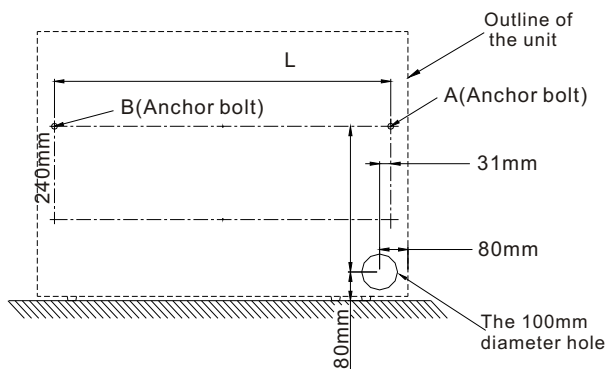
(Fig.1)



(Fig.2)

2. Drilling holes for anchor bolts and installing the anchor bolts (m10)

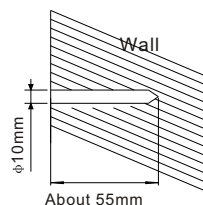
According to the position of the hole, install two expansible anchor bolts (A and B) at the position shown in the figure.



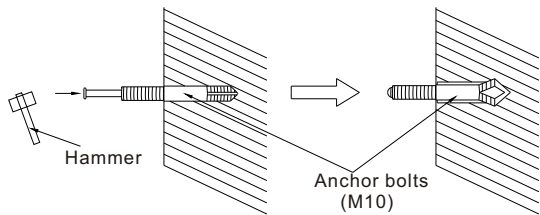
NOTE:

Cooling Capacity Dimension	18000 Btu/hr	24000 Btu/hr	36000 Btu/hr	48000 Btu/hr
L	980mm	980mm	1200mm	1560mm

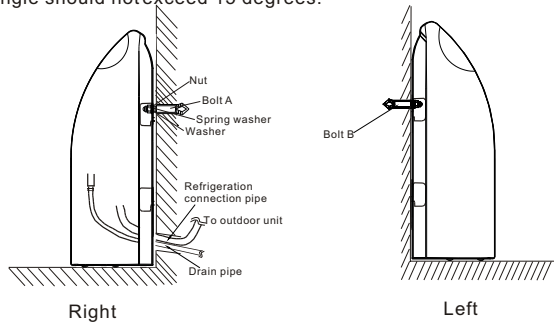
With a concrete drill, drill two 10mm diameter holes at the position (A and B) on the wall.



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

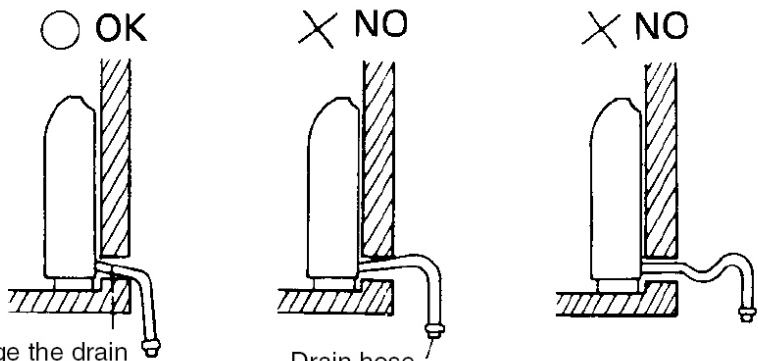


Install the unit to them with nuts, washers and spring washers
NOTE: The installation angle should not exceed 15 degrees.



CAUTION

Be sure to arrange the drain hose so that it is leveled lower than the drain hose connecting port of the indoor unit.



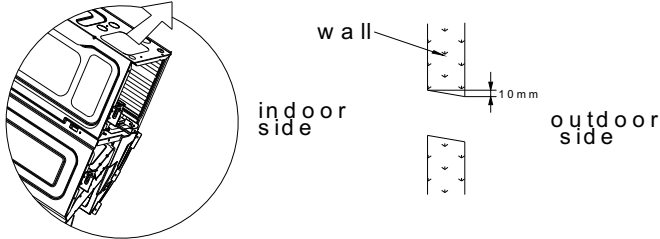
Arrange the drain hose lower than this portion.

UNDER CEILING TYPE

1. Select piping and drain directions.

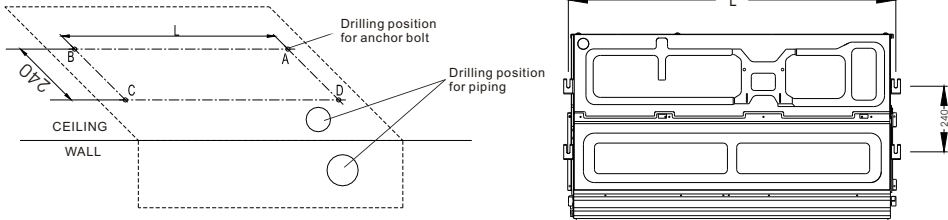
CAUTION: Install the drainage hose at the rear, it should not be installed on the top.

When the directions are selected, drill 80 mm (3-1/8") and 50 mm (2") or 150 mm (6") dia. hole on the wall so that the hole is tilted downward toward the outdoor for smooth water flow.



2. Drilling holes for anchor bolts and installing the anchor bolts(m10).

Please drill four holes for anchor bolts at the position A,B,C and D.



NOTE:

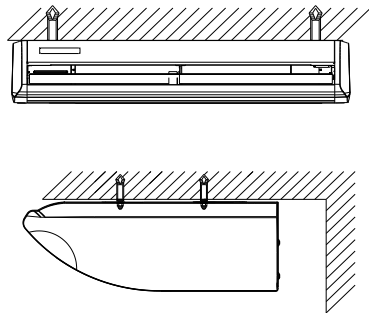
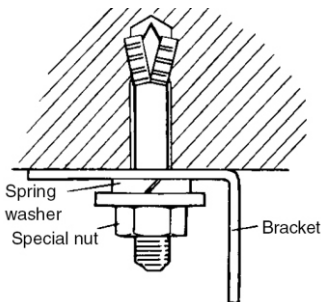
Cooling Capacity Dimension	18000 Btu/hr	24000 Btu/hr	36000 Btu/hr	48000 Btu/hr
L	980mm	980mm	1200mm	1560mm

3. Installing indoor unit

Now, securely tighten nuts to each bolt with washers and spring washers.

