

# Installation Manual of Room Air Conditioner


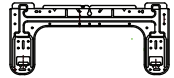









- Read this manual before installation
- Explain sufficiently the operating means to the user according to this manual.

## Necessary Tools for Installation

- |                           |                                 |  |           |
|---------------------------|---------------------------------|--|-----------|
| 1.Driver                  | 5.Torque wrench(17mm,22mm,26mm) | 9.Nipper   | 12.Reamer |
| 2.Hacksaw                 | 6.Pipe cutter                   | 10.Gas leakage detector or soap-and-water solution |           |
| 3.Hole core drill         | 7.Flaring tool                  | 11.Measuring tape                                  |           |
| 4.Spanner(17,19 and 26mm) | 8.Knife                         |  |           |

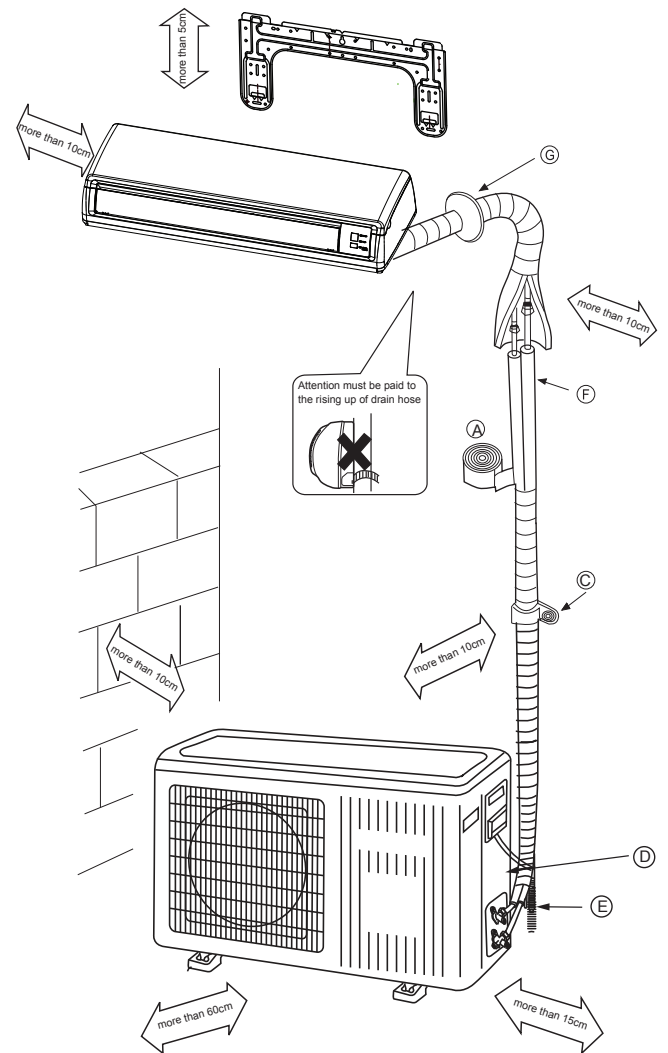
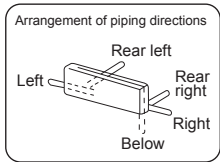
### Drawing for the installation of indoor and outdoor units

#### Accessory parts

No.	Accessory parts	Number of articles
①	Remote controller	1
②	 R-03 dry battery	2
③	 Mounting plate	1
④	 Drain hose	1
⑤	 $\phi 4 \times 50$ Steel nail, cement	6
⑥	 $\phi 4 \times 25$ Screw  Plastic cap	4
⑦	 Drain-elbow	1
⑧	 Cover	1
⑨	 Cushion	4
⑩	 Pipe supporting plate	1
⑪	 Connecting cable	1

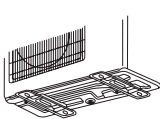
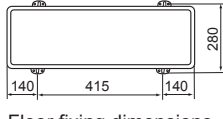
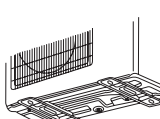
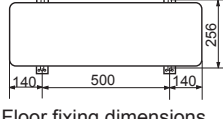
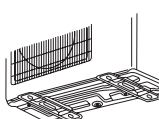
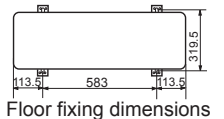
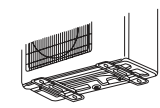
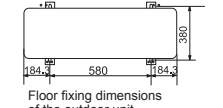
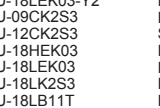
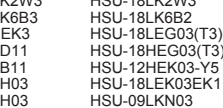

