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Air Conditional Service Manual



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каталоги, инструкции, сервисные мануалы, схемы.

MODEL: AC-FR30HA

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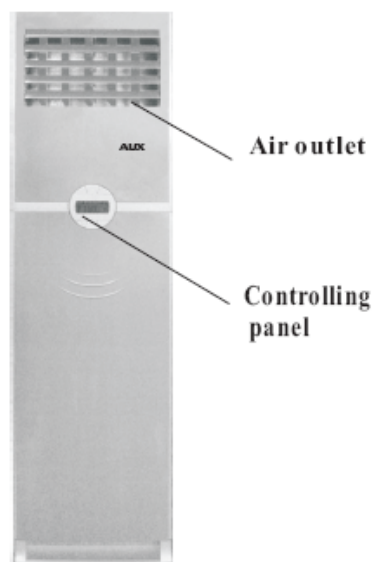
SPECIFICATION

Model		AC-FR30HA			
Cooling capacity(W)		5100		7200	
Heating capacity +electric heating(W)		/	5900+1500	/	7920+2100
Circulating wind quantity(m ³ /h)		850		1050	
Power source(V/Hz)		1PH 220-240~/50			
Rated input power(W)	Cooling	1850	1950	2780	
	Heating	/	1950	/	2780+2100
Rated input current(A)	Cooling	8.4	8.8	12.6	
	Heating	/	8.8+6.8	/	12.6+9.5
Input power under worst condition(W)		3000	3600	3900	5300
Input current under worst condition(A)		15.1	16.4	19.7	25.0
Name of refrigeration material		R22			
Indoor unit	Size of shape(cm) (thickness×width×height)	31.0×48.0×174.5			
	Net weight(kg)	36	36	38	38
	Noise dB(A)	≤43	≤45	≤52	
Outdoor unit	Size of shape(cm) (thickness×width×height)	26.0×76.0×54.0	30.0×80.0×54.0	30.0×80.0×69.0	
	Net weight(kg)	39	45	53	54
	Noise dB(A)	≤54	≤55	≤59	
Specification and length of connecting pipe (mm)	Liquid tube	Φ6.35×0.6×3600		Φ9.52×0.6×3600	
	Vapour tube	Φ12.7×0.7×3600		Φ15.88×0.75×3600	
Normal Environment Temperature Using Rang (°C)		18~43	-7~43	18~43	-7~43
Range of voltage change (V)		198~242			
Suitable room area (m ²)		25~34		35~47	
Energy Sources Efficiency Degree		4		5	

 Model No.: AC-FR30HA
 Version: 1.0

APPEARANCE & PART NAME

★ Indoor unit



★ Outdoor unit



AS-H24B4/P2-5
AS-H18B4/P
AS-24B4/P

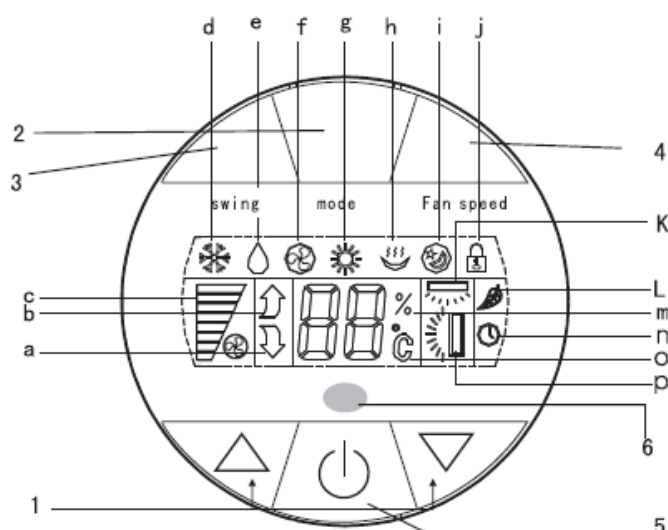


AS-18B4/P2-4

Notice:

Appearance of the indoor unit and outdoor unit may differ with some models.

PANEL CONTROL & FUNCTION



☆ Function Button And Indicator Light

1.TEMP.BUTTON

Temperature setting button, Touch the temperature setting buttons to adjust the temperature setting, ▼—Lower temp, ▲—Raise temp, Temperature can be set within the range of 16°C to 32°C, Display will change as you touch the button. Touch both the buttons for 2 seconds, all the current settings are locked, at the same time, the unit doesn't take action to any operation or signal. Touch the two buttons together again, the lock function is cancelled.

Remark: In dry or fan operation mode, temperature setting is non-effective.

2.MODE SELECT BUTTON

Each time you push the button, a mode is selected in a sequence.

Heat-pump type: → COOL → DRY → HEAT → CIRCULATION →
Cold wind type: → COOL → DRY → CIRCULATION →

3.SWING BUTTON

By pressing the button of swing you can control to move the louver alternatively from up to down and adjust the air flow direction. The louver direction can be set as to the sequence while you press the button each time.

Up-down-left-right Direction → Lock louver → Left-right Direction → Lock louver → Up-down direction → Lock louver.

4.FAN SPEED BUTTON

Touch button and select the fan speed, high or low as you touch.

5.ON/OFF BUTTON

Touch conditioner by touching this button and stop its operation by pressing it again.

6.INFRARED SENSOR

Receive the signal of remote controller.

☆ Fluorescence Display

- | | | | |
|--------------------|-------------------------|--|-----------------|
| a. Whisht sound | b. Mightiness fan speed | c. Fan speed | d. Cooling mode |
| e. Drying mode | f. Circulating air | g. Heating mode(cold windtype without) | |
| h. Adding damp | i. Sleep mode | j. Lock function | k. Or so swing |
| l. Healthiness | m. Humidity | n. Timer mode on/off | o. Temperature |
| p. Fluctuate swing | | | |

Note: according to different models and operation modes, air conditioner under operation would only display parts of the above contents, please comply with actual article.

★ Wind direction adjustment

In order to guarantee an even diffusion of the air in the room, you can choose one way as follows to control:

1. Press the swing button on the control panel to move the louver to the desired direction. The function see swing button introduced.
2. You can adjust the louver direction to desired direction by pressing the “Left/Right wind” or “swing” button on remote controller.

Please see the remote controller buttons description for function introduced.

