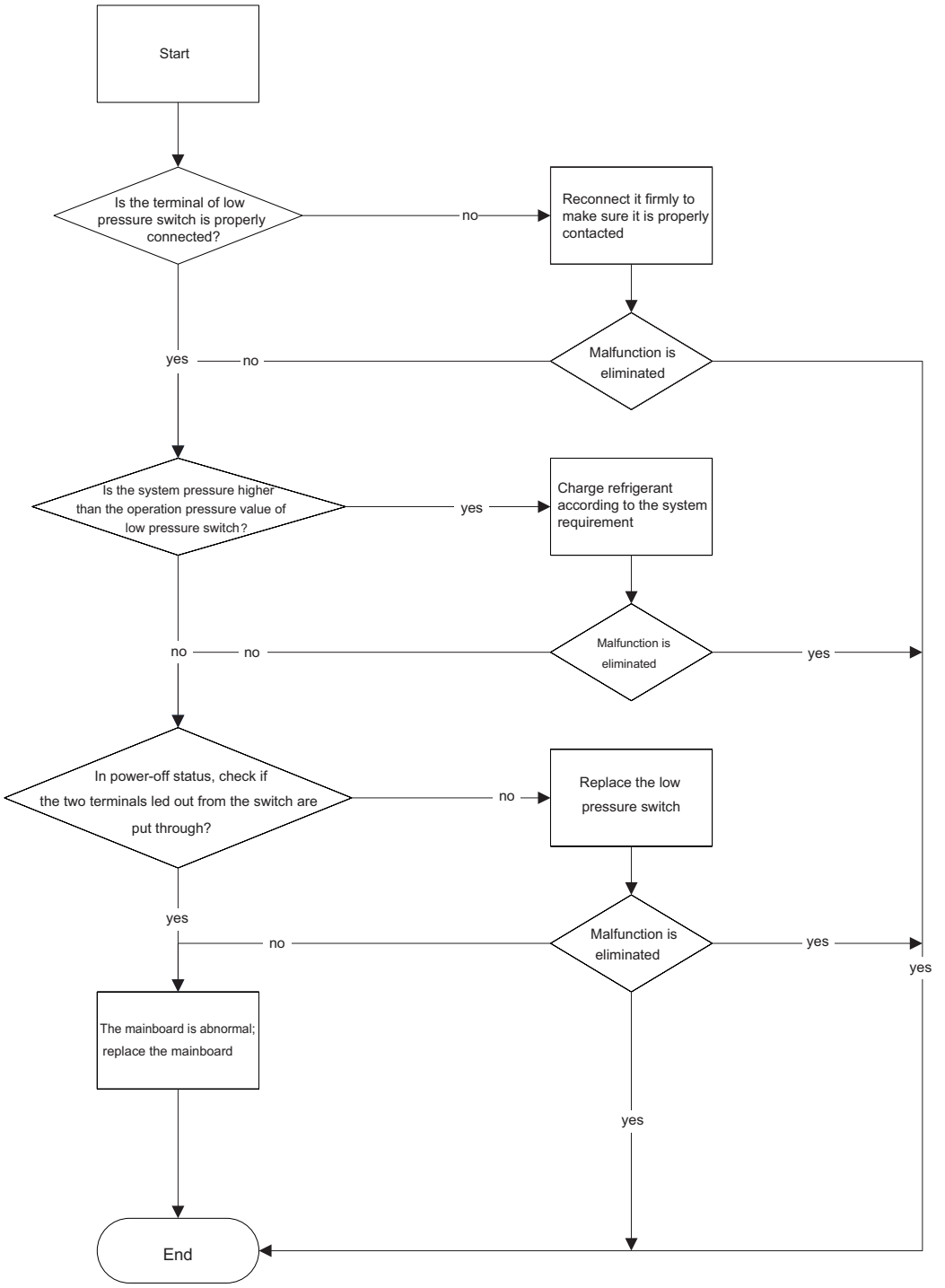
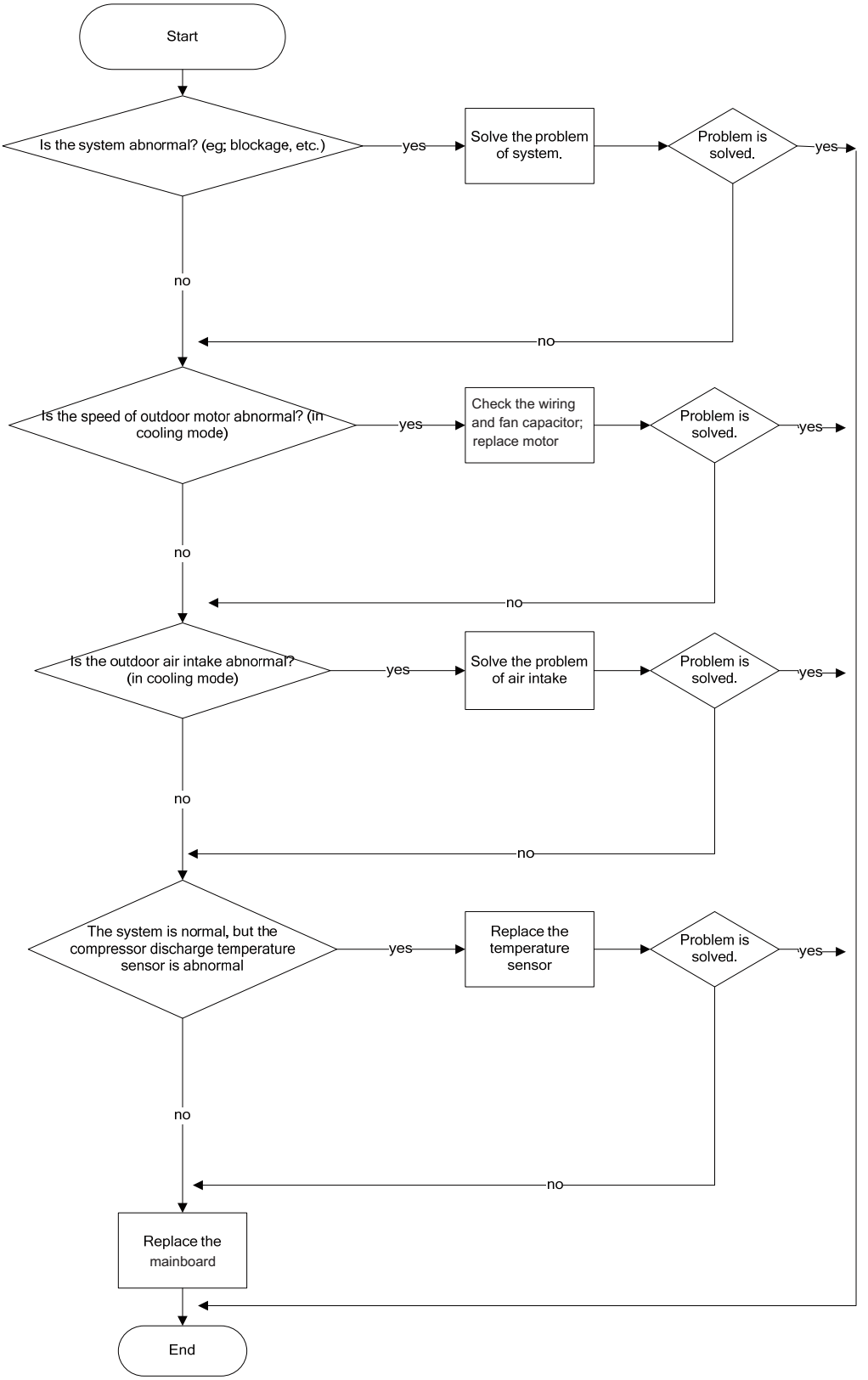
