















# Installation Manual of Room Air Conditioner

- Read this manual before installation
- Explain sufficiently the operating means to the user according to this manual.

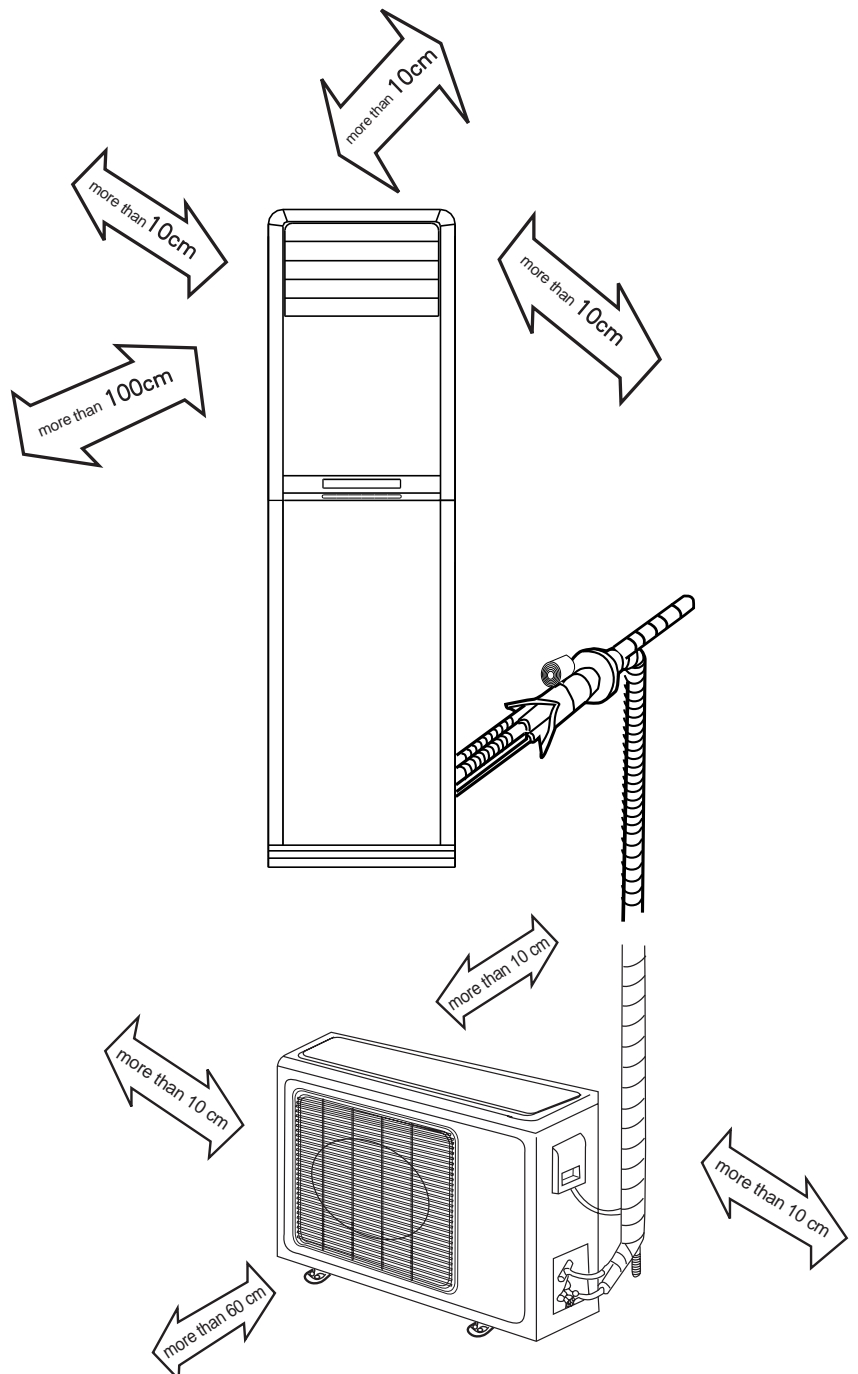
## Drawing for the installation of indoor and outdoor units