NOTE: The installation angle should not exceed 10 degrees.

Mount the unit to the anchor bolts



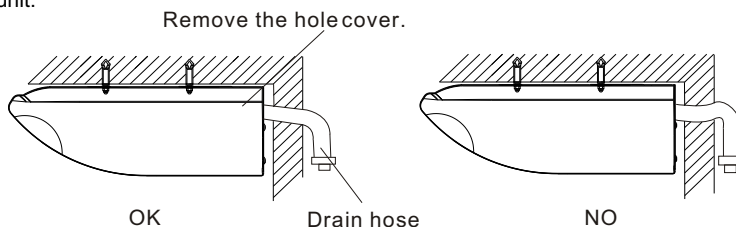
DRAINAGE PIPE CONNECTION

1.Installing the drain hose

Insert the drain hose into the drain pan, then secure the drain hose with a nylon fastener(we have connected the drain hose to the drain pan in the factory,you just need connect the drain pipe.).

Wrap the insulation (drain hose) around the drain hose connection.

Be sure to arrange the drain hose so that it is leveled lower than the drain hose connecting port of the indoor unit.



2.Drainage test

A.Check whether the drain pipe is unhindered and each joint is airtight.

B.Inject 2000ml water into the drain pan to test whether the water flows smoothly.

OUTDOOR UNIT INSTALLATION

1.Choose installation location

- 1.A place where there is sufficient space for installation and repair.
- 2.A place where the air inlet and outlet are not hindered, without strong air flowing.
- 3.A dry and ventilated place.
- 4.A place where the overhanging is level and bears the weight of the outdoor unit, without much noise.
- 5.A place where neighbours are not annoyed by noise and exhausted air.
- 6.A place without leakage of flammable gas.
- 7.A place convenient for installation.

Caution:(location in the following places may cause malfunction of the machine).

- 1.A place where there is flammable gas leakage.
- 2.there is salty air surrounding(near the coast)
- 3.there is caustic gas(the sulfide, for example) existing in the ai.
- 4.a place where can not bear the weight of the machine
- 5.in kitchen where it is full of oil gas.
- 6.there is strong electromagnetic wave existing.
- 7.there is acid or alkaline liquid evaporating
- 8.a place where air circulation is not enough.
- 9.other special surroundings.

10.Any obstruction ofthe unit air outlet and intakeor any obstacle that is too close (see minimum clearances required). Installation on grassy ground or soft surfaces (in these cases a solid foundation must be included).(fig.1)

11.If the unit is installed in areas where heavy snowfalls may occur, it is necessary to raise its level at least 200 mm above the usual snow level or alternatively use the outdoor unit bracket kit.(fig.2)

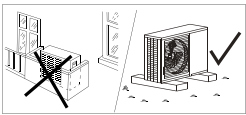


Fig.1

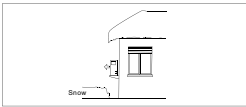


Fig.2

2.Split type outdoor unit

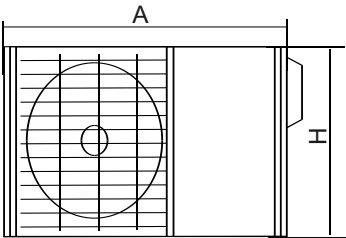


Fig.1

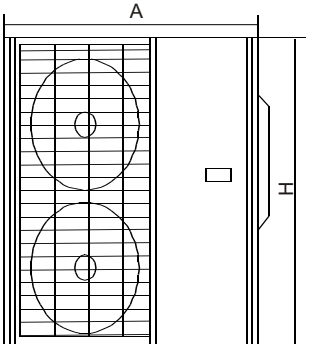
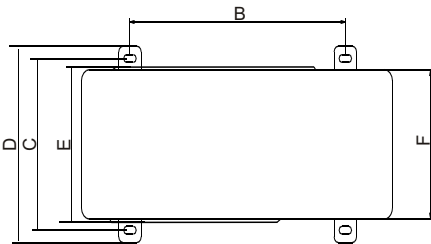
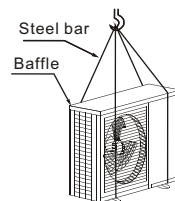


Fig.2

MODE	A	B	C	D	E	F	H	REMARK
18	780	521	290	328	288	290	605	Fig.1
24	900	753	349	399	304	315	650	Fig.1
30/36	900	675	398	433	358	360	805	Fig.1
48/60	940	600	375	400	338	340	1250	Fig.2

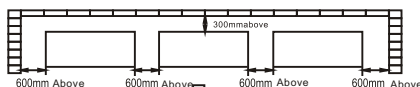
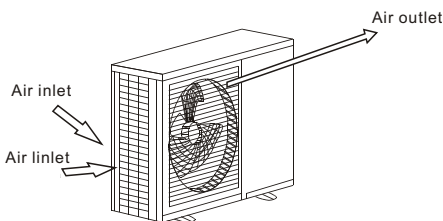
Move outdoor unit in

1. Please use 4 pieces of 6mm steel wire hanging the outdoor unit up and move in.
2. To avoid the outdoor unit is out of shape, please add the baffles at the surface of outdoor unit where the steel wire rope may touch.
3. After moving, please remove the tray wood on the bottom.



Installation Space

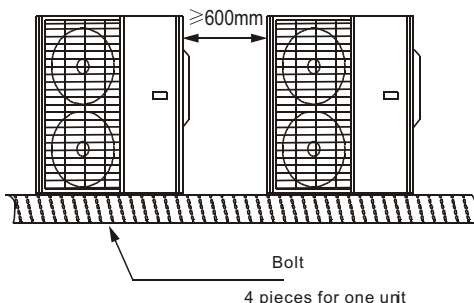
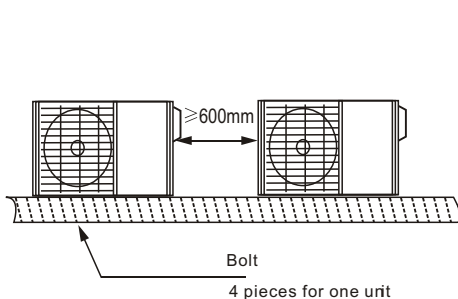
1. After leaving repair space as illustrated below, install the outdoor unit with power supply equipment installed at the side of the outdoor unit. Please refer to ELECTRIC SUPPLY INSTALLATION MANUAL for the installation method.
2. Please make sure necessary space for installation and repair.