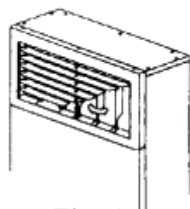


Fig. A

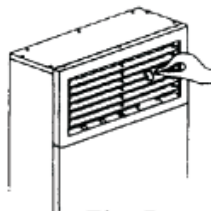


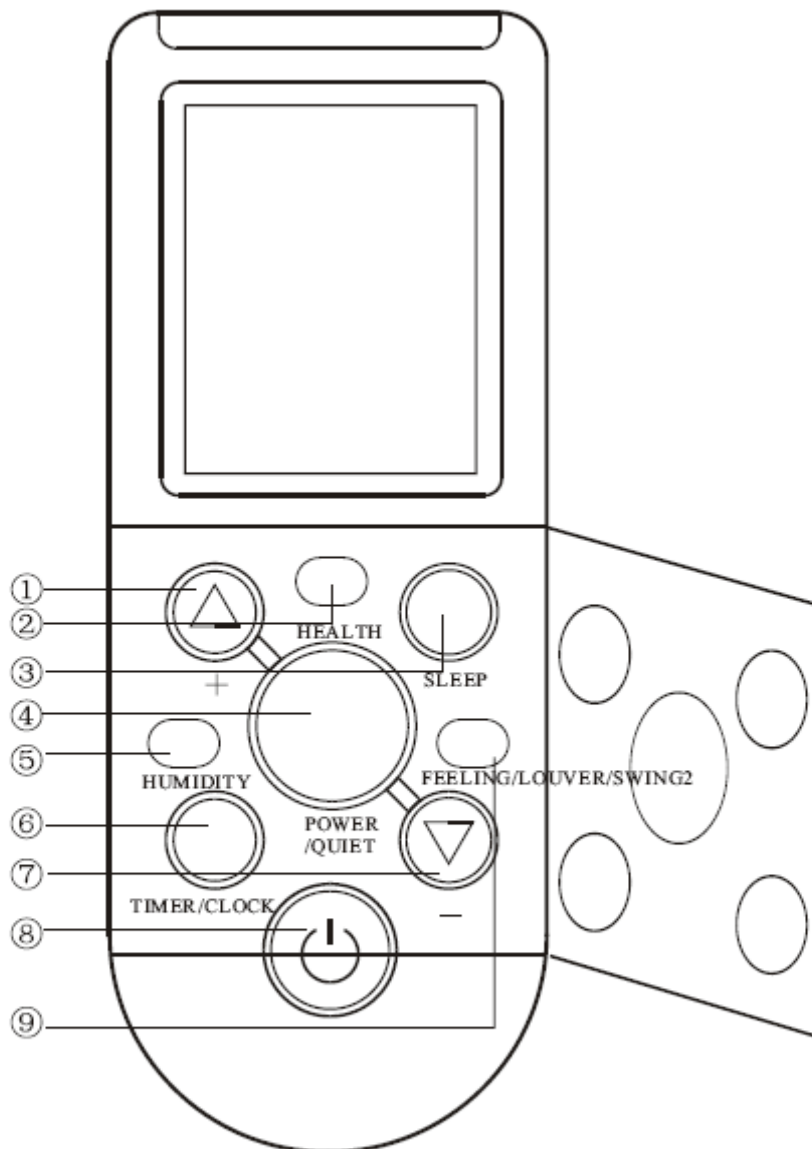
Fig. B

NOTE : Adjusting the vertical louvers manually in automatically-controlled operation may damage the servo-motor.

★ Optimal operation

- Pay attention to the following items so as to ensure optimal operation of the system, detailed operation see the relevant content.
- Set the suitable temperature for a comfortable environment. Don't make the room too cold or too hot.
- During the cooling operation, don't let the sun rays into the room, please pull down the window shades or veils.
- Close the windows and doors. Otherwise, it decreases its cooling or heating capacity.
- Please set the scheduled operation time with the remote controller.
- Make sure that air outlet and inlet are not blocked, or it may decrease the efficiency of the air-conditioner, even stops the operation of the system.
- If the air filter is blocked, the cooling or heating capacity will be affected. Please regularly clean the air filter.

REMOTE CONTROL



NOTICE: It's general sketch map of outline for remote controller. Please refer to the real one you buy for specific location of buttons, and if the relevant keys are not indicated, it means absence of corresponding function.

① “+” button

This button not only can adjust clock time and the timer time but also can set room humidity.



Adjusting clock time and timer time

Press it once, the time increases one minute. Press it for 1 to 3 seconds, time display will increase at the speed of 2min/s. For 3 to 5 seconds, it will increase at the speed of 10min/s. For more than 5 seconds, it will increase at the speed of 10min/s.


Setting room temperature and room humidity


Press it once, the humidity increases 5%.

② “HEALTH” button

Press this button, the LCD shows the “” symbol, the anion emission function of the air conditioner is started. Press the button once again, The “” symbol disappears, the function is cancelled at the same time.

③ “SLEEP” button

Press this button, the LCD shows the “” symbol, the sleeping function of the air conditioner is started. After 7 hours of setting this function, the air conditioner will be off automatically.

Press the button once again, The “” symbol disappears, the function is cancelled at the same time.

This function is invalid when the appliance under the Fan mode.

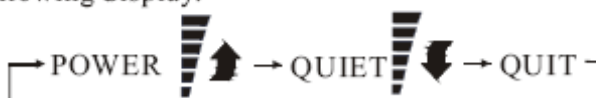
④ “POWER” button or “POWER/QUIET” button

☆ When it displays “POWER” button:

Press this button, the fan speed reach the highest, press it again it resume the foregoing fan speed.


☆ When it displays “POWER/QUIET” button :


Which enables you to select different operation mode, after each pressing, the operation mode will be changed. It shows in the following display.



This function is only suitable for frequency variable appliance.


⑤ “HUMIDITY” button


Only under the mode of Heat and Fan, Press this button once, the LCD shows the “” symbol, the wetting function of the air conditioner is started. The initial humidity is 60%. Press the “+” or “-” button once, the humidity increases or decreases 5%. The setting range is 30%~60%.

Press the button once again, The “” symbol disappears, the function is cancelled at the same time.


⑥ “TIMER/CLOCK” button

Setting the “ON/OFF” timer time

When remote controller is at the on/off state, Press this button, the LCD flickers the “/” symbol. Press the “+” or “-” button to set the timer time. After finishing it, press this button again in 10 seconds to affirm. If the setting time is the same as the current time, this setting is invalid.

Press the button once more, The “/” symbol disappears, the function is cancelled at the same time.

Adjusting the clock time

Press this button in 5 seconds Under the state of no timer setting, the LCD flickers the “” symbol. Press the “+” or “-” button to set the timer time. After finishing it, press this button again in 10 seconds to affirm. If not, this operation is invalid.

⑦ “-” button

This button not only can adjust clock time and the timer time but also can set room humidity.

Adjusting clock time and timer time

Press it once, the time decreases one minute. Press it for 1 to 3 seconds, time display will decrease at the speed of 2min/s. For 3 to 5 seconds, it will decrease at the speed of 10min/s. For more than 5 seconds, it will decrease at the speed of 10min/s.

Setting room temperature and room humidity

Press it once, the humidity decreases 5%.

⑧ “” button

You can start the air-conditioner by pressing this button and stop its operation by pressing it again.

⑨ “FEELING” button or “LOUVER/SWING2” button

☆ When it displays “FEELING” button:

Press this button can be used to set the feeling function.

The LCD shows the actual room temperature when the function set and it shows the setting temperature when the function cancelled. This function is invalid when the appliance at the Fan mode.

☆ When it displays “LOUVER/SWING2” button:

Press this button, the vertical wind direction vanes can rotate automatically, when you have the desired horizontal wind direction, press it again, the vertical wind direction vanes will be stopped at the situation of your choice.

★ Fix batteries




1. Slide open the cover according the direction indicated by arrowhead.
2. Put into two brand new batteries (7#), position the batteries to right electric poles (+&-).
3. Put back the cover.

Remark: Make sure to connect the wire to independent power source socket before you use the remote controller.

★ Cooling /Heating operation mode

(Cold wind type has no heating function)

1. Press the “” button, the operation indicator is on, the air conditioner starts to operate the Cooling or Heating mode. Press the button again, the air-conditioner stops.
2. Press the **MODE** button, select the Cooling or Heating operation mode.
3. Press the “+” or “-” button, you can set the temperature range from 16°C to 32°C.
4. Press the **FAN** button, you can select fan speed from “Low”, “Med”, “High”, “Auto” .

★ Dry operation mode

1. Press the **MODE** button, select the dry mode operation.
2. Press the “+” or “-” button, you can set the temperature range from 16°C to 32°C.
3. Press the **FAN** button, you can select fan speed from “Low”, “Med”, “High”, “Auto” .

★ Fan operation mode

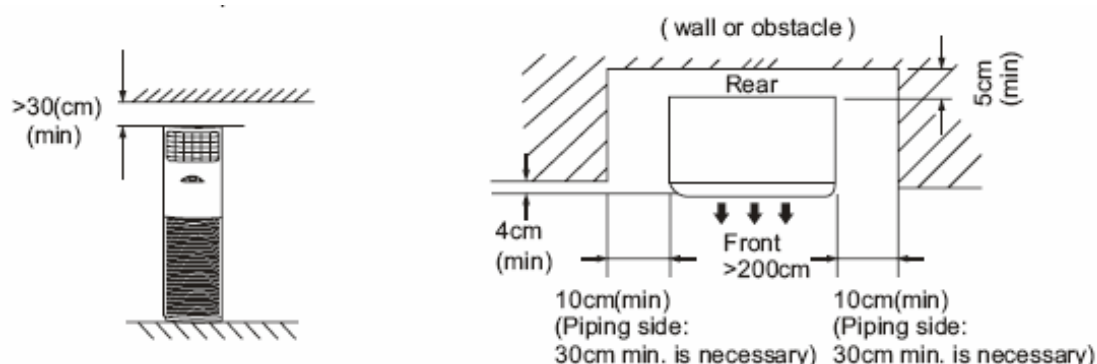
1. Press the **MODE** button, select the fan operation mode.
2. Press the **FAN** button, you can select fan speed from “Low”, “Med”, “High” .

Remark: In the fan operation mode, to set the temperature is noneffective.

