

# DUCT SERIE H6

Installation and  
owner's manual

**MUCR-H6** (v2)



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### IMPORTANT

Thank you for selecting super quality Air Conditioners. To ensure satisfactory operation for many years to come, this manual should be read carefully before the installation and before using the air conditioner. After reading, store it in a safe place. Please refer to the manual for questions on use or in the event that any irregularities occur. This Air Conditioner should be used for household use.

This unit must be installed by a professional according to RD 795/2010, RD 1027/2007 and RD 238/2013.

### WARNING

The power supply must be SINGLE-PHASE (one phase (L) and one neutral (N)) with its grounded power (GND)) or THREE-PHASE (three phase (L1, L2, L3) and one neutral (N) with its grounded power (GND)) and its manual switch. Any breach of these specifications involves a breach of the warranty conditions provided by the manufacturer.

### NOTE

In line with the company's policy of continual product improvement, the aesthetic and dimensional characteristics, technical data and accessories of this appliance may be changed without notice.

### ATTENTION

Read this manual carefully before installing or operating your new air conditioning unit. Make sure to save this manual for future reference.

# INSTALLATION MANUAL

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Please read this manual carefully before installing and using the unit.

## INVERTER SPLIT-TYPE ROOM AIR CONDITIONER

The design and specifications are subject to change without prior notice for product improvement.

### Read This Manual:

Inside you will find many helpful hints on how to use and maintain your air conditioner properly.

Just a little preventative care on your part can save you a great deal of time and money over the life of your air conditioner.

You'll find many answers to common problems in the chart of troubleshooting tips. If you review the chart of Troubleshooting Tips first, you may not need to call for service.

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## PRECAUTIONS

- Keep this manual where the operator can easily find them.
- Read this manual attentively before starting up the units.
- For safety reason the operator must read the following cautions carefully.

The safety precautions listed here are divided into two categories.



### WARNING

If you do not follow these instructions exactly, the unit may cause property damage, personal injury or loss of life.



### CAUTION

If you do not follow these instructions exactly, the unit may cause minor or moderate property damage, personal injury.

After completing the installation, make sure that the unit operates properly during the start-up operation. Please instruct the customer on how to operate the unit and keep it maintained. Also, inform customers that they should store this installation manual along with the owner's manual for future reference.



### WARNING

Be sure only trained and qualified service personnel to install, repair or service the equipment.

Improper installation, repair, and maintenance may result in electric shocks, short-circuit, leaks, fire or other damage to the equipment.

Install according to this installation instructions strictly. If installation is defective, it will cause water leakage, electrical shock and fire.

When installing the unit in a small room, take measures against to keep refrigerant concentration from exceeding allowable safety limits in the event of refrigerant leakage. Contact the place of purchase for more information. Excessive refrigerant in a closed ambient can lead to oxygen deficiency.

Use the attached accessories parts and specified parts for installation. otherwise, it will cause the set to fall, water leakage, electrical shock and fire.

Install at a strong and firm location which is able to withstand the set's weight. If the strength is not enough or installation is not properly done, the set will drop to cause injury.

The appliance must be installed 2.3m above floor.

The appliance shall not be installed in the laundry.

Before obtaining access to terminals, all supply circuits must be disconnected.

The appliance must be positioned so that the plug is accessible.

The enclosure of the appliance shall be marked by word, or by symbols, with the direction of the fluid flow.

For electrical work, follow the local national wiring standard, regulation and these installation instructions. An independent circuit and single outlet must be used.

If electrical circuit capacity is not enough or defect in electrical work, it will cause electrical shock or fire.

Use the specified cable and connect tightly and clamp the cable so that no external force will be acted on the terminal. If connection or fixing is not perfect, it will cause heat-up or fire at the connection.

Wiring routing must be properly arranged so that control board cover is fixed properly.

If control board cover is not fixed perfectly, it will cause heat-up at connection point of terminal, fire or electrical shock.

If the supply cord is damaged, it must be replaced by the manufacture or its service agent or a similarly qualified person in order to avoid a hazard.

An all-pole disconnection switch having a contact separation of at least 3mm in all poles should be connected in fixed wiring.

When carrying out piping connection, take care not to let air substances go into refrigeration cycle. Otherwise, it will cause lower capacity, abnormal high pressure in the refrigeration cycle, explosion and injury.

Do not modify the length of the power supply cord or use of extension cord, and do not share the single outlet with other electrical appliances.

Otherwise, it will cause fire or electrical shock.

If the refrigerant leaks during installation, ventilate the area immediately.  
Toxic gas may be produced if the refrigerant comes into the place contacting with fire.

The temperature of refrigerant circuit will be high, please keep the interconnection cable away from the copper tube.

After completing the installation work, check that the refrigerant does not leak.  
Toxic gas may be produced if the refrigerant leaks into the room and comes into contact with a source of fire, such as a fan heater, stove or cooker.



### CAUTION

Ground the air conditioner.

Do not connect the ground wire to gas or water pipes, lightning rod or atelephone ground wire. Inappropriate grounding may result in electric shocks.

Be sure to install an earth leakage breaker.

Failure to install an earth leakage breaker may result in electric shocks.

Connect the outdoor unit wires , then connect the indoor unit wires.

You are not allowed to connect the air conditioner with the power supply until the wiring and piping is done.

While following the instructions in this installation manual, install drain piping in order to ensure proper drainage and insulate piping in order to prevent condensation.  
Improper drain piping may result in water leakage and property damage.

Install the indoor and outdoor units, power supply wiring and connecting wires should be at least 1 meter away from televisions or radios in order to prevent image interference or noise.

Depending on the radio waves, a distance of 1 meter may not be sufficient enough to eliminate the noise.

The appliance is not intended for use by young children or infirm persons without supervision.

Don't install the air conditioner in the following circumstance:

- There is petrolatum existing.
- There is salty air surrounding (near the coast).
- There is caustic gas (the sulfide, for example) existing in the air (near a hot spring).
- The Volt vibrates violently (in the factories).
- In buses or cabinets.
- In kitchen where it is full of oil gas.
- There is strong electromagnetic wave existing.

- There are inflammable materials or gas.
- There is acid or alkaline liquid evaporating.
- Other special conditions.

The appliance shall be installed in accordance with national wiring regulations.

Do not operate your air conditioner in a wet room such as a bathroom or laundry room.

An all-pole disconnection device which has at least 3mm clearances in all poles , and have a leakage current that may exceed 10mA, the residual current device (RCD) having a rated residual operating current not exceeding 30mA, and disconnection must be incorporated in the fixed wiring in accordance with the wiring rules.

## INSTALLATION INFORMATION

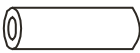





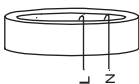



- To install properly, please read this "installation manual" at first.
- The air conditioner must be installed by qualified persons.
- When installing the indoor unit or its tubing, please follow this manual as strictly as possible.
- If the air conditioner is installed on a metal part of the building, it must be electrically insulated according to the relevant standards to electrical appliances.
- When all the installation work is finished, please turn on the power only after a thorough check.
- Regret for no further announcement if there is any change of this manual caused by product improvement.

## INSTALLATION ORDER

- Indoor unit installation;
- Outdoor unit installation;
- Install the refrigerant pipe;
- Connect the drain pipe ;
- Electric wiring work;
- Twins function
- Test operation.

## ACCESSORIES

Please check whether the following fittings are of full scope. If there are some spare fittings , please restore them carefully.

	NAME	SHAPE	QUANTITY
Tubing & Fittings	1. Soundproof / insulation sheath		2
	2. Binding tape		1
	3. Seal sponge		1
Drainpipe Fittings	4. Drain joint		1
	5. Seal ring		1
Wire controller	6. Wire controller KJR-12B		1
EMC & Its Fitting (for some models)	7. Magnetic ring (twist the electric wires L and N around the magnetic ring to five circles)		1
Others	8. Installation and owner's manual		1
	9. Connecting wire for display (2M)		1 (on some models)
	10. Cord protection rubber ring		1 (on some models)

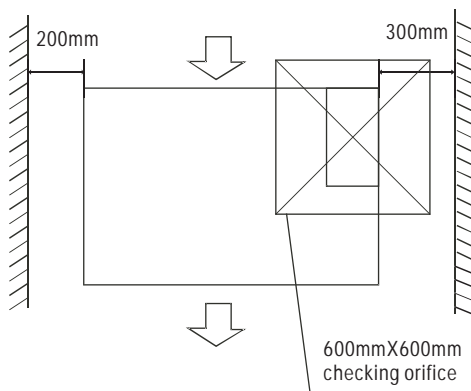
## 1. INDOOR UNIT INSTALLATION

### 1.1 Installation place

The indoor unit should be installed in a location that meets the following requirements:

- There is enough room for installation and maintenance.
- The ceiling is horizontal, and its structure can endure the weight of the indoor unit.
- The outlet and the inlet are not impeded, and the influence of external air is the least.
- The air flow can reach throughout the room.
- The connecting pipe and drainpipe could be extracted out easily.
- There is no direct radiation from heaters.

Maintenance roomage



#### CAUTION

Keep indoor unit, outdoor unit, power supply wiring and transmission wiring at least 1 meter away from televisions and radios. This is to prevent image interference and noise in those electrical appliances. (Noise may be generated depending on the conditions under which the electric wave is generated, even if 1 meter is kept.)



#### NOTE

All the pictures in this manual are for explanation purpose only. There may be slightly different from the air conditioner you purchased ( depend on model ). The actual shape shall prevail.

### 1.2 Install the main body

#### 1 Installing Ø10 hanging screw bolts. (4 bolts)

- Please refer to the following figures for positioning 4 screw bolts.
- Evaluate the ceiling construction and please install with Ø10 hanging screw bolts.
- Consult the construction personnel for the specific procedures.
  - Do keep the ceiling flat. Consolidate the roof beam to avoid possible vibration.
- Carry out the pipe and line operation in the ceiling after finishing the installation of the main body. While choosing where to start the operation, determine the direction of the pipes to be drawn out. Especially in case there is a ceiling, position the refrigerant pipes, drain pipes, indoor & outdoor lines to the connection places before hanging up the machine.
- The installation of hanging screw bolts.
  - Cut off the roof beam.
  - Strengthen the place that has been cut off, and consolidate the roof beam.
- After the selection of installation location, position the refrigerant pipes, drain pipes, indoor & outdoor wires to the connection places before hanging up the machine.
- The installation of hanging screw bolts.

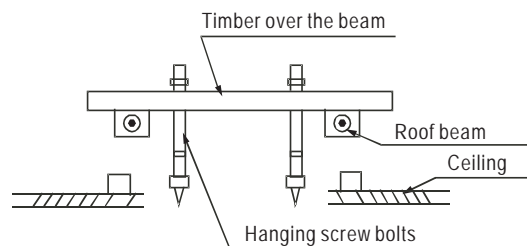


#### NOTE

Confirm the minimum drain tilt is 1/100 or more

#### 1.2.1 Wooden construction

Put the square timber crosswise over the roof beam, then install the hanging screw bolts.



#### 1.2.2 New concrete bricks

Inlaying or embedding the screw bolts.



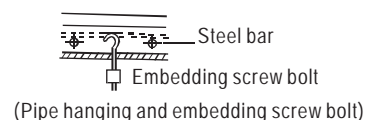
(Blade shape insertion)



(Slide insertion)

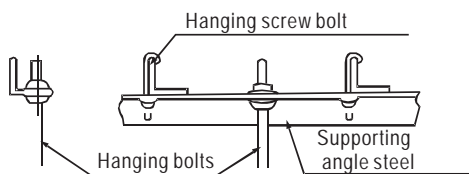
#### 1.2.3 For Original concrete bricks

Use embedding screw bold, crock and stick harness.



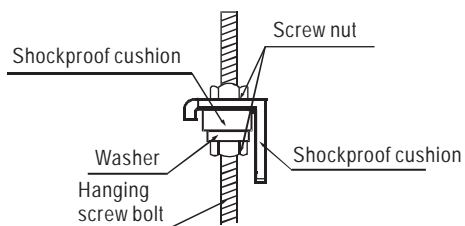
### 1.2.4 Steel roof beam structure

Install and use directly the supporting angle steel.



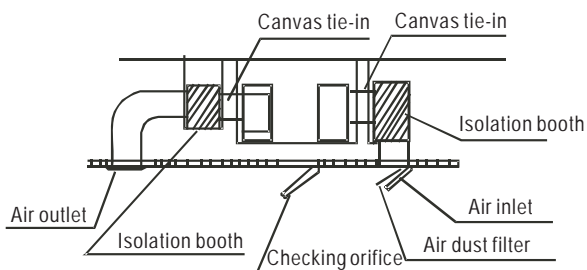
## 2 Overhanging the indoor unit

- (1) Overhang the indoor unit onto the hanging screw bolts with block.
- (2) Position the indoor unit in a flat level by using the level indicator, unless it may cause leakage.



### 1.3 Duct and accessories installation

1. Install the filter(optional) according to air inlet size.
2. Install the canvas tie-in between the body and duct.
3. Air inlet and air outlet duct should be apart far enough to avoid air passage short-circuit.
4. Recommended duct connection.



5. Please refer to the static pressure to install



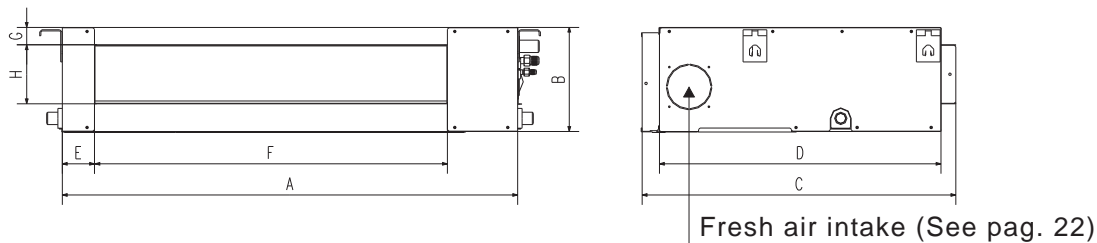
#### NOTE

1. Do not put the connecting duct weight on the indoor unit.
2. When connecting duct, use inflammable canvas tie-in to prevent vibrating.
3. Insulation foam should be wrapped outside the duct to avoid condensate an internal duct under layer shall be added to reduce the noise for special requirement.

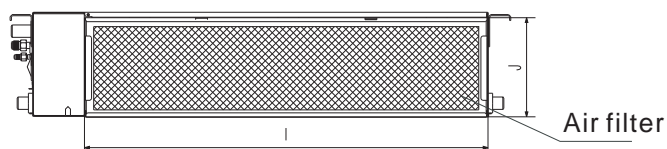


The positioning of ceiling hole, indoor unit and hanging screw bolts

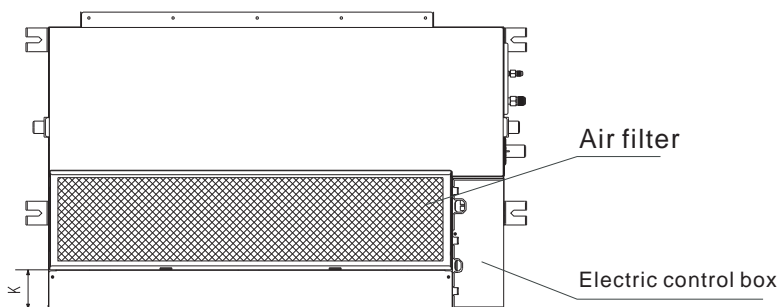
### Dimension and air outlet size



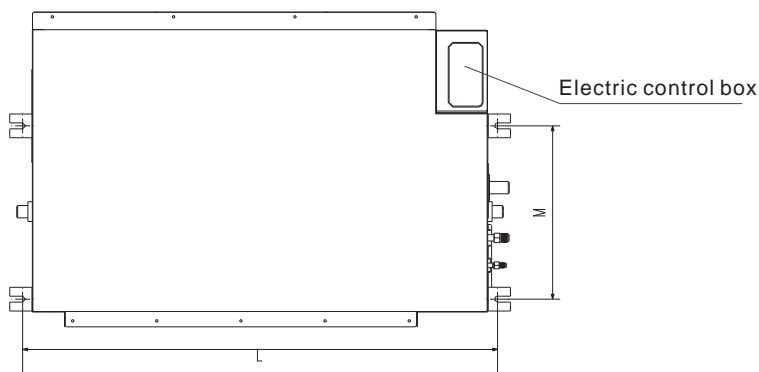
### Air inlet size



### Position size of ventilation opening



### Size of mounted hook

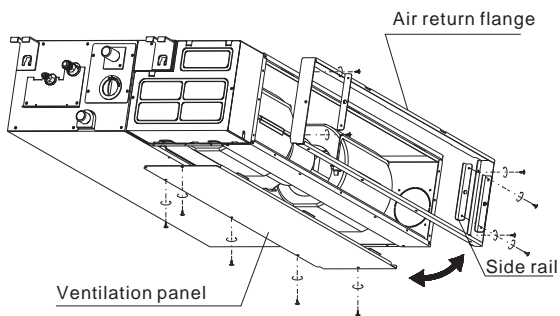


Unit: mm

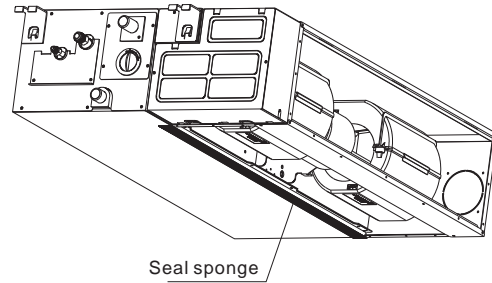
Model	Outline dimension				Air outlet opening size				Air return opening size			Size of mounted lug	
	A	B	C	D	E	F	G	H	I	J	K	L	M
MUCR-12-H6	700	210	635	570	65	493	35	119	595	200	80	740	350
MUCR-18-H6	920	270	635	570	65	713	35	179	815	260	20	960	350
MUCR-24-H6	920	270	635	570	65	713	35	179	815	260	20	1180	490
MUCR-30-H6	1140	270	775	710	65	933	35	179	1035	260	45	1240	500
MUCR-36/42/48-H6 MUCR-48/60-H6T	1200	300	865	800	80	968	40	204	1094	288	45	1240	500

## How to adjust the air inlet direction? (From rear side to under-side.)

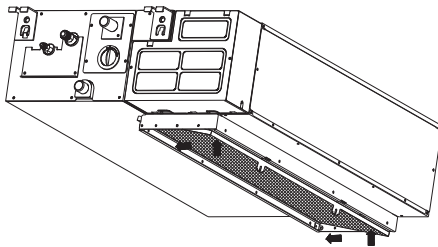
1. Take off ventilation panel and flange, cut off the staples at side rail.



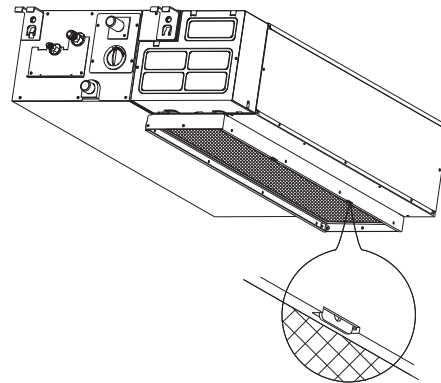
2. Stick the attached seal sponge as per the indicating place in the following fig, and then change the mounting positions of air return panel and air return flange .