Air outlet of the outdoor unit
Overview of the outdoor unit

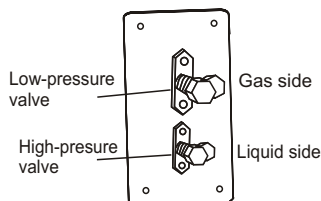
⚠ No obstruction from the air outlet of outdoor unit

3. At least 600mm space must be left between outdoor units as the sketch indicated.



Refrigerant pipe

1. The junction is inside the cover of the right panel, please take off the cover first.
2. The pipe gets out of the side gap of the cover.
3. After connecting from the valve gap, reinstall it from left, right or backwards for installation.
4. The right picture is the sketch map of valve installation board of outdoor. Gas-side (low pressure) is the one upward, liquid side is the one downward.



INSTALLATION

Pre-installation precautions

- ◆ Please confirm that the installation personnel are qualified in relevant installation service. If the air conditioner was installed by persons without special skills, normal operations would not be ensured, even the personal and estate safety would be affected.

User guideline

- ◆ The user's installation site should be provided with regular power supply in conformity with that indicated in nameplate of the air conditioner, and its voltage should be within a range 90 %~ 110 % of the rated voltage value.
- ◆ Power circuit should be equipped with protector, such as electricity leakage protector or air switch, which should possess a capacity greater than 1.5 times the maximum current value of the air conditioner.
- ◆ Never fail to adopt personal circuit and effectively-grounded socket compatible with the attached plug of the air conditioner. The attached plug is equipped with grounding pin, and it must not be modified as desired.
- ◆ Please adopt the fuse or circuit breaker prescribed in Installation Instructions.
- ◆ Only qualified electrician is allowed to carry out wiring tasks strictly according to electric safety requirements.
- ◆ Do ensure good earth of air conditioner, in other words, the main power switch of air conditioner must be connected to reliable ground wire.

Precautions

- ◆ The air conditioner should be installed securely; otherwise poor installation may lead to abnormal noises and vibration.
- ◆ Outdoor unit should be installed at a spot ensuring that its air outlet noises and hot exhaust will not violate your neighbors.

Unit body installation

Please confirm the indoor unit dimension according to the picture below M10 whorl is to be installed.(4 sets).

- ◆ please refer to the following for the center distance between the bolts M 10 whorl is used.
 - ◆ please consult professional for your specific ceiling arrangement.
1. Dismantle scale of the ceiling.....please keep ceiling its level. Strengthen the beam to avoid vibration.
 2. Break the beam of the ceiling.
 3. Strengthen the breaking point of the ceiling and reinforce the ceiling beam.
- ◆ After the main body hanging is finished, arrangement of pipe and line will be done in the ceiling. The direction of the pipe is determined after the installation location is chosen. If the ceiling has existed, please arrange the refrigerant pipe, drainage pipe, indoor and outdoor connecting line.
 - ◆ Installation of the hanging screw bolt.

REFRIGERANT PIPE CONNECTION

Pipe dimension and ways of installation

Outdoor pipe dimension and ways of install (in sequence of cooling capacity)

1) 9000Btu/h

Junction Dimension: ($\phi 1/4''$ + $\phi 3/8''$)

2) 12000~18000Btu/h

Junction Dimension: ($\phi 1/4''$ + $\phi 1/2''$)

3) 24000Btu/h

Junction Dimension: ($\phi 3/8''$ + $\phi 5/8''$)

4) 36000~60000Btu/h

Junction Dimension: ($\phi 1/2''$ ($\phi 5/8''$) + $\phi 3/4''$)

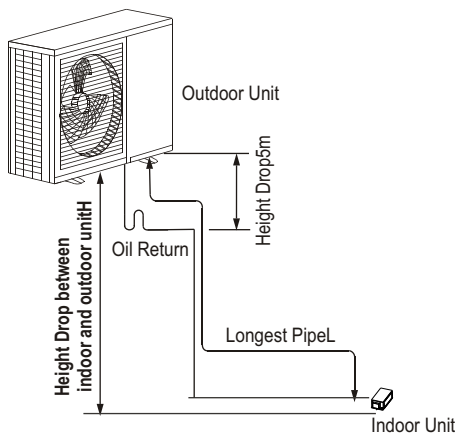
Conventional pipe, cooling capacity ≤ 12000 Btu/h		Allowed value
Longest pipe(L)		10m
Maximum height drop	Height drop between indoor and outdoor unit H	5m

Conventional pipe, cooling capacity 18000~24000Btu/h		Allowed value
Longest pipe(L)		15m
Maximum height drop	Height drop between indoor and outdoor unit	7.5m

Conventional pipe, cooling capacity ≥ 24000 Btu/h		Allowed value
Longest pipe (L)		20m
Maximum height drop	Height drop between indoor and outdoor unit H	9m

Please refer to refrigerant pipe connection for detail.

Allowed length and height drop



Remove objects and water

- Use high-pressure nitrogen to clean the pipe instead of outdoor refrigerant.
- Before installing refrigerant pipe, please clean the pipe in case of foreign objects.

Additional refrigerant charge

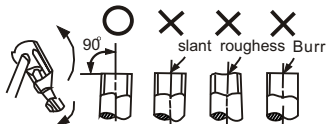
The additional charge is base on the diameter and length of outlet/inlet liquid type .

This AC has been charged with that for 5m pipe, those beyond 5 m should recharge as follows.

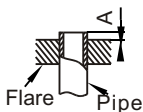
Liquid pipe diameter	$\phi 1/4''$	$\phi 3/8''$	$\phi 1/2''$
Additional charge for 1m pipe(R410A)	0.022kg	0.054kg	0.110Kg
Additional charge for 1m pipe(R22)	0.020kg	0.050kg	0.080Kg

FLARING

- ① Cut the refrigerant pipe off with pipe cutter.



- ② Flaring after putting the pipe into connection nut.



Outside Diameter	A (mm)	
	MAX	MIN
1/4"	8.7	8.3
3/8"	12.4	12.0
1/2"	15.8	15.4
5/8"	19.0	18.6
3/4"	23.3	22.9

Stop valve operation item

- Open the valve rod til to the position rod.
Do not try to open larger.
 - Fasten the bonnet with spanner or similar tools.
 - Fasten the bonnet of valve rod.
- Liquid side(3/8" , 1/2"): 1180Nc m(120kgfcm)
gas side(5/8" , 3/4"): 1180Nc m(120kgfcm)

- When vacuum pump is used, each low-pressure valve must be manipulated as follow
Please refer to operation manual for the usage of manifold valve.

