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# ODIN PLUS

PORTABLE AIR CONDITIONER (LOCAL)



## SERVICE MANUAL

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Read the instructions carefully before operating the appliance or carrying out maintenance work. Observe all the safety instructions; failure to do so may lead to accidents and/or damage. Store these instructions in a safe place for future reference.

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## 1. Safety Considerations





**IMPORTANT!**

Please Read Before Starting

This air conditioning system meets strict safety and operating standards. As the installer or service person, it is an important part of your job to install or service the system, so it operates safely and efficiently.

For safe installation and trouble free operation, you must:

- Carefully read this instruction booklet before beginning.
- Follow each installation or repair step exactly as shown.
- Observe all local, state, and national electrical codes.
- Pay close attention to all warning and caution notices given in this manual.

Icon	Icon means	Warning
 <p data-bbox="292 1041 461 1061">Caution, risk of fire, R290</p>	<p data-bbox="579 824 874 898">Appliance is filled with flammable gas R290.</p>	<ul style="list-style-type: none"> <li data-bbox="1043 824 1418 1021">·Appliance shall be installed, operated and stored in a room with a floor area Recommended in user manual.</li> <li data-bbox="1043 1077 1382 1274">·Do not use means to accelerate the defrosting process or to clean, other than those recommended by the manufacturer.</li> </ul>
	<p data-bbox="579 1113 995 1187">Before using the appliance, read the manual.</p>	<ul style="list-style-type: none"> <li data-bbox="1043 1323 1390 1644">· The appliance shall be stored in a room without continuously operating ignition sources (for example: open flames, an operating gas appliance or an operating electric heater).</li> </ul>
	<p data-bbox="579 1346 975 1458">Before installing the appliance, read the installation manual.</p>	<ul style="list-style-type: none"> <li data-bbox="1043 1323 1390 1644">· The appliance shall be stored in a room without continuously operating ignition sources (for example: open flames, an operating gas appliance or an operating electric heater).</li> </ul>
	<p data-bbox="579 1583 1011 1740">Any repairs you need, contact the nearest authorized Service Centre and strictly follow manufacturer's instruction only</p>	<ul style="list-style-type: none"> <li data-bbox="1043 1695 1350 1731">· Do not pierce or burn.</li> <li data-bbox="1043 1778 1394 1852">·Be aware that refrigerants do not have any odour.</li> </ul>

#### If Necessary, Get Help

These instructions are all you need for most installation sites and maintenance conditions. If you require help for a special problem, contact our sales/service outlet or your certified dealer for additional instructions.

#### In Case of Improper Installation

The manufacturer shall in no way be responsible for improper installation or maintenance service, including failure to follow the instructions in this document.

#### SPECIAL PRECAUTIONS

##### When Servicing

△ Turn the power OFF at the main power box (mains) before opening the unit to check or repair electrical parts and wiring.

##### Others




△ Ventilate any enclosed areas when disassembling the refrigeration system. Escaped refrigerant gas, on contact with flame or heat, like a stove, gas water heater, electric room heater or other heat source, it can fire.

##### NOTE:






The Figure, size and parameter of the product may not be identical with the service manual, please take the actual product as the standard.

## 2. Product & Accessories Picture

### 2-1. Product and Accessories Pictures

Item	Front panel review	Rear panel review	Top review
ODIN PLUS			

### 2-2. Accessories:

Pictures	Part Name	Sizes/cm
	Connector to the unit	Max. Thickness: $\phi$ 155.5mm ABS/427C/44g
	Connector to the slide bar	W:237*D:137mm Outer diameter $\phi$ 155mm thickness $\phi$ 151 $\pm$ 0.3mm
	Exhaust hose	Right Rotate; Extended sizes is: $\phi$ 150*1500mm Compressed length :265mm
	PVC Water pipe	Outer diameter $\phi$ 18mm thickness 1.8mm
	Remote control	LCD:L139*W460*D200mm

## 3. Function Operation

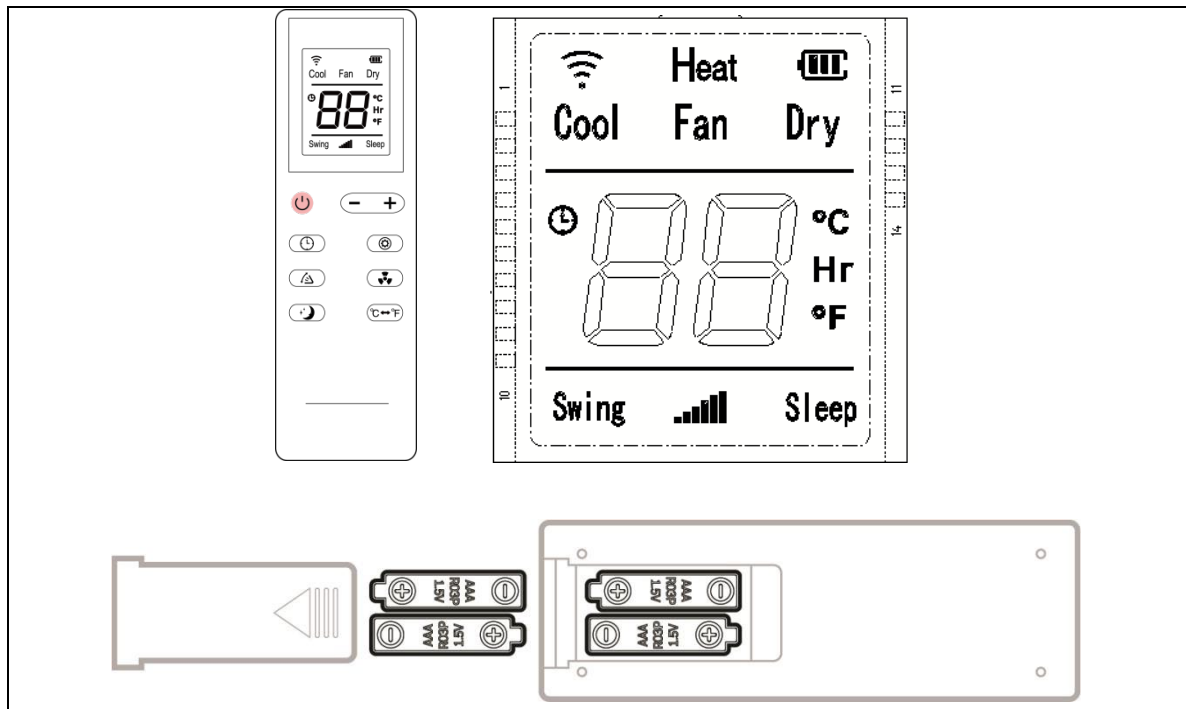
### 3-1. Operation Range (cooling and heating)







Type	Temperature	
	Ambient Maxi.	35°C
	Ambient Mini.	7°C


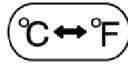
Cooling&Heat pump	Setting temp Maxi.	31°C
	Setting temp Mini.	16°C

### 3-2. Remote Controller Operation & Function operation instructions of remote control

1) The remote control Panel is as follows:

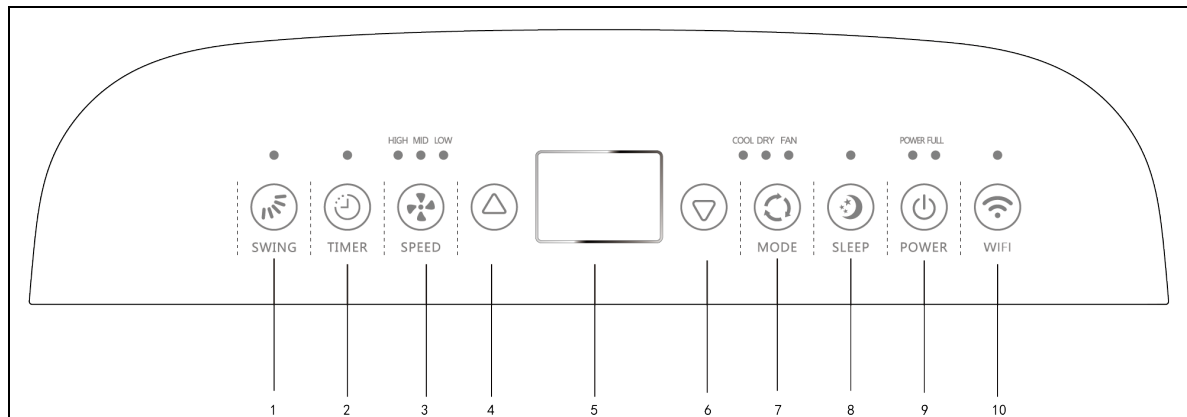







Icon	Function	Function description
	Power	Press the key to turn on or turn off the machine.
	Up &Down	Press “+” key to increase temperature and timing set value. Press “-”key to reduce temperature and timing set value.
	Timer	Press the key to set timing value.
	Auto swing	Press the key to make louvers on top panel to swing automatically.
	Sleep	Press the key to turn on the sleep mode.
	Mode	Press the key to switch between cooling, air supply, dehumidification and heating (single cold with no such function) mode.






	Fan	Press the key to select high, medium and low wind speed output circularly.
	Temperature	Press the key to switch between Celsius and Fahrenheit.

### 3-3. Function Instruction

#### 1. Control panel operation instructions



No.	Icon	Function	Function description
1		Swing	The SWING function only can work after turn on the unit, but you can turned on or off.
2		Timer	Press the key, when the timing symbol flashes, press up and down key to select the required timing value. Timing values can be set in 1-24 hours and the timing value is adjusted up or down by one hour.
3		Fan Speed	In cooling, heating and fan mode, press this key to select high, middle, low speed. This function is not available in SLEEP mode and DEHUMIDIFYING mode.
4		Up	Press this button to increase the temperature setting or set up the timer to the required timer setting. This function is not available under FAN mode and DEHUMIDIFYING mode.
5		Display board	To show temperature, Timer etc.

6		Down	Under timer mode, press this key can be adjusted downward the time. Under cooling and heating mode, press this key can be adjusted downward the temperature. Press this button to decrease the temperature setting or set down the timer to the required timer setting. This function is not available under FAN mode and DEHUMIDIFYING mode.
7		Mode	In the case of power on, press this key to switch between cooling → heating→ fan → dehumidifying mode.
8		Sleep	When the power is on and In the cooling mode (or heating mode), press 'SLEEP' button to start the sleep mode. Under sleep mode, the FAN speed is set to LOW speed and not adjustable. The SLEEP mode can be cancelled by pressing the button.
9		Power	Press this key to turn on and turn off the unit.
10		Wifi	Press"WIFI" till there`s a beep, it means the machine is stead-by for WIFI connection.

#### 4.Trouble Shooting

##### 4-1.Trouble Shooting

Problem	Reasons	Solution
Machine cannot work	1. Power-off 2. Power plug is loose 3.Water-full indicator turns on	1.Power-on 2.Re-insert power plug 3.Drain out the water
Cooling function cannot work well	1.Filters are blocked by dusts 2.Air-inlet is blocked 3.The room is too big or blow-by	1.Clean filters 2. Remove the blockage. 3. Adjust room area or strengthen the seal
Water leakage	1.Machine doesn't stand upright 2.Water-outlet is blocked	1 Let machine stand upright 2. Unchoke water-outlet.



Abnormal noise	<ol style="list-style-type: none"> <li>1.Machine is not placed well</li> <li>2.Filters is blocked</li> </ol>	<ol style="list-style-type: none"> <li>1.Let machine on flat place and stand upright</li> <li>2. Clean the filters</li> </ol>
Heat air doesn't go out immediately under heating mode.	<ol style="list-style-type: none"> <li>1.Environmental temperature is higher than setting temperature</li> <li>2.Heat air will blow out three minutes later after heating mode running</li> </ol>	<ol style="list-style-type: none"> <li>1.Make setting temperature is higher than environmental temperature</li> <li>2.Please wait patiently for three minutes.</li> </ol>
Strange smell blows out	Machine is unused for a longtime, it has adsorbed the smell from furniture , carpet, paint. when the machine runs, the smell will blow out	Run machine for 2-5minutes, the strange smell will disappear.
Can not cool the room	<ol style="list-style-type: none"> <li>1.The ambient temperature is greater than the setting temperature.</li> <li>2.Compressor does not start</li> <li>3.Refrigerant leakage or use out</li> <li>4.The application area is not match with the cooling capacity of the machine.</li> </ol>	<ol style="list-style-type: none"> <li>1.Reset the setting temperature smaller than the ambient temperature.</li> <li>2.Restart the machine or wait for three minute and then restart the machine.</li> <li>3.Fill with refrigerant matching the machine</li> <li>4.Adjust the room to use according to the recommended area or replace the machine with a larger cooling capacity.</li> </ol>
Display stroke-lack or indicator off	<ol style="list-style-type: none"> <li>1.The control panel is in poor contact with the display panel, and the plug needs to be reinserted</li> <li>2.The display panel damaged</li> </ol>	<ol style="list-style-type: none"> <li>1.Connect the wire between main control board and display board.</li> <li>2.Replace display board</li> </ol>
No display	<ol style="list-style-type: none"> <li>1.The power cord terminals (N, L) are in poor contact with the inserted control panel.</li> <li>2.Grounding parts damaged</li> <li>3.The Control panel damaged</li> </ol>	<ol style="list-style-type: none"> <li>1.Reinsert the wire</li> <li>2.Replace the grounding parts</li> <li>3.Replace the control panel</li> </ol>

Compressor nor work	<ol style="list-style-type: none"> <li>1.The compressor capacity damaged</li> <li>2.The compressor stops for 3 minutes and the protection function is activated When the machine ran for a long time</li> <li>3.The compressor damaged</li> </ol>	<ol style="list-style-type: none"> <li>1.Replace the compressor capacity</li> <li>2.Wait for three minutes and restart the machine.</li> <li>3.Replace the compressor.</li> </ol>
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#### 4-2. Error Code Table

Error code	Problem Description	Reasons	Solution
E1	Room temperature sensor failure	Sensor short circuit or open circuit or main board detection circuit failure	Re-plug the sensor terminal or replace the PCB.
E2	Pipe temperature sensor failure	Sensor short circuit or open circuit or main board detection circuit failure	Re-plug the sensor terminal or replace the PCB.
E3	Main board and display board connection failure	The display board connection harness is short circuit or open circuit, the main board is defective.	Re-plug the connection terminal of the display board to the main board(PCB), or replace the main board(PCB)

Temperature Sensor resistance value table:

T	Rnor	T	Rnor	T	Rnor	T	Rnor
-30	62.1125	4	11.8258	38	3.0836	72	1.0081
-29	58.8212	5	11.3226	39	2.9753	73	0.9782
-28	55.7259	6	10.8436	40	2.8713	76	0.9494
-27	52.8136	7	10.3877	41	2.7714	77	0.9215
-26	50.0723	8	9.9535	42	2.6756	78	0.8945
-25	47.4911	9	9.5399	43	2.5835	79	0.8685
-24	45.0595	10	9.1458	44	2.4951	80	0.8434
-23	42.7679	11	8.7702	45	2.4101	81	0.8191
-22	40.6076	12	8.4121	46	2.3284	82	0.7956
-21	38.5700	13	8.0707	47	2.2499	83	0.7728
-20	36.6476	14	7.7450	48	2.1745	84	0.7509
-19	34.8331	15	7.4343	49	2.1020	85	0.7296
-18	33.1199	16	7.1377	50	2.0322	86	0.7091
-17	31.5016	17	6.8546	51	1.9651	87	0.6892
-16	29.9724	18	6.5843	52	1.9005	88	0.6700
-15	28.5270	19	6.3261	53	1.8384	89	0.6513
-14	27.1602	20	6.0794	54	1.7786	90	0.6333
-13	25.8672	21	5.8437	55	1.7210	91	0.6159
-12	24.6438	22	5.6184	56	1.6656	92	0.5990
-11	23.4857	23	5.4030	57	1.6122	93	0.5827
-10	22.3890	24	5.1970	58	1.5608	94	0.5668
-9	21.3502	25	5.0000	59	1.5113	95	0.5515
-8	20.3659	26	4.8115	60	1.4636	96	0.5367
-7	19.4328	27	4.6311	61	1.4176	97	0.5223
-6	18.5481	28	4.4584	62	1.3733	98	0.5084
-5	17.7090	29	4.2931	63	1.3306	99	0.4948
-4	16.9127	30	4.1347	64	1.2894	100	0.4818
-3	16.1570	31	3.9830	65	1.2497	101	0.4691
-2	15.4395	32	3.8377	66	1.2114	102	0.4568
-1	14.7581	33	3.6985	67	1.1744	103	0.4449
0	14.1108	34	3.5650	68	1.1387	104	0.4333
1	13.4956	35	3.4370	69	1.1043	105	0.4221
2	12.9108	36	3.3143	70	1.0711	106	0.4112
3	12.3547	37	3.1966	71	1.0391	107	0.4007

## 5. Disassemble instructions

### 5-1. Disassemble Instruction

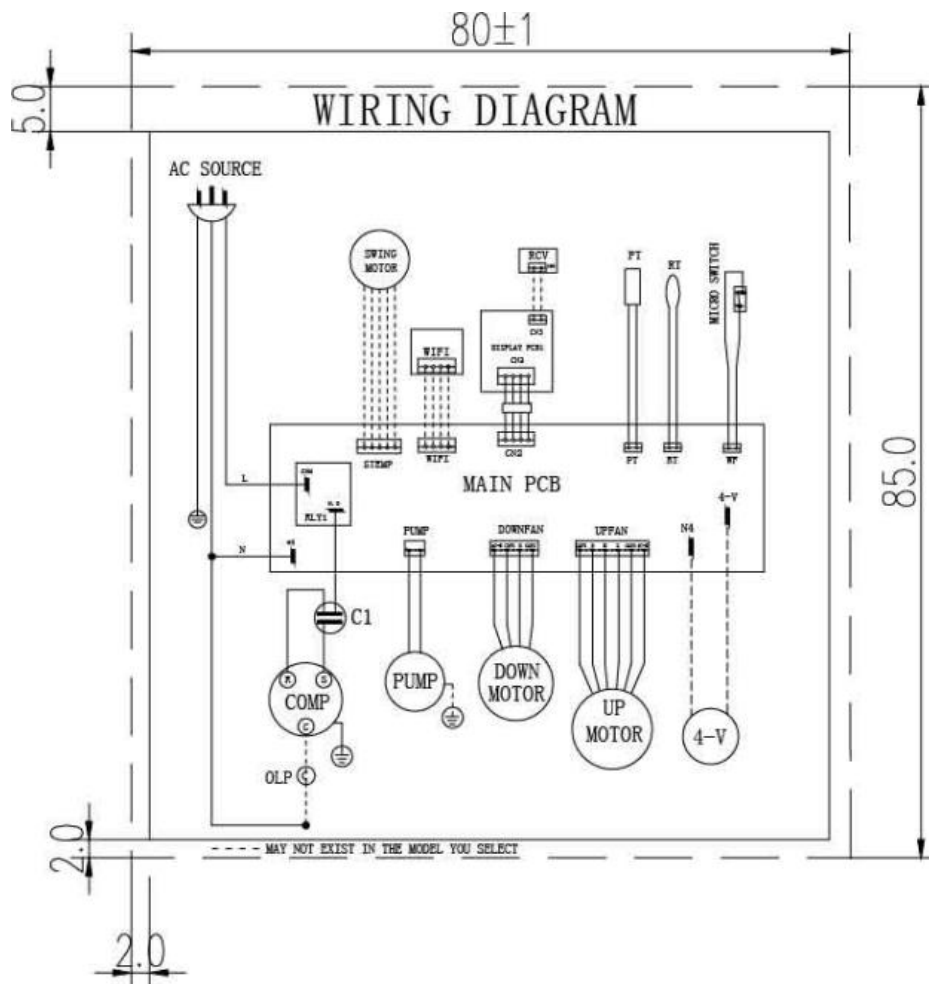
Gather the required tools and parts before starting installation. Read and follow the instructions provided with any tools listed here.

Tools needed

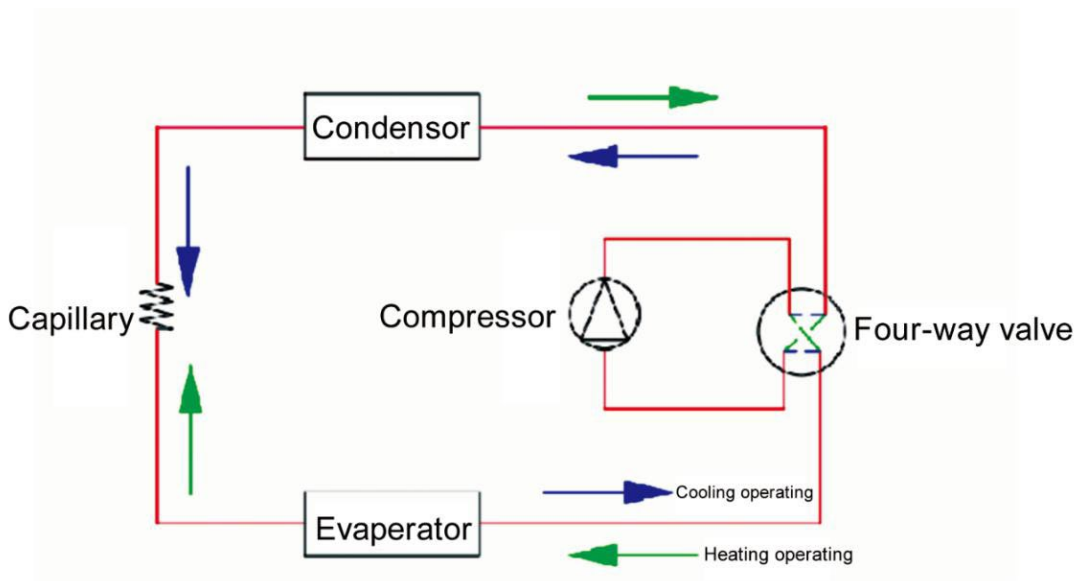
- Phillips screwdriver
- Scissors
- Cordless drill

### 5-2. Electric Wiring Diagram

This wiring diagram is applicable for whole function unit, included cooling function, heat pump, WIFI etc. The function marked by a dotted line means that your product may not include it. The function marked by a solid line means that this function is available on your product.