3. When install the filter mesh, please plug it into flange inclined from air return opening, and then push up.



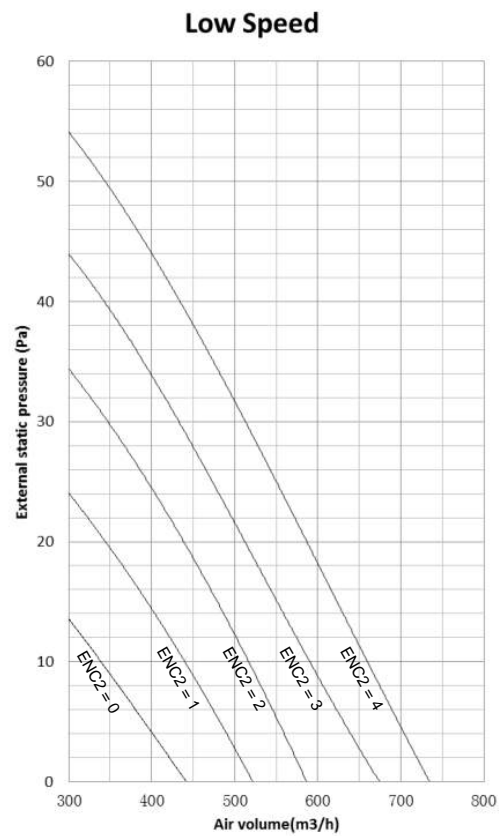
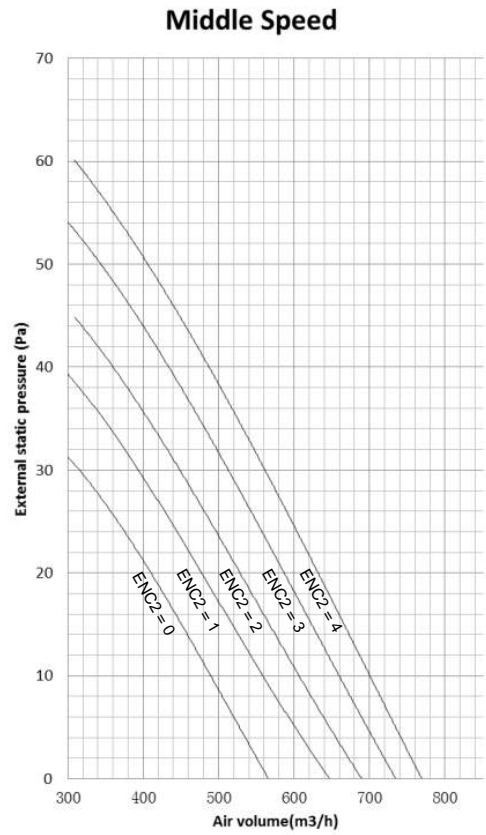
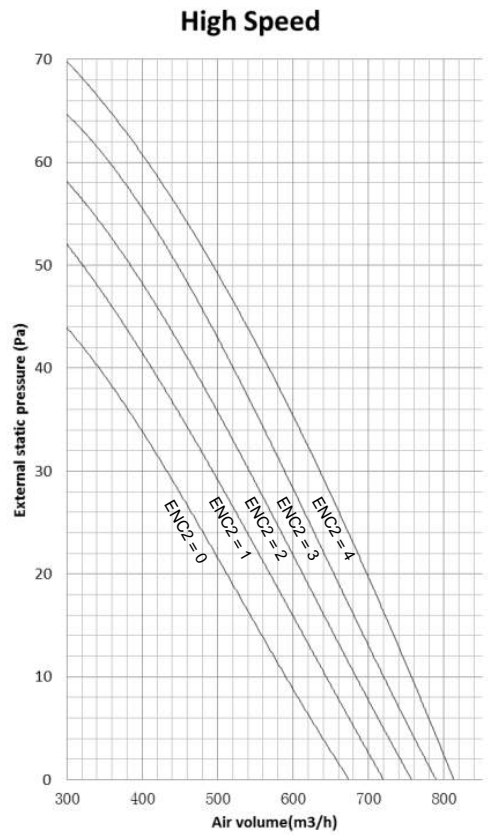
4. The installation has finish, upon filter mesh which fixing block shave been inserted to the flange positional holes.



### NOTE

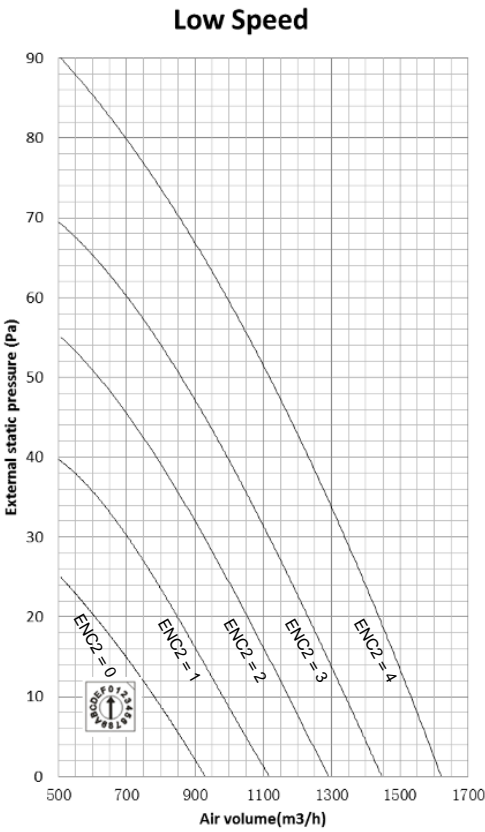
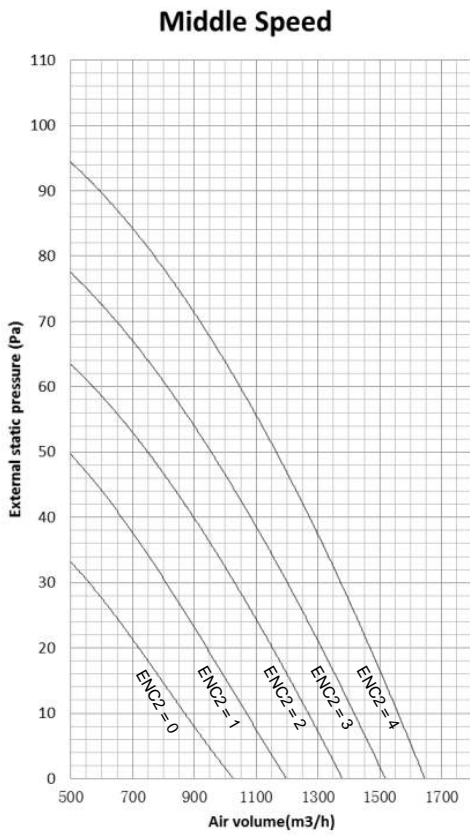
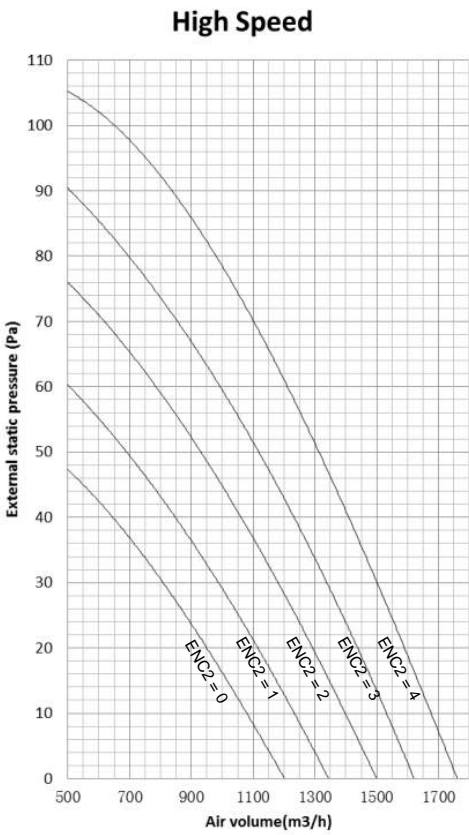
All the figures in this manual are for explanation purpose only. They may be slightly different from the air conditioner you purchased. The actual unit shall prevail.

Fan performances  
Static pressure curve (middle static pressure duct)  
**MUCR-12-H6**



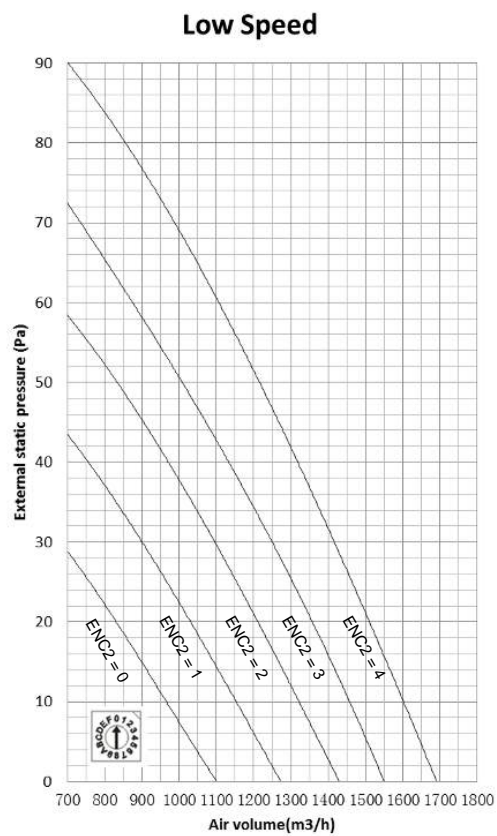
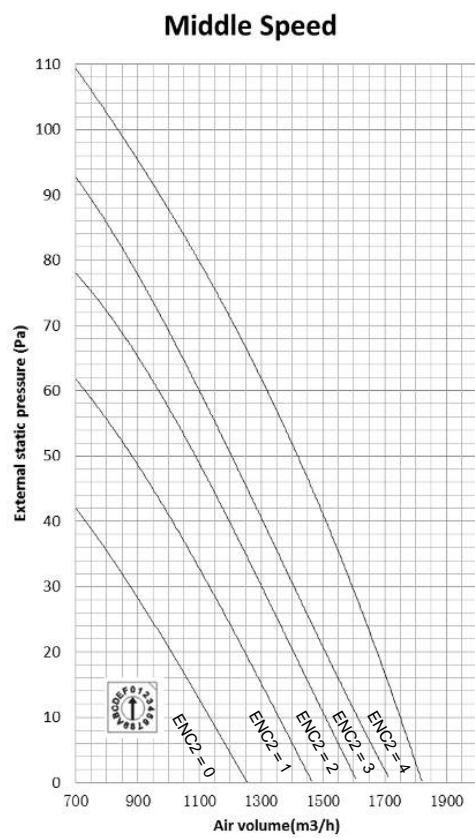
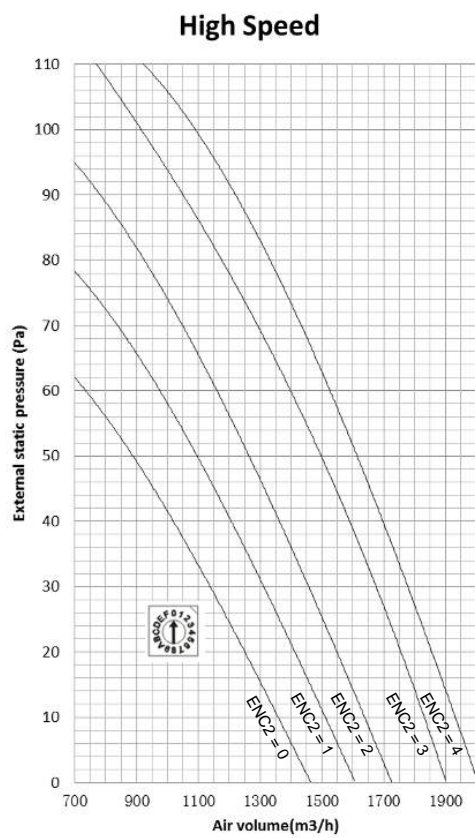
FOR SETTING STATIC PRESSURE						
ENC2						
MODEL	CODE	0	1	2	3	4
	12	0 Pa	10 Pa	20 Pa	30 Pa	40 Pa
	18 to 24	10 Pa	25 Pa	40 Pa	55 Pa	70 Pa
30 to 60	20 Pa	35 Pa	50 Pa	65 Pa	80 Pa	
FACTORY SETTING		✓				

MUCR-18-H6



FOR SETTING STATIC PRESSURE						
ENC2						
MODEL	CODE	0	1	2	3	4
	12	0 Pa	10 Pa	20 Pa	30 Pa	40 Pa
	18 to 24	10 Pa	25 Pa	40 Pa	55 Pa	70 Pa
	30 to 60	20 Pa	35 Pa	50 Pa	65 Pa	80 Pa
	FACTORY SETTING	✓				

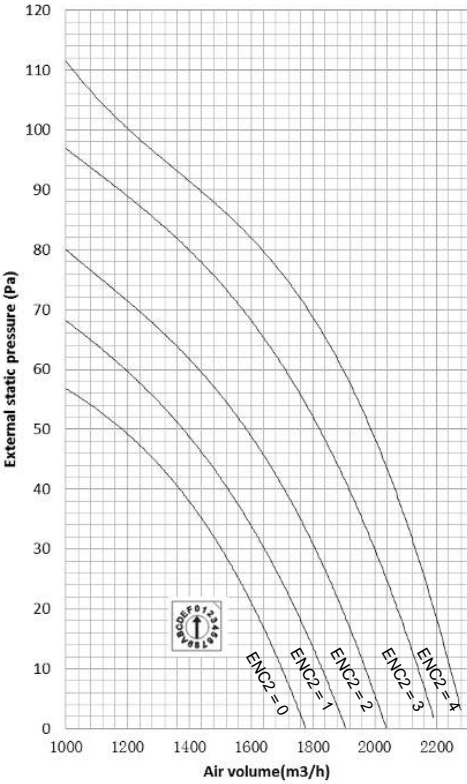
MUCR-24-H6



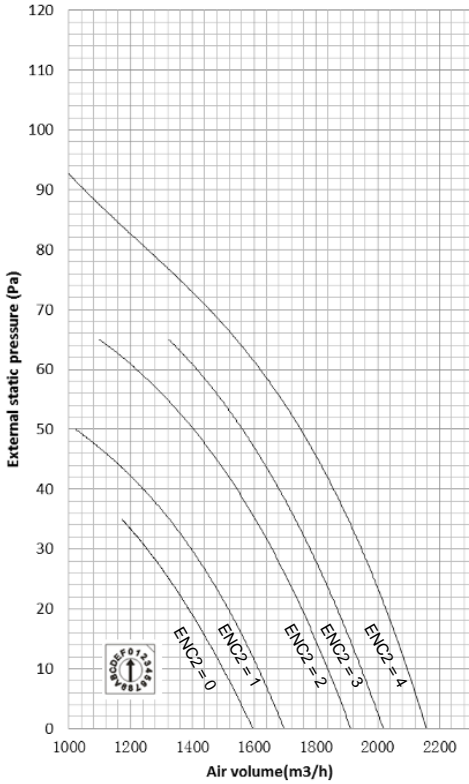
FOR SETTING STATIC PRESSURE						
ENC2						
MODEL	CODE	0	1	2	3	4
	12	0 Pa	10 Pa	20 Pa	30 Pa	40 Pa
	18 to 24	10 Pa	25 Pa	40 Pa	55 Pa	70 Pa
	30 to 60	20 Pa	35 Pa	50 Pa	65 Pa	80 Pa
FACTORY SETTING						

MUCR-30-H6

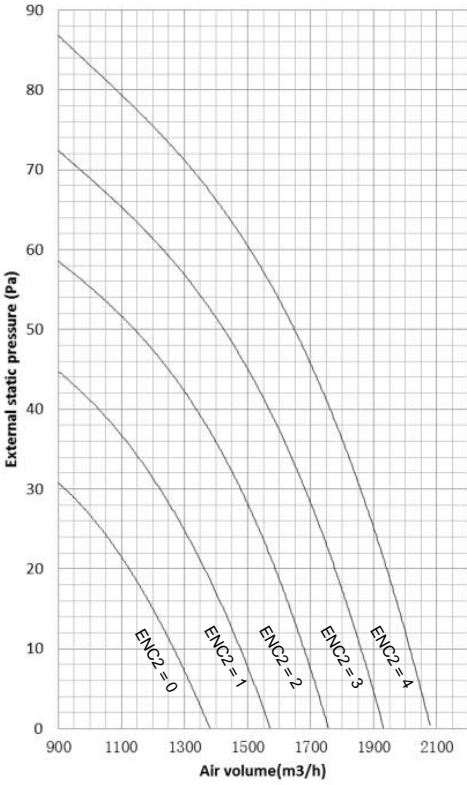
High Speed



Middle Speed



Low Speed

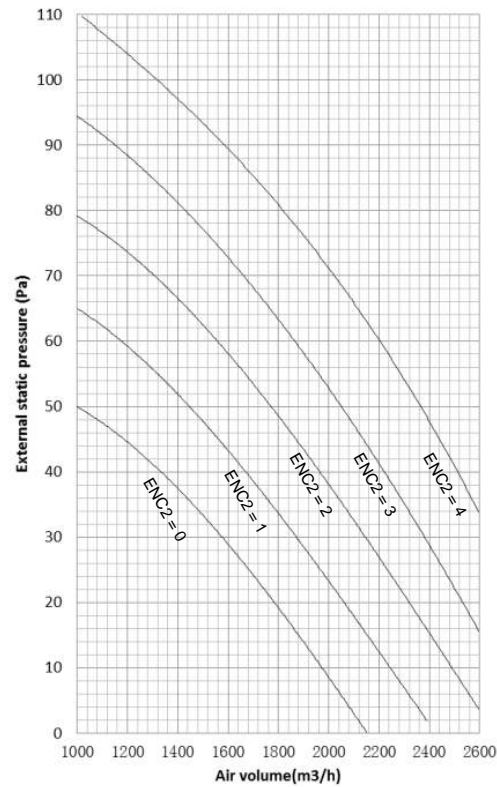


FOR SETTING STATIC PRESSURE						
ENC2						
MODEL	CODE	0	1	2	3	4
	12	0 Pa	10 Pa	20 Pa	30 Pa	40 Pa
	18 to 24	10 Pa	25 Pa	40 Pa	55 Pa	70 Pa
	30 to 60	20 Pa	35 Pa	50 Pa	65 Pa	80 Pa
	FACTORY SETTING	✓				