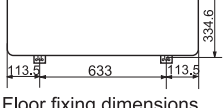
#### Optional parts for piping

Mark	Parts name
(A)	Non-adhesive tape
(B)	Adhesive tape
(C)	Saddle(L.S) with screws
(D)	Connecting electric cable for indoor and outdoor
(E)	Drain hose
(F)	Heating insulating material
(G)	Piping hole cover



Note: Cooling only units don't have Drain-elbow

- ※ The marks from (A) to (G) in the figure are the parts numbers.
- ※ The distance between the indoor unit and the floor should be more than 2m.

 <p>HSU-09LEK13 HSU-12LEK13 HSU-07LEK03 HSU-07HEK03 HSU-09LB11T HSU-09LD11T HSU-12LB11T HSU-12LD11T HSU-05LEK03</p>	 <p>Floor fixing dimensions of the outdoor unit (Unit:mm)</p> <p>HSU-12HEK03 HSU-05LEK03-Y HSU-07LEK03-Y HSU-09LEK03-Y HSU-12LEK03-Y2 HSU-09LEE12</p> <p>HSU-09LEK03 HSU-12LEK03 HSU-09HEK03 SAS-09HEK3 SAS-12HEK3 HSU-09LK03 HSU-09LEW12</p>	 <p>HSU-09LEK03/ (DB) HSU-12LEK03/ (DB) HSU-108CH09 HSU-138CH09 HSU-12LEK13-M HSU-09LEK03-Y3 HSU-12LEK03-Y3 HSU-18LEK03-Y3 HSU-18LEK03-Y HSU-12LEK03-Y2 HSU-18LEK03-Y2 HSU-09CK2S3 HSU-12CK2S3 HSU-18K6B3 SAS-18HEK3 HSU-18HEK03 HSU-18LEK03 HSU-18LK2S3 HSU-18LB11T HSU-18LD11T HSU-09LEK03-Y5 HSU-12LEK03-Y5 HST-18LEG13(T3) HST-18HEG13(T3) HSU-12HEG13(T3)</p>	 <p>Floor fixing dimensions of the outdoor unit (Unit:mm)</p> <p>HSU-09LB11 HSU-09LD11 HSU-12LD11 HSU-12LB11 HSU-18LEK13 HSU-09CK2W3 HSU-09CK6B3 HSU-12CK2W3 HSU-12CK6B3 HSU-18K6B3 SAS-18HEK3 HSU-18LD11 HSU-18LB11 HSU-09LH03 HSU-12LH03 HSU-09HH03 HSU-12HH03 HSU-18LK0G3 HSU-07LEK03/Y HSU-12LEE12 HSU-12LEW12</p> <p>HSU-09HEG03 HSU-12HEG03 YKS-18HEK03 HSU-12LEK03-Y6 HSU-12LK03 HSU-18LK03 HSU-09LEK03-Y4 HSU-12LEK03-Y4 HSU-12CK6B2 HSU-18K2W3 HSU-18LK6B2 HSU-18LEG03(T3) HSU-18LEK03(T3) HSU-12HEK03-Y5 HSU-18LEK03EK1 HSU-09LKN03 HSU-12LKN03 HSU-18LKN03 HSU-18LEE12 HSU-18LEW12 HST-18LEG03(T3)</p>	 <p>HSU-24LK2S3 HSU-24LEK13 HSU-22LB11 HSU-22LD11 HSU-24LD11T HSU-18LEK03/ (DB) HSU-12LK03 HSU-24LEK03-Y2 HSU-24LEK03-Y3 HSU-18LEK03-Y5 HSU-18LH03</p>	 <p>Floor fixing dimensions of the outdoor unit (Unit:mm)</p> <p>HSU-18LEK03-Y6 HSU-24LEK03-Y4 HSU-24LK2S2 HSU-24LEK03 HST-24LEG13(T3) HST-24HEG13(T3) HSU-24LEAA13(T3) HSU-24HEAA13(T3)</p> <p>HSU-24LEE12 HSU-24LEW12</p>
 <p>HSU-24HH03 HSU-24HEG03 HSU-24LH03 HSU-24LEK03-Y5 HSU-30LEG13(T3) HSU-30HEG13(T3)</p>	 <p>Floor fixing dimensions of the outdoor unit (Unit:mm)</p> <p>HST-30LEG13(T3) HST-30HEG13(T3)</p>	 <p>HSU-09LEK03-Y5 HSU-12LEK03-Y5 HST-18LEG13(T3) HST-18HEG13(T3) HSU-12LEW12</p>	 <p>HSU-18LH03 HSU-09LKN03 HSU-12LKN03 HSU-18LKN03 HSU-18LEE12 HSU-18LEW12 HST-18LEG03(T3)</p>	 <p>SAS-24HEK3 HSU-18HH03 HSU-18HEG03 HSU-24HEK03 HSU-24LEG03(T3) HSU-24HEG03(T3)</p>	 <p>Floor fixing dimensions of the outdoor unit (Unit:mm)</p> <p>HST-24LEG03(T3) HSU-26HEK03 HSU-24LEK03-Y6 YKS-24HEK03</p>