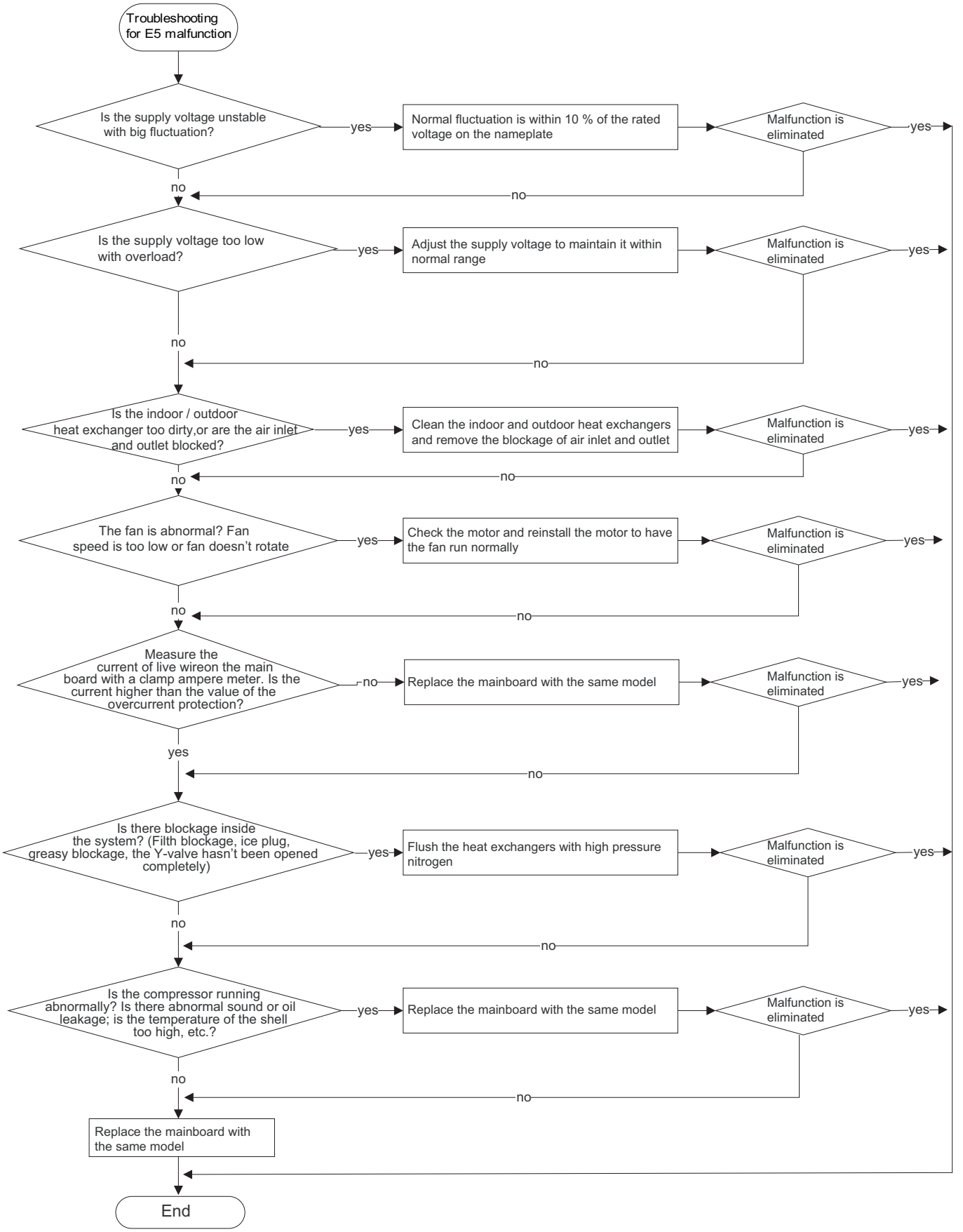
3. Compressor low pressure protection (E3)