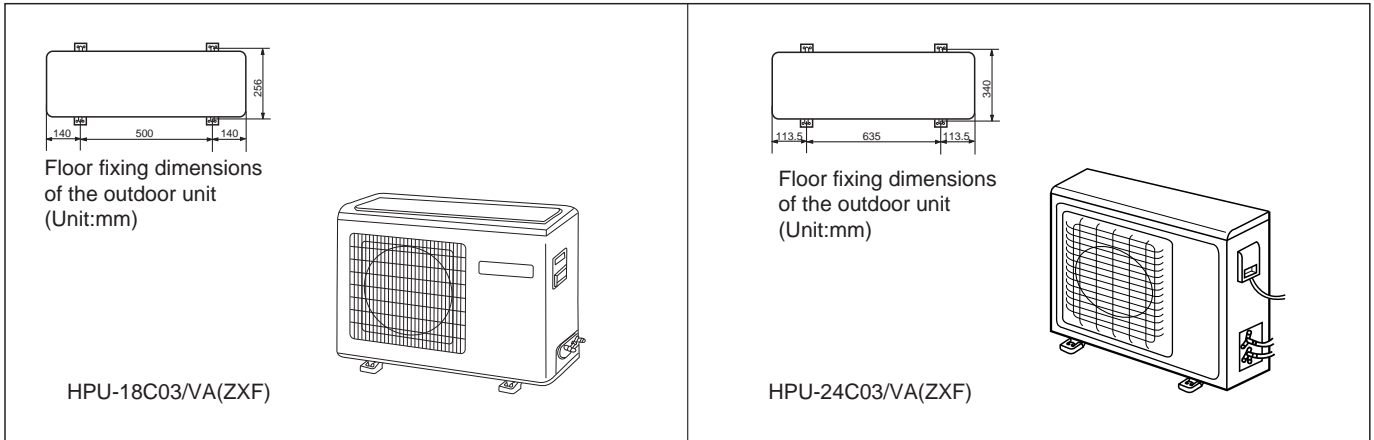
### Accessory parts

No.	Shape and description	QTY
①	 Remote controller	1
②	 Cement nail	3
③	 Drain-elbow	1
④	 Drain hose	1
⑤	 Screw	3
⑥	 wire clip	4
⑦	 Wall hole cover	1
⑧	 Piping hole cover	1
⑨	 Dry battery #7	1
⑩	 Cushion	4
⑪	 Non-adhesive tape	1
⑫	 connecting cable	1
⑬	 L shape component	2
⑭	 anti-fall component	1
⑮	change for fresh air assembly	1

### Note:

On cool only unit, drain-elbow is not available.





**Fixing of outdoor unit**

- Fix the unit to concrete or block with bolts(φ10mm) and nuts firmly and horizontally.
- When fitting the unit to wall surface, roof or rooftop, fix a supporter surely with nails or wires in consideration of earthquake and strong wind.
- If vibration may affect the house, fix the unit by attaching a vibration-proof mat.

Indoor Unit	Selection of Installation Place	Outdoor Unit
<ul style="list-style-type: none"> <li>● Place, robust not causing vibration, where the body can be supported sufficiently.</li> <li>● Place, not affected by heat or steam generated in the vicinity, where inlet and outlet of the unit are not disturbed.</li> <li>● Place, possible to drain easily, where piping can be connected with the outdoor unit.</li> <li>● Place, where cold and warm air can be spread in a room entirely.</li> <li>● Place, nearby a power receptacle, with enough space around. (Refer to drawings).</li> <li>● Place where the distance of more than 1m from televisions, radios, wireless apparatuses and fluorescent lamps can be left.</li> <li>● Do not make the air flow blows directly to the bed when installing the indoor unit.</li> </ul>	<ul style="list-style-type: none"> <li>● Place, which is less affected by rain or direct sunlight and is sufficiently ventilated.</li> <li>● Place, possible to bear the unit, where vibration and noise are not increased.</li> <li>● Place, where discharged wind and noise do not cause a nuisance to the neighbors.</li> <li>● Place with enough space for smooth air flow.</li> <li>● The air conditioner should not be installed on the unprofessional metal frame (f.g. guard against theft net)</li> <li>● The outdoor unit should be installed above the ground 2.5m beside the street.</li> </ul>	

### Power Source

- Before inserting power plug into receptacle, check the voltage without fail. The power source is the same as the corresponding name plate.
- Install an exclusive branch circuit of the power.
- A receptacle shall be set up in a distance where the power cable can be reached. Do not extend the cable by cutting it.