## 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.

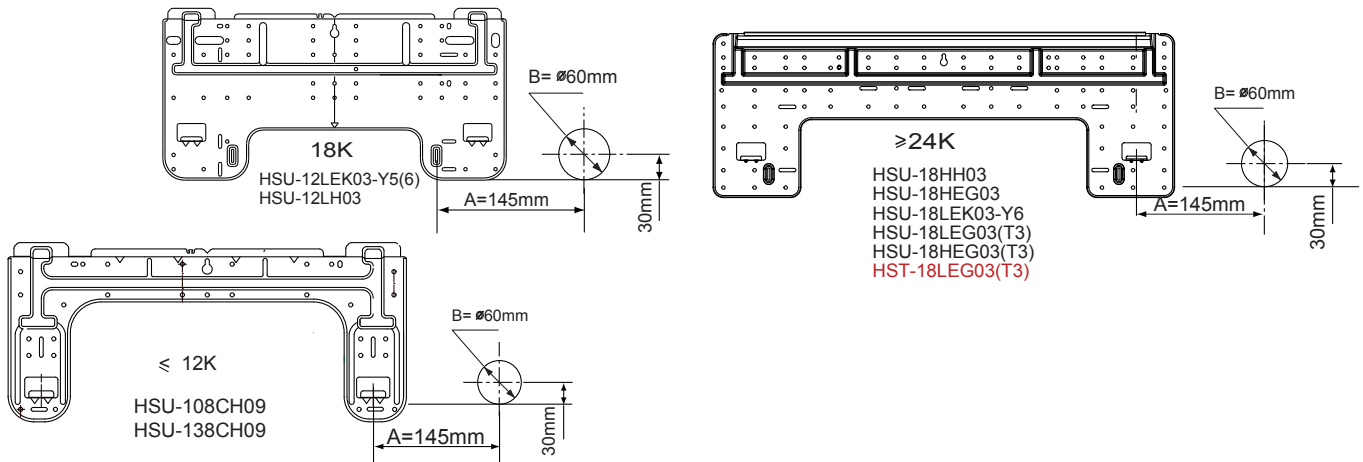
	For 05 07 09 108	For 12 18 138	For ≥24 HSU-18LEK03-Y5(6) HSU-18LH03
Liquid pipe (φ)	6.35mm(1/4")	6.35mm(1/4")	9.52mm(3/8")
Gas pipe (φ)	9.52mm(3/8")	12.7mm(1/2")	15.88mm(5/8")

## Indoor unit

### 1. Fitting of the Mounting Plate and Positioning of the wall Hole

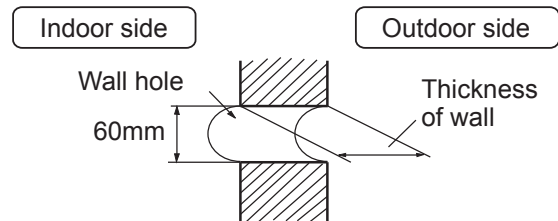
#### When the mounting plate is first fixed