4. High discharge temperature protection of compressor (E4)



5. Malfunction of Overcurrent Protection (E5)



9.3 Maintenance Method for Normal Malfunction

1. Air Conditioner Can't be Started Up

Possible Causes	Discriminating Method (Air conditioner Status)	Troubleshooting
No power supply, or poor connection for power plug	After energization, operation indicator isn't bright and the buzzer can't give out sound	Confirm whether it's due to power failure. If yes, wait for power recovery. If not, check power supply circuit and make sure the power plug is connected well.
Wrong wire connection between indoor unit and outdoor unit, or poor connection for wiring terminals	Under normal power supply circumstances, operation indicator isn't bright after energization	Check the circuit according to circuit diagram and connect wires correctly. Make sure all wiring terminals are connected firmly
Electric leakage for air conditioner	After energization, room circuit breaker trips off at once	Make sure the air conditioner is grounded reliably Make sure wires of air conditioner is connected correctly Check the wiring inside air conditioner. Check whether the insulation layer of power cord is damaged; if yes, place the power cord.
Model selection for air switch is improper	After energization, air switch trips off	Select proper air switch
Malfunction of remote controller	After energization, operation indicator is bright, while no display on remote controller or buttons have no action.	Replace batteries for remote controller Repair or replace remote controller

2. Poor Cooling (Heating) for Air Conditioner

Possible Causes	Discriminating Method (Air conditioner Status)	Troubleshooting
Set temperature is improper	Observe the set temperature on remote controller	Adjust the set temperature
Rotation speed of the IDU fan motor is set too low	Small wind blow	Set the fan speed at high or medium
Filter of indoor unit is blocked	Check the filter to see it's blocked	Clean the filter
Installation position for indoor unit and outdoor unit is improper	Check whether the installation postion is proper according to installation requirement for air conditioner	Adjust the installation position, and install the rainproof and sunproof for outdoor unit
Refrigerant is leaking	Discharged air temperature during cooling is higher than normal discharged wind temperature; Discharged air temperature during heating is lower than normal discharged wind temperature; Unit's pressure is much lower than regulated range	Find out the leakage causes and deal with it. Add refrigerant.
Malfunction of 4-way valve	Blow cold wind during heating	Replace the 4-way valve
Malfunction of capillary	Discharged air temperature during cooling is higher than normal discharged wind temperature; Discharged air temperature during heating is lower than normal discharged wind temperature; Unit't pressure is much lower than regulated range. If refrigerant isn't leaking, part of capillary is blocked	Replace the capillary
Flow volume of valve is insufficient	The pressure of valves is much lower than that stated in the specification	Open the valve completely
Malfunction of horizontal louver	Horizontal louver can't swing	Refer to point 3 of maintenance method for details
Malfunction of the IDU fan motor	The IDU fan motor can't operate	Refer to troubleshooting for H6 for maintenance method in details
Malfunction of the ODU fan motor	The ODU fan motor can't operate	Refer to point 4 of maintenance method for details
Malfunction of compressor	Compressor can't operate	Refer to point 5 of maintenance method for details

3. Horizontal Louver Can't Swing

Possible Causes	Discriminating Method (Air conditioner Status)	Troubleshooting
Wrong wire connection, or poor connection	Check the wiring status according to circuit diagram	Connect wires according to wiring diagram to make sure all wiring terminals are connected firmly
Stepping motor is damaged	Stepping motor can't operate	Repair or replace stepping motor
Main board is damaged	Others are all normal, while horizontal louver can't operate	Replace the main board with the same model

4. ODU Fan Motor Can't Operate

Possible causes	Discriminating method (air conditioner status)	Troubleshooting
Wrong wire connection, or poor connection	Check the wiring status according to circuit diagram	Connect wires according to wiring diagram to make sure all wiring terminals are connected firmly
Capacity of the ODU fan motor is damaged	Measure the capacity of fan capacitor with an universal meter and find that the capacity is out of the deviation range indicated on the nameplate of fan capacitor.	Replace the capacity of fan
Power voltage is a little low or high	Use universal meter to measure the power supply voltage. The voltage is a little high or low	Suggest to equip with voltage regulator
Motor of outdoor unit is damaged	When unit is on, cooling/heating performance is bad and ODU compressor generates a lot of noise and heat.	Change compressor oil and refrigerant. If no better, replace the compressor with a new one