### Selection of pipe

- To this unit, both liquid and gas pipes shall be insulated as they become low temperature in operation.
- Use optional parts for piping set or pipes covered with equivalent insulation material.
- The thickness of the pipe must be 0.8 mm at least.

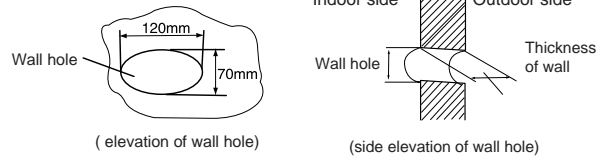
	For 18	For 24
Liquid pipe(φ)	6.35mm(1/4")	9.52mm(3/8")
Gas pipe(φ)	12.7mm(1/2")	15.88mm(5/8")

# Installation Manual of Room Air Conditioner

## 1. Making a Hole on the Wall and Fitting the Piping Hole Cover

### 1. Position of the wall hole

Wall hole should be decided according to installation place and piping direction. (refer to installation drawings).



### 2. Making a wall hole

Make a hole, with a little slope towards outside. Install piping hole cover and seal it off with putty after installation.

### 3. Fasten the indoor unit

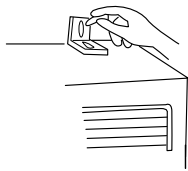
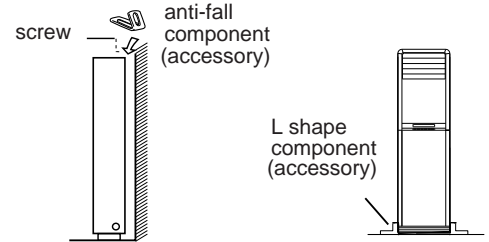
For preventing overturn, fasten the upside of the indoor unit onto the wall with the anti-fall components and downside part on the floor with L shape component. Please install the whole unit horizontally and keep the unit pitch within 1 degree.

The anti-fall component installation

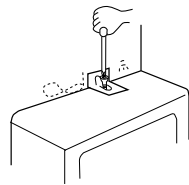
- Fasten the component onto the wall (fig. 1)
- Keep the unit vertically and adjust the hole of the component, and keep it unite with the unit tightly; then fasten the bolt (fig. 2)

L component installation

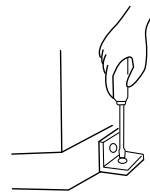
- Do not make gap between the component and the unit, fasten the L-shape component with the unit with the bolts (fig. 3).
- After making sure the unit keeps vertical, fasten the L-shape onto the floor with the bolts (fig. 4).



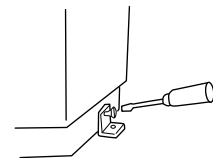
(fig. 1)



(fig. 2)



(fig. 3)

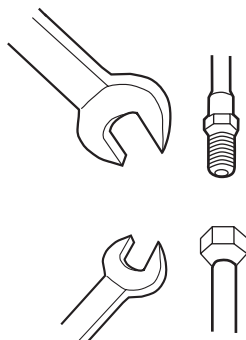


(fig. 4)

### 3. Piping connection

Connecting method

To bent a pipe, give the roundness as large as possible not to crash the pipe. When connecting pipe, hold the pipe center to center then screw nut on by hand, refer to Fig. Be careful not to let foreign matters, such as sands enter the pipe.



Forced fastening without careful centering may damage the threads and cause a leakage of gas.