1. Connect the recharged hose to lower pressure valve junction (low/high pressure valve must be tightened.)
2. Connect the charged hose junction with vacuum pump.
3. Open the low pressure handler of manifold fully.
4. Start vacuumizing with vacuum pump. When vacuumizing begins, loosen the nut of low pressure valve a bit. Check if the air enters (noise of vacuum pump changes, the all-purpose meter indication change from negative to zero), then tighten the nut of connection pipe.
5. After vacuumizing finishing, tighten the low pressure handler of manifold valve fully and stop the vacuum pump. When vacuumizing is carried out for over 15 minutes, please confirm if the all-purpose meter points at -1.0×10^5 Pa (-76cmHg).
6. Open the high/low pressure valve fully.
7. Dismantle the recharged hose from charge gap of low pressure valve.
8. Tighten the bonnet of low-pressure valve.

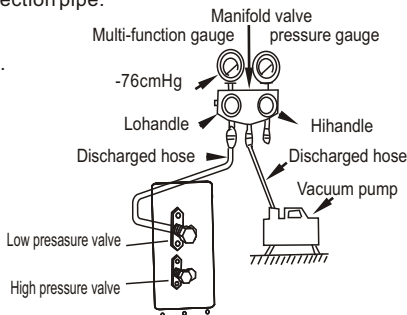
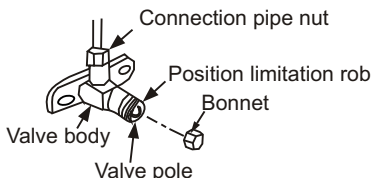
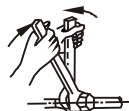
Junction fixture

- Aim at connection pipe
fix the nut of connection pipe, then tighten]
as the following diagram with spanner

Notice

- According to installation conditions, overlarge wrenched
torch will destroy the nut. (Unit. N.cm)

Outside diameter	Strengthen to fasten the torch
1/4"	1420~1720 N.cm (144~176kgf.cm)
3/8"	3270~3990 N.cm (333~407kgf.cm)
1/2"	4950~6030 N.cm (504~616kgf.cm)
5/8"	6180~7540 N.cm (630~770kgf.cm)
3/4"	9720~11860 N.cm (990~1210kgf.cm)

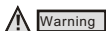


ELECTRIC WIRING

Caution

- Please set the appropriated power supply of outdoor unit.
- Please classify the connection wire system of outdoor&indoor unit and refrigeration pipe system as the same system.
- Carried out according to National Electric Standard.
- Consign the professional technician to do the electric wiring.
- Electric leakage protector and manual switch should be installed for power.

Safety precaution



Please make sure that dimension of electrical source complies with requirements and the voltage is stable.

The electrical source should be connected by specific circuit.

Wiring operation should be done by professionals in accordance with concerning national standard.

Indoor and outdoor connection and the lead of electrical source should be well installed to make sure they do not contact each other.

Please wire under the guidance of circuit diagram and notice concerning warnings on indoor and outdoor unit.

Please add short-circuit switch and protection switch for electrical leakage to the circuitry .

Please make use of the matched power cord. If requirement can not be satisfied, the substitute should comply with national standard.



1. Electric line connecting indoor and outdoor unit is a power-supply cord connecting indoor and outdoor unit.
2. Those above are dimensions of electric supply, electric line and indoor -outdoor connecting line for each type of unit.
3. When the electric connecting line is a bit longer, The sectional area of Conductor should be enlarged in case of voltage falling.
4. The sectional area of the electric core wire is minimum. in case power-connecting wire is longer than usual, just select the conductor cross-section a level higher than the specified one to avoid voltage drop.
5. Power lead connecting indoor unit is RVV (300/500V) power cord. Power line connecting outdoor unit and indoor-outdoor power supply is multi-stranded line of YZW (300/500V) power cord. If single-core cord is adopted, please use wires with larger dimension and wear electrician cover.

When following occasions occur, please stop running immediately, cut off the power supply and contact the dealer.

- Incorrect motion of on/off .
- Fuse or electric leakage protector melts frequently.
- Foreign matters or water come into the air conditioner.

1. Ways of Electric wiring for indoor unit

Open the electric joint box and let connecting line go through the ring.

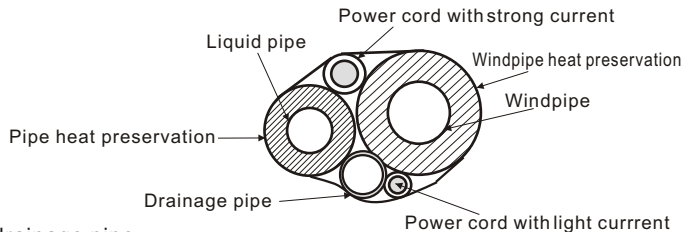
Do according to what the circuit diagram proscribes.

Please make sure the connecting line at the end of the line be impressed tight.

2. Wrapping

After wiring is finished, please wrap connecting pipe, connecting line and drainage pipe with bandages.

The section is illustrated as follows after wrapping is done.



NOTICE:

Do not flatten the drainage pipe.

Please connect drainage outlet.

Where the environment is not polluted.

If situations as follow occur, please cut off the electric power before contacting the dealer.

- ◆ Open or close incorrectly
- ◆ Fuse or electric leakage protector breaks for several times.
- ◆ Objects or water into the AC

3. Outdoor unit wiring

1. Copper-cored wire should be selected.

2. As the electric control box is inside the unit body, dismantle the valve installation cover, top cover right front board sequenly when connecting wires. Then connect the responding wires from the hole of the electric of the right back board.

3. mate series number according to junction box of outdoor unit. (Disposed length of connection wire is good enough for inserting the conenction pole completely as the right picture shows.)

4. Wrap the electric wire(conductor), which is not inserted into the connection pole, with PVC belt and make it avoid any electric appliance or metal elements.

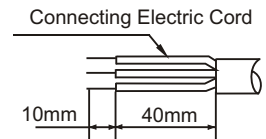
5. After installing cable connection lug on the main power wire, then connect to the terminal row.

6. Connection lug should be installed on the grounded wire of all cables.

Only finishing that all cables can be connected to grounded bolt.