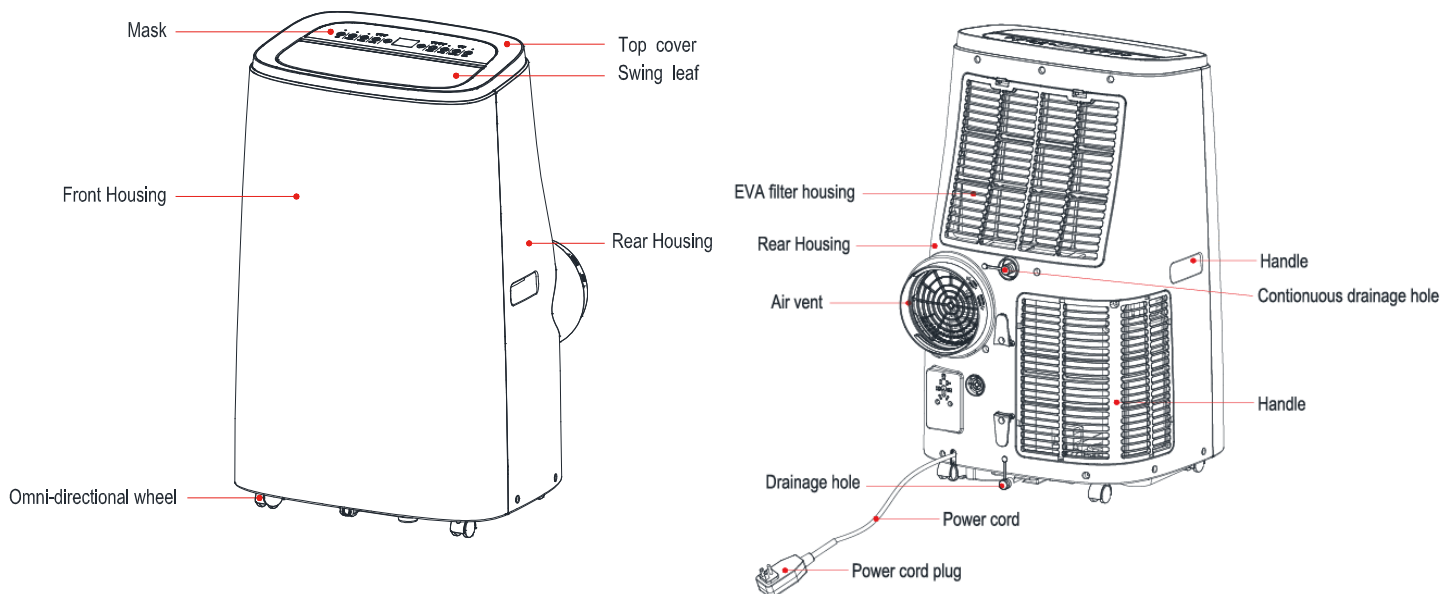
### 5-3.Refrigerant Flow System



### 5.4 Disassemble details

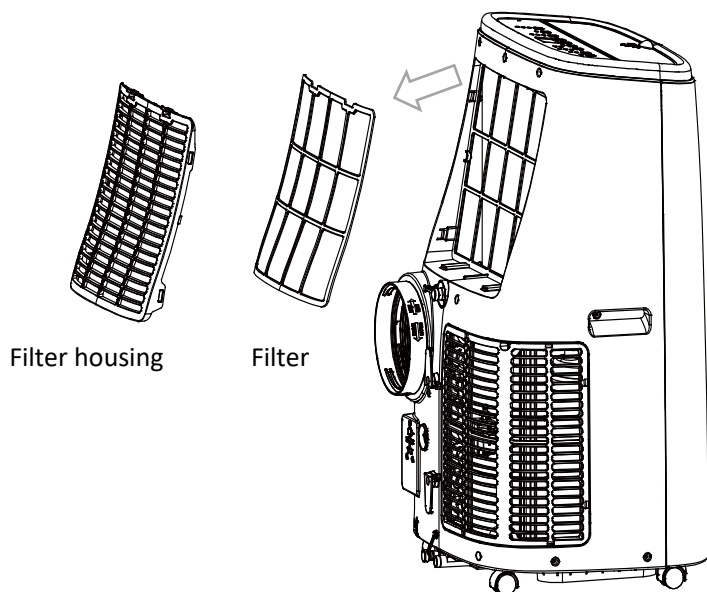
Check before Disassemble that you have Switch off power.

#### (1) Whole unit drawing



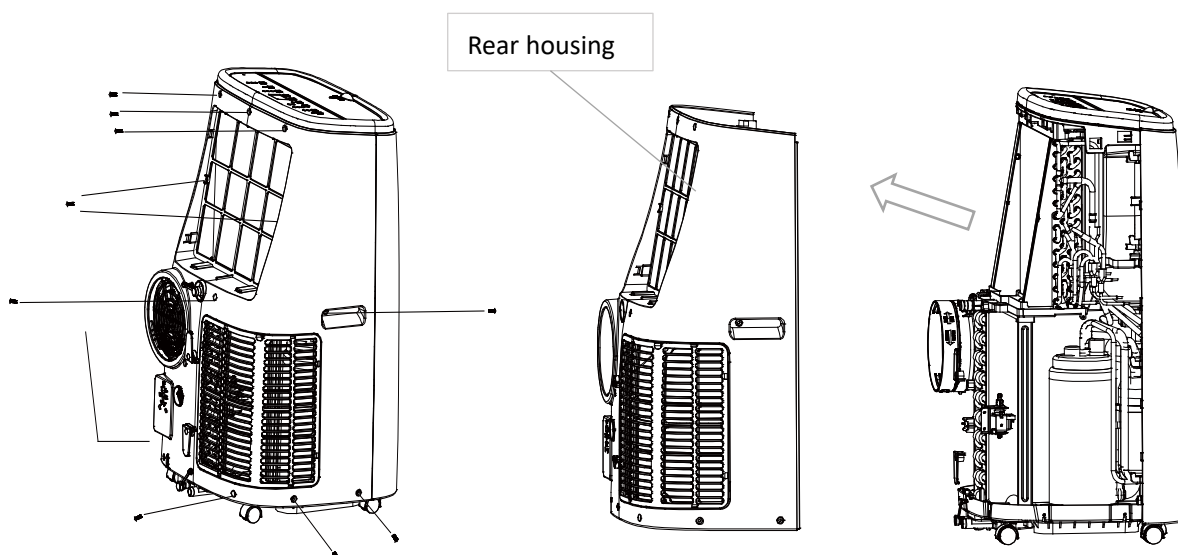
(2) Disassemble the upper filter housing and upper filter:

Use your hand to buckle the two latches on the top of the filter housing and pull it out, and then take out the filter housing.