Pipe Diameter ( $\phi$ )	Fastening Torque
Liquid Side 6.35mm(1/4")	18N.m
Liquid Side 9.52mm(3/8")	42N.m
Gas Side 12.7mm(1/2")	55N.m
Gas Side 15.88mm(5/8")	60N.m

# Installation Manual of Room Air Conditioner

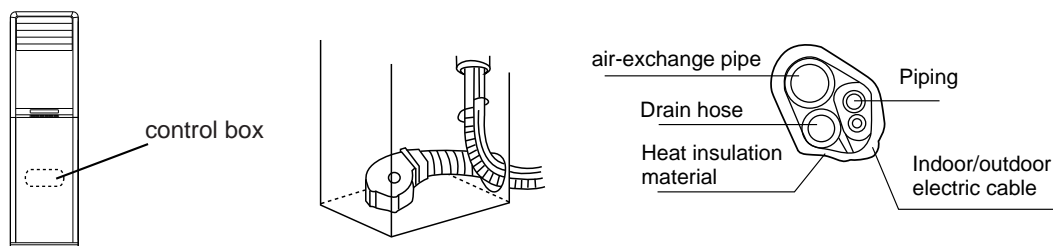
## 2. Piping connection of the indoor unit

Arrangement of connecting pipe, drainage pipe and air-exchange pipe

After opening inlet grill, you will see a control box as shown in the below left picture. Remove the cover before working.

According to the connecting pipe direction, put away the left, right, back or downside connecting pipe cover of the indoor unit. According to the pipe connection way, connect the refrigerant pipe with the ripple pipe. Put the slippery tip of the air-exchange pipe into the air-exchange machine nozzle, and connect the other ripple tip with the other air-exchange pipe by the connector. (The air-exchange pipe should be as short as possible and avoid the strong airflow blowing directly.) Please see the below right picture.

According to the hole location, install the connection pipe and tie up the soft drain pipe, connection cable, fresh air tube and connection pipe with the polyethylene adhesive tape, and then drill through the prepared hole so as to connect with the outdoor unit.



Arrangement drain hose

Drain hose shall be placed in under place.

There should be a slope when arrange drain hose. Avoid up and down waves in drain hose.

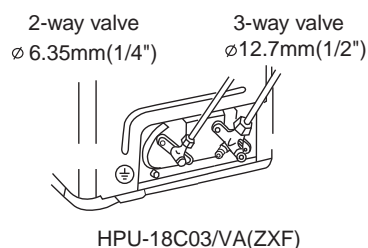
If humidity is high, drain pipe (especially in room) must be covered with installation material.

## 3. Piping connection of the indoor unit

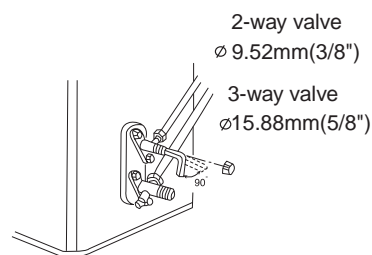
Purging method

Push the air out of the indoor unit and piping as follows:

- (1) Remove the valve cap on 2-way valve in outdoor unit.
- (2) Loosen by 1~2 circle the flare nut of gas pipe, which is connected to 3-way valve.
- (3) Loosen 2-way valve by 90° using hexagon wrench, and after approx. After approx 15 sec tighten it up. Gas comes out through flare nut on wide pipe. If no gas is discharged, tighten flare nut with specified torque.
- (4) Open 2-way and 3-way valves using specified torque.
- (5) Tighten the caps on the valves with specified torque.



HPU-18C03/VA(ZXF)



HPU-24C03/VA(ZXF)

	Tighten torque N.m
Valve rod	7-9
Valve cap	20-25

Note: When additional refrigerant is necessary, first purge air out of connecting pipe by external gas, then drive out the excessive refrigerant by purging method.

Brand new unit is charged 80g more refrigerant than regulated weight. This is only for first installation to purge air in the indoor unit and connecting pipe.

When piping is longer than 5m, charge additional refrigerant specified in this list.