INSTALLATION INSTRUCTION

Selection installation place

1. Indoor unit
 - a. A place which provides the spaces around the indoor unit as required above in the diagram.
 - b. A place where is no obstacle near the inlet and outlet area.
 - c. A place which can bear the weight of the indoor unit.
 - d. A place which allows the air filter to be removed downward.
 - e. A place where the reception range is not exposed to direct sunlight.
 - f. In the center the room where possible.
 - i. Please stand the unit in hard and flat ground.
 - ii. Please reserve space for installation and maintenance.



- iii. Please check the elevation difference between the indoor unit and the outdoor unit, the length of the refrigerant pipe and the curved places (bend) of the pipe are no more than the following number.
 Elevation difference: No more than 10M (if the elevation difference between indoor and outdoor unit is more than 10 meters, it is recommended that the outdoor unit be placed above the indoor unit.)
 Pipe length: No more than 20M
 Bends: No more than 5 places

2. Outdoor unit
 - a. Before installing the outdoor unit,
 - i. Select a place where no direct sunlight or other heat-radioactivity may reach. A sunshade is needed if it is unavoidable.
 - ii. Select a place that is easy to connect indoor unit's pipe and electric wires.
 - iii. Avoid a place where combustible gas may leak or stay.
 - iv. Keep it in mind that water may drain out of the outdoor unit while in "Heat" mode.

Caution

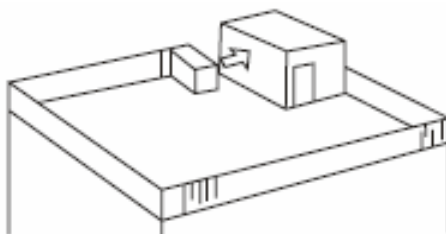
Installation in the following places may cause trouble. If it is unavoidable to use in such places:

- A place full of machine oil.
- A saline place such as coast.
- Hot-spring resort.
- A place full of sulfide gas.
- A place where there are high frequency machines such as wireless installation, welding machine, medical facility.
- A place of special environmental condition.

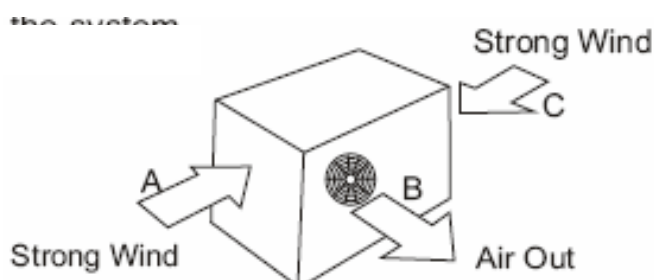
- b. If the outdoor unit is to be installed on a roof or where no constructions are around, you should avoid hard wind blows directly to the outlet because it may cause trouble for air-flow shortage.

For example:

Let the air outlet face a wall (if there is one) with a distance about 300 centimeters between them.

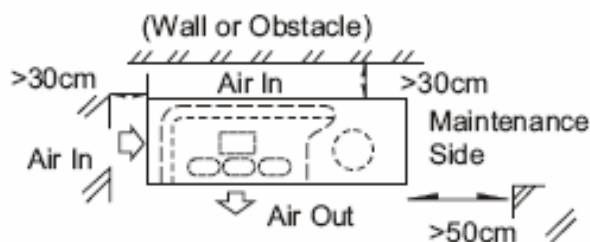


Try to make the air outlet vertical to wind direction if it is known in the season you use the system. In directions A, B, C leave open two of the three directions.

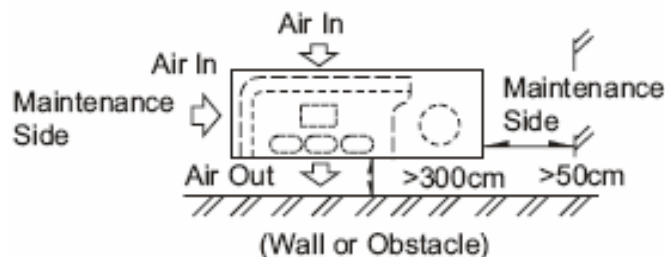


- c. Reserve enough space for installation, maintenance and unit-functioning. Remove as many obstacles as possible nearby.

When the air-in surface is facing a wall.



When the air-out surface is facing a wall.








Installation


1. Indoor Unit

a. Accessories

Before installing, please check the available accessories according to the list given below.

Accessories for installing			
No	Part name	Qty	Illustrations
1	Installing board (for wall mounting)	1	
2	3.9 x 25 screw (for fixing the board)	2	
3	Plain washer	4	

Accessories for pipe-connecting			
No	Part name	Qty	Illustrations
4	Pip-hole-protection ring	1	
5	Sound /heat insulation sleeves	2	Outer : $\Phi 52\text{mm}$ Inner : $\Phi 36\text{mm}$ Length: 100cm 
6	Water receiver	1	
7	Seal	1	
8	Drain joint	1	

Accessories for wire-connecting			
No	Part name	Qty	Illustrations
9	Sleeves for wire-connecting	2	
10	Band	3	

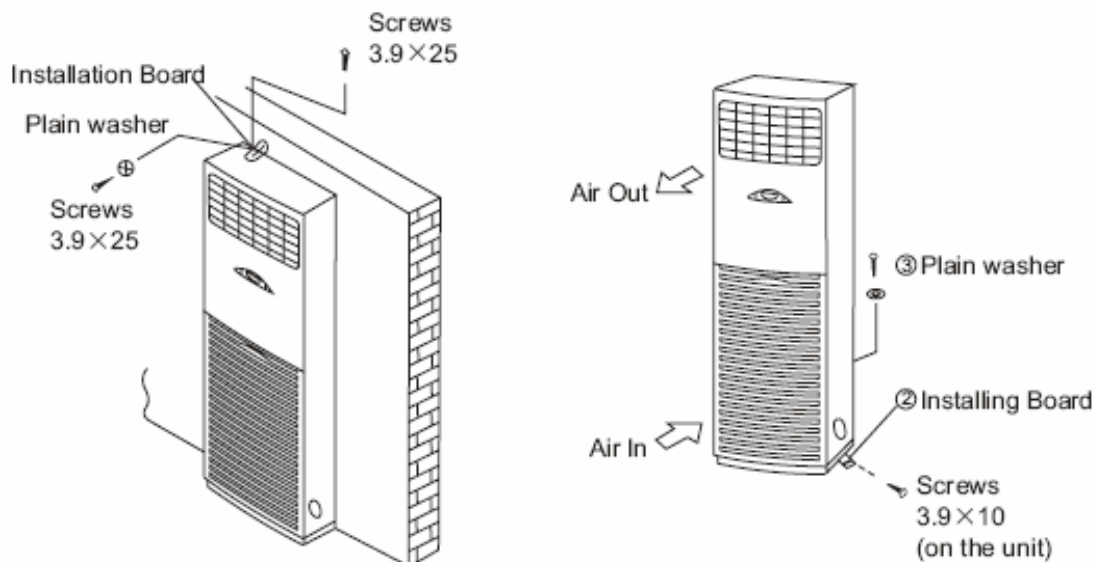
Refrigerant pipe (optional)			
No	Name	capacity (Btu/h)	
11	Liquid side size	20000~30000	$\Phi 12.7\text{mm}$
12	Gas side size	30000~55000	$\Phi 16\text{mm}$

If there is any difference between the above table and packing list, the packing list shall prevail.

b. Anti-falling

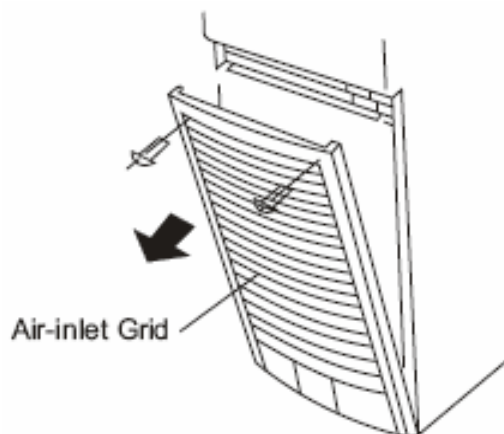
To prevent the indoor unit from falling, you must:-

- i. Pay full attention to the unit because its long outer shape makes it easy to fall.
- ii. Firmly fix the unit to the wall and in the ground to avoid accidental falling.