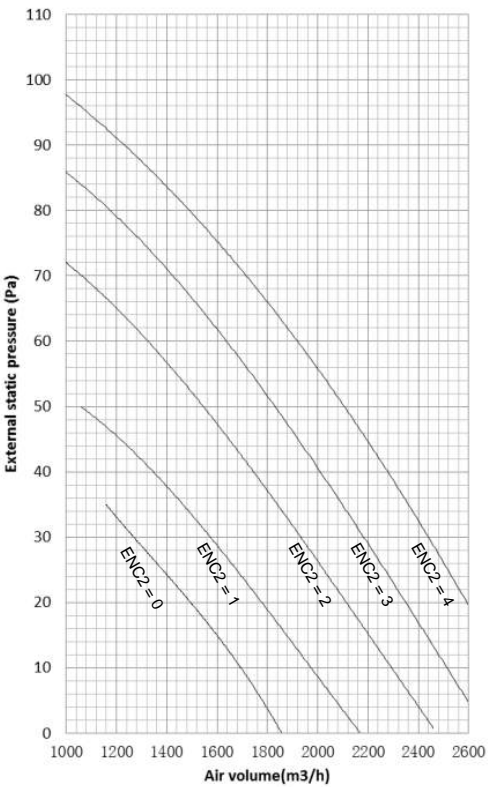


MUCR-36-H6

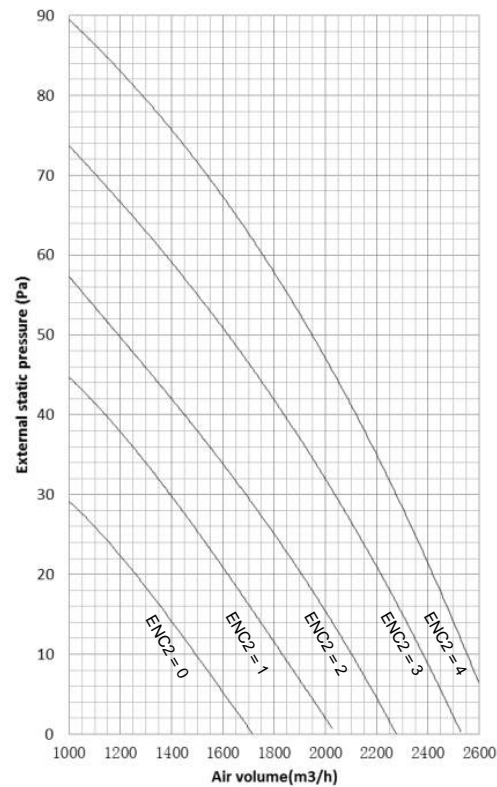
High Speed








Middle Speed



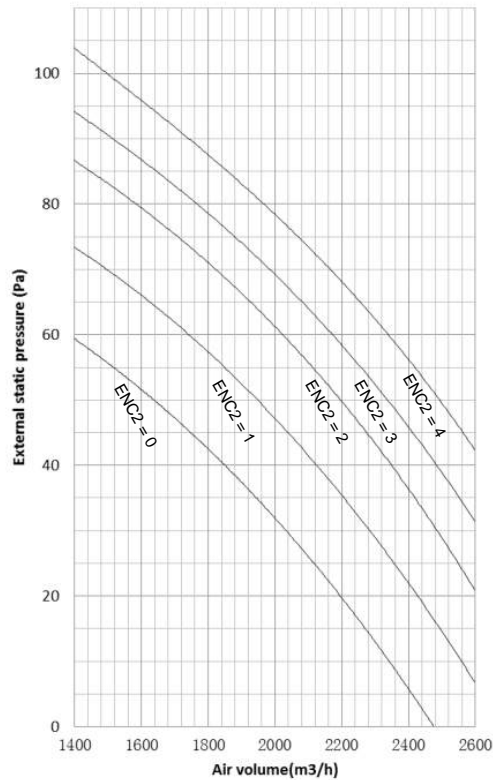
Low Speed



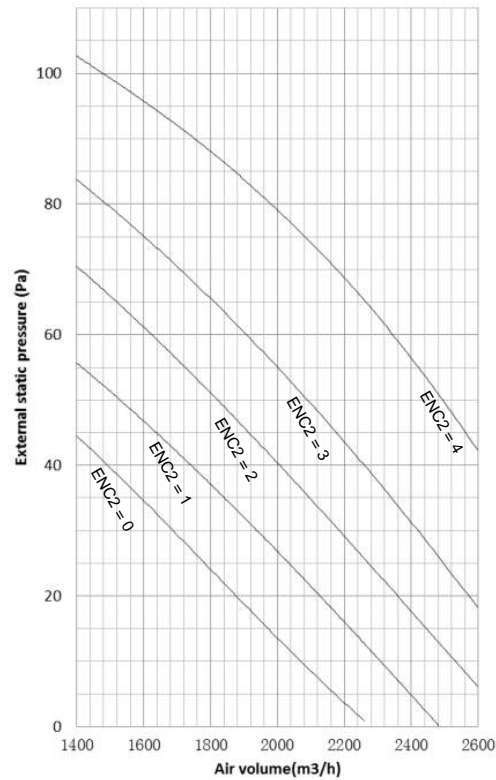
FOR SETTING STATIC PRESSURE						
ENC2						
MODEL	CODE	0	1	2	3	4
	12	0 Pa	10 Pa	20 Pa	30 Pa	40 Pa
	18 to 24	10 Pa	25 Pa	40 Pa	55 Pa	70 Pa
	30 to 60	20 Pa	35 Pa	50 Pa	65 Pa	80 Pa
FACTORY SETTING		<input checked="" type="checkbox"/>				

MUCR-42-H6  
MUCR-48-H6  
MUCR-48-H6T  
MUCR-60-H6T

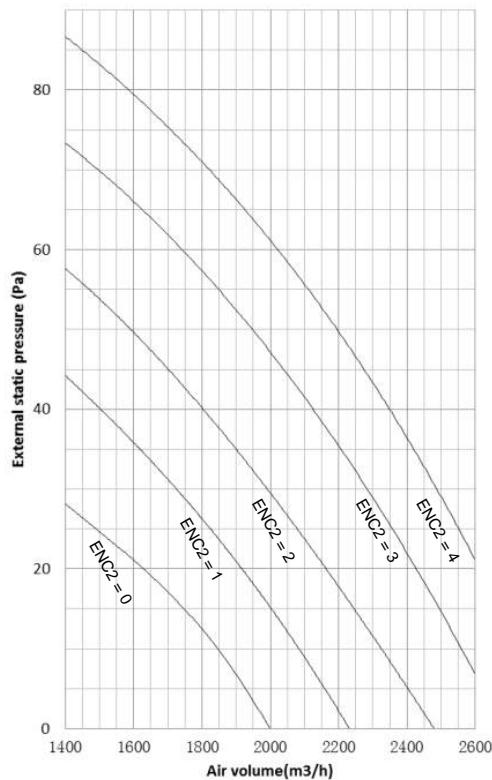
High Speed



Middle Speed



Low Speed



FOR SETTING STATIC PRESSURE					
ENC2					
MODEL	CODE	0	1	2	3
	12	0 Pa	10 Pa	20 Pa	30 Pa
	18 to 24	10 Pa	25 Pa	40 Pa	55 Pa
	30 to 60	20 Pa	35 Pa	50 Pa	65 Pa
	60 to 120	30 Pa	45 Pa	60 Pa	75 Pa
FACTORY SETTING					



## 2. OUTDOOR UNIT INSTALLATION

### 2.1 Precautions for selecting the location

- 1) Choose a place solid enough to bear the weight and vibration of the unit, where the operation noise will not be amplified.
- 2) Choose a location where the hot air discharged from the unit or the operation noise will not cause a nuisance to the neighbours of the user.
- 3) Avoid places near a bedroom and the like, so that the operation noise will cause no trouble.
- 4) There must be sufficient spaces for carrying the unit into and out of the site.
- 5) There must be sufficient space for air passage and no obstructions around the air inlet and the air outlet.
- 6) The site must be free from the possibility of flammable gas leakage in a nearby place.
- 7) Install units, power cords and inter-unit wire at least 3m away from television and radio sets. This is to prevent interference to images and sounds. (Noises may be heard even if they are more than 3m away depending on radio wave conditions.)
- 8) In coastal areas or other places with salty atmosphere of sulfate gas, corrosion may shorten the life of the air conditioner.
- 9) Since drain flows out of the outdoor unit, do not place under the unit anything which must be kept away from moisture.

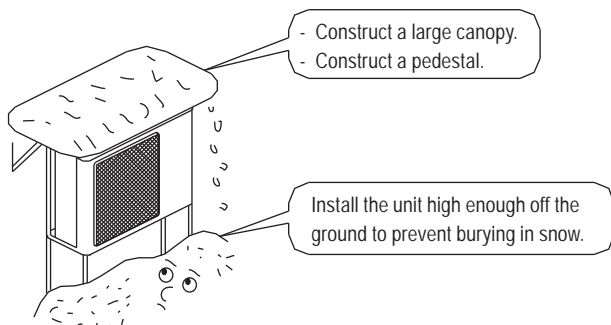
NOTE: Cannot be installed hanging from ceiling or stacked.



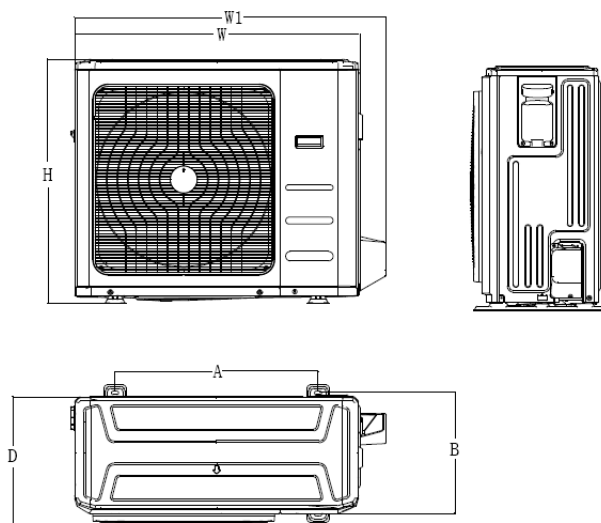
### CAUTION

When operating the air conditioner in a low outdoor ambient temperature, be sure to follow the instructions described below.

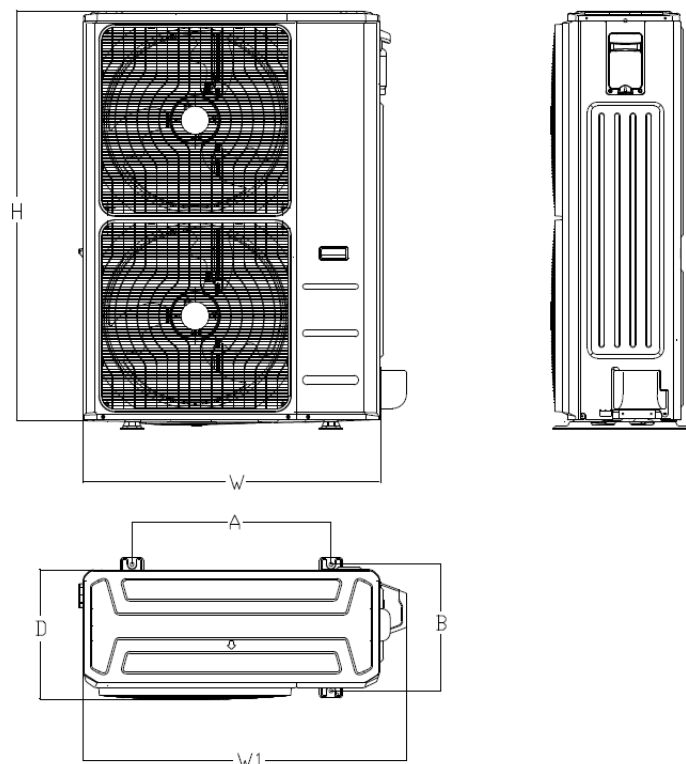
- To prevent exposure to wind, install the outdoor unit with its suction side facing the wall.
- Never install the outdoor unit at a site where the suction side may be exposed directly to wind.
- To prevent exposure to wind, it is recommended to install a baffle plate on the air discharge side of the outdoor unit.
- In heavy snowfall areas, select an installation site where the snow will not affect the unit.



### 2.2 Figure of body size



MODEL	Unit: mm					
	W	D	H	W1	A	B
MUCR-12/18-H6	800	333	554	870	514	340
MUCR-24-H6	845	363	702	914	540	350
MUCR-30/36/42-H6	946	410	810	1030	673	403

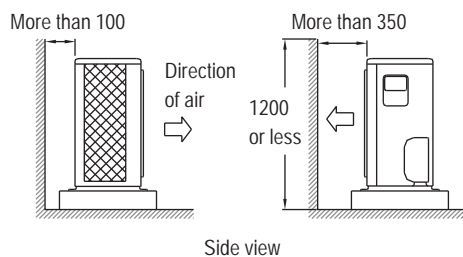


MODEL	Unit: mm					
	W	D	H	W1	A	B
MUCR-48-H6 MUCR-48/60-H6T	952	415	1333	1045	634	404

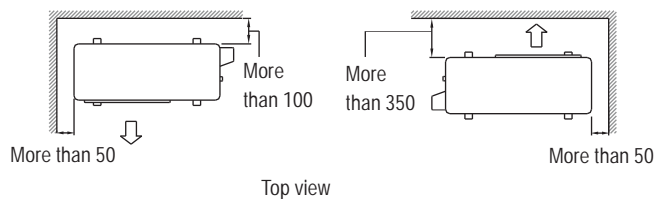
## 2.3 Installation guidelines

- Where a wall or other obstacle is in the path of outdoor unit's inlet or outlet airflow, follow the installation guidelines below.
- For any of the below installation patterns, the wall height on the outlet side should be 1200mm or less.

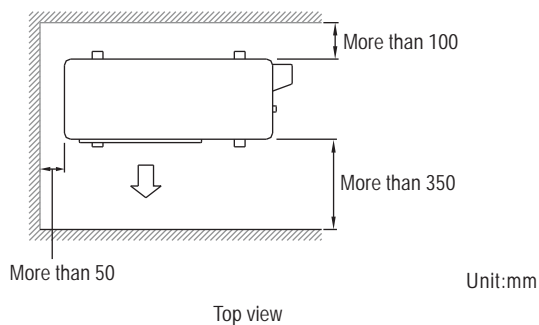
Wall facing one side



Walls facing two sides



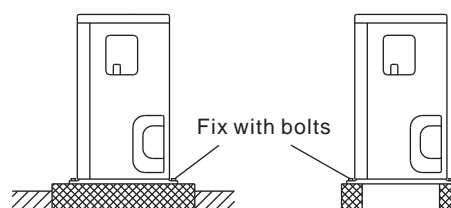
Walls facing three sides



## 2.4 Outdoor unit installation

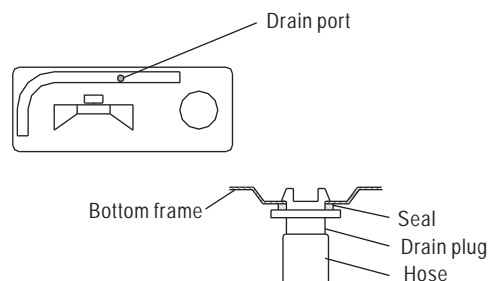
### 1) Installing outdoor unit

- When installing the outdoor unit, refer to "Precautions for selecting the location" .
- Check the strength and level of the installation ground so that the unit will not cause any operating vibration or noise after installed.
- Fix the unit securely by means of the foundation bolts. (Prepare 4 sets of M8 or M10 foundation bolts, nuts and washers each which are available on the market.)



### 2) Drain work

- If drain work is necessary, follow the procedures below.
- Use drain plug for drainage.
- If the drain port is covered by a mounting base or floor surface, place additional foot bases of at least 30mm in height under the outdoor unit's feet.
- In cold areas, do not use a drain hose with the outdoor unit. (Otherwise, drain water may freeze, impairing heating performance.)



### 3. INSTALL THE REFRIGERANT PIPE



All field piping must be provided by a licensed refrigeration technician and must comply with the relevant local and national codes.

#### Precautions

- Execute heat insulation work completely on both sides of the gas piping and liquid piping. Otherwise, this can sometimes result in water leakage.  
(When using a heat pump, the temperature of the gas piping can reach up to approximately 120°C. Use insulation which is sufficiently resistant.)
- Also, in cases where the temperature and humidity of the refrigerant piping sections might exceed 30°C or Rh80%, reinforce the refrigerant insulation (20mm or thicker). Condensation may form on the surface of the insulating material.
- Before rigging tubes, check which type of refrigerant is used.
- Use a pipe cutter and flare suitable for used refrigerant.
- Only use annealed material for flare connections.
- Do not mix anything other than the specified refrigerant, such as air, etc., inside the refrigerant circuit.
- If the refrigerant gas leaks during the work, ventilate the area. A toxic gas is emitted by the refrigerant gas being exposed to a fire.
- Make sure there is no refrigerant gas leak. A toxic gas may be released by the refrigerant gas leaking indoor and being exposed to flames from an area heater, cooking stove, etc.
- Refer to the table below for the dimensions of flare nuts spaces and the appropriate tightening torque. (Over tightening may damage the flare and cause leaks.)

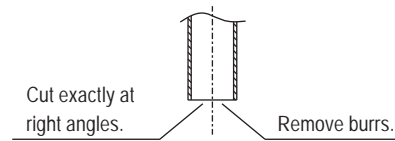
Pipe gauge (mm)	Tightening torque	Flare dimension A (mm)	Flare shape
Ø6.35	15~16 N.m (153~163 kgf.cm)	8.3~8.7	
Ø9.52	25~26 N.m (255~265 kgf.cm)	12.0~12.4	
Ø12.7	35~36 N.m (357~367 kgf.cm)	15.4~15.8	
Ø15.9	45~47 N.m (459~480 kgf.cm)	18.6~19.0	
Ø19.1	97.2~118.6 N.m (990~1210 kgf.cm)	22.9~23.3	

- Check whether the height drop between the indoor unit and outdoor unit, and the length of refrigerant pipe meet the following requirements:

Model	Max. allowable piping length	Max. allowable piping height
MUCR-12-H6	25m	10m
MUCR-18-H6	30m	20m
MUCR-24/30-H6	50m	25m
MUCR-36/42/48-H6 MUCR-48/60-H6T	65m	30m

#### 3.1 Flaring the pipe end

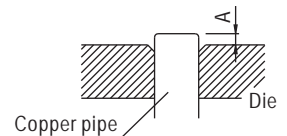
- 1) Cut the pipe end with a pipe cutter.
- 2) Remove burrs with the cut surface facing downward so that the chips do not enter the pipe.



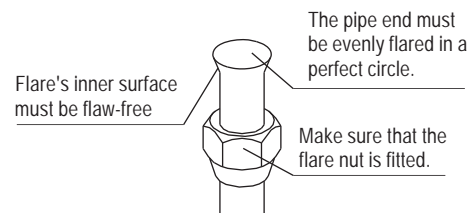
- 3) Put the flare nut on the pipe.
- 4) Flare the pipe.

Outer diam. (mm)	A(mm)	
	Max.	Min.
Ø6.35	1.3	0.7
Ø9.52	1.6	1.0
Ø12.7	1.8	1.0
Ø15.9	2.2	2.0

Set exactly at the position shown below.