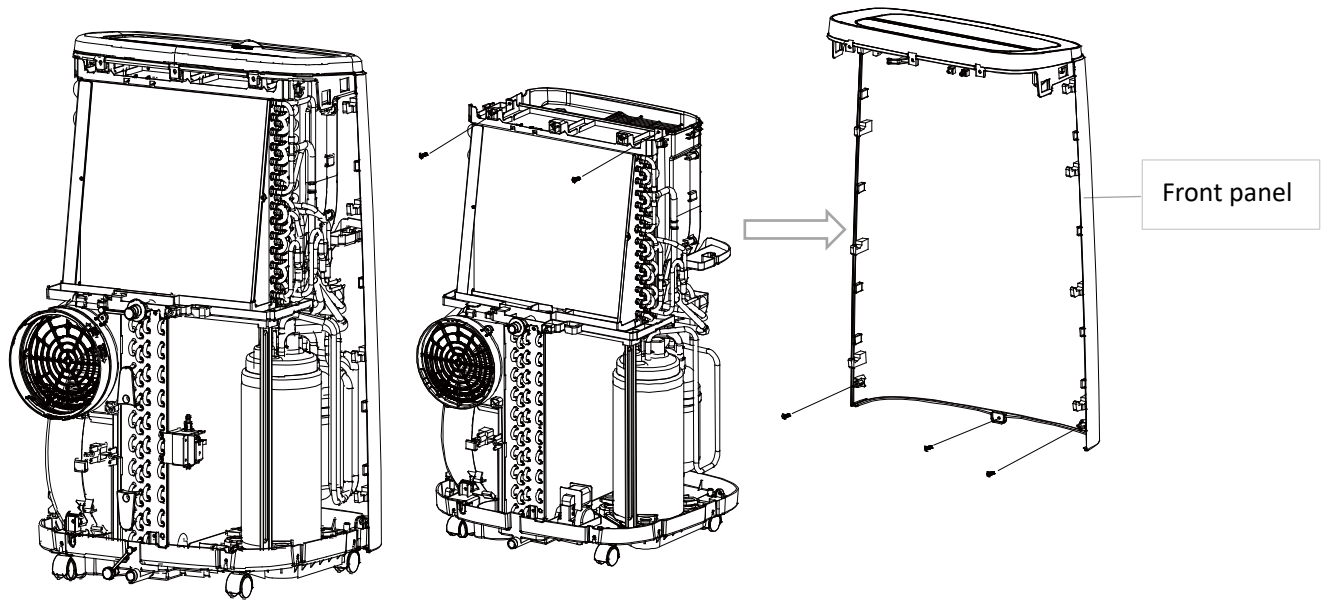
(3) Disassemble the rear panel.

- Use a screwdriver to remove the two screws on the left and right handles Firstly. Then remove the three screws on the rear top panel, two screws on the left and right respectively of the filter frame, one screw on the drain cover side in the middle, and the six screws on the left and right sides of the water outlet at the bottom of the unit.
- And lift the handle on the rear panel slightly and pull it outward.



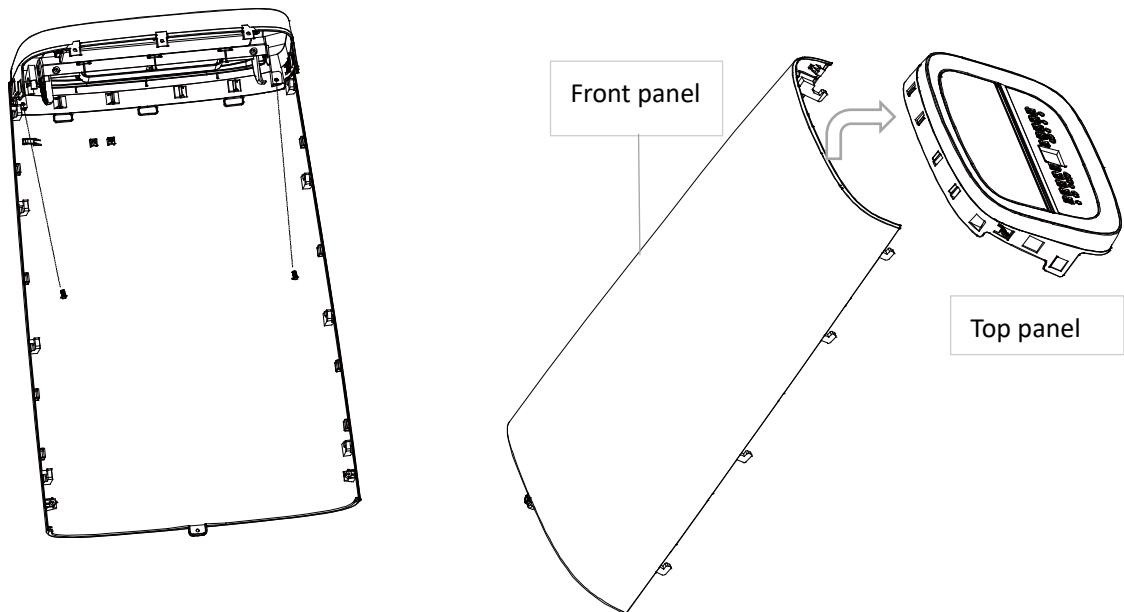
(4) Disassemble the front panel.

- Remove the three screws on bottom , the crews on top left and right with screwdriver.
- Move out of the front panel horizontally.



(5) Remove the top panel assembly

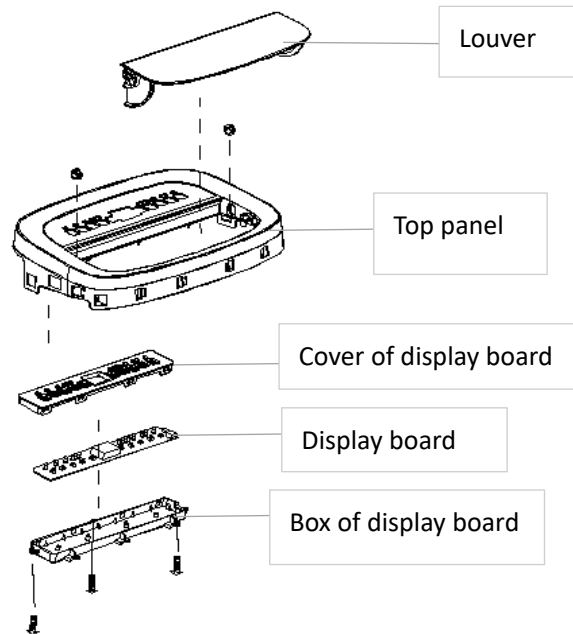
- Use a screwdriver to remove the two screws behind the top panel assembly.
- Pull out the connecting terminals, buckle both sides of the top cover with your hands, and take out the top panel assembly after the top panel assembly is separated from the body.