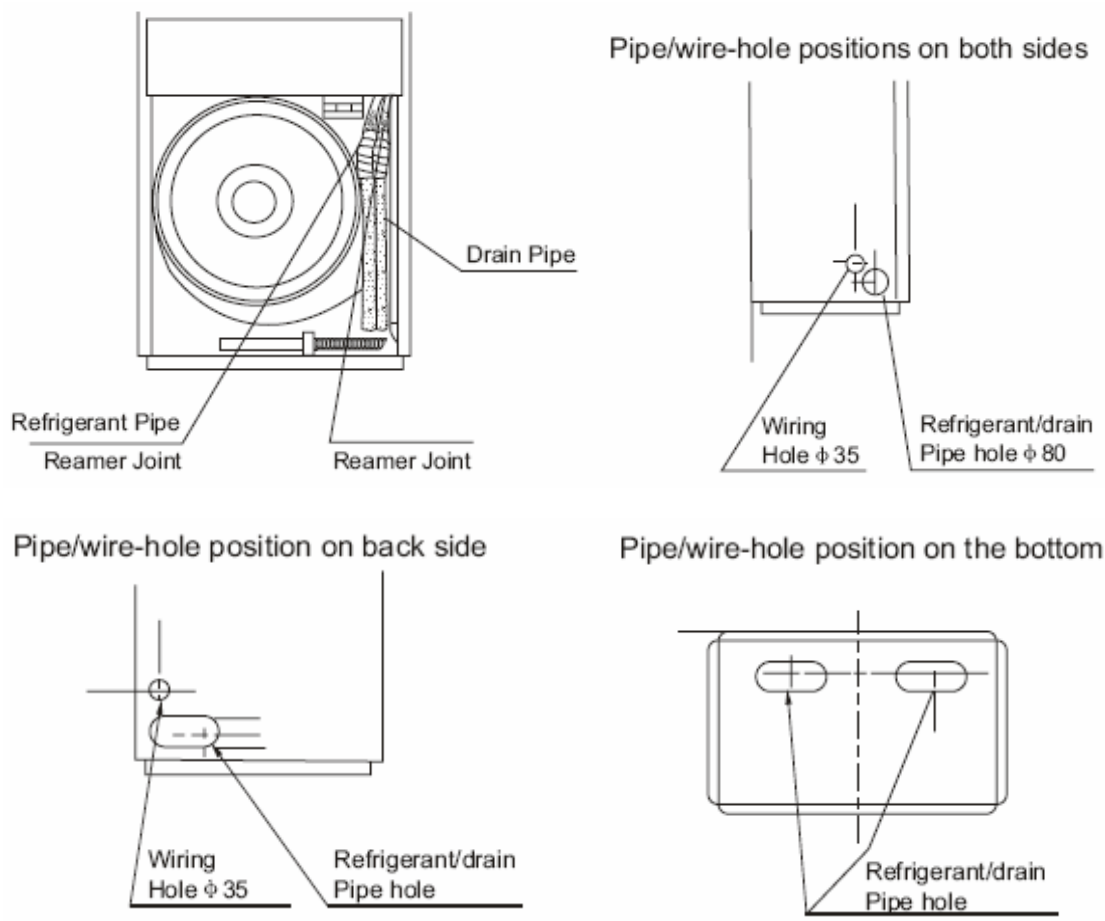
**c. Dismounting the air-inlet grid**

Please take off the air-inlet grid before connecting the pipes /wires.

Pull down the two knobs on the grid, take off the two screws, then the air-inlet grid goes free.

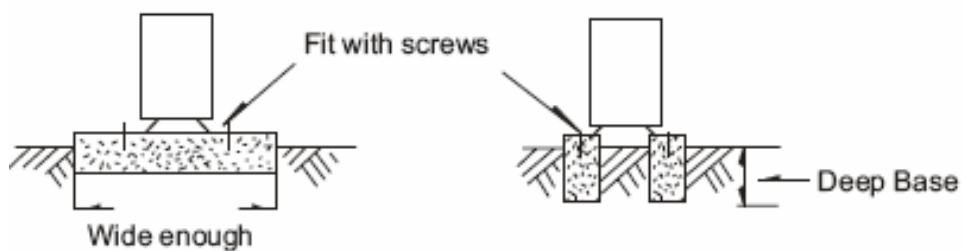


- d. Take the pipe clip off before connecting the pipes and wiring. Fit it when these finished. Use accessories 4 and 9 to connect the pipes /wires on both sides and back side.



2. Outdoor Unit

- a. Ship the a/c to the installation place originally packed.
- b. Be careful while hanging the unit because the center of gravity of the unit is not centralized.
- c. Do not make the angle of inclination more than 45 degrees while shipping. (Avoid horizontal storage).
- d. Be sure the electric insulation work is well done if installed on metal ceiling /wall.



- e. Fix the unit feet with bolts (M10/M8). Be sure the unit is fixed strongly enough to against blast or earthquake.
- f. Make a concrete basement to the unit by the above references.

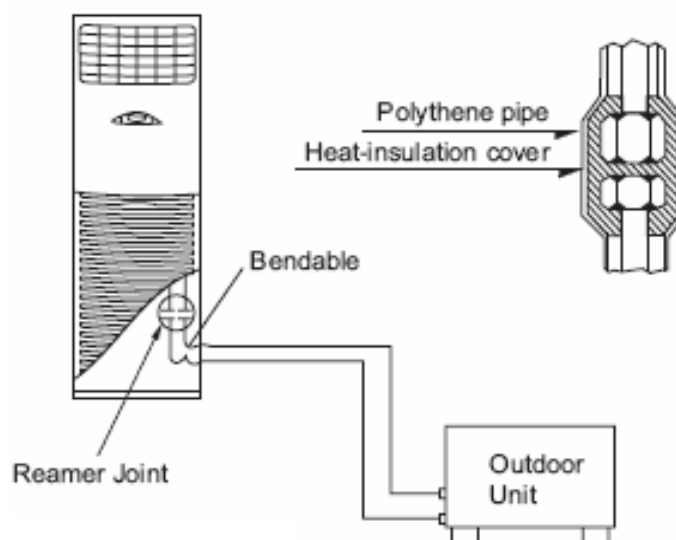
Refrigerant pipe

The refrigerant pipe and the drain pipe should be heat-insulated to avoid condensing and water-dropping.

A reamer joint is adopted to connect the indoor unit with the outdoor unit.

The refrigerant pipe is used to connect indoor and outdoor units, showed as below.

Note: The bendable pipe must not be curved for more than 3 times.



Note: Cover all exposed reamer joint pipes and refrigerant pipes with heat-insulation material.

1. Connecting of refrigerant pipe

- a. Only the correctly installation of indoor and outdoor unit done, can the refrigerant pipe be connected.
- b. The cut-off valves are completely close before ex-work. Before connecting the refrigerant pipe, be careful to check whether the valve are completely close.
- c. The connecting procedure of refrigerant pipe; first, unscrew the two valves on the outdoor unit and the pipe-jointing nut on the indoor unit (please keep them care fully). Please connect the refrigerant pipe according to the manual, the pipe-jointing nut should be screw tightly and no leakage.

Note: you need two wrenches to make balance.

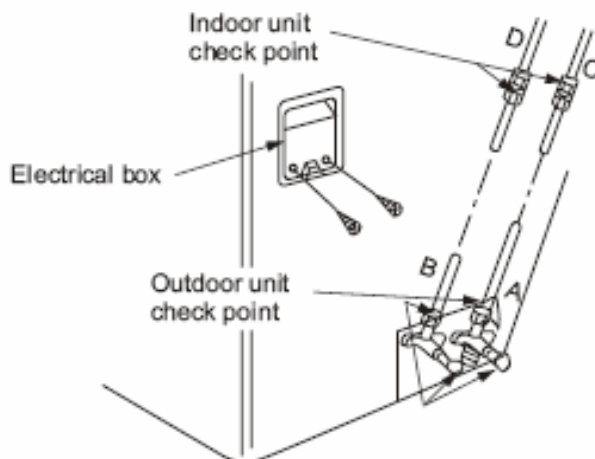
- d. When the connecting of refrigerant pipe is finished, before power on the system, you should vacuum the indoor unit through the maintenance port in the cut-off valves, or open the high-pressure valve (closed). It will take about ten seconds. Then screw tightly the maintenance port. (When supplement the refrigerant, fill thought the maintenance port of the low-pressure valves on the outdoor unit).
- e. Open all the valves completely before power on the system or it will be sick for low efficiency.
- f. Gas leak check. Make sure no gas from connections with leak detector or soap water.