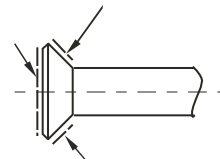
- 5) Check that the flaring is properly made.



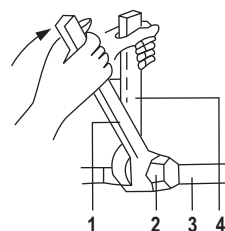
#### 3.2 Refrigerant piping

- Coat the flare both inside and outside with ether oil or ester oil.

Coat here with ether oil or ester oil



- Align the centres of both flares and tighten the flare nuts 3 or 4 turns by hand. Then tighten them fully with the torque wrenches.



- 1 Torque wrench
- 2 Flare nut
- 3 Piping union
- 4 Spanner

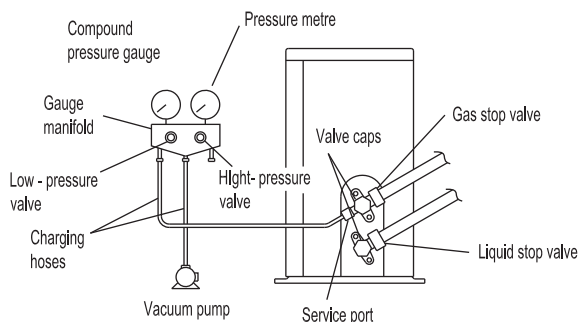
### 3.3 Purging air and checking gas leakage

- When piping work is completed, it is necessary to purge the air and check for gas leakage.



#### WARNING

- Do not mix any substance other than the specified refrigerant into the refrigeration cycle.
  - When refrigerant gas leaks occur, ventilate the room as soon as possible.
  - The specified refrigerant should always be recovered and never be released directly into the environment.
  - Use a vacuum pump for the specified refrigerant. Using the same vacuum pump for different refrigerants may damage the vacuum pump or the unit.
- 
- If using additional refrigerant, perform air purging from the refrigerant pipes and indoor unit using a vacuum pump, then charge additional refrigerant.
  - Use a hexagonal wrench(4mm) to operate the stop valve rod.
  - All refrigerant pipe joints should be tightened with a torque wrench at the specified tightening torque.



- 1) Connect projection side of charging hose (which comes from gauge manifold) to gas stop valve's service port.
- 2) Full open gauge manifold's low-pressure valve (Lo) and completely close its high-pressure valve (Hi) (High-pressure valve subsequently requires no operation.)
- 3) Do vacuum pumping and make sure that the compound pressure gauge reads -0.1MPa (-76cmHg).<sup>\*1</sup>
- 4) Close gauge manifold's low-pressure valve (Lo) and stop vacuum pump. (Keep this state for a few minutes to make sure that the compound pressure gauge pointer does not swing back.)<sup>\*2</sup>
- 5) Remove caps from liquid stop valve and gas stop valve.
- 6) Turn the liquid stop valve's rod 90 degrees counterclockwise with a hexagonal wrench to open valve. Close it after 5 seconds, and check for gas leakage. Using soapy water, check for gas leakage from indoor unit's flare and outdoor unit's flare and valve rods. After the check is complete, wipe all soapy water off.
- 7) Disconnect charging hose from gas stop valve's service port then fully open liquid and gas stop valves. (Do not attempt to turn valve rod beyond its stop.)
- 8) Tighten valve caps and service port caps for the liquid and gas stop valves with a torque wrench at the specified torques.

<sup>\*1</sup>. Pipe length vs. Vacuum pump run time

Pipe length	Up to 15m	More than 15m
Run time	Not less than 10 min	Not less than 15min

- <sup>\*2</sup>. If the compound pressure gauge pointer swings back, refrigerant may have water content or a loose pipe joint may exist. Check all pipe joints and retighten nuts as needed, then repeat steps 2) through 4).

### 3.4 Additional refrigerant charge



#### CAUTION

- Refrigerant may only be charged after performing the leak test and the vacuum pumping.
  - Check the type of refrigerant to be used on the machine nameplate. Charging with an unsuitable refrigerant may cause explosions and accidents, so always ensure that the appropriate refrigerant is charged.
  - Refrigerant containers shall be opened slowly.
- 
- The outdoor unit is factory charged with refrigerant. Calculate the added refrigerant according to the diameter and the length of the liquid pipe of the outdoor unit/indoor unit connection.

Pipe length and refrigerant amount:

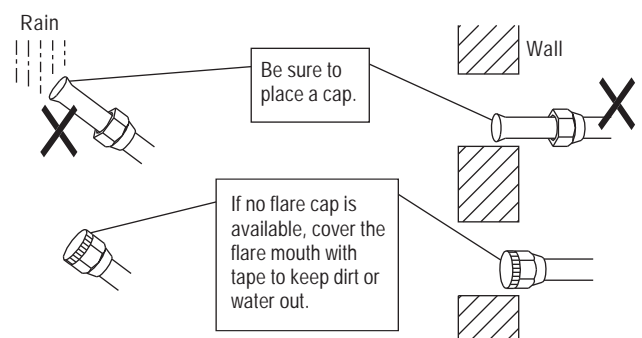
Connective pipe length	Air purging method	Additional amount of refrigerant to be charged	
Less than 5m	Use vacuum pump.	_____	
More than 5m	Use vacuum pump.	Liquid side: Φ 6.35mm (1/4") R410A: (L-5)x15g/m	Liquid side: Φ 9.52mm (3/8") R410A: (L-5)x30g/m

- Be sure to add the proper amount of additional refrigerant. Failure to do so may result in reduced performance.

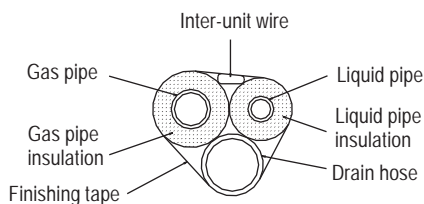
### 3.5 Refrigerant piping work

#### 1) Caution on the pipe handling

- Protect the open end of the pipe against dust and moisture.
- All pipe bends should be as gentle as possible. Use a pipe bender for bending.

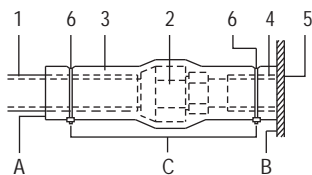


- 2) Be sure to insulate both the gas and liquid piping. Use separate thermal insulation pipes for gas and liquid refrigerant pipes. See the figure below.



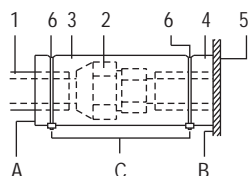
### Piping insulation procedure

#### Gas piping



- 1 Piping insulation material(field supply)
- 2 Flare nut connection
- 3 Insulation for fitting (field supply)
- 4 Piping insulation material (main unit)
- 5 Indoor unit
- 6 Clamp (field supply)
- A Turn seams up
- B Attach to base
- C Tighten the part other than the piping insulation material

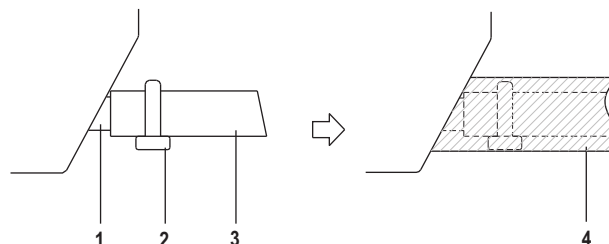
#### Liquid piping



## 4. CONNECT THE DRAIN PIPE

### 4.1 Install the drain pipes.

- 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.
- Keep pipe size equal to or greater than that of the connecting pipe (PVC pipe, nominal diameter 20mm in, outside diameter 25mm).
- Push the drain hose as far as possible over the drain socket, and tighten the metal clamp securely.

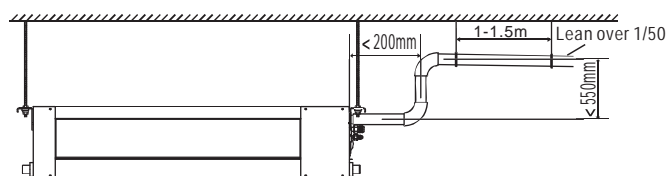


- 1 Drain socket (attached to the unit)
- 2 metal clamp
- 3 Drain hose
- 4 Insulation (field supply)

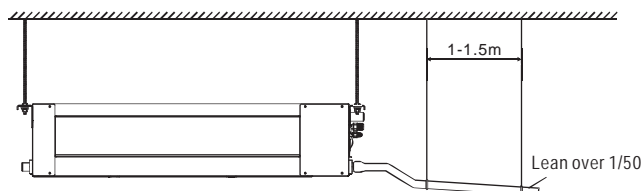
- Insulate the drain hose inside the building.
- If the drain hose cannot be sufficiently set on a slope, fit the hose with drain raising piping (field supply).
- Make sure that heat insulation work is executed on the following 2 spots to prevent any possible water leakage due to dew condensation.
  - 1 Indoor drain pipe.
  - 2 Drain socket.

### 4.2 How to perform piping

The drain pipe installation for the unit with pump.



The drain pipe installation for the unit without pump.



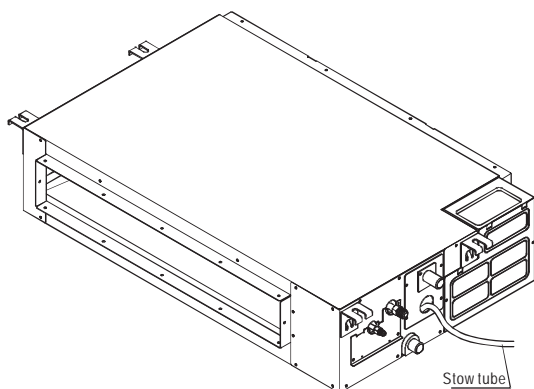
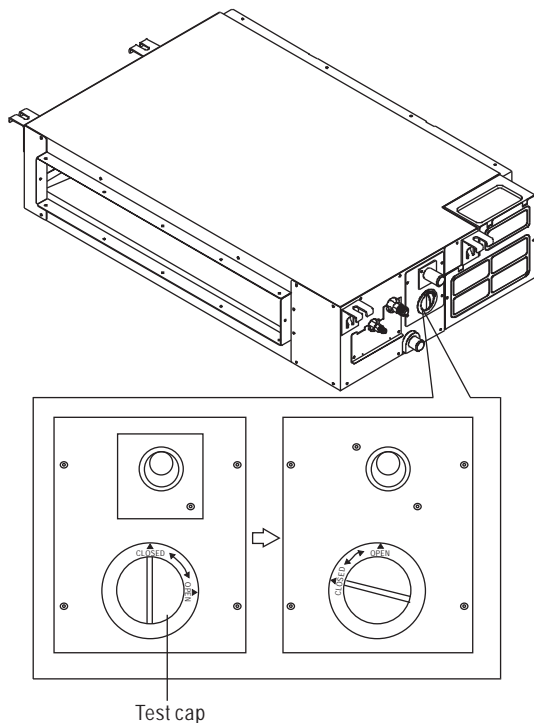
- For local insulation, be sure to insulate local piping all the way into the pipe connections inside the unit. Exposed piping may cause condensation or may cause burns when touched.
- Make sure that no oil remains on plastic parts of the decoration panel (optional equipment). Oil may cause degradation and damage to plastic parts.

### 4.3 Testing of drain piping

- Check whether the drainpipe is unhindered.
- New built house should have this test done before paving the ceiling.

#### ■ The unit with pump.

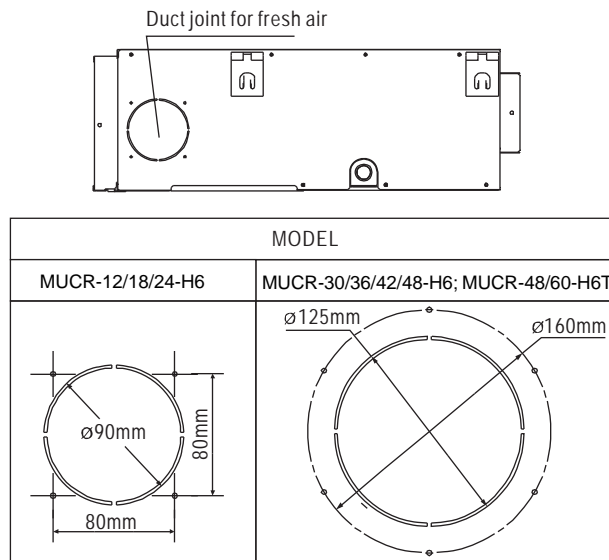
1. Remove the test cover, and stow about 2000ml water to the water pan.



2. Operate the air conditioner in "COOLING" mode. The sound of the drain pump shall be heard. Check whether the water is discharged well (1 min lag is possible, according to the length of the drain pipe), and check whether the water leaks from the joints.
3. Power off the air conditioner and recover the cap.

### 4.4 Fresh air duct installation

Dimension :

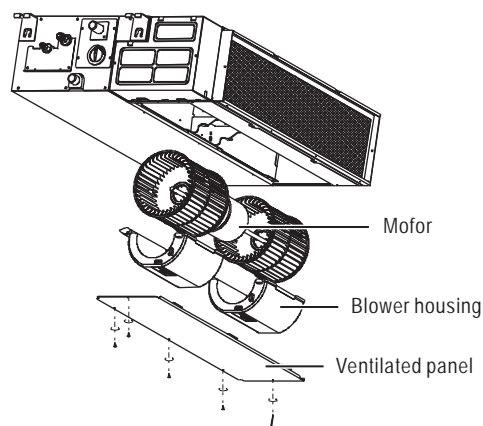


#### ■ Motor and drain pump maintenance

(Take rear ventilated as example)

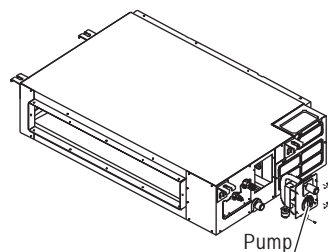
Motor maintain:

1. Take off the ventilated panel.
2. Take off the blower housing.
3. Take off the motor.



Pump maintenance:

1. Screw off four screws from drain pump.
2. Plug off pump power supply and water level switch cable.
3. Take off pump.



## 5. ELECTRIC WIRING WORK

Minimum nominal cross-sectional area of conductors:

### General instructions

- All field wiring and components must be installed by a licensed electrician and must comply with relevant European and national regulations.
- Use copper wire only.
- Follow the 'Wiring diagram' attached to the unit body to wire the outdoor unit, indoor units and the remote controller.
- A circuit breaker capable of shutting down power supply to the entire system must be installed.
- Note that the operation will restart automatically if the main power supply is turned off and then turned back on again.
- Be sure to ground the air conditioner.
- Do not connect the ground wire to gas pipes, water pipes, lightning rods, or telephone ground wires.
  - Gas pipes: might cause explosions or fire if gas leaks.
  - Water pipes: no grounding effect if hard vinyl piping is used.
  - Telephone ground wires or lightning rods: might cause abnormally high electric potential in the ground during lightning storms .

Rated current of appliance (A)	Nominal cross-sectional area (mm <sup>2</sup> )
≤6	0.75
>6 and ≤10	1.0
>10 and ≤16	1.5
>16 and ≤25	2.5
>25 and ≤32	4.0
>32 and ≤45	6.0
>45 and ≤60	10.0

#### NOTE:

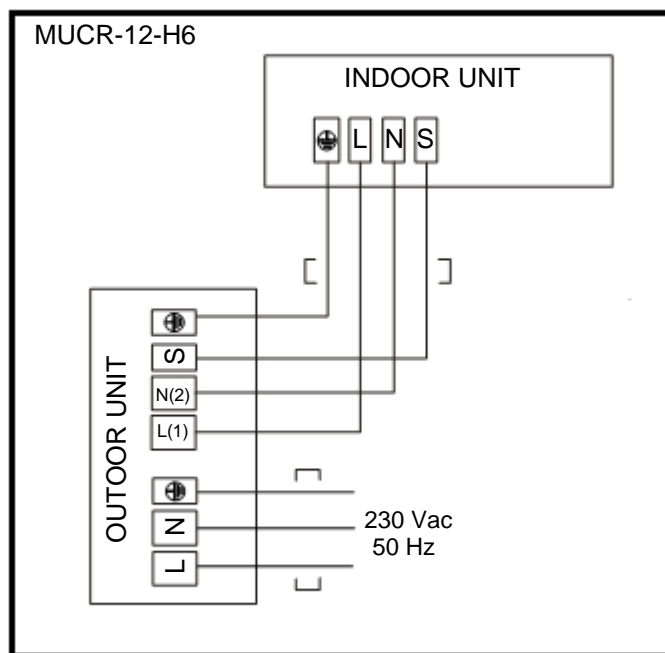
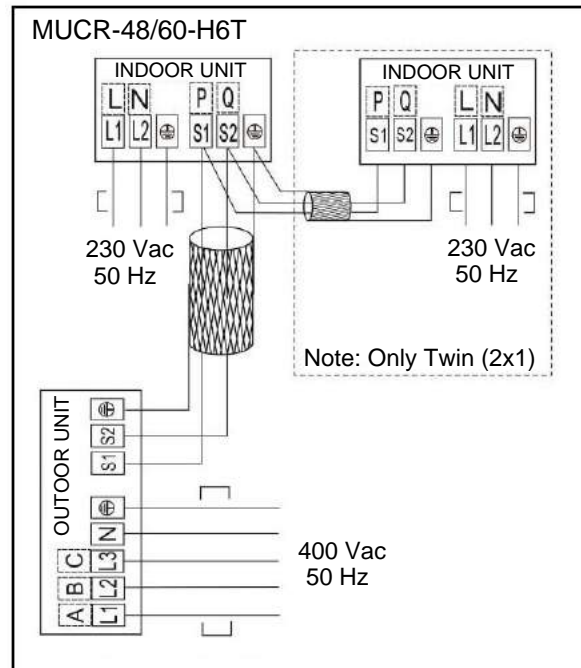
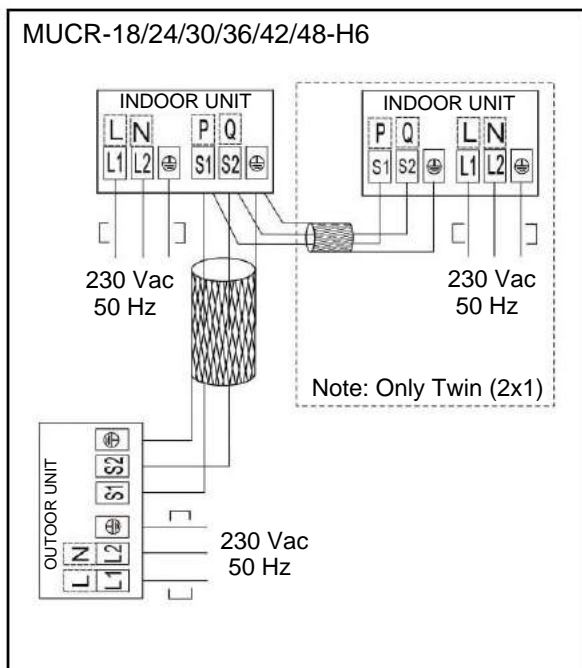
The cable size and the current of the fuse or switch are determined by the maximum current indicated on the nameplate which located on the side panel of the unit. Please refer to the nameplate before selecting the cable, fuse and switch.