5. Compressor Can't Operate

Possible causes	Discriminating method (air conditioner status)	Troubleshooting
Wrong wire connection, or poor connection	Check the wiring status according to circuit diagram	Connect wires according to wiring diagram to make sure all wiring terminals are connected firmly
Capacity of compressor is damaged	Measure the capacity of fan capacitor with an universal meter and find that the capacity is out of the deviation range indicated on the nameplate of fan capacitor.	Replace the compressor capacitor
Power voltage is a little low or high	Use universal meter to measure the power supply voltage. The voltage is a little high or low	Suggest to equip with voltage regulator
Coil of compressor is burnt out	Use universal meter to measure the resistance between compressor terminals and it's 0	Repair or replace compressor
Cylinder of compressor is blocked	Compressor can't operate	Repair or replace compressor

6. Air Conditioner is Leaking

Possible causes	Discriminating method (air conditioner status)	Troubleshooting
Drain pipe is blocked	Water leaking from indoor unit	Eliminate the foreign objects inside the drain pipe
Drain pipe is broken	Water leaking from drain pipe	Replace drain pipe
Wrapping is not tight	Water leaking from the pipe connection place of indoor unit	Wrap it again and bundle it tightly

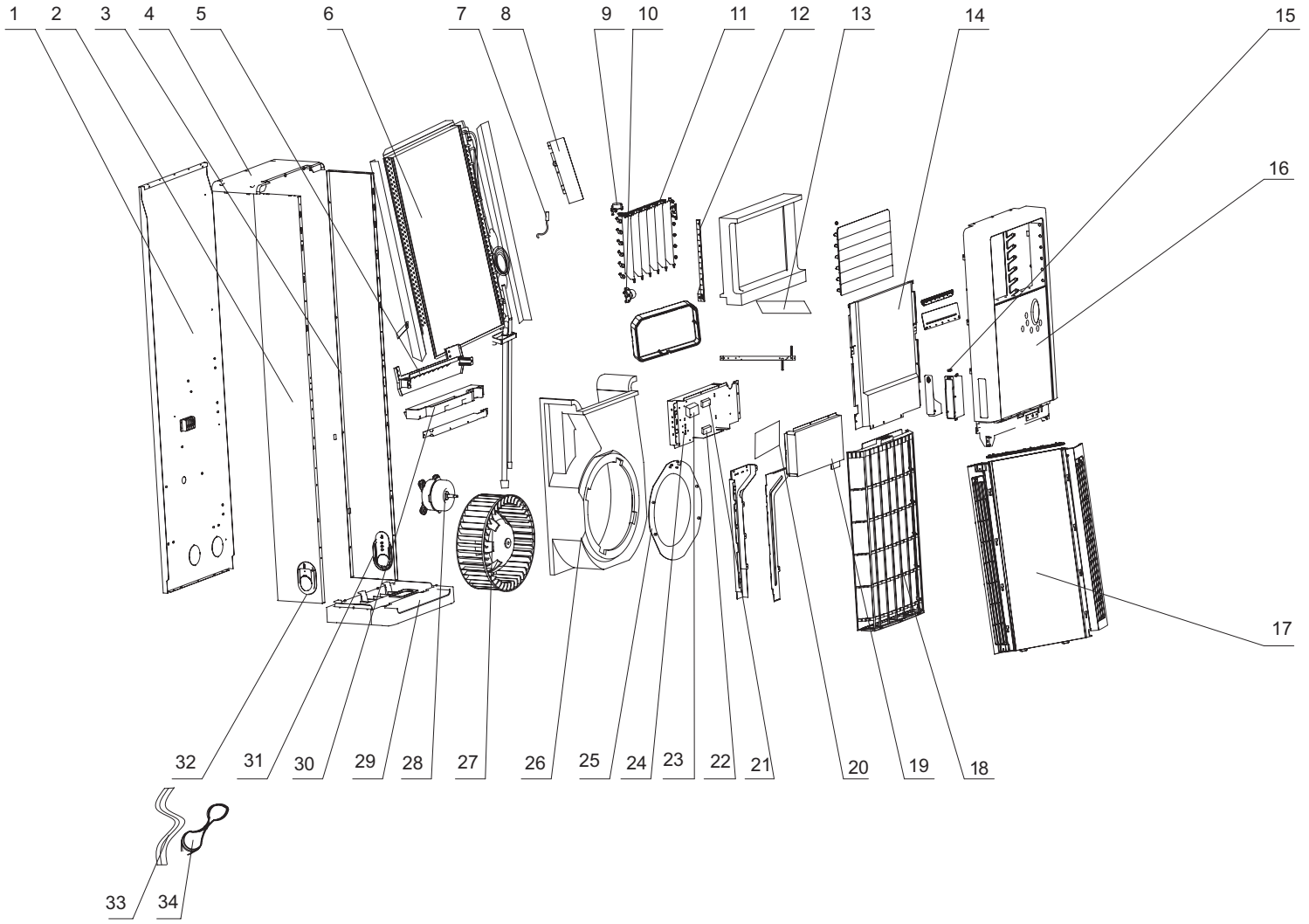
7. Abnormal Sound and Vibration

Possible causes	Discriminating method (air conditioner status)	Troubleshooting
When turn on or turn off the unit, the panel and other parts will expand and there's abnormal sound	There's the sound of "PAPA"	Normal phenomenon. Abnormal sound will disappear after a few minutes.
When turn on or turn off the unit, there's abnormal sound due to flow of refrigerant inside air conditioner	Water-running sound can be heard	Normal phenomenon. Abnormal sound will disappear after a few minutes.
Foreign objects inside the indoor unit or there're parts touching together inside the indoor unit	There's abnormal sound fro indoor unit	Remove foreign objects. Adjust all parts' position of indoor unit, tighten screws and stick damping plaster between connected parts
Foreign objects inside the outdoor unit or there're parts touching together inside the outdoor unit	There's abnormal sound fro outdoor unit	Remove foreign objects. Adjust all parts' position of outdoor unit, tighten screws and stick damping plaster between connected parts