7. The electric wire from wire terminal should be through wire clips.

8. Please refer to the right illstration.



NOTICE

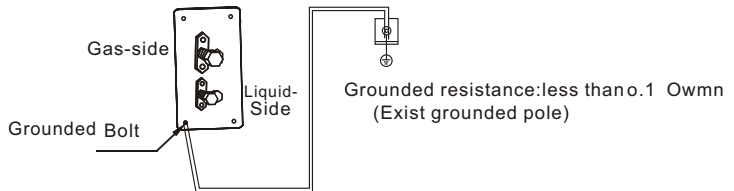
The indoor unit should be connected correctly with the high-pressure and low-presurre stop valve of the outdoor unit as well as the signal line. Otherwise, some electrical componets and system may suffer damages.

GROUNDING JOB

(NOTE: the hull of outdoor unit must be grounded)

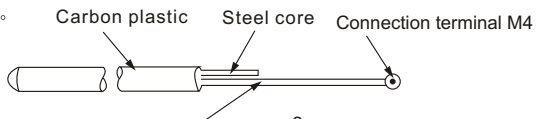
- Find the grounded connection pole on the outdoor PCB as the following picture indicated.

(1) when there is an exist grounded connection pole on the outdoor PCB as the following picture indicated 【The area of the wire is no less than 4mm^2 】 (standard line)



(2) use a grounded electrode

- Dimension of grounded electrode.



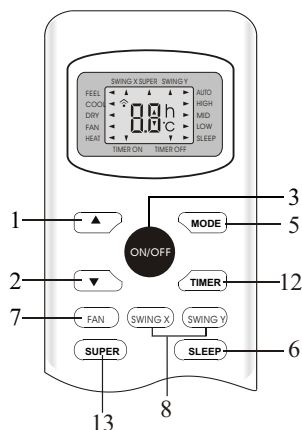
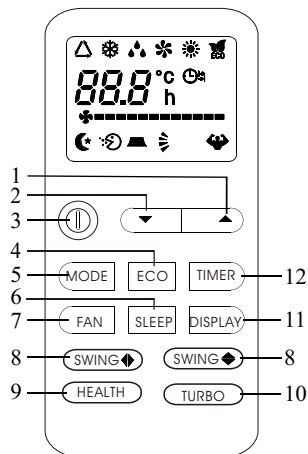
- Step of grounded connection

Do the grounded connection according to the following instruction.

Step	Job	Instruction	Notice information
1	Decide the connection Position	Suitable position a) moisture places b) hard quality soil but not loose sand and soil unsuitable position a) the places where there are underground building and facilities, such as gas pipe, telephone wire, cable, etc. B) within 2m of electric pole or conductor.	<ul style="list-style-type: none"> ● Avoid sand soil, gravel soil because their resistance are high. ● The grounded wire of the telephone cannot be used as that of the AC ● When the electrode is installed in a heavy traffic place, please pay attention to fasten connection.
2	Put the grounded electrode into the installation position	A) dig a hole according to the graphic size and put the electrode into it. B) cover grounded electrode with soil which has been dug out.	
3	Arrange the grounded wire connection	a) if the grounded wire is too short, extend the wire. the joint should be welded and wrapped with adhesive tape. b) fix the grounded wire with thread yard.	<ul style="list-style-type: none"> ● Grounded wire should use the green or yellow-green insulation material. The section-crossed are is no less than 4mm^2 ● do not bury the welding objects into underground
4	If necessary, check quality and take proper measure.	a) after the grounded job finishing, test the grounded resistance with ohmmeter b) if the grounded resistance is higher than the standard level, put the electrode deeper or add more electrodes.	
5	Connect grounded wire with AC.	Fix the grounded wire to the rod of the AC unit	

REMOTE CONTROLLER



















No.	Button	Function
1	▲ (TEMP UP)	Increase the temperature or time by 1 unit
2	▼ (TEMP DN)	Decrease the temperature or time by 1 unit
3	ON/OFF	To switch the conditioner on and off.
4	ECO	In cooling mode, press this button, the temperature will increase 2°C on the base of setting temperature In heating mode, press this button, the temperature will decrease 2°C on the base of setting temperature
5	MODE	To select the mode of operation
6	SLEEP	To activate the function "SLEEP"
7	FAN	To select the fan speed of auto/low/mid/high
8	SWING	To activate or deactivate of the movement of the "DEFLECTORS"
9	HEALTHY	To switch - on /offHEALTHY funtionIt is a button which controls the ionizer or plasma generator only for inverter type.
10	TURBO	In cooling mode, press this button, the unit will give the maximum cooling temperature with 16°C In heating mode, press this button, the unit will give the maximum heating temperature with 31°C
11	DISPLAY	To switch on/off the LED display (if present)
12	TIMER	To set automatic switching-on/off
13	SUPER	In cooling mode, press this button, the unit will give the maximum cooling temperature with 16°C In heating mode, press this button, the unit will give the maximum heating temperature with 31°C

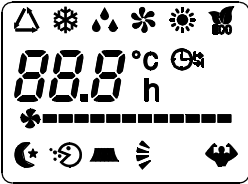


- ⚠ The outlook and some function of remote control may vary according to the model.
- ⚠ The shape and position of buttons and indicators may vary according to the model, but their function is the same.
- ⚠ The unit confirms the correct reception of each press button with a beep.

Remote control DISPLAY

Meaning of symbols on the liquid crystal display

No.	Symbols	Meaning
1		FEEL mode indicator
2		COOLING indicator
3		DEHUMIDIFYING indicator
4		FAN ONLY OPERATION indicator
5		HEATING indicator
6		TIMER OFF indicator
7		TIMER ON indicator
8		AUTO FAN indicator
9		LOW FAN SPEED indicator
10		MIDDLE FAN SPEED indicator
11		HIGH FAN SPEED indicator
12		SLEEP indicator
13		SUPER indicator
14		HEALTHY indicator
15		ECO indicator
16		BATTERY indicator
17		BATTERY indicator
18		CLOCK indicator



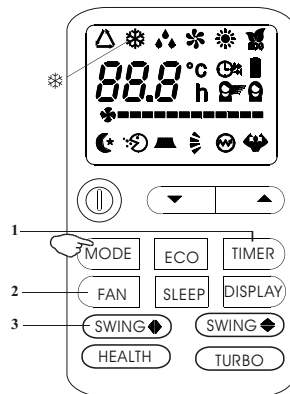
COOLING MODE

The cooling function allows the air conditioner to cool the room and at the same time reduces the humidity in the air.