(6) Split top cover and control panel

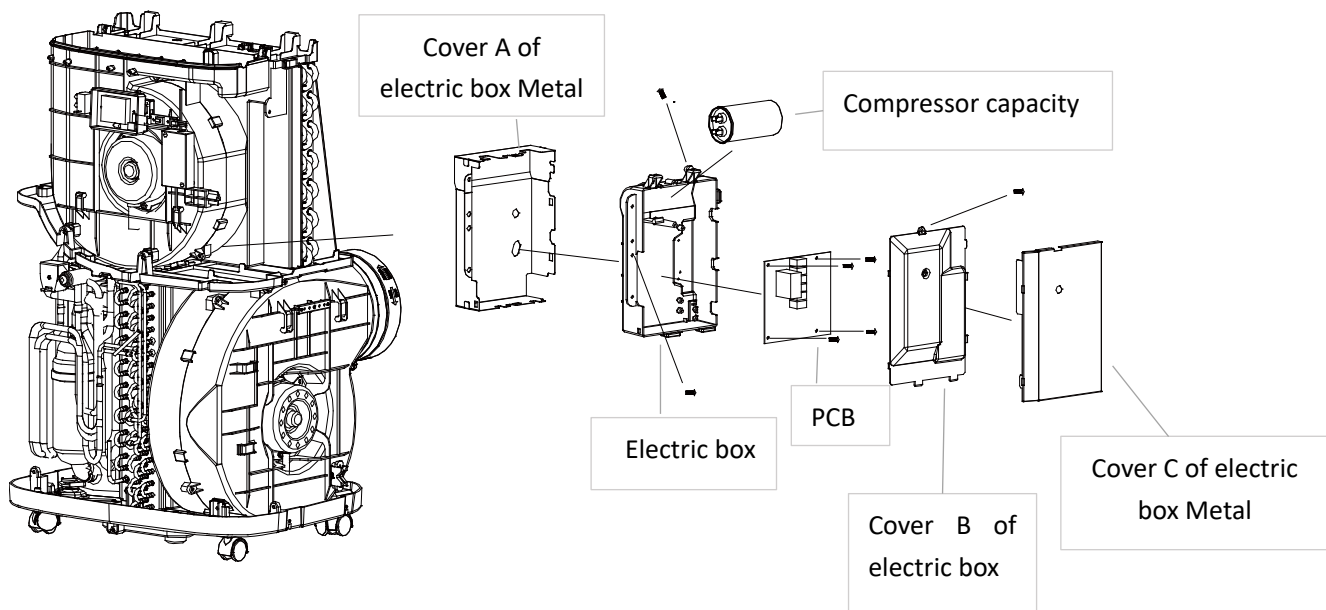
- Open the air outlet swing leaf, hold the end of one side of the swing leaf, pull it out of the fixing hole of the top cover, and then pull the end of the other swing leaf out of the top cover limit.
- Pull out the falling swing blade from the other end of the fixing hole in the top cover.
- Pinch the connecting rod of the swing blade and the link position of the swing blade, and pull out the connecting rod that is buckled at the latching position of the swing blade; then pull out the latching position and connecting rod of the other swing blade.

- Loosen the three screws on the back of the display board, take out the display board and pull out the connecting terminal.



(7) Disassemble the electric control box

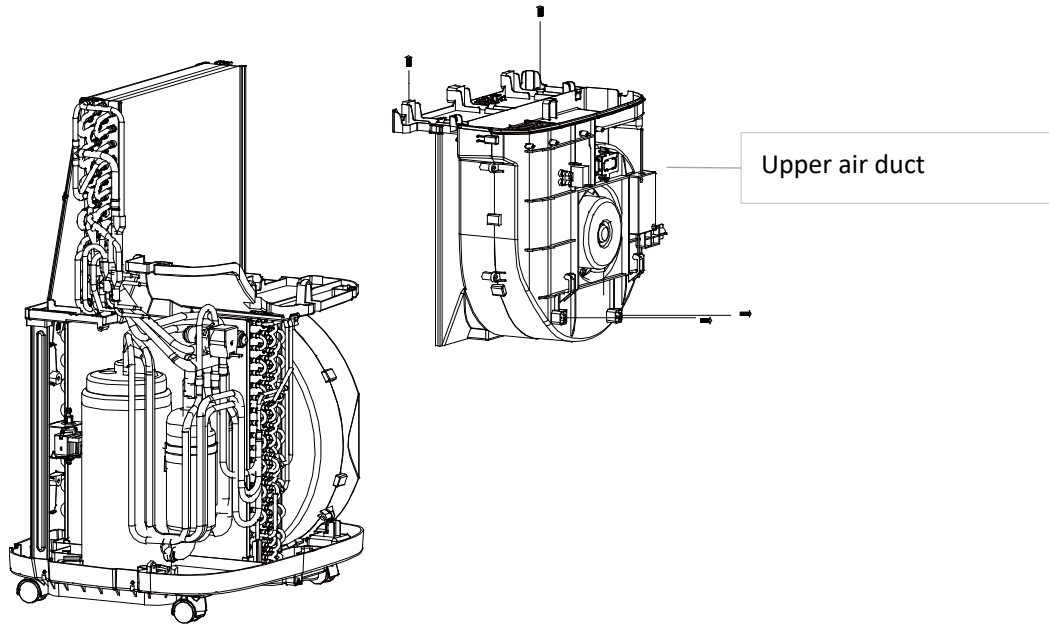
- Remove the screw fixing the cover of the electrical box and remove the cover of the electrical box.
- Pull out the connected terminal and take out the compressor capacitor
- Remove the 4 screws that fixing the main control PCB and remove the PCB.
- Remove one screw on the top and the left side of the electric control box to take off the electric control box



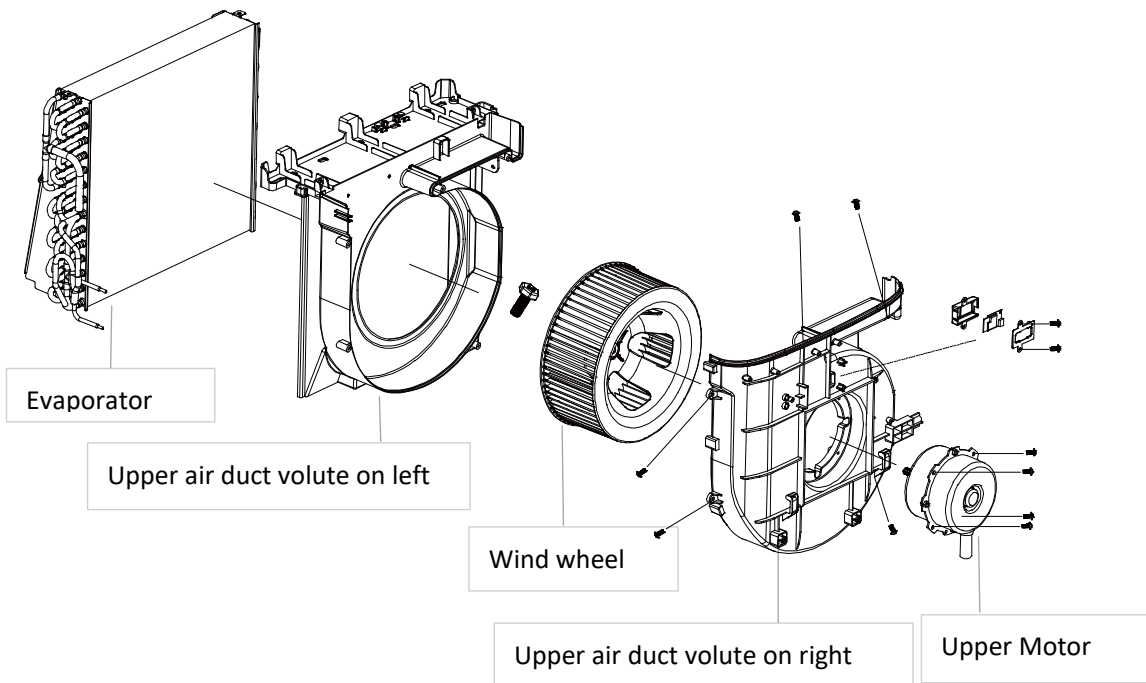


(8) Split air supplier duct components

- Remove the two screws connecting the air duct assembly to the top of the evaporator and the two screws connecting the middle partition, and move them out horizontally