### The specification of power

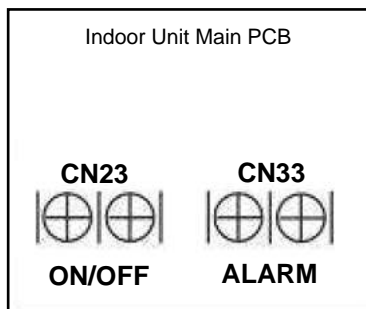
Model		MUCR-12-H6	MUCR-18/24-H6	MUCR-30/36-H6	MUCR-42/48-H6	MUCR-48/60-H6T
INDOOR UNIT POWER	Phase	—	1-phase	1-phase	1-phase	1-phase
	Frequency and Voltage	—	220-240V, 50Hz	220-240V, 50Hz	220-240V, 50Hz	220-240V, 50Hz
	POWER WIRING (mm <sup>2</sup> )	—	3×1.0	3×1.0	3×1.0	3×1.0
	CIRCUIT BREAKER/ Fuse (A)	—	15/10	15/10	15/10	15/10
OUTDOOR UNIT POWER	Phase	1-phase	1-phase	1-phase	1-phase	3-phase
	Frequency and Voltage	220-240V, 50Hz	220-240V, 50Hz	220-240V, 50Hz	220-240V, 50Hz	380-420V, 50Hz
	POWER WIRING (mm <sup>2</sup> )	3×2.5	3×2.5	3×4.0	3×6.0	5×2.5
	CIRCUIT BREAKER/ Fuse (A)	20/16	30/20	40/30	40/35	30/25
Indoor/Outdoor Connecting Wiring (mm <sup>2</sup> )		4×1.5	2×0.75 (Shielded)	2×0.75 (Shielded)	2×0.75 (Shielded)	2×0.75 (Shielded)



## Connecting wiring



## Remote ON/OFF signal and Alarm



To use the signal ON / OFF you should cut away the jumper CN23.

The operation is as follows:

- With the unit running if the contact CN23 opens unit stops and remote control is locked, CP shown in the display.
- With the unit stopped if the contact CN23 opens unit will continue stop and remote control is locked, CP shown in the display.

The alarm signal provides an output of 230Vac when the unit indicates an error code.

NOTE: Only CP shown in the display if the unit has a digital display.

The wired remote control KJR-120C (optional) also shows the CP code.



## Control and settings

The capacity of the unit, the address of the unit, temperature compensation, etc. it can be setting by remote control RG57 or by indoor dip-switch. For more information, please contact the after-sales service Mundoclimate, with your sales man or visit [www.mundoclimate.com](http://www.mundoclimate.com) in the corresponding model section you will find the parameters setting manual.

- Note**
- The unit capacity should not be modified without permission of the manufacturer.
  - The address setting of the unit is only necessary if centralized control CCM is connected.
  - Twin systems must be set as Master unit and the other as Slave, do the setting by RG57 control or by indoor dip-switch.
  - Setting is not allowed when the unit is running.

### Network address set by indoor dip-switch:

FOR SETTING NETADDRESS				
S1+S2				
CODE	0~F	0~F	0~F	0~F
NETADDRESS	0~15	16~31	32~47	48~63
FACTORY SETTING	✓			

Every air-conditioner in network has only one network address to distinguish each other. Address code of air-conditioner in LAN is set by code switches S1 & S2 on the Main Control Board of the indoor unit, and the set range is 0-63.

The adjustment should be made with disconnected power supply unit.

Note: Address setting is only required if you connect a centralized controller.

### Master / Slave set by indoor dip-switch:

SW1	SWITCH	FOR MAIN-SLAVE SETTING
ON		
STATE		
MODE	MAIN	MAIN
	NO SLAVE	SLAVE

By default, all the units are configured for use in 1x1 systems, to set an indoor unit of a Twin system (2x1) by micro-switch on the main board, you must set the micro-switch SW1 so as it is shown in the image on the left.

There are two combinations of the micro-switch to assign the master unit (the two serve equally). The adjustment should be made with disconnected power supply unit.

## How to connect wiring

- Remove the control box lid of the indoor unit.  
Remove the cover of the outdoor unit.
- Follow the "Wiring diagram label" attached to the indoor unit's control box lid to wire the outdoor unit, indoor unit and the remote controller.  
Securely fix the wires with a field supplied clamp.
- Attach the cover of the outdoor unit.

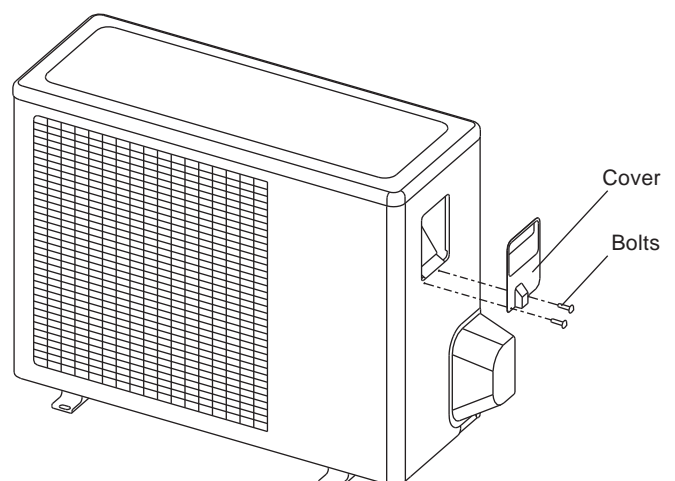
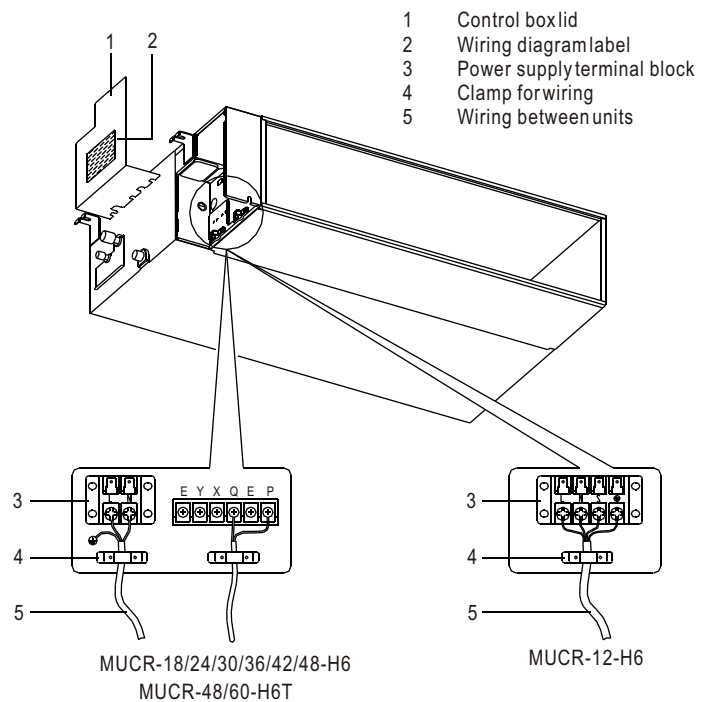
### Precautions

- Observe the notes mentioned below when wiring to the power supply terminal board.
  - Do not connect wires of different gauge to the same power supply terminal. (Looseness in the connection may cause overheating.)
  - When connecting wires of the same gauge, connect them according to the figure.



Use the specified electric wire. Connect the wire securely to the terminal. Lock the wire without applying excessive force to the terminal. (Tightening torque:  $1.31\text{N.m} \pm 10\%$ ).

- When attaching the control box lid, make sure not to pinch any wires.
- After all wiring connections are done, fill in any gaps in the casing wiring holes with putty or insulation material (field supply) thus to prevent small animals or dirt from entering the unit from outside and causing short circuits in the control box.
- Do not connect wires of different gauge to the same grounding terminal. Looseness in the connection may deteriorate the protection.
- Use only specified wires and tightly connect wires to the terminals. Be careful that wires do not place external stress on the terminals. Keep wiring in neat order so that they do not obstruct other equipment such as popping open the service cover. Make sure the cover closes tight. Incomplete connections could result in overheating, and in the worst case, electric shock or fire.

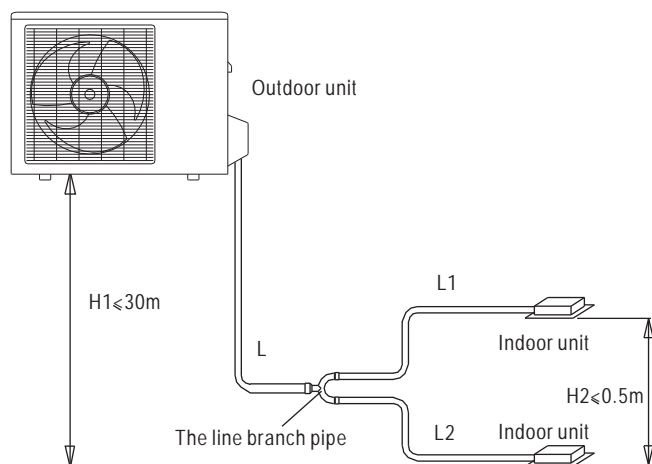


## 6. REFRIGERANT PIPE (the unit with the twins function)

### 6.1 Length and drop height permitted of the refrigerant piping

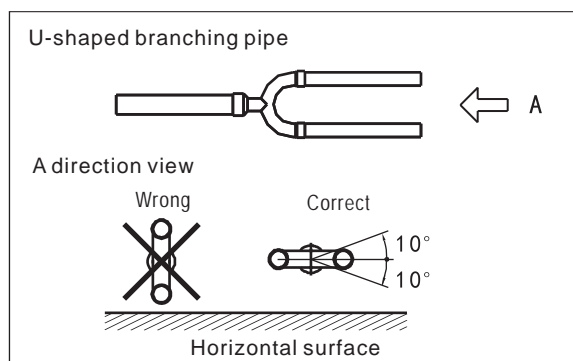
Note: Reduced length of the branching tube is the 0.5m of the equivalent length of the pipe.

Pipe length	Total pipe length (Actual)	Max value		Piping
		18K+18K 24K+24K 30K+30K	65m	
Drop height	(farthest from the line pipe branch)	15m		L1:L2
	(farthest from the line pipe branch)	10m		L1-L2
	Indoor unit-outdoor unit drop height	30m		H1
	Indoor unit to indoor unit drop height	0.5m		H2



**Note** The indoor units should be installed equivalently at the both side of the U type branch pipe.

The branching pipe must be installed horizontally, error angle of it should not large than 10°. Otherwise, malfunction will be caused.



### 6.2 Size of joint pipes for indoor unit

Size of joint pipes for indoor unit

Model	Size of main pipe(mm)		
	Gas side	Liquid side	Available branching pipe
18K	Ø12.7 (1/2)	Ø6.35 (1/4)	FQZHN-01D
24K	Ø15.9 (5/8)	Ø9.5 (3/8)	FQZHN-01D
30K	Ø15.9 (5/8)	Ø9.5 (3/8)	FQZHN-01D

### 6.3 Size of joint pipes for outdoor unit

Base on the following tables, select the diameters of the outdoor unit connective pipes. In case of the main accessory pipe large than the main pipe, take the large one for the selection.

Size of joint pipes for outdoor unit

Model	Size of main pipe(mm)		
	Gas side	Liquid side	The 1st branching pipe
36K	Ø15.9 (5/8)	Ø9.5 (3/8)	FQZHN-01D
48K	Ø15.9 (5/8)	Ø9.5 (3/8)	FQZHN-01D
60K	Ø15.9 (5/8)	Ø9.5 (3/8)	FQZHN-01D

### 6.4 Refrigerant amount to be added

Calculate the added refrigerant according to the diameter and the length of the liquid side pipe of the outdoor/indoor unit connection. The refrigerant is R410A.

(Refer to pag. 20)

## 7. TEST OPERATION

Make sure the control box lids are closed on the indoor and outdoor units.

Refer to "For the following items, take special care during construction and check after installation is finished" on page 4.

After finishing the construction of refrigerant piping, drain piping, and electric wiring, conduct test operation accordingly to protect the unit.

- 1 Open the gas side stop valve.
- 2 Open the liquid side stop valve.
- 3 Electrify crank case heater for 6 hours.
- 4 Set to cooling operation with the remote controller and start operation by pushing ON/OFF button.
- 5 Check the following points. If there is any malfunction, please resolve it according to the chapter "Troubleshooting" in the "Owner's Manual".
  - The indoor unit
    - Whether the switch on the remote controller works well.
    - Whether the buttons on the remote controller works well.
    - Whether the air flow louver moves normally.
    - Whether the room temperature is adjusted well.
    - Whether the indicator lights normally.
    - Whether the temporary buttons works well.
    - Whether there is vibration or abnormal noise during operation.
    - Whether the drainage flows smoothly.
  - The outdoor unit
    - Whether there is vibration or abnormal noise during operation.
    - Whether the generated wind, noise, or condensed of by the air conditioner have influenced your neighborhood.
    - Whether any of the refrigerant is leaked.

- 6 Turn off the main power supply after operation.



A protection feature prevents the air conditioner from being activated for approximately 3 minutes when it is restarted immediately after shut off.

# OWNER'S MANUAL

---

Please read this manual carefully before installing and using the unit.

## INVERTER SPLIT-TYPE ROOM AIR CONDITIONER

The design and specifications are subject to change without prior notice for product improvement.

### Read This Manual:

Inside you will find many helpful hints on how to use and maintain your air conditioner properly.

Just a little preventative care on your part can save you a great deal of time and money over the life of your air conditioner.

You'll find many answers to common problems in the chart of troubleshooting tips. If you review the chart of Troubleshooting Tips first, you may not need to call for service.

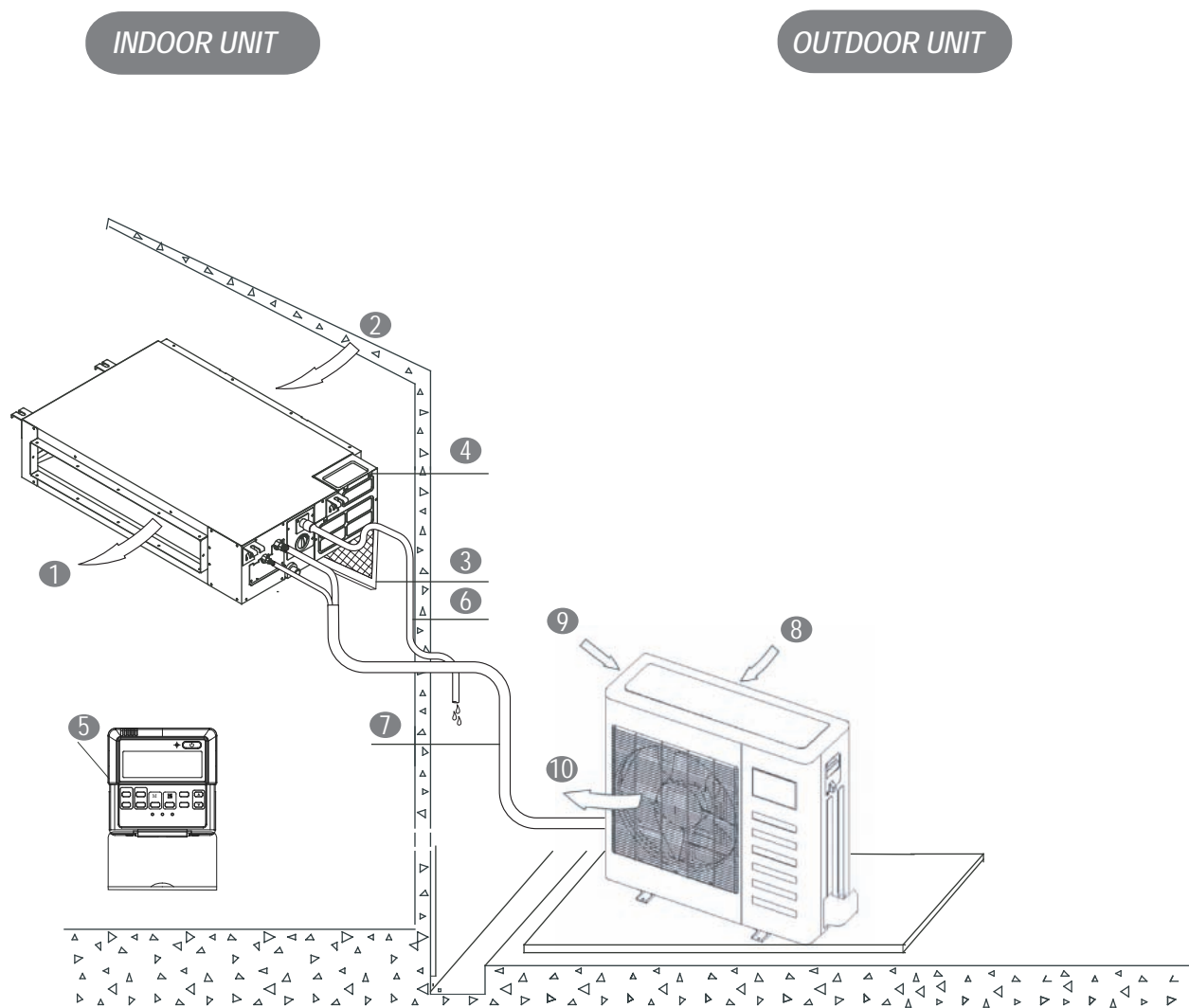


Fig.1

**INDOOR UNIT**

- ① Air outlet
- ② Air inlet
- ③ Air filter (on some models)
- ④ Electric control cabinet
- ⑤ Wire controller
- ⑥ Drain pipe

**OUTDOOR UNIT**

- ⑦ Connecting pipe
- ⑧ Air inlet
- ⑨ Air inlet (side and rear)
- ⑩ Air outlet

**NOTE**


All the pictures in this manual are for explanation purpose only. They may be slightly different from the air conditioner you purchased (depend on model). The actual shape shall prevail.

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1. IMPORTANT SAFETY INFORMATION

To prevent injury to the user or other people and property damage, the following instructions must be followed. Incorrect operation due to ignoring of instructions may cause harm or damage.

The safety precautions listed here are divided into two categories. In either case, important safety information is listed which must be read carefully.




**WARNING**

The appliance shall be installed in accordance with national wiring regulations. Failure to observe a warning may result in death.



**CAUTION**

Failure to observe a caution may result in injury or damage to the equipment.



**WARNING**

**Ask your dealer for installation of the air conditioner.**  
Incomplete installation performed by yourself may result in a water leakage, electric shock, and fire.

**Ask your dealer for improvement, repair, and maintenance.**  
Incomplete improvement, repair, and maintenance may result in a water leakage, electric shock, and fire.