To activate the cooling function (COOL) , press the MODE button until the symbol ☼ appears on the display.

The cooling cycle is activated by setting the keys ▲ or ▼ at a temperature lower than that of the room.

To optimize the functioning of the conditioner, adjust the temperature (1) , the speed (2) and the direction of the air flow (3) by pressing the keys indicated



HEATING MODE

The heating function allows the air conditioner to produce hot air.

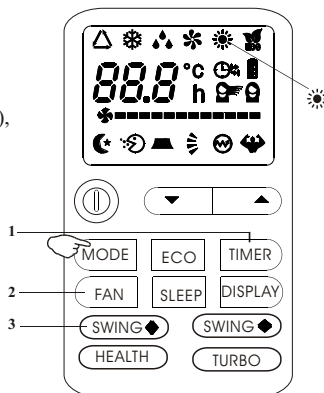
To activate the heating function (HEAT) , press the MODE button until the symbol ☼ appears on the display.

With the keys ▲ or ▼ set a temperature higher than that of the room..

To optimize the functioning of the conditioner adjust the temperature (1) , the speed (2) and the direction of the air flow (3) by pressing the keys indicated

⚠ The appliance is fitted with a Hot Start function, which delays appliance to startup in a few seconds to ensure an immediate output of hot air.

⚠ In HEATING operation, the appliance can automatically activate a defrost cycle, which is essential to free the condenser from an excessive deposit of frost. This procedure usually lasts for 2-10 minutes during defrosting, fans stop operation. After defrosting, it returns to HEATING mode automatically.



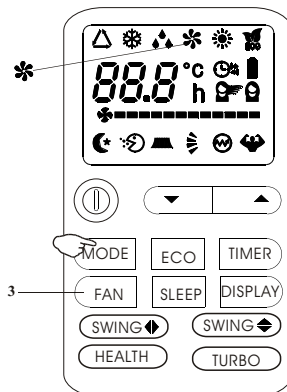
FAN MODE

The conditioner works in only ventilation.

To set the FAN mode, Press MODE until ☼ appears in the display. While pressing FAN button the speed changes in the following sequence: LOW/ MEDIUM/HIGH /AUTO in FAN mode.

The remote control also stores the speed that was set in the previous mode of operation.

In FEEL mode (automatic) the air conditioner automatically chooses the fan speed and the mode of operation (COOLING or HEATING).



TIMER MODE----TIMER ON

To set the automatic switching on of the air conditioner.

To program the time start, the appliance should be off.

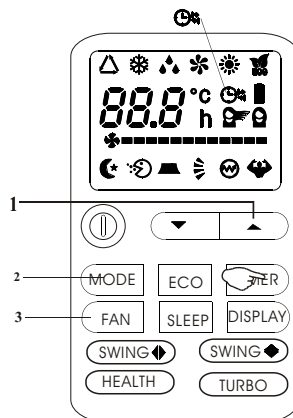
Press **TIMER**, Set the temperature with pressing the key **▲** or **▼**, Press **TIMER** Again, set the time with pressing the key **▲** or **▼**, Press the key more times till on the display you can read the time which passes between the programming and the timed start.

IMPORTANT!

Before proceeding with the timed start: program the working mode with the key **MODE(2)** and the fan speed with the key **FAN(3)**. Switch the conditioner off (with the key **ON/OFF**).

Note: To cancel the setted function, press the **TIMER** button again.

Note: In case of power off, it is necessary to set **TIMER ON** again.



TIMER MODE----TIMER OFF

To set the automatic switching-off of the air conditioner.

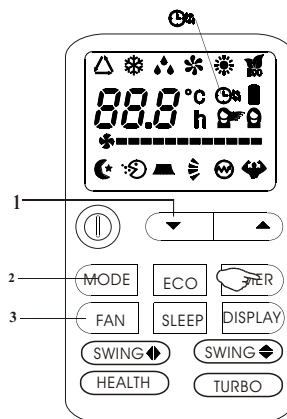
The timed stop is programmed with the appliance on.

Press **TIMER**, Set the time pressing the key **▲** or **▼**, Press the key more times till on the display you can read the time which passes between the programming and the timed stop.

Note: To cancel the setted function, press the **TIMER** button again.

Note: In case of power off, it is necessary to set **TIMER OFF** again.

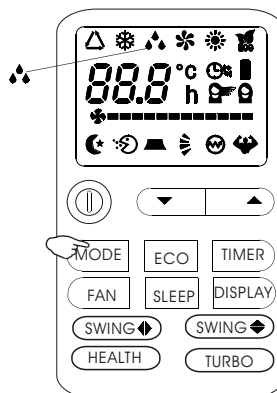
Note: While the time was right settled, the **TIMER** function of this remote (clock function) can be set by half hours.



DRY MODE

This function reduces the humidity of the air to make the room more comfortable.

To set the **DRY** mode, Press **MODE** until **☁** appears in the display. An automatic function of alternating cooling cycles and air fan is activated.

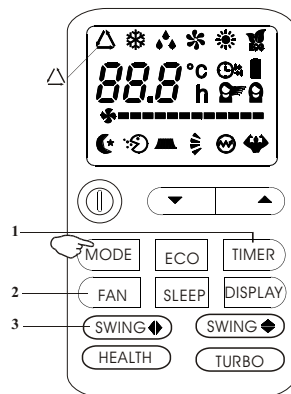


FEEL MODE

To activate the FEEL (automatic) mode of operation, press the **MODE** button on the remote control until the symbol \triangle appears in the display. In the FEEL mode the fan speed and the temperature are set automatically according to the room temperature (tested by the probe which is incorporated in the indoor unit) to ensure user comfort.

Ambient temp	Operation mode	Auto temp.
< 20°C	HEATING (FOR HEAT PUMP TYPE) FAN (FOR COOL ONLY TYPE)	23°C
20°C~26°C	DRY	18°C
> 26°C	COOL	23°C

To optimize the working of the conditioner, adjust the temperature(only $\pm 2^{\circ}\text{C}$) (1), the speed (2) and the direction of the air flow (3) by pressing the buttons indicated .