Caution

A: Lo packed valve

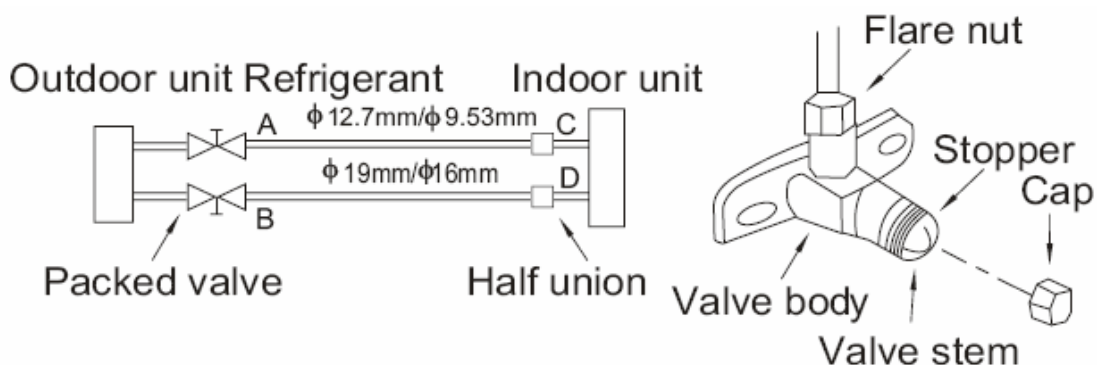
B: Hi packed valve

C and D are ends of indoor unit connection.



Caution in handling the packed valve

- Open the valve stem until it hits against the stopper. Do not try to open it further.
- Securely tighten the valve stem cap with a spanner or the link.



- Notes for the bendable pipe
 - i. The bendable pipe should be used on the indoor side.
 - ii. Bend angle may not exceed 90 degrees.
 - iii. The bend location should be made on the center of the pipe if possible, as for bend radius, the bigger the better.
 - iv. The bendable pipe may not be bent for more than 3 times.
- Bend the thin pipe
 - i. While bending, expose the pipe by cutting the concave gap on the bending heat-insulation pipe (roll it with soft band after bent).
 - ii. To avoid pipe deformation, the radius is the bigger the better.
 - iii. Use a pipe-bending device to make the compact bending pipe.

Use thumb to curve the pipe



Min. Radius 100 mm



Untie the pipe, make is straight

2. Using bronze pipe selling in market

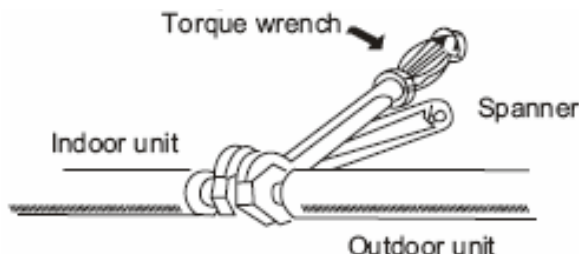
Completely shut the cut-off valves of the outdoor unit (as ex-work status). After the refrigerant pipe has been connected with both the indoor and outdoor unit, let the air exhaust out from the maintenance gap on the low-pressure cut-off valve of the outdoor unit. Screw the nuts tightly on the maintenance gap after the air has been drained.

3. To make the refrigerant pipe unblocked completely.

Should keep the cut-off valves of the outdoor unit completely open after finished the above steps (step 1 or step 2).

Note:

- Before screwing the reamer nut, smear the pipe and the connecting surface with refrigerant oil.
- Check and make sure there is no leakage by soap-water or leakage-checker after connecting.
- Be sure the connecting joint on the indoor side is insulated.
- Use two wrenches to connecting the pipe.



4. Filling refrigerant.

The correct refrigerant quality filled in the 5-meter-long pipe of the outdoor unit is marked on the Product Data Plate. If you have to use longer pipe for every meter plus pipe, the refrigerant should be added according to the following calculation.

Connective pipe length	Air purging method	Additional amount of refrigerant to be charged	
Less than 5m	Use vacuum pump	-	
5~20m	Use vacuum pump	Liquid side Φ 9.53	Liquid side Φ 12.7
		(L-5) x 65g	(L-5) x 90g

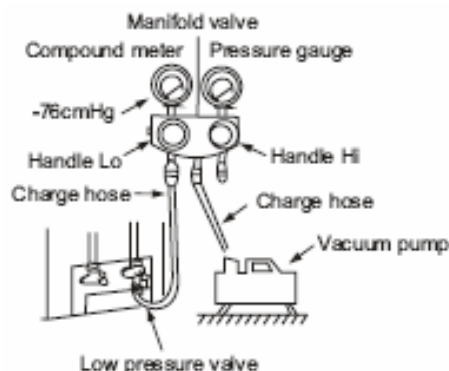
Note:

If you are using pipe purchased in the market, please make sure the heat-insulation material is the same as what we supply. (At least 12 millimeters in thickness).

5. Air purging

When using the vacuum pump

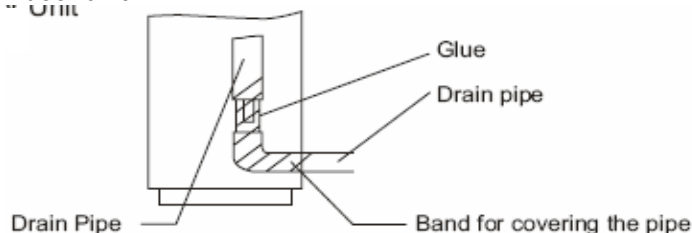
- a. Completely tighten the flare nuts A, B, C, D connect the manifold valve charge hose to a charge port of the low-pressure valve on the gas pipe side.
- b. Connect the charge hose connection to the vacuum pump.
- c. Fully open the handle Lo of the manifold valve.
- d. Operate the vacuum pump to evacuate. After starting evacuation, slightly loose the flare nut of the Lo valve on the gas pipe side and check that the air is entering. (operation noise of the vacuum pump charges and a compound meter indicates 0 instead of minus).
- e. After the evacuation is complete, fully close the handle Lo of the manifold valve and stop the operation of the vacuum pump.
Make evacuation for 15 minutes or more and check that the compound meter indicates - 76cmHg (-10x10⁶Pa).



- f. Turn the stem of the packed valve B about 45o counter clockwise for 6~7 seconds after the gas coming out, then tighten the flare nut again. Make sure the pressure display in the pressure indicator is a little higher than the atmosphere pressure.
- g. Remove the charge hose from the Low pressure charge hose.
- h. Fully open the packed valve stems B and A.
- i. Securely tighten the cap of the packed valve.

Drain pipe

Drain pipe of the indoor unit



1. Make sure the drain pipe is connected to the outdoor side downward.
2. The hard polyvinyl chloride (PVC) plastic pipe (external diameter 26 mm) sold is the market is suitable for the attached soft drain pipe.
3. Please connect the Soft Drain Pipe with the Drain Pipe, then fix it with band.
4. If you have to connect the Drain Pipe indoors to avoid condensing caused by air intake, you must cover the pipe with heat-insulation material (polyethylene with specific Gravity of 0.03, at least 9 mm in thickness) and use glue band to fix it.
5. After the Drain Pipe has been connected, please check if the water drains out of the pipe efficiently and has no leakage.
 - Refrigerant Pipe and Drain Pipe should be heat-insulated to avoid condensing and water dropping later on.

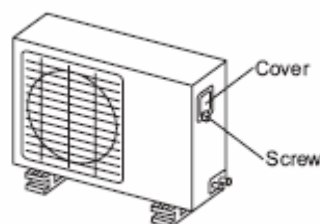
Connecting the electric system

1. Wire connecting

The outdoor unit will look one of the following:

a. Outdoor unit

- i. Remove the electric parts cover from the outdoor unit.
- ii. Connect the connective cables to the terminals as identified with their respective matched numbers on the terminal block of indoor and outdoor units.