**In order to avoid electric shock, fire or injury, or if you detect any abnormality such as smell of fire, turn off the power supply and call your dealer for instructions.**

**Never let the indoor unit or the remote controller get wet.**  
It may cause an electric shock or a fire.

**Never press the button of the remote controller with a hard, pointed object.**  
The remote controller may be damaged.

**Never replace a fuse with that of wrong rated current or other wires when a fuse blows out.**  
Use of wire or copper wire may cause the unit to break down or cause a fire.

**It is not good for your health to expose your body to the air flow for a long time.**

**Do not insert fingers, rods or other objects into the air inlet or outlet.**  
When the fan is rotating at high speed, it will cause injury.

**Never use a flammable spray such as hair spray, lacquer or paint near the unit.**  
It may cause a fire.

**Never touch the air outlet or the horizontal blades while the swing flap is in operation.**  
Fingers may become caught or the unit may break down.

**Never put any objects into the air inlet or outlet.**  
Objects touching the fan at high speed can be dangerous.

**Never inspect or service the unit by yourself.**  
Ask a qualified service person to perform this work.

**Do not dispose this product as unsorted municipal waste. Collection of such waste separately for special treatment is necessary.**


Do not dispose of electrical appliances as unsorted municipal waste, use separate collection facilities.  
Contact your local government for information regarding the connection systems available.

**If electrical appliances are disposed of in landfills or dumps, hazardous substances can leak into the ground and get into the food chain, damaging your health and well-being**

**To prevent refrigerant leak, contact your dealer.**  
When the system is installed and runs in a small room, it is required to keep the concentration of the refrigerant, if by any chance coming out, below the limit. Otherwise, oxygen in the room may be affected, resulting in a serious accident.

**The refrigerant in the air conditioner is safe and normally does not leak.**  
If the refrigerant leaks in the room, contact with a fire of a burner, a heater or a cooker may result in a harmful gas.

**Turn off any combustible heating devices, ventilate the room, and contact the dealer where you purchased the unit.**  
Do not use the air conditioner until a service person confirms that the portion where the refrigerant leaks is repaired.



**CAUTION**

**Do not use the air conditioner for other purposes.**  
In order to avoid any quality deterioration, do not use the unit for cooling precision instruments, food, plants, animals or works of art.

**Before cleaning, be sure to stop the operation, turn the breaker off or pull out the supply cord.**  
Otherwise, an electric shock and injury may result.

**In order to avoid electric shock or fire, make sure that an earth leak detector is installed.**

**Be sure the air conditioner is grounded.**  
In order to avoid electric shock, make sure that the unit is grounded and that the earth wire is not connected to gas or water pipe, lightning conductor or telephone earth wire.

**In order to avoid injury, do not remove the fan guard of the outdoor unit.**

**Do not operate the air conditioner with a wet hand.**  
An electric shock may happen.

**Do not touch the heat exchanger fins.**  
These fins are sharp and could result in cutting injuries.

**Do not place items which might be damaged by moisture under the indoor unit.**  
Condensation may form if the humidity is above 80%, the drain outlet is blocked or the filter is polluted.

**After a long use, check the unit stand and fitting for damage.**  
If damaged, the unit may fall and result in injury.

**To avoid oxygen deficiency, ventilate the room sufficiently if equipment with burner is used together with the air conditioner.**

**Arrange the drain hose to ensure smooth drainage.**  
Incomplete drainage may cause wetting of the building, furniture etc.

**Never touch the internal parts of the controller.**  
Do not remove the front panel. Some parts inside are dangerous to touch, and a machine trouble may happen.

**Never expose little children, plants or animals directly to the air flow.**  
Adverse influence to little children, animals and plants may result.

**Do not allow a child to mount on the outdoor unit or avoid placing any object on it.**  
Falling or tumbling may result in injury.

**Do not operate the air conditioner when using a room fumigation - type insecticide.**  
Failure to observe could cause the chemicals to become deposited in the unit, which could endanger the health of those who are hypersensitive to chemicals.

**Do not place appliances which produce open fire in places exposed to the air flow from the unit or under the indoor unit.**  
It may cause incomplete combustion or deformation of the unit due to the heat.

**Do not install the air conditioner at any place where flammable gas may leak out.**  
If the gas leaks out and stays around the air conditioner, a fire may break out.

**The appliance is not intended for use by young children or infirm persons without supervision.**

**Do not operate your air conditioner in a wet room such as a bathroom or laundry room.**

**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.**

This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

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

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.

## 2. PARTS NAMES

The air conditioner consists of the indoor unit, the outdoor unit, the connecting pipe and the remote controller.

(Refer to Fig.2-1)

### Function indicators on indoor unit display panel

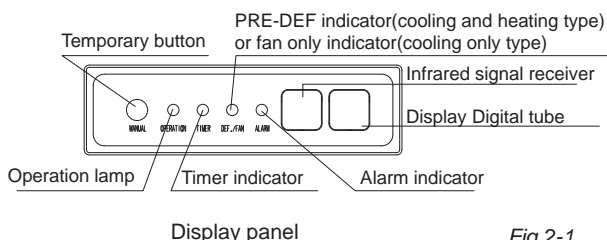


Fig.2-1

- 1 **FORCED AUTO**  
The OPERATION lamp is lit, and the air conditioner will run under FORCED AUTO mode. The remote controller operation is enabled to operate according to the received signal.
- 2 **FORCED COOL**  
The OPERATION lamp flashes, the air conditioner will turn to FORCED AUTO after it is enforced to cool with a wind speed of HIGH for 30 minutes. The remote controller operation is disabled.
- 3 **OFF**  
The OPERATION lamp goes off. The air conditioner is OFF while the remote controller operation is enabled.



### 3. AIR CONDITIONER OPERATIONS AND PERFORMANCE

Use the system in the following temperature for safe and effective operation. The Max operation temperature for the air conditioner. (Cooling/Heating)

Table 2-1

Temperature Mode	Outdoor temperature	Room temperature
Cooling operation	-15°C ~ 50°C / 5 °F ~ 122°F	17°C ~ 32°C (62°F ~ 90°F)
Heating operation	-15°C ~ 24°C / 5 °F ~ 76°F	0°C ~ 30°C (32°F ~ 86°F)
Dry operation	0°C ~ 50°C / 32 °F ~ 122°F	17°C ~ 32°C (62°F ~ 90°F)



#### NOTE

- 1 If air conditioner is used outside the above conditions, it may cause the unit to function abnormally.
- 2 The phenomenon is normal that the surface of air conditioning may condense water when the relative larger humidity in room, please close the door and window.
- 3 Optimum performance will be achieved within these operating temperature range.

#### Three-minute protection feature

A protection feature prevents the air conditioner from being activated for approximately 3 minutes when it restarts immediately after operation.

#### Power failure

Power failure during operation will stop the unit completely.

- The OPERATION lamp on the indoor unit will start flashing when power is restored.
- To restart operation, push the ON/OFF button on the remote controller.

### 4. HINTS FOR ECONOMICAL OPERATION

The following should be noticed to ensure an economical operation. (Refer to corresponding chapter for details)

- Adjust the air flow direction properly to avoid winding toward your body.
- Adjust the room temperature properly to get a comfortable situation and to avoid supercooling and superheat.
- In cooling, close the curtains to avoid direct sunlight.
- To keep cool or warm air in the room, never open doors or windows more often than necessary.
- Set the timer for the desired operating time.
- Never put obstructions near the air outlet or the air inlet. Or it will cause lower efficiency, even a sudden stop.
- Adjust the air flow direction properly to avoid winding toward your body.
- Adjust the room temperature properly to get a comfortable situation and to avoid supercooling and superheat.
- In cooling, close the curtains to avoid direct sunlight.
- To keep cool or warm air in the room, never open doors or windows more often than necessary.
- If you don't plan to use the unit for a long time, please disconnect power and remove the batteries from the remote controller. When the power switch is connected, some energy will be consumed, even if the air conditioner isn't in operation. So please disconnect the power to save energy. And please switch the power on 12 hours before you restart the unit to ensure a smooth operation.
- A clogged air filter will reduce cooling or heating efficiency, please clean it once two weeks.

### 5. MAINTENANCE



#### CAUTION

Before you clean the air conditioner, be sure the power supply is off.

Check if the wiring is not broken off or disconnected.

Use a dry cloth to wipe the indoor unit and remote controller.

A wet cloth may be used to clean the indoor unit if it is very dirty.

Never use a damp cloth on the remote controller.

Do not use a chemically-treated duster for wiping or leave such material on the unit for long. it may damage or fade the surface of the unit.

Do not use benzene, thinner, polishing powder, or similar solvents for cleaning. These may cause the plastic surface to crack or deform.

## ■ Maintenance after a long stop period

(eg. at the beginning of the season)

Check and remove everything that might be blocking inlet and outlet vents of indoor units and outdoor units.

Clean air filters and casings of indoor units.

Refer to "Cleaning the air filter" for details on how to proceed and make sure to install cleaned air filters back in the same position.

Check and remove everything that might be blocking inlet and outlet vents of indoor units and outdoor units.

Clean air filters and casings of indoor units.

Refer to "Cleaning the air filter" for details on how to proceed and make sure to install cleaned air filters back in the same position.

Turn on the power at least 12 hours before operating the unit in order to ensure smoother operation. As soon as the power is turned on, the remote controller displays appear.

## ■ Maintenance before a long stop period

(eg. at the end of the season)

Let the indoor units run in fan only operation for about half a day in order to dry the interior of the units.

Clean air filters and casings of indoor units. Refer to "Cleaning the air filter" for details on how to proceed and make sure to install cleaned air filters back in the same position.

## ■ Cleaning the air filter(on some models)

The air filter can prevent the dust or other particulate from going inside. In case of blockage of the filter, the working efficiency of the air conditioner may greatly decrease.

Therefore, the filter must be cleaned once two weeks during long time usage.

If the air conditioner is installed in a dust place, clean the air filter frequent.

If the accumulated dust is too heavy to be cleaned, please replace the filter with a new one(replaceable air filter is an optional fitting).

- For your purchasing unit is a rear ventilated one, please remove the filter fixed screws (2 screws) and take down the filter away from the unit.

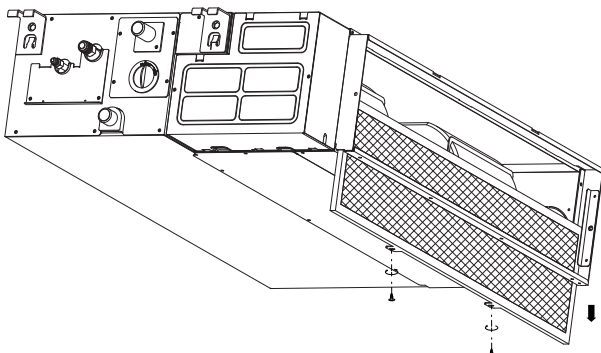


Fig.5-1

- For your purchasing unit is a descensional ventilated one, please push the filter up slightly to let the position retainer escape away from the flange fixed holes, and take off the filter according to the arrow direction shows in the following fig.

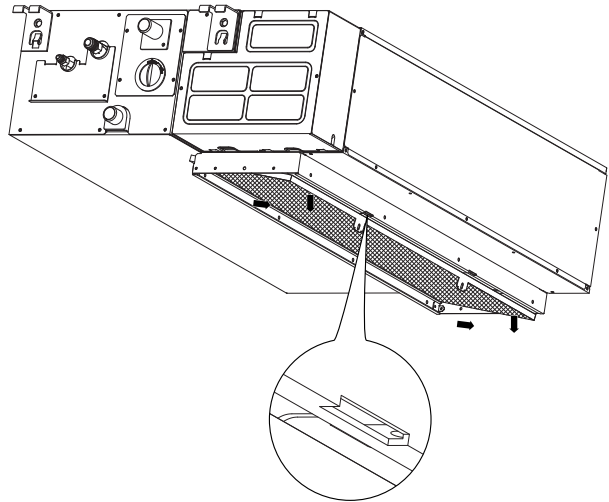


Fig.5-2

- Clean the air filter (Vacuum cleaner or pure water may be used to clean the air filter. If the dust accumulation is too heavy, please use soft brush and mild detergent to clean it and dry out in cool place).

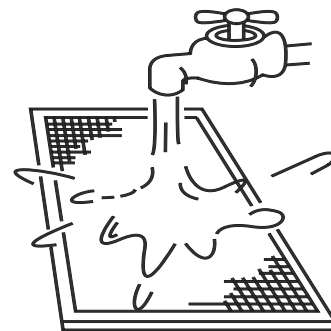


Fig.5-3

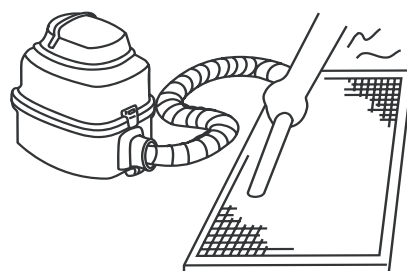


Fig.5-4



The air-in side should face up when using vacuum cleaner.  
(Refer to Fig.5-4)  
The air-in side should face down when using water. (Refer to Fig.5-3)



### CAUTION

Do not dry out the air filter under direct sunshine or with fire.

5. Re-install the air filter
6. Install and close the air-in grill in the reverse order of step 1 and 2 and connect the control box cables to the corresponding terminators of the main body .

## 6. FOLLOWING SYMPTOMS ARE NOT AIR CONDITIONER TROUBLES

### Symptom 1: The system does not operate

- The air conditioner does not start immediately after the ON/OFF button on the remote controller is pressed.  
If the operation lamp lights, the system is in normal condition. To prevent overloading of the compressor motor, the air conditioner starts 3 minutes after it is turned ON.
- If the operation lamp and the "PRE-DEF indicator(cooling and heating type) or fan only indicator(cooling only type)" light, it means you choose the heating model, When just starting, if the compressor has not started, the indoor unit appears "anti cold wind" protection because of its overflow outlet temperature.

### Symptom 2: Change into the fan mode during cooling mode

- In order to prevent the indoor evaporator frosting, the system will change into fan mode automatically, restore to the cooling mode after soon.
- When the room temperature drops to the set temperature, the compressor goes off and the indoor unit changes to fan mode; when the temperature rises up, the compressor starts again. It is same in the heating mode.

### Symptom 3: White mist comes out of a unit

#### Symptom 3.1: Indoor unit

- When humidity is high during cooling operation If the interior of an indoor unit is extremely contaminated, the temperature distribution inside a room becomes uneven. It is necessary to clean the interior of the indoor unit. Ask your dealer for details on cleaning the unit. This operation requires a qualified service person

### Symptom 3.2: Indoor unit, outdoor unit

- When the system is changed over to heating operation after defrost operation Moisture generated by defrost becomes steam and is exhausted.

## Sptom 4: Noise of air conditionerscooling

### Symptom 4.1: Indoor unit

- A continuous low "shah" sound is heard when the system is in cooling operation or at a stop.  
When the drain pump (optional accessories) is in operation, this noise is heard.
- A "pishi-pishi" squeaking sound is heard when the system stops after heating operation.  
Expansion and contraction of plastic parts caused by temperature change make this noise.

### Symptom 4.2: Indoor unit, outdoor unit

- A continuous low hissing sound is heard when the system is in operation.  
This is the sound of refrigerant gas flowing through both indoor and outdoor units.
- A hissing sound which is heard at the start or immediately after stopping operation or defrost operation.  
This is the noise of refrigerant caused by flow stop or flow change.

### Symptom 4.3: Outdoor unit

- When the tone of operating noise changes.  
This noise is caused by the change of frequency.

## Symptom 5: Dust comes out of the unit

- When the unit is used for the first time in a long time.  
This is because dust has gotten into the unit.

## Symptom 6: The units can give off odours

- The unit can absorb the smell of rooms, furniture, cigarettes, etc., and then emit it again.

## Symptom 7: The outdoor unit fan does not spin.

- During operation. The speed of the fan is controlled in order to optimize product operation.

## 7. TROUBLESHOOTING

### 7.1. Troubles and causes of air conditioner

If one of the following malfunctions occur, stop operation, shut off the power, and contact with your dealer.

- The operation lamp is flashing rapidly (5Hz). This lamp is still flashing rapidly after turn off the power and turn on again. (Refer to Table 7-1, Table 7-2 and Table 7-3)
- Remote controller receives malfunction or the button does not work well.
- A safety device such as a fuse, a breaker frequently actuates.
- Obstacles and water enter the unit.
- Water leaks from indoor unit.
- Other malfunctions.

If the system does not properly operate except the above mentioned cases or the above mentioned malfunctions is evident, investigate the system according to the following procedures. (Refer to Table 7-4)



#### CAUTION

Please cut off the power supply when appearing the above malfunction, check if the voltage provided is out of range, check if the installation of air-conditioner is correct, then electrify again after 3 minutes power off. If the problem is still existent, please contact the local service station or the equipment provider.