Short circuit inside the magnetic coil	During heating, the way valve has abnormal electromagnetic sound	Replace magnetic coil
Abnormal shake of compressor	Outdoor unit gives out abnormal sound	Adjust the support foot mat of compressor, tighten the bolts
Abnormal sound inside the compressor	Abnormal sound inside the compressor	If add too much refrigerant during maintenance, please reduce refrigerant properly. Replace compressor for other circumstances.

10. Exploded View and Parts List

10.1 Indoor Unit

GVC18AG-K3NNB1A/I GVH18AG-K3NNB1A/I GVC24AG-K3NNB1A/I



The component picture is only for reference; please refer to the actual product.

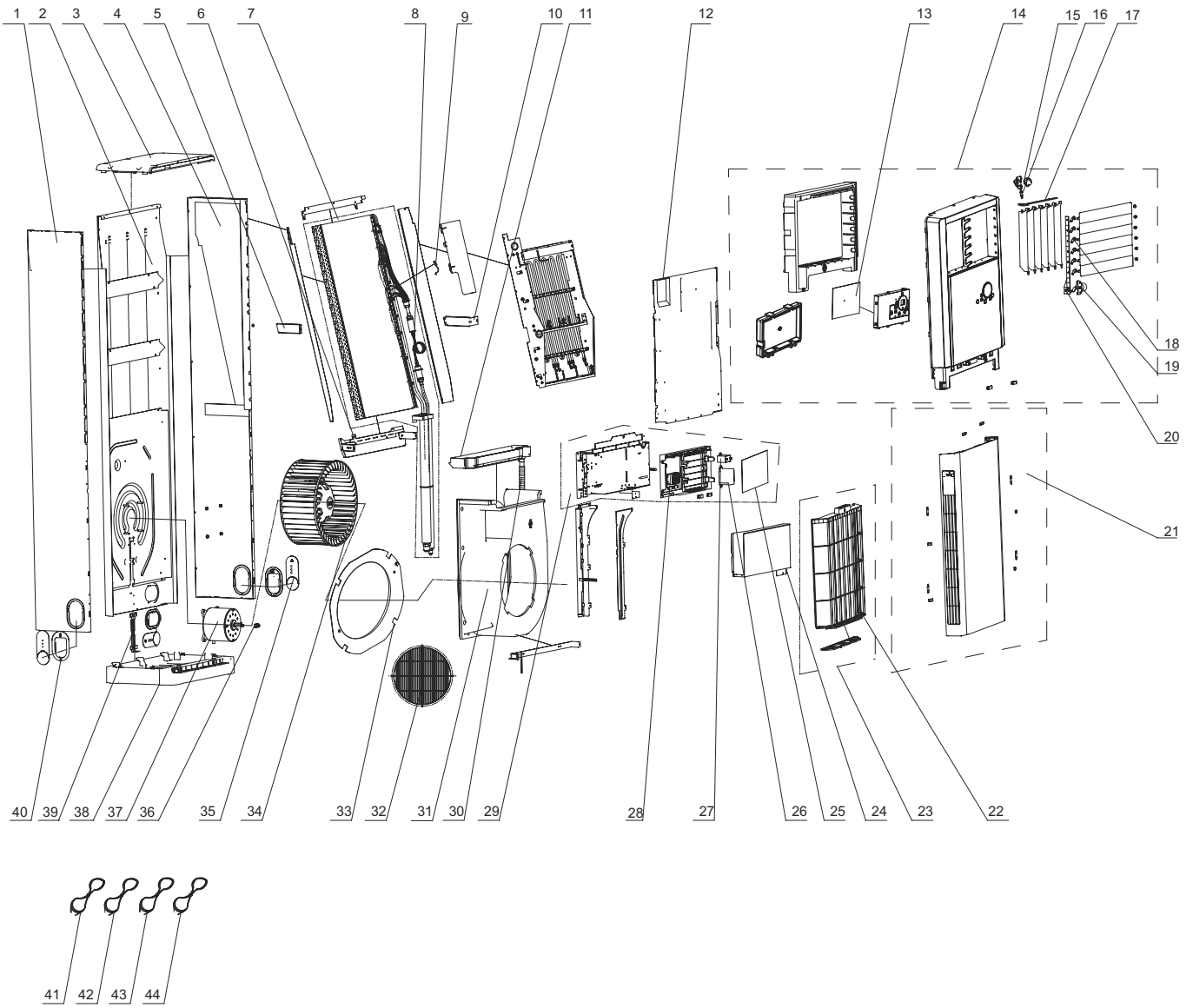
NO.	Description	Part Code		Qty
		GVC18AG-K3NNB1A/I	GVH18AG-K3NNB1A/I	
	Product Code	CG143N02000	CG143N02100	
1	Rear Plate Sub-Assy	01304134	01304134	1
2	Left Side Plate Sub-Assy	0130452103	0130452103	1
3	Right Side Plate Sub-Assy	0130452003	0130452003	1
4	Top Cover Sub-Assy	22244107	22244107	1
5	Breakwater	26114193	26114193	1
6	Evaporator Assy	01004089	01004089	1
7	Temperature Sensor	3900019003	3900019003	1
8	Protection Cover	20124112	20124112	1
9	Stepping Motor	1521421103	1521421103	1
10	Stepping Motor	1521400801	1521400801	1
11	Swing Lever	10584218	10584218	1
12	Guide Blade Lever	10584088	10584088	1
13	Display Board	30563375	30563320	1
14	Air Guard Sub-Assy	01364183	01364183	1
15	Latch	70811002	70811002	1
16	Air Outlet Panel Assy	00801400012	2001403301	1
17	Air Intake Panel Assy	20004815	20004815	1
18	Filter Sub-assy(Upper)	11124104	11124104	1
19	Cover Plate assy of Electric Box	01404389	01404389	1
20	Main Board	30133306	30133305	1
21	Capacitor CBB61S	3301074706	3301074706	1
22	Terminal Board	4201025801	4201025801	1
23	Transformer	43110287	43110287	1
24	Electric Box Assy	10000202259	10000202193	1
25	Diversion Circle	10374006	10374006	1
26	Propeller Housing Sub-assy	1210420101	1210420101	1
27	Centrifugal Fan	10314001	10314001	1
28	Fan Motor	1501422005	1501422005	1
29	Chassis	22224018	22224018	1
30	Water Tray Sub-Assy	20184022	20184022	1
31	Baffle Plate	2611408801	2611408801	3
32	Rear Cover	2224422101	2224422101	3
33	Connecting Cable	4002054712	400205475	1
34	Power Cord	4002028803	4002028801	1