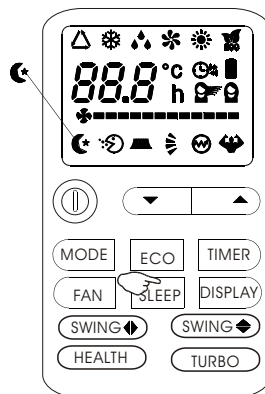


SLEEP MODE

To activate the SLEEP mode of operation, press the **SLEEP** button on the remote control until the symbol AUTOQUIET appears in the display. The function “SLEEP” automatically adjusts the temperature to make the room more comfortable during the night sleep . In cooling or dry mode , the set temperature will automatically raise by 1°C every 60 minutes, to achieve a total rise of 2°C during the first 2 hours of work.

In heating mode the set temperature is gradually decreased by 2°C during the first 2 hours of work.

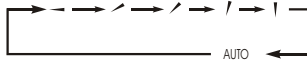
After 10 hours running in sleep mode the air conditioner is switched off automatically.



Air flow direction adjustment procedure

Adjusting air flow direction

- Up/down direction can be adjusted by using the **AIRFLOW** button on the remote controller. This button, each time pressed, changes the mode in the following sequence:



- push the **LOUVER** button, changes the mode to swing louver. Push the button, to stop swing.

NOTE

- When the room temperature controller (thermostat) trips in the heating mode or when the defrosting operation is conducted, the blow flap changes automatically to the horizontal position.
- When the heating operation has just started and the room temperature is still low, it may take a little time before the flap moves to the above sway operation angle.
- The flap may stop at the tilted down-blow position during the "Sway operation" in the heating mode.

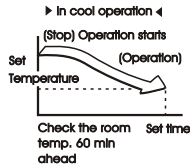
About TIMER operation

About Amenity reservation

Amenity reservation function is provided to start the operation a little earlier so that the room temperature is near the optimum temperature at the timer ON time in case of starting the operation by **TIMER ON/OFF**.

Mechanism

- Checking of the room temperature starts 60 minutes ahead of the timer ON time. Depending on the temperature at that time, operation starts 5 to 60 minutes ahead of the timer ON time.
- Amenity reservation is the function only for **COOL** and **HEAT** operation mode (including **AUTO**). It does not actuate in **DRY** mode.



About SLEEP Operation

When the **SLEEP** operation is selected, the room temperature is automatically controlled with elapsed time so that the room isn't too cool during cooling or too warm during heating.

- During cooling and dry: Present temperature is raised 1°C in an hour (when the timer is set), and 2°C raise in two hours. Then the temperature doesn't change ever.
- During heating: Present temperature is lowered 1°C in an hour (when the timer is set), and 2°C lower in two hours. Then the temperature doesn't change ever.

About FAN SPEED

- Capacity of the air conditioner can be selected by your choice. During heating or cooling.

Operation capacity by your choice	FAN SPEED
Set automatically by microcomputer	AUTO
Powerful operation with high capacity	HI
Standard operation	MED
Energy-saving operation	LO

About power-off memory function

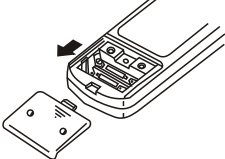
- When the air conditioner disconnects the power suddenly, restart it, the air conditioner operates at the mode it did before power suddenly failed.
- The wire control doesn't have this function.

■ Remote controller handling procedure

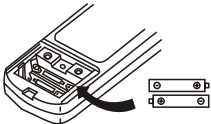
Batteries replacing procedure

Following cases signify dead cells. Replace the dead batteries with new ones.

- Receiving sound is not emitted from the unit when signal is transmitted.
- Indicator becomes indistinct.

1
Please slide and remove the cover.


Slide the cover upwardly in the direction of the arrow.

2
Exchange the batteries.


Attention to the (+) and (-) marks.

3
Install the cover.







4
Set it to the present time.

NOTE

- Do not use an old battery together with a new one.
- Remove cells when the remote controller is not used for a long period.
- The life of a cell made in conformity to JIS or IEC is 6 to 12 months in normal use. If it is used longer or an unspecified cell is used, a liquid leaks from the cell, causing the remote controller inoperative.

- Guideline of the life time is printed on the battery. The battery life may be shorter than that of the air conditioner depending on the date of manufacture.
- However, the battery may be alive even after the nominal life time expired.

Note of remote controller handling

<ul style="list-style-type: none"> • A place with high temperature such as near an electric carpet or a stove. 	<ul style="list-style-type: none"> • A place unprotected from direct sunlight or strong lighting. 	<ul style="list-style-type: none"> • It will be damaged if fallen. Be careful 
<ul style="list-style-type: none"> • Do not put obstacles between the remote controller and the unit. 	<ul style="list-style-type: none"> • Protect the remote controller from being splashed with water, etc. 	<ul style="list-style-type: none"> • Do not put weights on the remote controller. 

TEST RUN

NOTICE

1. When carrying out test run, please confirm all the valves are open.
2. After checking electric safety, do the test run.
3. Try your best not to do the test running in force.

1、Test running should be preceded by proper installation.

2、Please confirm the following particulars.

- Make sure proper installation of the indoor and outdoor units.
 - Make sure proper connection of pipe and line. (Cross connection is forbidden!)
 - Make sure refrigerant pipe system gone through leak hunting.
 - Make sure drainage is not hindered.
 - Make sure heat insulation and preservation in proper condition.
 - Make sure earth wire correctly connected.
 - Make sure records on pipe length and additional refrigerant charge are made.
 - Make sure voltage of the electrical source equal to rated voltage of the air conditioner.
 - Make sure clearance in air outlets of indoor and outdoor units.
- Make sure gas-sided and liquid-sided cut-off valve open.

3、Make sure electrical source is connected, and the air conditioner preheated.
Racks for remote controller should be installed according to customers' requirement.

The location should facilitate smooth transmission of signals to the indoor apparatus.

4、TEST RUNNING

Usage of remote controllers should be in accordance with particulars as follows:

Troubles can be eliminated according to the chapter of maintenance.

● Indoor Unit

- (1) Make sure switch of the remote controller in proper state.
- (2) Make sure each function button of the remote controller in proper state.
- (3) Make sure movement of baffle in proper state. (Except for those without baffles)
- (4) Make sure regulation of indoor temperature in proper state.
- (5) Make sure the pilot lamp shine in proper state.
- (6) Make sure buttons for hands handling in proper state.
- (7) Make sure no condensation or drooping water as a result of loose in copper pipe and drainpipe.
- (8) Open the air grill and make sure no penetration or leakage, especially at the drain plug.
- (9) Make sure no vibration or abnormal noise in operation.
- (10) Make sure proper running in heating mode.