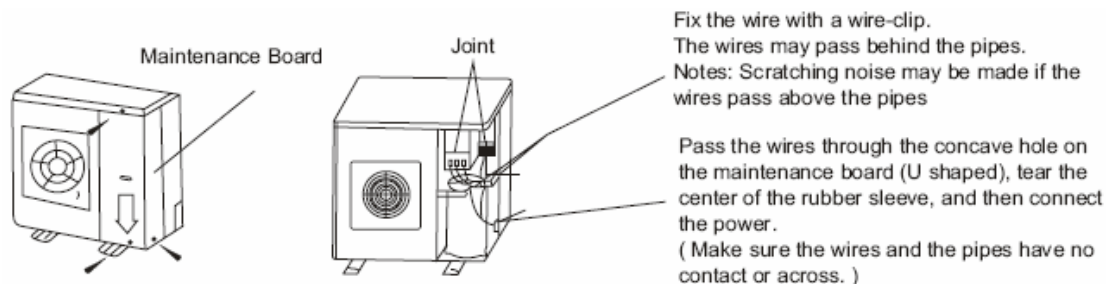


- iii. To prevent the ingress of water, form a loop of the connective cable as

- iv. Wiring connection must be done strictly according to the “Wiring Diagram” located on the panel of air conditioner.
- v. Follow the instruction of wiring connection in this manual, never attempt to modify the wiring by yourself.

b. Outdoor unit

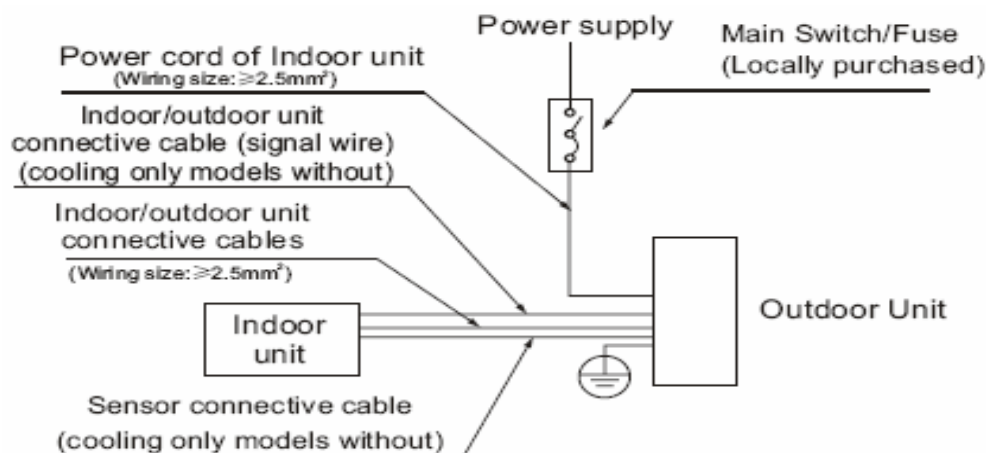
- i. Unscrew the maintenance board. Pull it down as the signal shown.
(Be careful not to scratch the crust.)



Caution

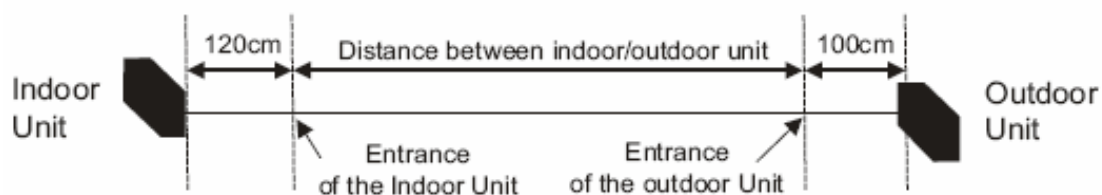
Wrong wiring connections may cause some electrical parts to malfunction.
The air conditioner must be grounded well.

2. Wire-connecting brief diagram (for details refer to wire-connecting diagram)



Note:

- i. Some models is equipped with a cord having a plug. So a wall outlet shall be properly installed.
- ii. Please remember the surroundings (environmental temperature, direct sunlight, rain etc.)
- iii. We consider the minimal size of the metal core as the wire size. So it is recommended you adopt a thicker one as the power conducting wire so as to avoid power decrease.
- iv. Connect the grounded wire to both indoor and outdoor units.
- v. This table is just an on-site wire-connecting example.
The length of the power wire and connecting-wire which connects the indoor unit to the outdoor unit. (The figure given below shows a suitable length).



3. Electrical safety check
Perform the electric safe check after completing installation:
 - a. Insulated resistance
The insulated resistance must be more than 2M Ω .
 - b. Grounding work
After finishing grounding work, measure the grounding resistance by visual detection and grounding resistance tester. Make sure the grounding resistance is less than 4 Ω .
 - c. Electrical leakage check (performing during test running)
During test operation after finishing installation, use the electro probe and multi meter to perform the electrical leakage check. Turn off the unit immediately if leakage happens. Check and find out the solution ways till the unit operate properly.

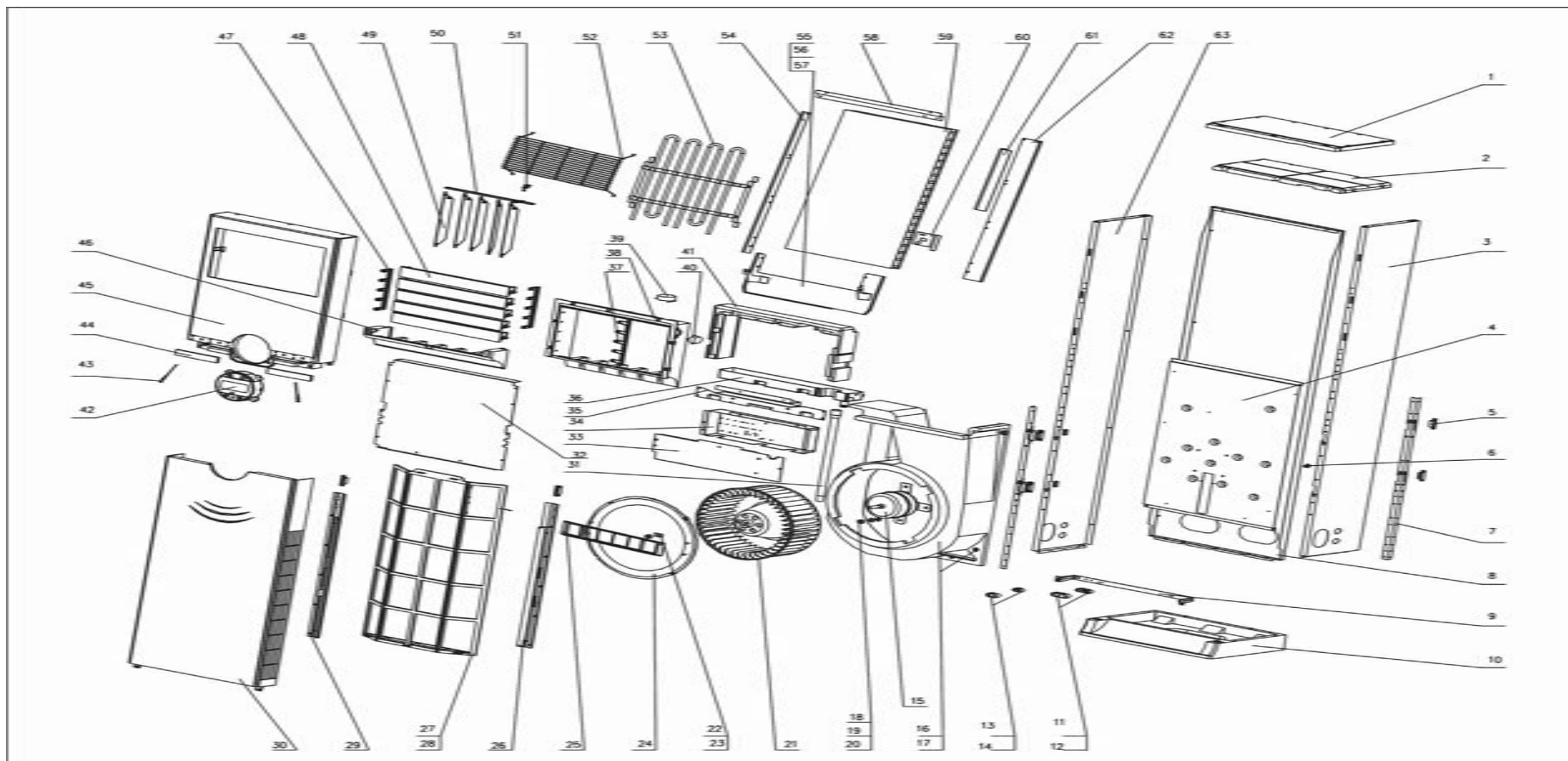
Test run

Perform test operation after completing gas leak and electrical safety check. The test operation time should last more than 30 minutes.