The data above are subject to change without notice.

NO.	Description	Part Code		Qty
		GVC24AG-K3NNB1A/I		
	Product Code	CG143N02200	CG143N02201	
1	Rear Plate Sub-Assy	01304134	01304134	1
2	Left Side Plate Sub-Assy	0130452101	0130452101	1
3	Right Side Plate Sub-Assy	0130452003	0130452003	1
4	Top Cover Sub-Assy	22244107	22244107	1
5	Breakwater	26114118	26114118	1
6	Evaporator Assy	01100100189	01100100189	1
7	Temperature Sensor	3900019003	3900019003	1
8	Protection Cover	20124112	20124112	1
9	Stepping Motor	1521421103	1521400801	1
10	Stepping Motor	1521400801	1521421103	1
11	Swing Lever	10584218	10584218	1
12	Guide Blade Lever	10584088	10584088	1
13	Display Board	30563309	30563309	1
14	Air Guard Sub-Assy	01364183	01364183	1
15	Latch	70811002	70811002	1
16	Air Outlet Panel Assy	20014271	00801400011	1
17	Air Intake Panel Assy	20004815	20004815	1
18	Filter Sub-assy(Upper)	11124104	11124104	1
19	Cover Plate assy of Electric Box	01404389	01404389	1
20	Main Board	30133301	30133301	1
21	Capacitor CBB61S	3301074706	3301074706	1
22	Terminal Board	4201025801	4201025801	1
23	Transformer	43110287	43110287	1
24	Electric Box Assy	10000201856	10000201856	1
25	Diversion Circle	10374006	10374006	1
26	Propeller Housing Sub-assy	1210420101	1210420101	1
27	Centrifugal Fan	10314001	10314001	1
28	Fan Motor	1501420206	1501420206	1
29	Chassis	22224018	22224018	1
30	Water Tray Sub-Assy	20184022	20184022	1
31	Baffle Plate	2611408801	2611408801	3
32	Rear Cover	2224422101	2224422101	3
33	Connecting Cable	40020318	40020318	1
34	Power Cord	4002028801	40020018	1

The data above are subject to change without notice.