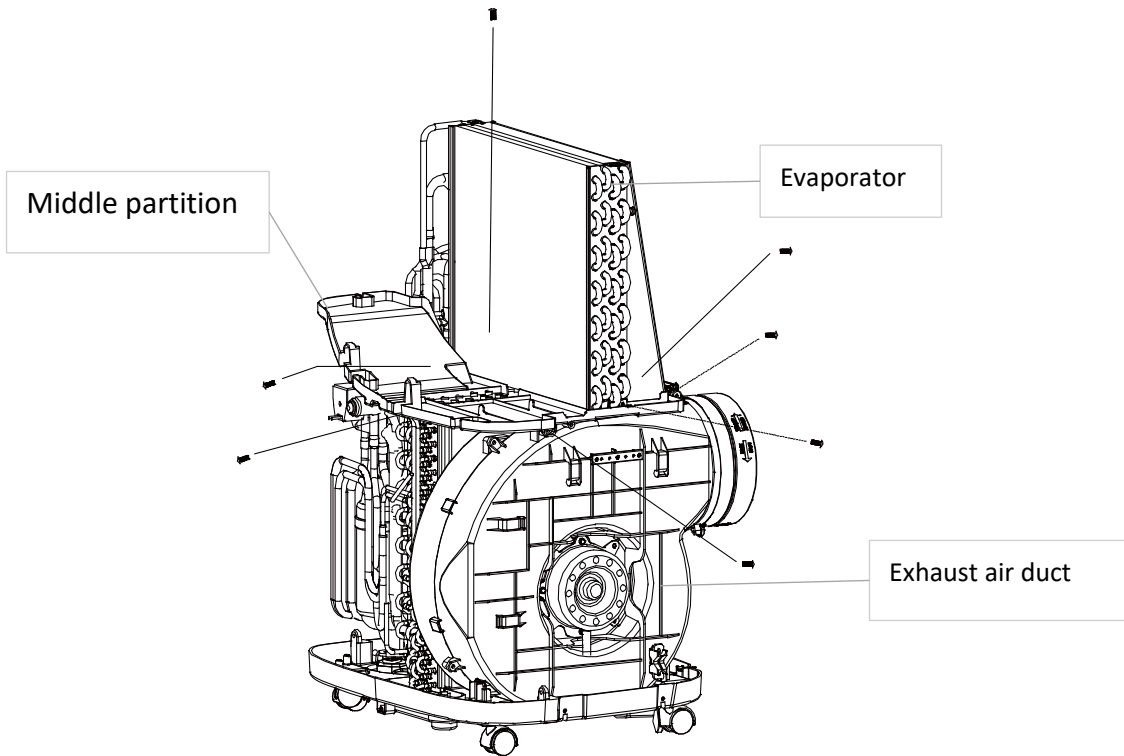
- Remove the WIFI components, two screws fixed on the , and five screws on the volute.
- Loosen the nut fastened on the motor shaft and take out the wind wheel
- Loosen the four screws fixing the motor and take out the motor



(9) Split the Lower frame component

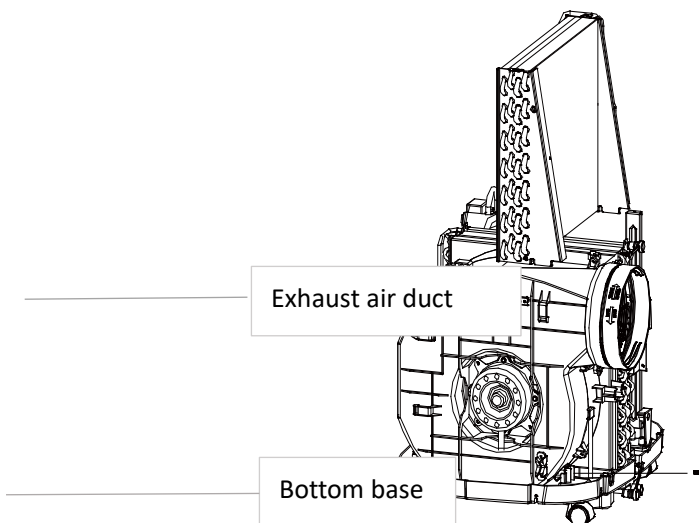
- Remove the one screw connecting the middle partition on the front of the air conditioner and the condenser.

- Remove the screw on the left and right sides of the middle partition and the evaporator, and then remove the two fixing screws connecting the middle partition and the exhaust air duct assembly.
- Remove the one screw connecting the middle partition behind the air conditioner and the condenser.
- Remove the one fixing screw connecting the middle partition and the main bracket
- Lift the evaporator assembly and remove the middle partition.