1. Open the panel and lift the panel up to angle which remains fixed. Do not lift the panel any further when it stops with a "click" sound.
2. Press the manual switch button twice until the operation indicator lights, the unit will operate on Manual Cool mode.
3. Check if all the functions works well while testing the air conditioner. Especially check whether the drainage of indoor unit is smooth or not.
4. Press the manual switch button again till the operation indicator turns dark after finishing the test operation and the unit stops operation.

EXPLODED VIEW & PART LIST

Indoor Unit



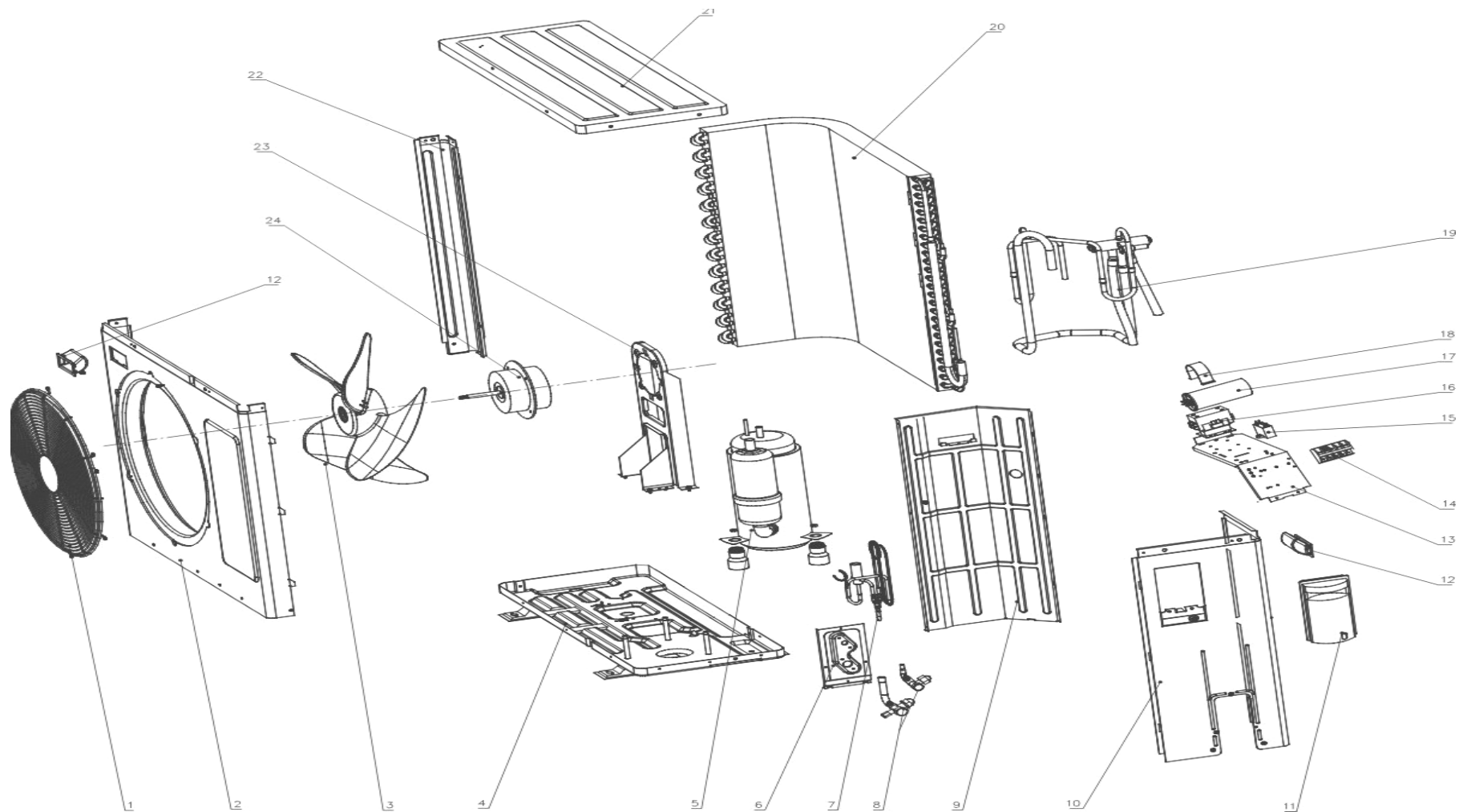
Model No.: AC-FR30HA
Version: 1.0

INDOOR PART LIST

No.	Name of part	Quantity
1	Top cover	1
2	Top cover foam	1
3	Right-hand board	1
4	Motor's fixing board	1
5	Magnet assembly	6
6	Motor's fixing bolt	4
7	Strengthening plate for side-board	2
8	Backboard assembly	1
9	Supporting plate for foamy shell	1
10	Chassis	1
11	Double line-clamping seat	1
12	Double line-clamping cover	1
13	Single line-clamping seat	1
14	Single line-clamping cover	1
15	Motor	1
16	Foamy shell	1
17	Foamy shell stator	9
18	Ordinary gasket	4
19	Standard spring gasket	4
20	Hexangular nut	4
21	Centrifugal fan blade	1
22	Cushion	1
23	Nut	1
24	Air-inlet guiding ring	1
25	Bracket of bactericidal net	1
26	Lead way of filtering net A	1
27	Filtering net A	1
28	Filtering net B	1
29	Lead way of filtering net B	1
30	Air-inlet grille	1
31	Drain pipe	1
32	Heat-preservation cover	1
33	Cover for electric controller box	1
34	Electric controller box	1
35	Supporting plate	1
36	Water-draining slot	1
37	Bracket	1
38	Air-outlet window	1
39	Swing motor	1
40	Step motor	1
41	Foam A of air-outlet window	1
42	Display board assembly	1
43	Pulling rope	2
44	Ornamental strip	2
45	Upper panel assembly	1
46	Foam B of air-outlet window	1
47	Connecting rod clevel of horizontal air-blade	2
48	Horizontal air-blade	5
49	Vertical air-blade	5
50	Connecting rod clevel of vertical air-blade	1
51	Brace	1
52	Protecting net for electric heat	1
53	Electric heater assembly	1
54	Left fixing board for evaporator	1
55	downside fixing board for evaporator	1
56	Left fixed clip for evaporator	1
57	Right fixed clip for evaporator	1
58	Upper fixing board for evaporator	1
59	Evaporator	1
60	Bracket of protector	1
61	Tube protection board	1
62	Right fixing board for evaporator	1
63	Left-hand board	1