Pipe length	5m	10m	15m
Refrigerant charge(g)	—	90	180

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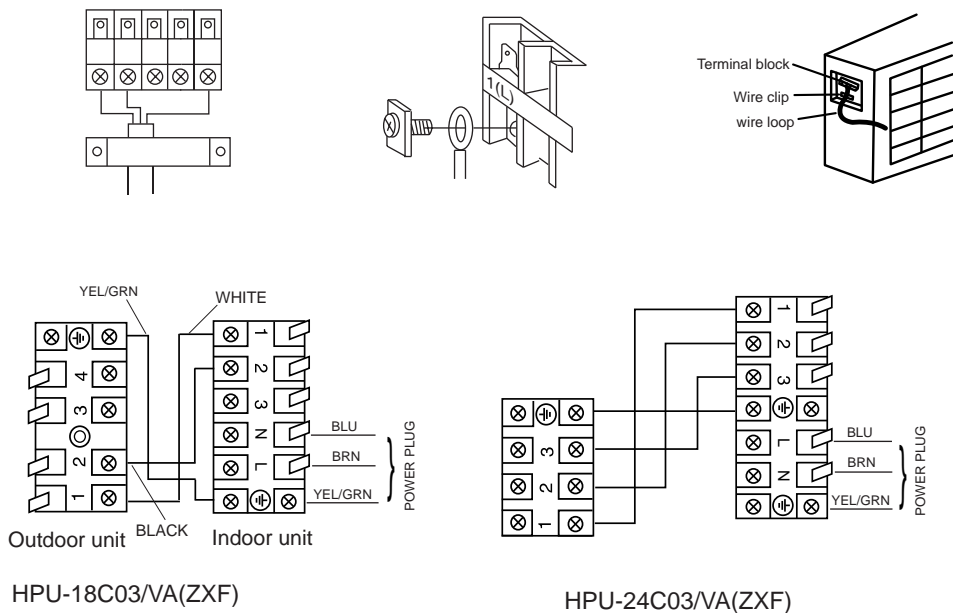
## Electric wiring

### Note

- Electric wiring must be done by qualified person.
- Use copper wire only.

### Wiring of indoor unit

- Insert the cable from outside the wall hole where piping already exist.
- Put it out from front.
- Loosen terminal screw and insert cable end fully into terminal block, then tighten it .
- Pull the cable gently to make sure it is tight.
- Replace cover after wiring.
- The parameter of the connecting wiring:
  - mod18k: 3G2.0mm<sup>2</sup>
  - mod 24k: 4G0.75mm<sup>2</sup>



### Wiring of outdoor unit

- Insert the cable from inside the wall hole where piping already exist.
- Pull it out from front.
- Loose terminal screw and insert cable end fully into terminal block, then tighten it.
- Replace cover after wiring.

### Note:

- When connecting indoor and outdoor wire, check the number on indoor and outdoor terminal blocks. Terminals of same number and same color shall be connected by the same wire.
- Incorrect wiring may damage air conditioner's control or cause operation failure.

# Installation Manual of Room Air Conditioner

## Others

### 1. Power supply

Air conditioner must use an exclusive line(18k: over 20A, 24k: over 30A).

There is not power plug with the type of 18k, and there is not power cable with the type of 24k.

The type of power supply wire is H05VV-F:

-mod 18k:  $\geq 3G2.5mm^2$

-mod 24k:  $\geq 3G4.0mm^2$

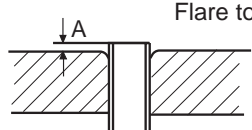
When installation air conditioner in a wet place , try to use a circuit breaker against current leakage.

For installation in other places, use circuit breaker as far as possible.







### 2. Piping cutting and flaring

Be sure to carry out deburring after cutting with a pipe cutter.

Insert flaring tool to make a flare.



	Pipe diameter $\phi$	Size A (mm)
Liquid pipe	6.35mm(1/4")	0.8~1.5
Gas pipe	12.7mm(1/2")	1.2~2.0
Liquid pipe	9.52mm(3/8")	1.0~1.8
Gas pipe	15.88mm(5/8")	1.4~2.2

Correct	Incorrect				
					
	Lean	Damage of flare	Crack	Partial	Too outside

Installation inspection and test run:

Please operate unit according to this manual.

Items to be checked during test run. Please made a "  " in "

- Are there any gas leakage?
- How is insulation at piping connection carried out?
- Are electric wires of indoor and outdoor unit firmly inserted into terminal block?
- Is electric wiring of indoor and outdoor securely fixed?
- Is drainage securely carried out?
- Is earth line(grounding) securely connected?
- Is power supply voltage abided by the code?
- Is there any noise?
- Is control display normal?
- Is cooling operation normal?
- Is room temperature regulator normal?