GVC36AH-D3NNB1A/I GVC60AH-F3NNB1A/I



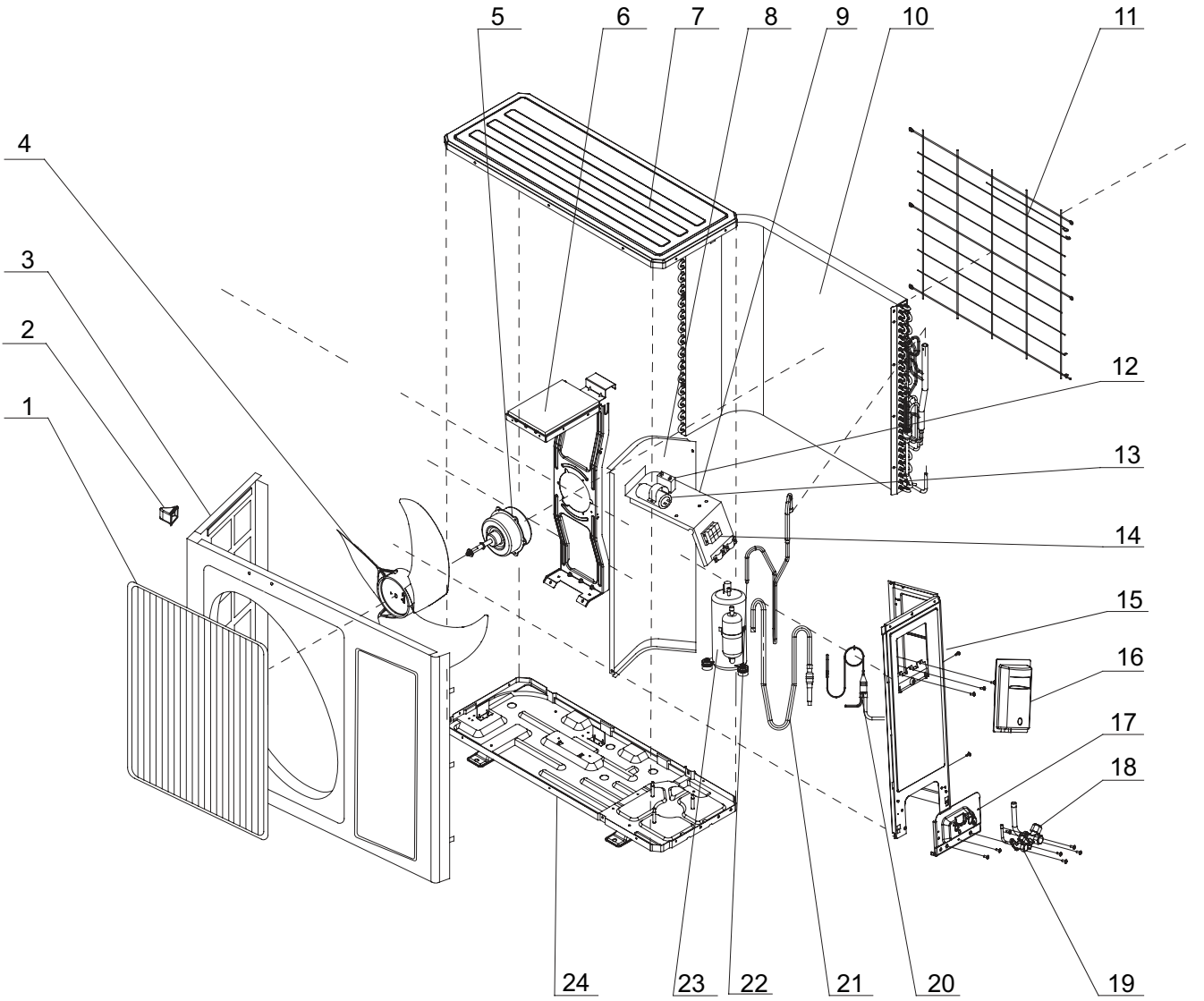
The component picture is only for reference; please refer to the actual product.

No.	Description	Part Code		Qty
		GVC36AH-D3NNB1A/I	GVC60AH-F3NNB1A/I	
	Product Code	CG143N02300	CG143N02700	
1	Left Side Plate Sub-Assy	0130451901	0130451901	1
2	Rear Plate Assy	01304290	01304290	1
3	Top Cover Sub-Assy	22244152	22244152	1
4	Right Side Plate Sub-Assy	0130451801	0130451801	1
5	Left Support	/	/	/
6	Breakwater Sub-Assy	01364503P	01364503P	1
7	Evaporator Assy	01100100196	01004580	1
8	Capillary Sub-assy	03018314	03018314	1
9	Ambient Temperature Sensor	3900019001	3900019003	1
10	Right Support	/	/	/
11	Water Tray Sub-Assy	12314811	12314811	1
12	Air Guard Assy	01364361	01364361	1
13	Display Board	30568227	30568227	1
14	Air Outlet Panel Assy	20014232	20014232	1
15	Stepping Motor	1521400801	1521400801	1
16	Crank 1	10564204	10564204	1
17	Swing Lever	10584218	10584218	1
18	Crankshaft of Guide Louver	1056420502	1056420502	6
19	Stepping Motor	1521400801	1521400801	1
20	Guide Blade Lever	10584089	10584089	1
21	Air Intake Panel Assy	20004536	20004536	1
22	Filter Sub-assy(Upper)	11124103	11124103	1
23	Filter Sub-Assy	11124100	11124100	1
24	Electric Box Cover Sub-Assy	01404388	01404388	1
25	Main Board	30138000255	30138000255	1
26	Transformer	43110287	43110287	1
27	Capacitor CBB61	33010056	33010056	1
28	Terminal Board	420111041	420111045	1
29	Electric Box Assy	02604110	10000202181	1
30	Drainage Pipe Sub-assy	05235434	05235434	1
31	Propeller Housing Sub-assy	12104058	12104058	1
32	Protective Covering	01474027	01474027	1
33	Diversion Circle	10374435	10374435	1
34	Centrifugal Fan	10314401	10314401	1
35	Baffle Plate	2611408801	2611408801	3
36	Gasket	70414201	70414201	1
37	Fan Motor	1501442410	1501442410	1
38	Chassis	22224020	22224020	1
39	Wire Clamp	01384201	01384201	1
40	Rear Cover	2224422101	2224422101	3
41	Connecting Cable	4002052319	4002052319	1
42	Connecting Cable	4002054015	4002053810	1
43	Connecting Cable	/	/	/
44	Connecting Cable	/	/	/

Above data is subject to change without notice.