1. Carry out, based on the neighboring pillars or lintels, a proper leveling for the plate to be fixed against the wall, then temporarily fasten the plate with one steel nail.
2. Make sure once more the proper level of the plate, by hanging a thread with a weight from the central top of the plate, then fasten securely the plate with the attachment steel nail.
3. Find the wall hole location A using a measuring tape



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

- Make a hole of 60 mm in diameter, slightly descending to outside the wall.
- Install piping hole cover and seal it off with putty after installation



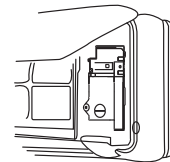
(Section of wall hole) ③ Piping hole pipe

# Indoor unit

## Connecting the indoor/outdoor Electric Cable

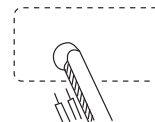
### Removing the wiring cover

- Remove terminal cover at right bottom corner of indoor unit, then take off wiring cover by removing its screws.



### When connecting the cable after installing the indoor unit

- Insert from outside the room cable into left side of the wall hole, in which the pipe has already existed.
- Pull out the cable on the front side, and connect the cable making a loop.

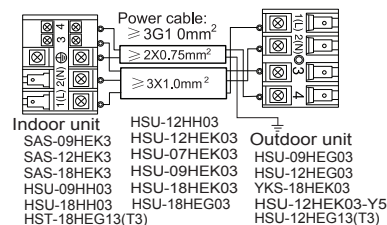
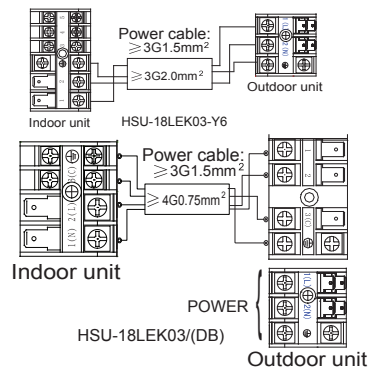
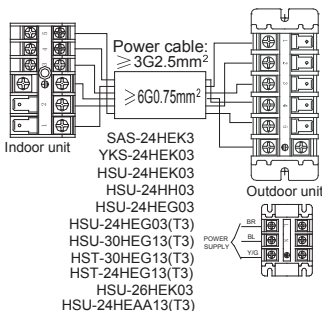
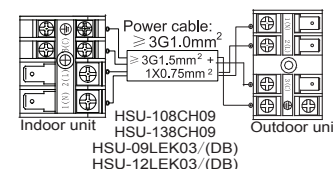
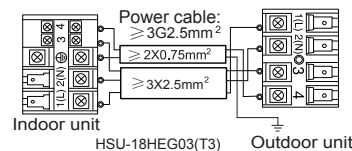
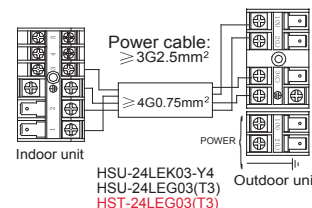
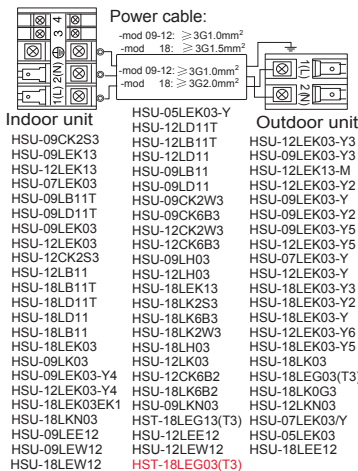
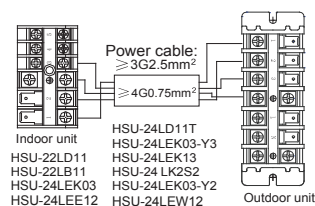


### When connecting the cable before installing the indoor unit

- Insert the cable from the back side of the unit, then pull it out on the front side.
- Loosen the screws and insert the cable ends fully into terminal block, then tighten the screws.
- Pull the cable slightly to make sure the cables have been properly inserted and tightened.
- After the cable connection, never fail to fasten the connected cable with the wiring cover.