Table 7-1 Indoor unit error codes

Nº	Code	Timer Lamp	Run Lamp (flashes)	Description
1	E0	OFF	1	Indoor EEPROM error
2	E1	OFF	2	Communication malfunction between indoor and outdoor units
3	E3	OFF	4	Indoor fan speed malfunction
4	E4	OFF	5	Indoor room temperature sensor (T1) open circuit or short circuit
5	E5	OFF	6	Indoor coil temperature sensor (T2) open circuit or short circuit
6	EC	OFF	7	Refrigerant leakage detection malfunction
7	EE	OFF	8	Water-level alarm malfunction
8	E8	OFF	9	Communication malfunction between two indoor units (for Twin systems)
9	E9	OFF	10	Other malfunction of Twins systems
10	Ed	OFF	11	Outdoor unit is faulty (for old communication protocol)
11	F0	ON	1	Current overload protection
12	F1	ON	2	Outdoor room temperature sensor (T4) open circuit or short circuit
13	F2	ON	3	Outdoor coil temperature sensor (T3) open circuit or short circuit
14	F3	ON	4	Outdoor discharge temperature sensor (T5) open circuit or short circuit
15	F4	ON	5	Outdoor EEPROM error
16	F5	ON	6	Outdoor fan speed malfunction
17	F6	ON	7	Coil temperature sensor (T2b) open circuit or short circuit (for some Multi)
18	F7	ON	8	Lifting panel communication checking channel is abnormal
19	F8	ON	9	Lifting panel malfunction
20	F9	ON	10	Lifting panel is not closed
21	P0	FLASH	1	Inverter module IPM protection
22	P1	FLASH	2	High/Low voltage protection
23	P2	FLASH	3	High temperature protection of compressor top
24	P3	FLASH	4	Outdoor low temperature protection
25	P4	FLASH	5	Compressor drive error
26	P5	FLASH	6	Mode conflict (for some Multi models)
27	P6	FLASH	7	Low pressure protection of compressor
28	P7	FLASH	8	Sensor of outdoor IGBT is faulty
29	CP	--	--	Remote control OFF enabled

Table 7-2 Outdoor unit error codes (Models 18 to 60)

Nº	Code	Description
1	E1	Communication malfunction between indoor and outdoor units
2	F0	Current overload protection
3	F1	Outdoor room temperature sensor (T4) open circuit or short circuit
4	F2	Outdoor coil temperature sensor (T3) open circuit or short circuit
5	F3	Outdoor discharge temperature sensor (T5) open circuit or short circuit
6	F4	Outdoor EEPROM error
7	F5	Outdoor fan speed malfunction
8	P0	Inverter module IPM protection
9	P1	High/Low voltage protection
10	P3	Outdoor low temperature protection
11	P4	Rotor position protection of compressor
12	P7	Sensor of outdoor IGBT is faulty
13	J0	High temperature position of indoor heat exchanger in heating mode
14	J1	High temperature position of indoor heat exchanger in cooling mode
15	J2	High discharge temperature protection
16	J3	PFC module protection
17	J4	Communication error between outdoor main chip and compressor driven chip IR341
18	J5	High pressure protection
19	J6	Low pressure protection
20	J8	AC voltage protection

In low ambient cooling mode, the LED displays "LC" or alternative displays between running frequency and "LC" (each displays 0.5s)

Table 7-3

Symptoms	Causes	Solution
Unit does not start	<ul style="list-style-type: none"> <li>Power failure.</li> <li>Power switch is off.</li> <li>Fuse of power switch may have burned.</li> <li>Batteries of remote controller exhausted or other problem of controller.</li> </ul>	<ul style="list-style-type: none"> <li>Wait for the comeback of power.</li> <li>Switch on the power.</li> <li>ReplLocation:</li> <li>Replace the batteries or check the controller.</li> </ul>
Air flowing normally but completely can't cooling	<ul style="list-style-type: none"> <li>Temperature is not set correctly.</li> <li>Be in 3 minutes protection of compressor.</li> </ul>	<ul style="list-style-type: none"> <li>Set the temperature properly.</li> <li>Wait.</li> </ul>
Units start or stop frequently	<ul style="list-style-type: none"> <li>Refrigerant is too little or too much.</li> <li>Air or no concretingc gas in the refrigerating circuit.</li> <li>Compressor is malfunction.</li> <li>Voltage is too high or too low.</li> <li>System circuit is blocked.</li> </ul>	<ul style="list-style-type: none"> <li>Check leakage, and rightly recharge refrigerant.</li> <li>Vacuum and recharge refrigerant.</li> <li>Maintenance or change compressor.</li> <li>Install manostat.</li> <li>Find reasons and solution.</li> </ul>
Low cooling effect	<ul style="list-style-type: none"> <li>Outdoor unit and indoor unit heat exchanger is dirty.</li> <li>The air filter is dirty.</li> <li>Inlet/outlet of indoor/outdoor units is blocked.</li> <li>Doors and windows are open</li> <li>Sunlight directly shine.</li> <li>Too much heat resource.</li> <li>Outdoor temp. is too high.</li> <li>Leakage of refrigerant or lack of refrigerant.</li> </ul>	<ul style="list-style-type: none"> <li>Clean the heat exchanger.</li> <li>Clean the air filter.</li> <li>Eliminate all dirties and make air smooth.</li> <li>Close doors and windows.</li> <li>Make curtains in order to shelter from sunshine.</li> <li>Reduce heat source.</li> <li>AC cooling capacity reduces (normal).</li> <li>Check leakage and rightly recharge refrigerant.</li> </ul>
Low heating effect	<ul style="list-style-type: none"> <li>Outdoor temperature is lower than 7°C</li> <li>Doors and windows not completely closed.</li> <li>Leakage of refrigerant or lack of refrigerant.</li> </ul>	<ul style="list-style-type: none"> <li>Use heating device.</li> <li>Close doors and windows.</li> <li>Check leakage and rightly recharge refrigerant.</li> </ul>

## 7.2. Troubles and causes of wire controller

Before asking for serving or repairing , check the following points. (Refer to Table 7-4)

Table 7-4

Symptoms	Solution	Causes
The fan speed can not be changed.	<ul style="list-style-type: none"> <li>● Check whether the MODE indicated on the display is "AUTO"</li> </ul>	When the automatic mode is selected, the air conditioner will automatically change the fan speed.
	<ul style="list-style-type: none"> <li>● Check whether the MODE indicated on the display is "DRY"</li> </ul>	When dry operation is selected, the air conditioner automatically change the fan speed. The fan speed can be selected during "COOL" , "FAN ONLY" , and "HEAT"
The wire controller signal is not transmitted even when the ON/OFF button is pushed.	<ul style="list-style-type: none"> <li>● Check whether the signal transmitter of the wire controller is properly directed to the infrared signal receiver of the indoor unit.</li> </ul>	The power supply is off.
The TEMP. indicator does not come on.	<ul style="list-style-type: none"> <li>● Check whether the MODE indicated on the display is FAN ONLY</li> </ul>	The temperature cannot be set during FAN mode.
The indication on the display disappears after a lapse of time.	<ul style="list-style-type: none"> <li>● Check whether the timer operation has come to an end when the TIMER OFF is indicated on the display.</li> </ul>	The air conditioner operation will stop up to the set time
The TIMER ON indicator goes off after a lapse of certain time.	<ul style="list-style-type: none"> <li>● Check whether the timer operation is started when the TIMER ON is indicated on the display.</li> </ul>	Up to the set time, the air conditioner will automatically start and the appropriate indicator will go off.
No receiving tone sounds from the indoor unit even when the ON/OFF button is pressed.	<ul style="list-style-type: none"> <li>● Check whether the signal transmitter of the wire controller is properly directed to the infrared signal receiver of the indoor unit when the ON/OFF button is pressed.</li> </ul>	Directly transmit the signal transmitter of the wire controller to the infrared signal receiver of the indoor unit, and then repeatedly push the ON/OFF button twice.

# WIRED CONTROLLER



---

- This manual gives detailed description of the precautions that should be brought to your attention during operation.
- In order to ensure correct service of the wired controller please read this manual carefully before using the unit.
- For convenience of future reference, keep this manual after reading it.
- All the pictures in this manual are for explanation purpose only. Your wire controller may be slightly different .The actual shape shall prevail.
- The design and specifications are subject to change without prior notice for product improvement. Consult with the sales agency or manufacturer for details.



## I. Safety precautions

The following contents are stated on the product and the operation manual, including usage, precautions against personal harm and property loss, and the methods of using the product correctly and safely. After fully understanding the following contents (identifiers and icons), read the text body and observe the following rules.



### ■ Identifier description

Identifier	Meaning
 <b>Warning</b>	Means improper handling may lead to personal death or severe injury.
 <b>Caution</b>	Means improper handling may lead to personal injury or property loss.
[Note]: 1. "Harm" means injury, burn and electric shock which need long-term treatment but need no hospitalization 2. "Property loss" means loss of properties and materials.	

### ■ Icon description

Icon	Meaning
	It indicates forbidding. The forbidden subject-matter is indicated in the icon or by images or characters aside.
	It indicates compulsory implementation. The compulsory subject-matter is indicated in the icon or by images or characters aside.

### Warning

 <b>Warning</b>	Delegate installation	Please entrust the distributor or professionals to install the unit. The installers must have the relevant know-how. Improper installation performed by the user without permission may cause fire, electric shock, personal injury or water leakage.
 <b>Usage Warning</b>	Forbid	Do not spray flammable aerosol to the wire controller directly. Otherwise, fire may occur.
	Forbid	Do not operate with wet hands or let water enter the wire controller. Otherwise, electric shock may occur.



### NOTE

- ① Do not install the unit in a place vulnerable to leakage of flammable gases. Once flammable gases are leaked and left around the wire controller, fire may occur.
- ② Do not operate with wet hands or let water enter the wire controller. Otherwise, electric shock may occur.
- ③ The wiring should adapt to the wire controller current. Otherwise, electric leakage or heating may occur and result in fire.
- ④ The specified cables shall be applied in the wiring. No external force may be applied to the terminal. Otherwise, wire cut and heating may occur and result in fire.

## 2. Installation accessory

### 2.1 Select the installation location

Don't install at the place where cover with heavy oil, vapor or sulfureted gas, otherwise, this product would be deformed that would lead to system malfunction.

### 2.2 Preparation before installation

1. Please confirm that all the following parts you have been supply.

No.	Name	Qty.	Remarks
1	Wire controller	1	_____
2	Installation and owner's manual	1	_____
3	Screws	3	M4X20 (For Mounting on the Wall)
4	Wall plugs	3	For Mounting on the Wall
5	Screws	2	M4X25 (For Mounting on switch box)
6	Plastic screw bars	2	For fixing on switch box
7	Battery	1	
8	The connective wires group	1	Optional

2. Please filed install the following accessory.

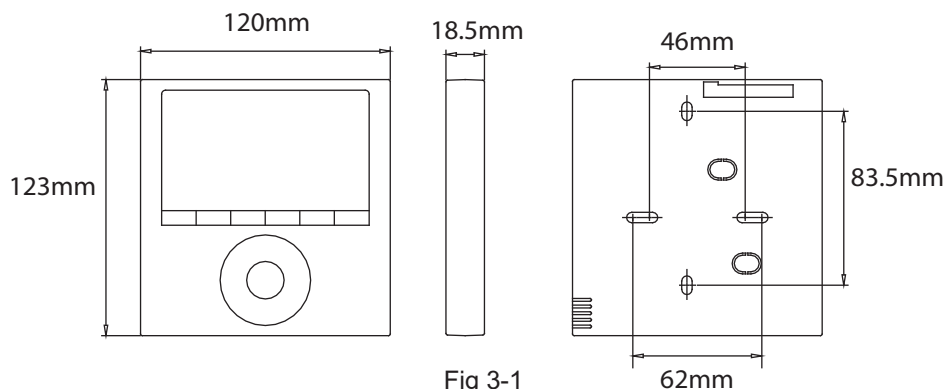
No.	Name	Qty.(embeded into wall)	Specification (only for reference)	Remarks
1	Switch box	1	_____	_____
2	Wiring Tube(Insulating Sleeve and Tightening Screw)	1	_____	_____

Precaution of install the wire controller

1. This manual provides the installation method of wire controller. Please refer to the wiring diagram of this installation manual to wire the wire controller with indoor unit.
2. The wire controller working in low voltage loop circuit. Forbid to directly contact the cable of 220V commercial electricity or of 380V high voltage, and don't wire this kind of wire in the said loop; wiring clearance between configured tubes should at the range of 300~500 or above.
3. The Shielded wire of the wire controller must be grounded reliable.
4. Upon finish the wire controller connection, do not employed tramegger to detect the insulation.

## 3. Installation method

### 1. Dimensions



## 2. Remove the upper part of wire controller

- Insert a slot screwdriver into the slots in the lower part of the wire controller (2 places), and remove the upper part of the wire controller. (Fig.3-2)



### NOTICE

The PCB is mounted in the upper part of the wire controller. Be careful not to damage the board with the slot screwdriver.

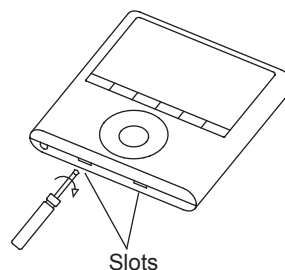


Fig 3-2

## 3. Fasten the back plate of the wire controller

- For exposed mounting, fasten the back plate on the wall with the 3 screws (M4×20) and plugs. (Fig.3-3)

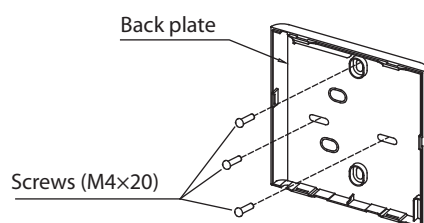


Fig 3-3

- For flush-mounting, fasten the back plate on the switch box with 2 screws (M4×25) and fasten it on the wall with 1 screw (M4×20). (Fig.3-4)

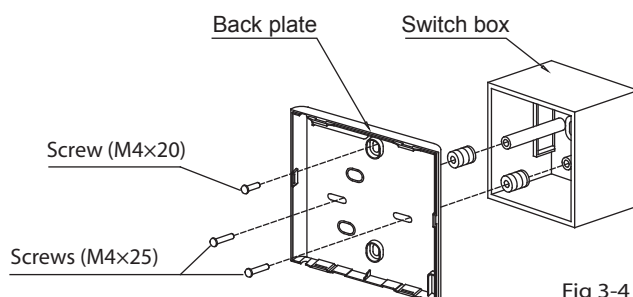


Fig 3-4



### NOTICE

Put on a flat surface. Be careful not to distort the back plate of the wire controller by overtightening the mounting screws.

## 4. Battery installation

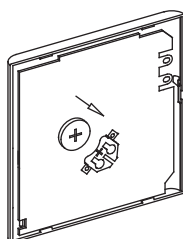


Fig 3-5

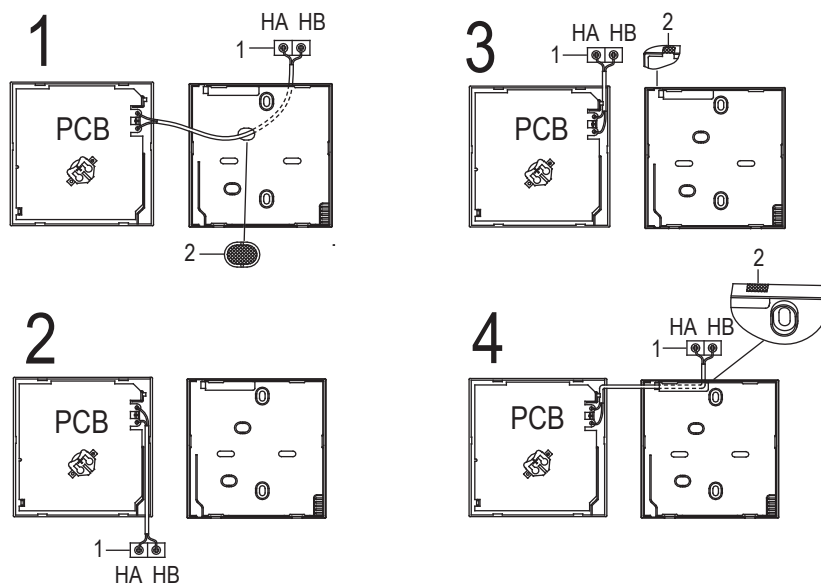
- Put the battery into the installation site and make sure the positive side of the battery is in accordance with the positive side of installation site. (See Fig.3-5)
- Please set the time corrected on the first time operation. Batteries in the wire controller can timing under power failure which ensure the time keep right. When the power restores, if the time displayed is not correct, it means the battery is dead and replace the battery.



## 5. Wire the indoor unit

4 methods

- 1 from the rear;
- 2 from the bottom;
- 3 from the top;
- 4 from the top center.



- 1 indoor unit  
2 notch the part for the wiring to pass through with nippers, etc.

Connect the terminals on the remote controller (HA ,HB), and the terminals of the indoor unit (HA ,HB). (HA and HB do not have polarity.)

**NOTE:** DO NOT allow water to enter the remote control.  
Use the trap and putty to seal the wires.

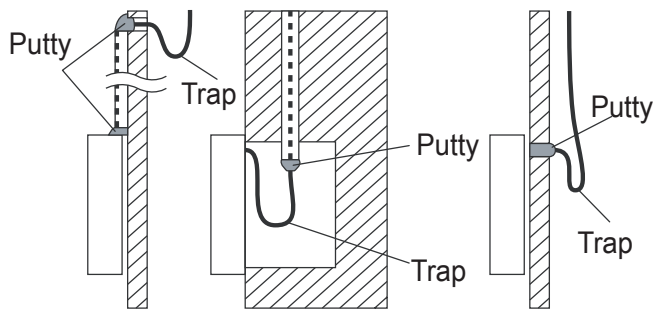


Fig 3-6

## 6. Reattach the upper part of the wire controller

- After adjusting the upper case and then buckle the upper case; avoid clamping the wiring during installation. (Fig 3-7)

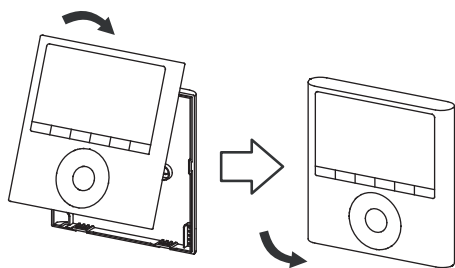


Fig 3-7

All the pictures in this manual are for explanation purpose only.  
Your wire controller may be slightly different .The actual shape shall prevail.

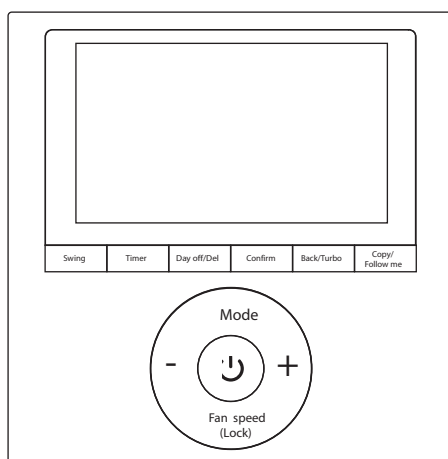
## 4. Specification

Input voltage	DC 5V/DC 12V
Ambient temperature	-5~43°C (23~110°F)
Ambient humidity	RH40%~RH90%

### Wiring specifications

Wiring type	Size	Total length
Shielded vinyl cord or cable	0.75-1.25mm <sup>2</sup>	≤50m

## 5. Feature and function of the wired controller



### Feature:

LCD display.

Malfunction code display: it can display the error code, helpful for service.

4-way wire layout design, no raised part at backside, more convenient to place the wires and install the device.

Room temperature display.

Weekly Timer.