● Outdoor Unit

- (1) Make sure no vibration or abnormal noise in operation.
- (2) Make sure neighbours out of disturbance from wind, noise and condensation.
- (3) Make sure no refrigerant leakage.

NOTE: When the switch is on, restarting after immediate opening or closing will be under protection of the air conditioner with the compressor restarting 3 minutes later.

PTC Function

- Automatically controlled by PCB , the auxiliary heater will start under such occasions as:
 - 1、In heating mode;
 - 2、Compressor is in operation (Exclude defrosting and outdoor protection period) ;
 - 3、Indoor fan motor is in operation;
 - 4、 $T_2 \leq 42^{\circ}\text{C}$;
 - 5、 $T_s - T_1 > 3^{\circ}\text{C}$;
 - 6、 $T_1 \leq 18^{\circ}\text{C}$ 。
- The auxiliary heater will close under such occasions as:
 - 1、The compressor is off (Exclude defrosting and outdoor protection period) ;
 - 2、The indoor fan motor is off;
 - 3、 $T_2 \geq 54^{\circ}\text{C}$;
 - 4、 $T_1 \geq T_s - 1^{\circ}\text{C}$ or $T_1 \geq 24^{\circ}\text{C}$ 。
- When the auxiliary heater and compressor are reliable to be on spontaneously , the former will be on 3 minutes later than the latter is.

Note: T_1 is indoor temp; T_2 is evaporator coil temp; T_s is the temp set by the user.

Error code

Fault code of outdoor unit					
● Lighting ◎ Flashing(1Hz) ○ Extinguishing					
Red	Green	Blue	Faults/States	Solutions	Priority
●	●	◎	Phase-sequence error	1. Check whether the Power phase is normal.	1
●	○	◎	Phase-loss		1
◎	○	○	High pressure protection	1. Check whether the high pressure is normal.	2
○	●	◎	Exhaust temperature protection	1. Check whether the exhaust temperature is normal.	3
●	◎	○	Low pressure protection	1. Check whether the low pressure is normal.	4
◎	●	○	Outdoor coil sensor fault	1. Check whether the sensors are normal.	5
◎	◎	○	Outdoor exhaust sensor fault	1. Check whether the sensors are connected.	6
○	●	○	Running		7

Fault code of thyristor unit: ● Lighting ◎Flashing ○ Extinguishing				
Red	Gree	Faults/States	Solutions	Priority
●	○	Zero-cross point fault	1.Check whether the power frequency is 50Hz.	1
◎ (1Hz)	○	Outdoor ambient sensor/Outdoor coil sensor fault Outdoor exhaust sensor fault (reserved)	1.Check whether the sensors are normal. 2.Check whether the sensors are connected.	2
○	●	Standby		3
○	◎ (1Hz)	Cooling mode		4
○	◎ (0.5Hz)	Heating mode		5

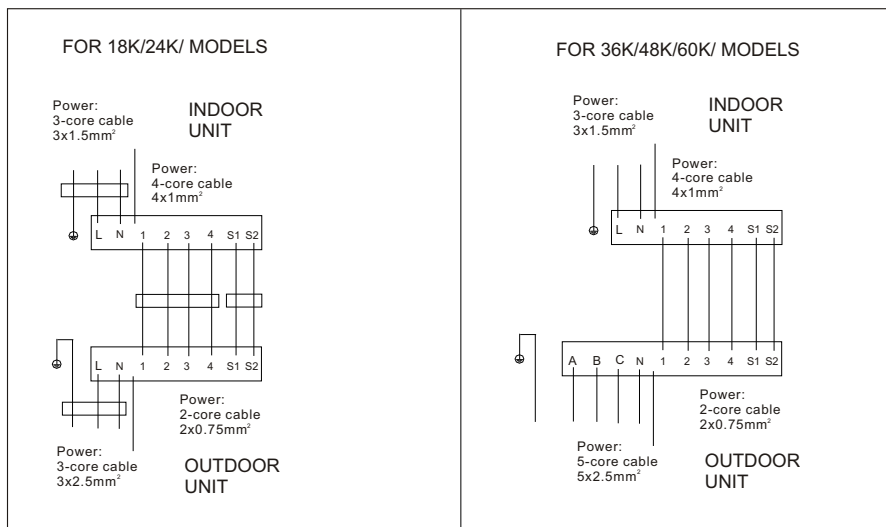
Fault code of indoor unit				
Failure	Error Code	Failure description	Remarks	
Indoor ambient sensor fault	E1	1、Check whether the sensors are normal. 2、Check whether the sensors are Connected.		
Indoor coil sensor fault	E2			
Outdoor coil sensor Faultsensor fault	E3			
outdoor unit protection	E4	(if there is an outdoor control board) 1.View the fault code of outdoor unit. (if there is not an outdoor control board) 1.Check whether the protection input and the neutral line is short circuit.	Unrecoverable before restart.	
Water pump fault	d3	(if there is a water pump) 1.Check whether the water pump is normal. 2.Check whether the water level switch is normal. 3.Check whether the water level switch is connected. (if there is not a water pump) 1.Check whether the water level switch is short circuit.	Recoverable	
EEPROM fault	Ed		Unrecoverable before restart.	

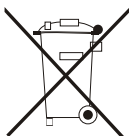
HAND OVER TO CUSTOMERS

- INSTALLATION MANUAL and REPAIR MANUAL must be handed over to customers.
- Please narrate the manual to customers in detail.
- The figures in this manual are sketch maps based on the external view of a standard model. In practice, the shape may differ from that of the air conditioner you have selected.
- The specification are subject to change without prior notice for product improvement.

WIRING DIAGRAM

Please see the pasted diagram instruction on the unit first





**IMPORTANT INFORMATION FOR CORRECT DISPOSAL OF THE PRODUCT
IN ACCORDANCE WITH EC DIRECTIVE 2002/96/EC.**

At the end of its working life, the product must not be disposed of as urban waste. It must be taken to a special local authority differentiated waste collection centre or to a dealer providing this service.

Disposing of a household appliance separately avoids possible negative consequences for the environment and health deriving from inappropriate disposal and enables the constituent materials to be recovered to obtain significant savings in energy and resources. As a reminder of the need to dispose of household appliances separately, the product is marked with a crossed-out wheeled dustbin.