Note: When connecting the cable, confirm the terminal number of indoor and outdoor units carefully. If wiring is not correct, proper operation can not be carried out and will cause defect.

- If the supply cord is damaged, it must be replaced by the manufacturer or its service agent or a similar qualified person. The type of connecting wire is H05/07RN-F or 245IEC57(YZW).
- If the fuse on PC board is broken please change it with the type of T. 3.15A/250V. If the fuse of outdoor unit on PC board is broken, please change it with the type of T. 25A/250V.
- The wiring method should be in line with the local wiring standard.
- After installation, the power plug should be easily reached.
- A breaker should be incorporated into fixed wiring. The breaker should be all-pole switch and the distance between its two contacts should be not less than 3mm.

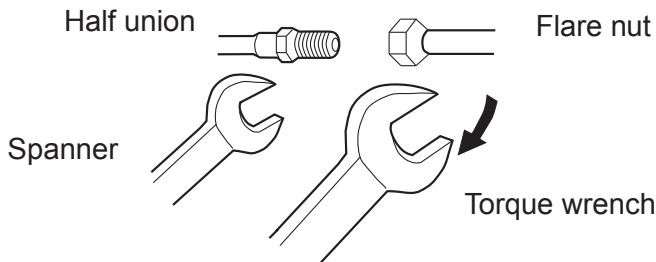


# Outdoor unit

## Outdoor unit

### 1. Connection of pipes

- To bend a pipe, give the roundness as large as possible not to crush the pipe
- Connecting the pipe of gas side first makes working easier.
- The max vertical distance between the indoor unit and the outdoor unit is 5 m.



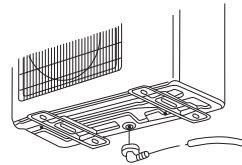
Be careful that matters, such as wastes of sands, etc. shall not enter the pipe.

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

Pipe Diameter ( $\phi$ )	Fastening torque
Liquid side 6.35mm	18N.m
Liquid side 9.52mm(3/8")	40N.m
Gas side 9.52mm(3/8")	40N.m
Gas side 12.7mm	50N.m
Gas side 15.88mm(5/8")	60N.m

### 2. Attaching Drain-Elbow

- If the drain-elbow is used, please attach it as figure. (Note: Only for heat pump unit.)



### 3. Purging Method:

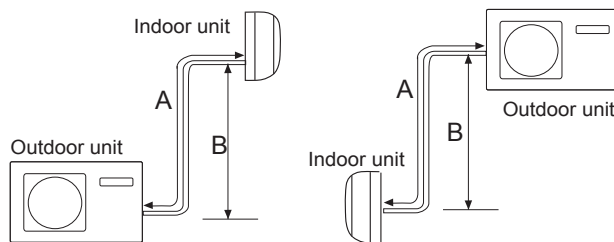
Push the air out of the indoor unit and piping as follows:

- Tighten the caps on the valves with specified torque.

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

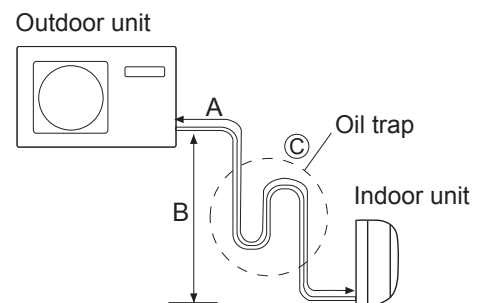
- When connecting pipe exceeds 5 meters, 20g or 60g(only for 22k 24k) refrigerant shall be added per exceeding meter. Charge according to the following list.

	for $\leq 18k$			for $\geq 22k$			
Piping length	5m	7m	10m	5m	7m	10m	20m
Additional amount	No need	40g	100g	No need	120g	300g	900g



Max.Elevation: for 5K 7K 9K 10K 12K 13K: B=5m  
for  $\geq 18K$ : B=10m

Max. Length: for 5K 7K 9K 10K: A=7m  
for 12K 13K: A=10m  
for  $\geq 18K$ : A=20m



#### CAUTION

- In case more than 5 metres, oil trap © should be installed every 5~7m.