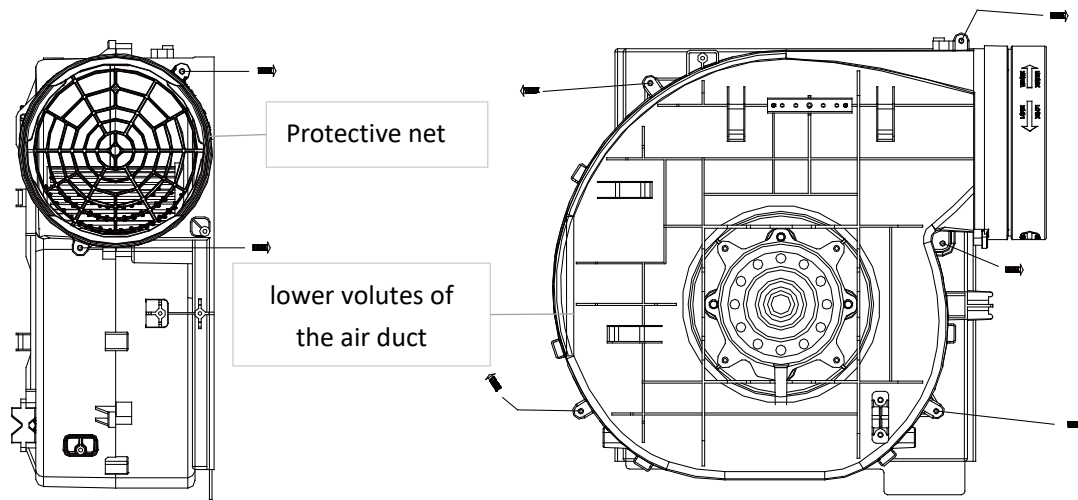


(10) Disassemble the exhaust air duct assembly

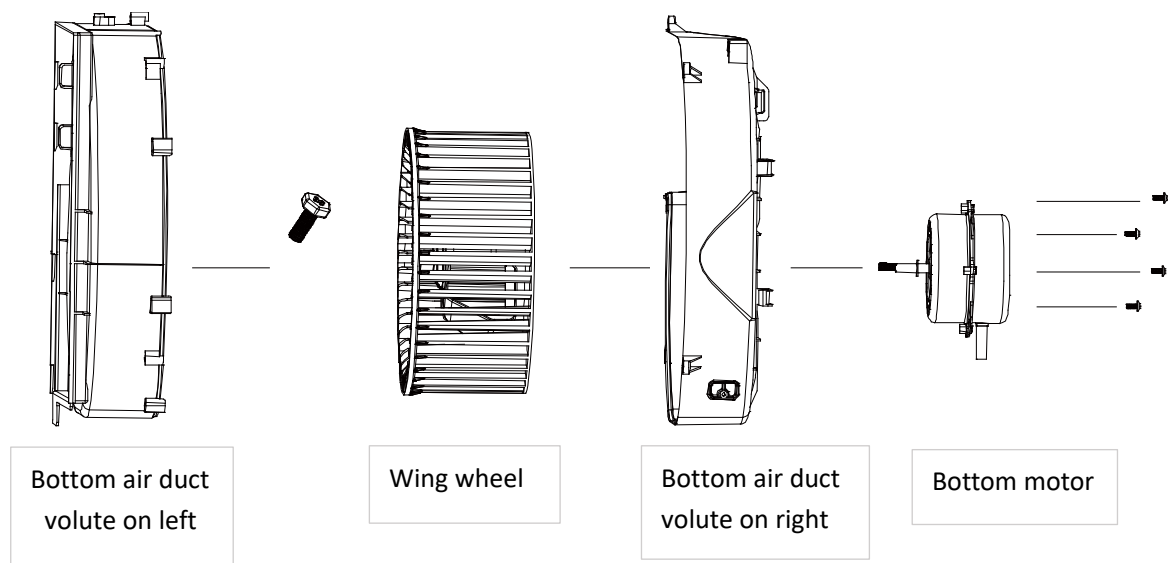
- Remove the 2 fixing screws connecting the bottom of the exhaust air duct assembly with the chassis.



- Remove the 2 screws fixing the protective net and the exhaust air duct assembly, and remove the protective net.
- Remove the 5 screws connecting the upper and lower volutes of the air duct assembly, and remove the lower volute of the exhaust air.

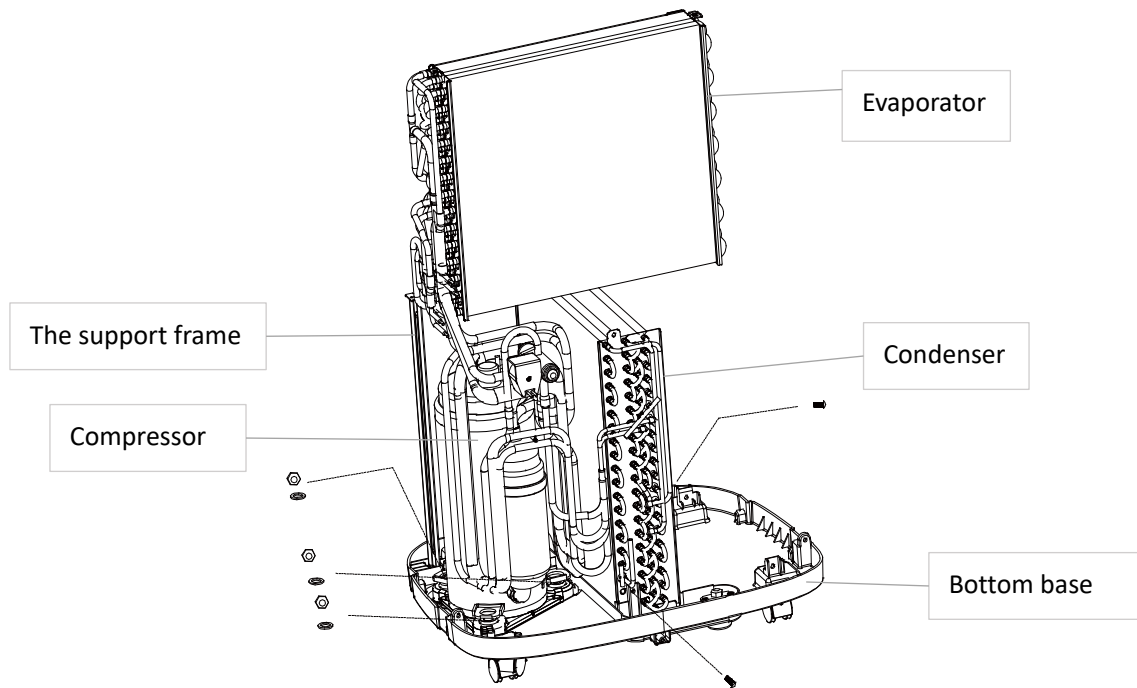


- Loosen the nut fixed on the motor shaft, remove the nut, pull out the exhaust fan with both hands; then remove the 4 screws that fix the motor on the other side, and take out the motor.



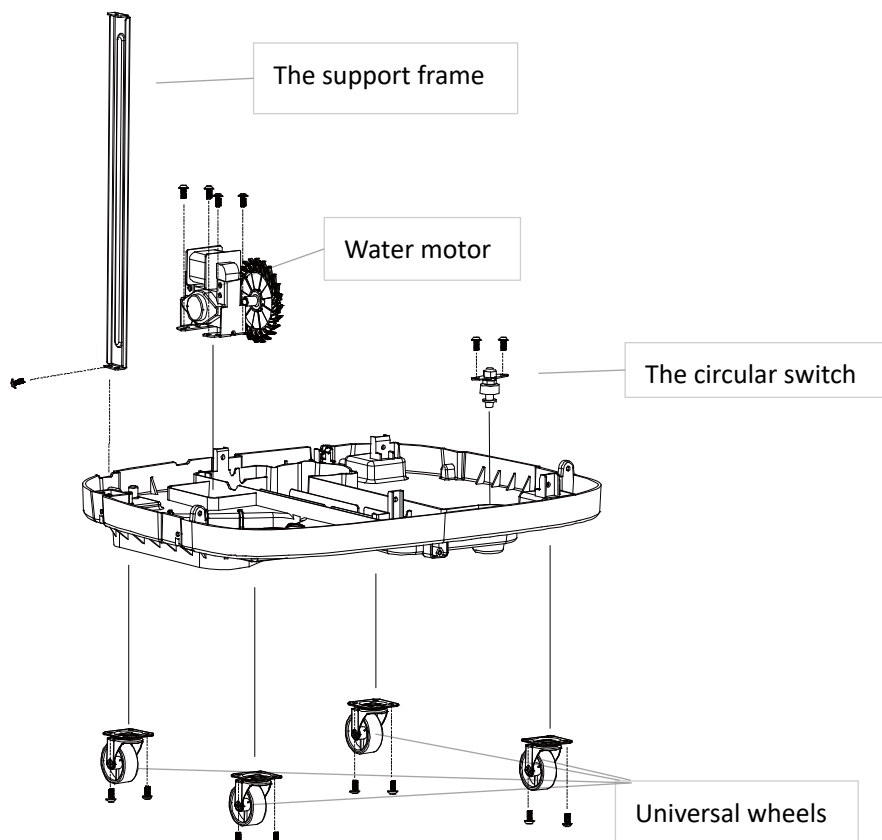
(11) Disassemble the refrigeration system

- remove the 2 screws connecting the end plates on both sides of the condenser with the base
- Unscrew the three nuts fixing the foot of the compressor, take out the nuts and gaskets, and lift up the refrigeration system composed of the compressor, condenser and evaporator. (Note that the protective pipeline cannot be broken) to separate it from the chassis assembly.



(12) Disassemble the bottom components

- Remove the 2 screws of the magnetic ring switch assembly
- Remove the screw on the main bracket
- Remove the 4 screws connecting the water dispenser component and the bottom
- Remove the 4 universal wheels fixed to the bottom, each with 2 screws fixed to the bottom, total 8 screws need to be removed.





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