Model No.: AC-FR30HA
 Version: 1.0

Outdoor Unit



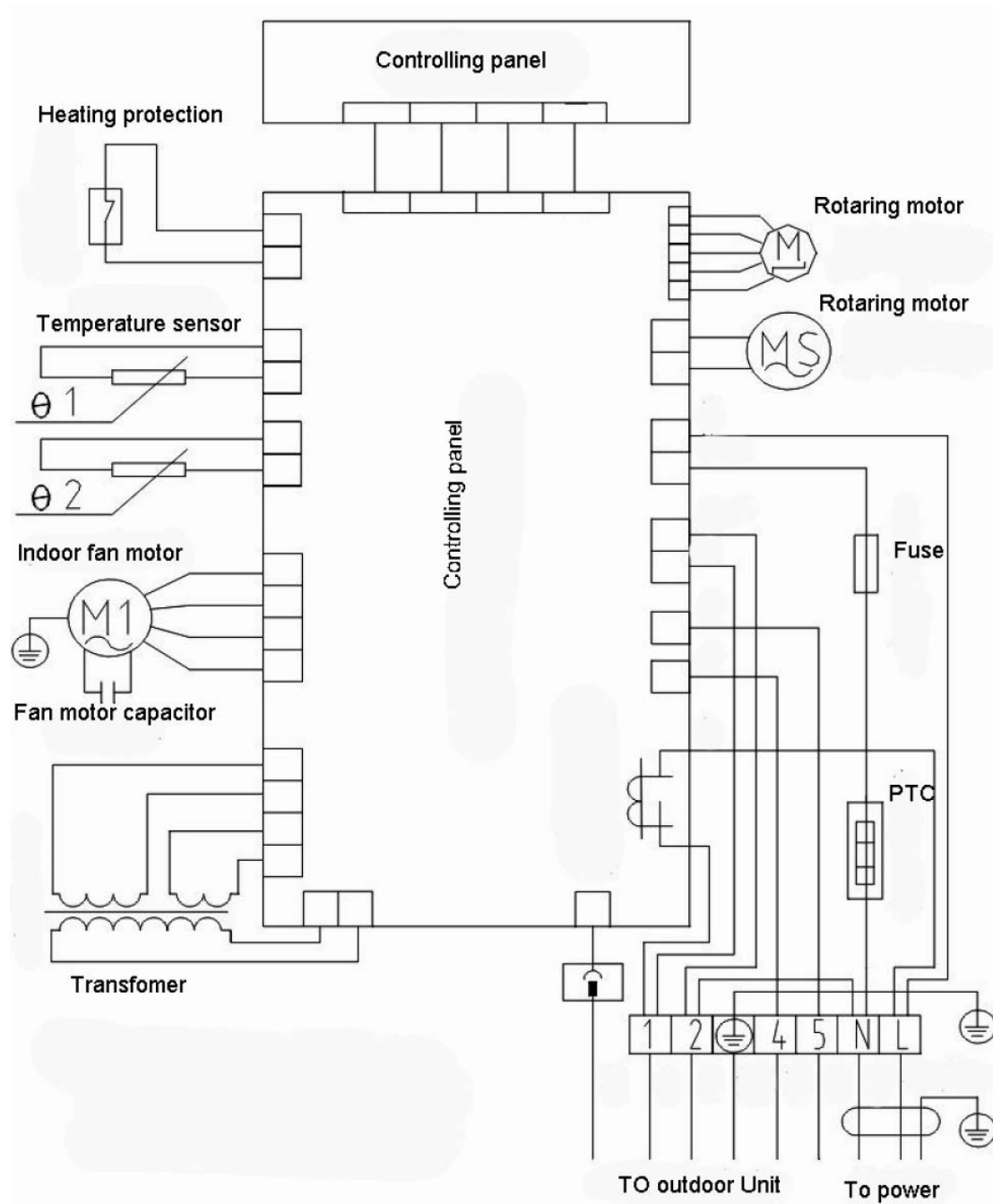
Model No.: AC-FR30HA
Version: 1.0

OUT DOOR PART LIST

No.	Name of Part	Quantity
1	Net for panel	1
2	Panel	1
3	Axial-flow wind leaves	1
4	Chassis assembly	1
5	Compressor	1
6	Valve board	1
7	Capillary assembly	1
8	Valve	1
9	Mid clapboard	1
10	Right-hand board	1
11	Cover for electric wiring	1
12	Digger	2
13	Wiring board	1
14	Terminal board	1
15	Fan motor capacitor	1
16	AC contactor	1
17	Compressor capacitor	1
18	Capacitor clamp	1
19	Four-way valve assembly	1
20	Condenser assembly	1
21	Top cover	1
22	Left-hand propping board	1
23	Motor bracket	1
24	Motor	1

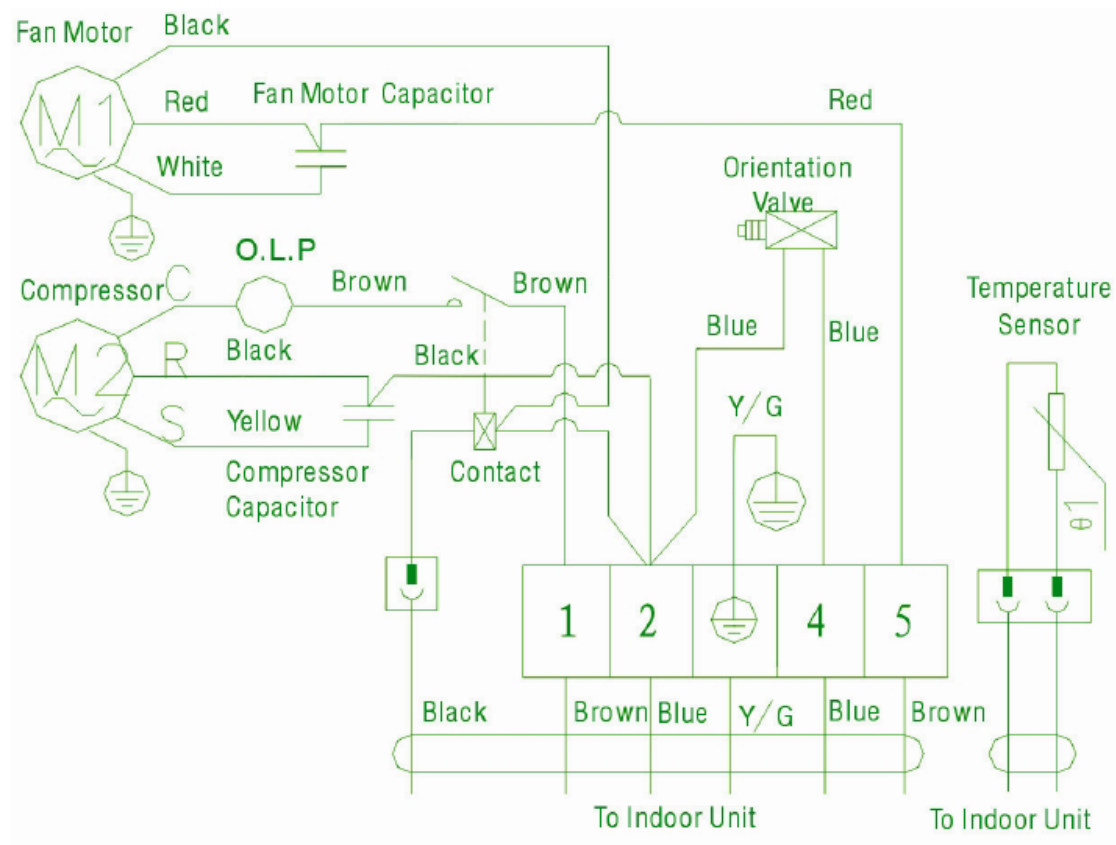
CIRCUIT DIAGRAM

Indoor Unit



CIRCUIT DIAGRAM

Outdoor Unit



TROUBLESHOOTING

Problem	Possible Cause	Solutions
Air conditioner does not operate at all	Power failure	Wait for power restoring
	The power supply is disconnected.	Switch on the main power switch
	The power fuse is blown.	Change the fuse
	The timer is set.	Wait or cancel timer setting
	The batteries of the remote control are exhausted	Change the batteries.
Air conditioner does not cool or heat well	The temperature setting is too high or too low.	Set a more comfortable temperature.
	The air filter is clogged with dust	Clean the filter
	The air inlet or outlet of the outdoor unit is blocked	Clear up the block
	Doors or windows are open	Close the doors or windows
Air conditioner does not cool or heat at all	The air inlet or outlet of the outdoor unit is blocked	Clear up the block first, then begin to operate.
	Three-minute protection feature	Wait for a while
	Unappropriated temperature setting	Set the temperature properly

Number	Display code	Problems	What to do
1	E1、 E2 E3、 E4	Temperature Sensor is off or short-circuit.	Contact service people
2	E6	Outdoor unit protection	Contact service people
3	E8	Electrostatic dust collection	Contact service people
4	P4	The temperature of the evaporator of indoor unit is too low or high (For the protection feature, the compressor turns off automatically)	Turn off the unit, clean the air filter, then restart the unit. If this operation does not work, please contact service people.
5	P5	The temperature of condenser of the outdoor unit is too high (For the protection feature, the compressor turns off automatically)	Turn off the unit, check if there is any obstacle in the air-inlet, otherwise call the service people.
6	P9	Defrosting protection or warm-air controlling is off	The unit will auto restart after finishing the defrosting or the temperature of the Heat Exchanger of indoor unit raise.

CAUTION:

When the power cord is to be replaced, replacement work shall be performed by authorized personnel.
 Все каталоги и инструкции здесь: <https://splitsystema48.ru/instrukcii-po-ekspluatatsii-kondicionerov.html>



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каталоги, инструкции, сервисные мануалы, схемы.