### Function:

Mode: choose Auto-Cool-Dry- Heat -Fan

Fan speed: Auto/Low/Med/High speed

Swing(on some models)

Timer ON/OFF

Temp setting

Weekly timer

Follow me

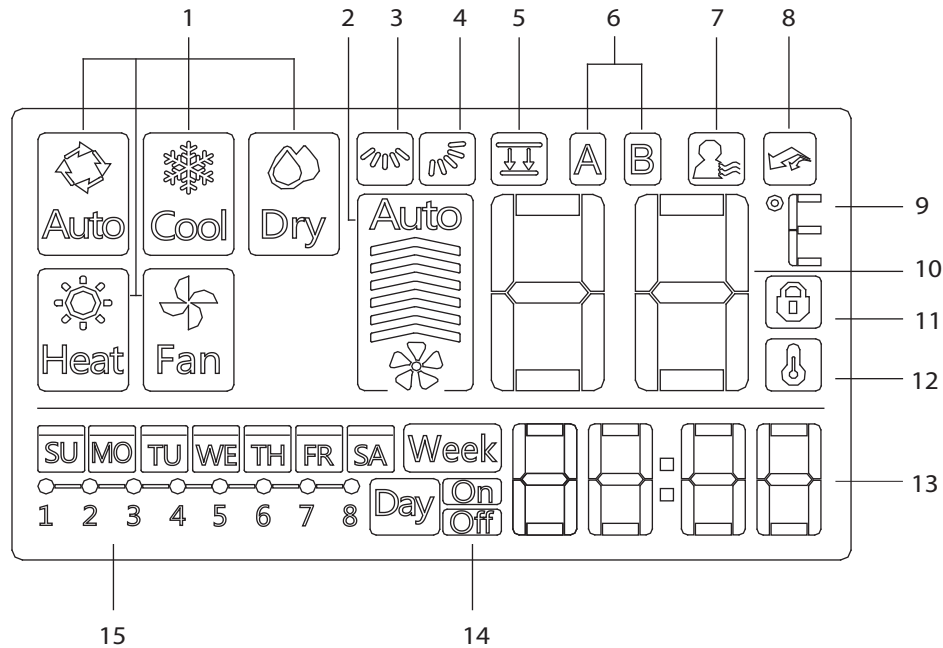
Child Lock

LCD display

Clock

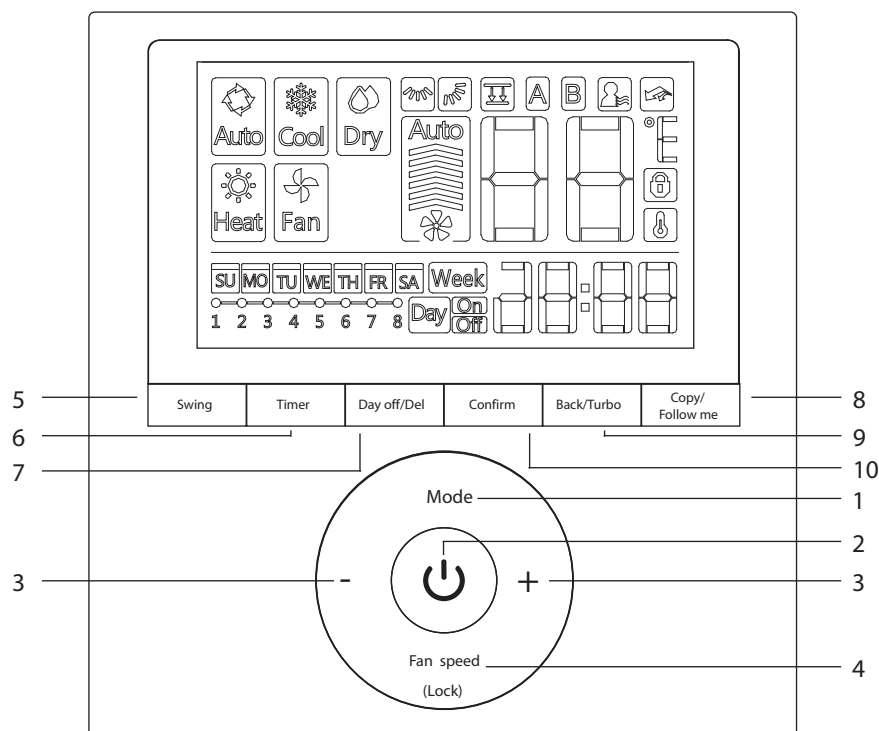
Faceplate function (on some models)

## 6. Name on the LCD of the wire controller



- |   |                                |
|---|--------------------------------|
| 1 Operation mode indication               | 8 Turbo function indication    |
| 2 Fan speed indication                    | 9 C° / F° indication           |
| 3 Left-right swing indication             | 10 Temperature display         |
| 4 Up-down swing indication                | 11 Lock indication             |
| 5 Faceplate function indication           | 12 Room temperature indication |
| 6 Main unit and secondary unit indication | 13 Clock display               |
| 7 Follow me function indication           | 14 On/Off timer                |
|   | 15 Timer display               |

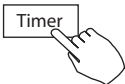
## 7. Name of the button on the wire controller



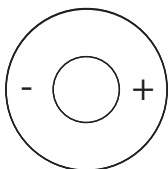

- |                    |                         |
|--------------------|-------------------------|
| 1 MODE button      | 6 TIMER button          |
| 2 POWER button     | 7 DAY OFF/DEL button    |
| 3 Adjust button    | 8 COPY/FOLLOW ME button |
| 4 FAN SPEED button | 9 BACK/TURBO button     |
| 5 SWING Button     | 10 CONFIRM button       |

## 8. Preparatory operation

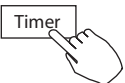
### Set the current day and time

- 1  Press the TIMER button for 3 seconds or more.  
The timer display will flash.

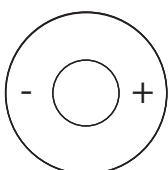

---

- 2  Press the button “+” or “-” to set the date. The selected date will flash.  


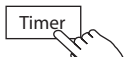
---

- 3  The date setting is finished and the time setting is prepared after pressing TIMER button or there is no pressing button in 10 seconds.

---


- 4  Press the button “+” or “-” to set the current time.  
Press repeatedly to adjust the current time in 1-minute increments.  
Press and hold to adjust the current time continuous.  
  
ex.Monday AM 11:20

---

- 5  The setting is done after pressing TIMER button or there is no pressing button in 10 seconds.

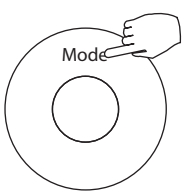
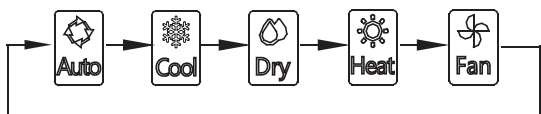
## 9. Operation

### To start/stop operation

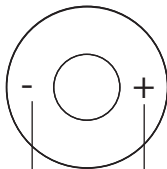
-  Press the POWER button.

### To set the operation mode

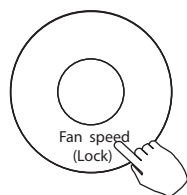
#### Operation mode setting

-  Press the MODE button to set the operation mode.  
(Heat function is invalid for cool only type unit)
- 

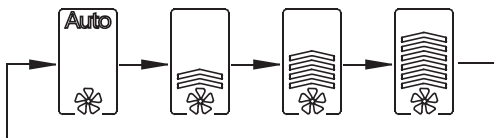
#### Room temperature setting

-  Press the button “+” or “-” to set the room temperature.  
Indoor Setting Temperature Range :  
17~30°C (62~86°F/62~88°F).
- Lower      Raise

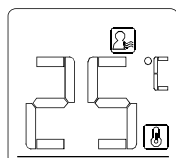
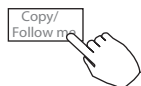
### Fan speed setting



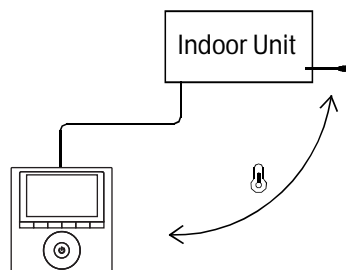
Press the FAN SPEED button to set the fan speed.  
(This button is unavailable when in the mode of Auto or Dry)




### Room temperature sensor selection

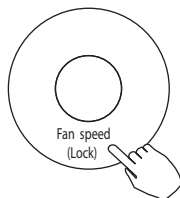


Press the Follow me button to select whether the room temperature is detected at the indoor unit or the wire controller.




When the Follow me function indication  appears, the room temperature is detected at the wire controller.

### Child lock function



Press the Lock button for 3 seconds to activate the child lock function and lock all buttons on the wire controller.  
Press the button again for 3 seconds to deactivate the child lock function.

When the child lock function is activated, the  mark appears.

### Keypad tone setting



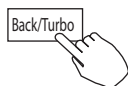
Press the buttons Swing and Timer simultaneously for 3 seconds to close the keypad tone.  
Press the buttons again for 3 seconds to open the keypad tone.

### °C & °F scale selection (on some models)




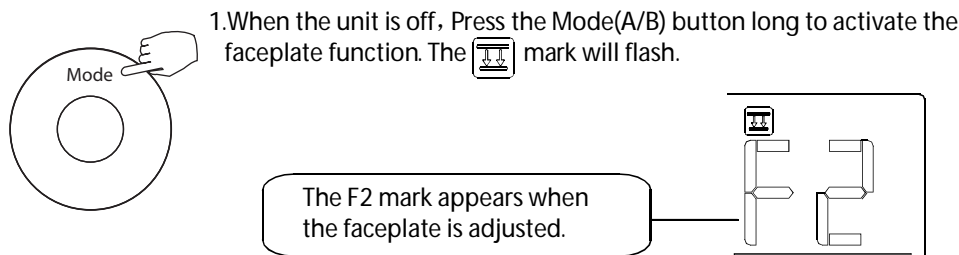
Press the buttons Back and Copy simultaneously for 3 seconds will alternate the temperature display between the °C&°F scale.

### Turbo function (on some models)

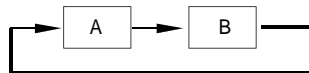


Press the Turbo button to activate the turbo function.  
Press the button again to deactivate the turbo function.

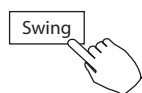
When the turbo function is activated, the  mark appears.

**Faceplate function (on some models)**


2. Push the Mode(A/B) button to select Unit A or Unit B, the wire controller select in a sequence that goes from (this step do not need to perform if the wire controller is connected with one unit only):

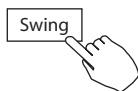


3. Press the button "+" and "-" to control the lift and drop of the faceplate.  
Pressing the "+" button can stop the faceplate, while it is dropping.  
Pressing the "-" button can stop the faceplate, while it is lifting.


**Left-right airflow swing (on some models)**

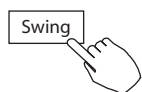
Press the swing button long to activate the auto Left-right swing function.  
And then the louver would swing automatically. Press it again to stop.

When the auto Left-right swing feature of the louver is activated, the  mark appears.  
(Not applicable to all the models)


**Up-Down airflow direction and swing (on some models)**

Press the Swing button to start up-down swing function.  
Press it again to stop.

When the Up-Down swing function is activated, the  mark appears.  
(Not applicable to all the models)


**Swing function (For the unit without left & right auto swing function models)****Up-Down airflow direction and swing**


- Use Swing button to adjust the Up-down airflow direction.
  - Press the button every time, the louver swings 6 degrees.
  - Press and hold the button for 2 seconds, it turns into up-down swing mode, press it again to stop.

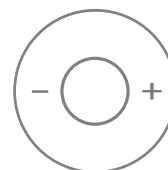
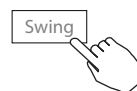
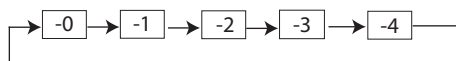
When the Up-Down swing function is activated, the  mark appears.  
(Not applicable to all the models)

- The operation can refer to the following instructions for the unit with four Up-Down louvers can be operated individually.

1. Press the Swing button to activate the Up-Down adjusting louver function.

The  mark will flash. (Not applicable to all the models)

2. Pressing the button "+" or "-" can select the movement of four louvers. Each time you push the button, the wire controller select in a sequence that goes from: (the icon  means the four louvers move at the same time.)




3. And then use Swing button to adjust the Up-Down airflow direction of the selected louver.


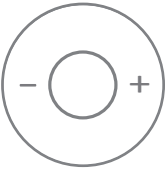

## 10. Timer functions

- Day On** On timer  
Use this timer function to start air conditioner operation. The timer operates and air conditioner operation starts after the time has passed.
- Day Off** Off timer  
Use this timer function to stop air conditioner operation. The timer operates and air conditioner operation stops after the time has passed.
- Day On Off** On and Off timer  
Use this timer function to start and stop air conditioner operation. The timer operates and air conditioner operation starts and stops after the time has passed.
- Week** WEEKLY timer  
Use this timer function to set operating times for each day of the week.


### 10.1. Timer ON and/or Timer OFF

To set the On or Off TIMER

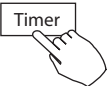

- 1**  Press the TIMER button to select the **Day On** or **Day Off**.


→ No display → **Week** → **Day On** → **Day Off** → **Day On Off**
- 2**  Press the CONFIRM button and the Clock display is flashing.
- 3**  

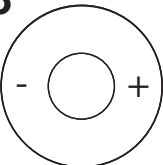

ex. Off timer set at PM 6:00

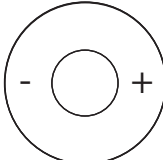
Press the button “+” or “-” to set the time. After the time is set, the timer will start or stop automatically.
- 4**  Press the CONFIRM button again to finish the settings.

**To set the On and Off TIMER**

- 1**  Press the TIMER button to select the .

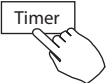


- 2**  Press the CONFIRM button and the Clock display is flashing.

- 3**   Press the button “+” or “-” to set the time of On timer, and then press the CONFIRM button to confirm the setting.



- 4**  Press the button “+” or “-” to set the time of Off timer.

- 5**  Press the CONFIRM button to finish the settings.

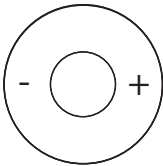

**10.2 Weekly timer****1 Weekly timer setting**

-   Press the Timer button to select the  and then press the Confirm button to confirm.

**2 Day of the week setting**

-   Press the button “+” or “-” to select the day of the week. And then press the Confirm button to confirm the setting.

**3 Time scale setting**

-   Press the button “+” and “-” to select the setting time. The setting time, mode, temperature and fan speed will be shown on the LCD, Press the Confirm button to enter the setting-time process.

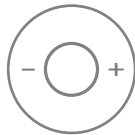


ex. Tuesday time scale 1

Up to 4 timer settings can be saved for each day of the week. It is convenient if the WEEKLY TIMER is set according to the user's life style.

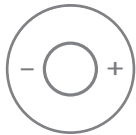


#### 4 Time setting

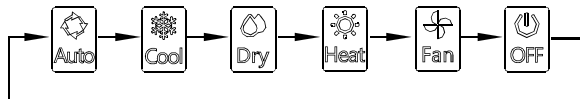


Press the button " + " and " - " to set the time and then press the Confirm button to confirm the setting.

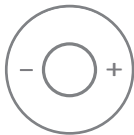
#### 5 Operation mode setting



Press the button " + " and " - " to set the operation mode and then press the Confirm button to confirm the setting.



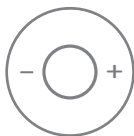
#### 6 Room temperature setting



Press the button " + " and " - " to set the room temperature and then press the Confirm button to confirm the setting.

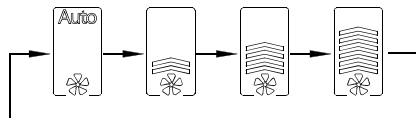
NOTE: This setting is unavailable when in the mode of Fan or Off.

#### 7 Fan speed setting



Press the button " + " and " - " to set the fan speed and then press the Confirm button to confirm the setting.

NOTE: This setting is unavailable when in the mode of Auto, Dry or Off.



#### 8 Different time scales can be set by repeating step 3 to 7.

☐ Other days in one week can be set by repeating step 3 to 8.

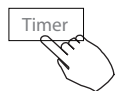
NOTE: The weekly timer setting can be returned to the previous step by pressing Back button.

The time of timer setting can be delete by pressing Day off button

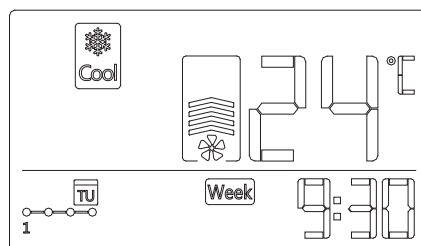
The current setting will be restored and withdrawn the weekly timer setting automatically when there is no operation for 30 seconds.

#### WEEKLY timer operation

To activate WEEKLY TIMER operation

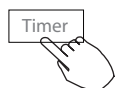


Press the Timer button while **Week** is displayed on the LCD.



ex.

To deactivate WEEKLY TIMER operation

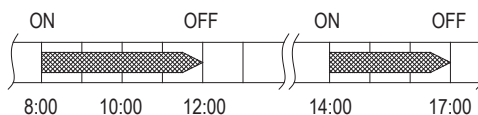


Press the Timer button while **Week** is disappear from the LCD.

### • To turn off the air conditioner during the weekly timer



1. If press the Power button once and quickly , the air conditioner will turn off temporarily. And the air conditioner will turn on automatically until the time of On timer.



ex. If press the POWER button once and quickly at 10:00, The air conditioner will turn on at 14:00.

2. When press the Power button for 2 seconds , the air conditioner will turn off completely.

#### To set the DAY OFF (for a holiday)

1



During the weekly timer, press the Confirm button.

2



Press the button "+" or "-" to select the day in this week .

3



Press the Day off button to set the DAY OFF.



ex. The DAY OFF is set for Wednesday

4

The DAY OFF can be setted for other days by repeating the steps 2 and 3.

5



Press the Back button to back to the weekly timer.

To cancel: Follow the same procedures as those for setup.

Notes:

The DAY OFF setting is cancelled automatically after the set day has passed.

#### DELAY function



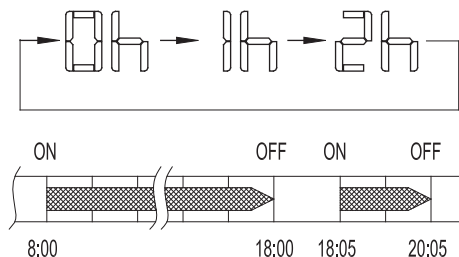
During the weekly timer, pressing the Del button once, display "0h".

Press this button twice, display "1h" and wait 3 seconds to confirm.

It means the unit will override 1 hours;

Press this button three times, display "2h" and wait 3 seconds to confirm.

It means the unit will override 2 hours;



ex. If press the DEL button to select "2h" at 18:05 ,  
The air conditioner will delay to turn off at 20:05.

#### Copy out the setting in one day into the other day.

A reservation made once can be copied to another day of the week.

The whole reservation of the selected day of the week will be copied.

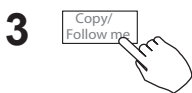
The effective use of the copy mode ensures ease of making reservations.



During the weekly timer, press the Confirm button.



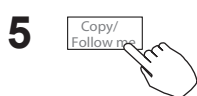
Press the button "+" or "-" to select the day to copy from.



Press the Copy button, the letter "CY" will be shown on the LCD.

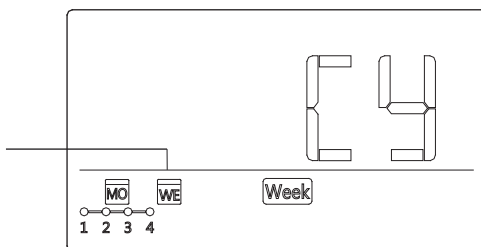


Press the button "+" or "-" to select the day to copy to.



Press the Copy button to confirm.

The  mark flashes quickly



ex. Copy the setting of Monday to Wednesday

**6**

Other days can be copied by repeating step 4 and 5.



Press the Confirm button to confirm the settings.



Press the Back button to back to the weekly timer.

## 11. Fault alarm handing

If the system does not properly operate except the above mentioned cases or the above mentioned malfunctions is evident, investigate the system according to the following procedures.

NO.	MALFUNCTION & PROTECTION DEFINE	DISPLAY DIGITAL TUBE
1	Error of communication between wire controller and indoor unit	F0
2	The faceplate is abnormal	F1

Please check the error display of indoor unit and read <<OWNER'S MANUAL>> if other error code appears.

## 12. Technical indication and requirement

EMC and EMI comply with the CE certification requirements.

### Note:

The design and specifications are subject to change without prior notice for product improvement. Consult with the sales agency or manufacturer for details

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