10.2 Outdoor Unit

GVC18AG-K3NNB1A/O

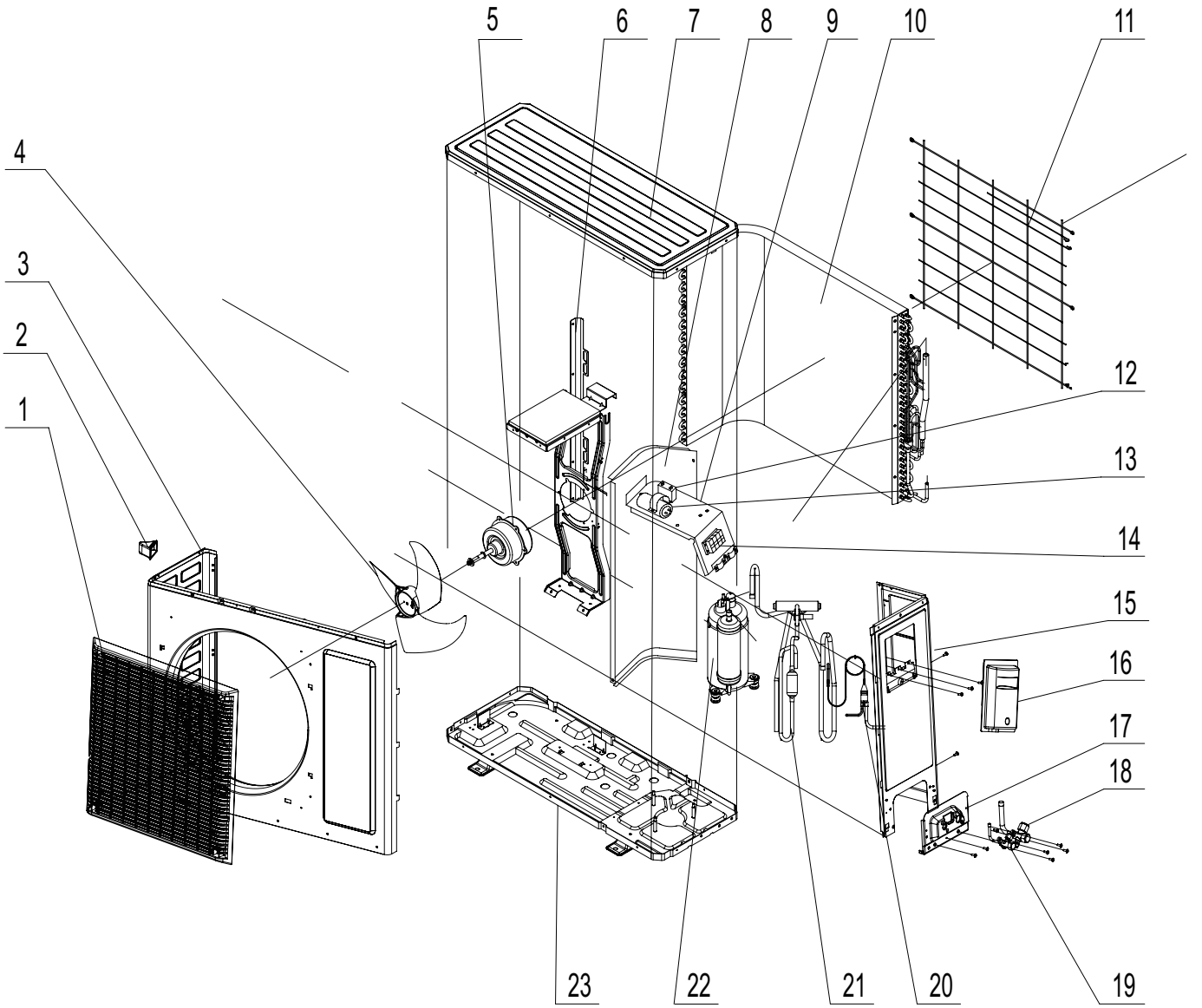


The component picture is only for reference; please refer to the actual product.

No.	Description	Part Code	Qty
		GVC18AG-K3NNB1A/O	
	Product Code	CG143W02000	
1	Front grill	22415001	1
2	left handle	2623525404	1
3	Front Panel	01435001P	1
4	Axial Flow Fan	10335257	1
5	Fan Motor	15015057	1
6	Motor Support Sub-Assy	0170510701	1
7	Top Cover	01255001	1
8	Clapboard Sub-Assy	01233035	1
9	Electric Box Assy	10000202258	1
10	Condenser Assy	01100200465	1
11	Rear grill	01475004	3
12	Capacitor CBB61	3301074704	1
13	Capacitor CBB65	3300008104	1
14	Terminal Board	42011154	1
15	Right Side Plate	01305095P	1
16	Handle	26235253	1
17	Valve Support Sub-Assy	01715006	1
18	Cut-off Valve	07130239	2
19	Cut-off Valve	071302392	1
20	Capillary Sub-Assy	03000600448	1
21	Inhalation Tube Sub-Assy	03001000342	1
22	Discharge Tube	03500800707	1
23	Compressor and fittings	00105054	1
24	Chassis Sub-assy	01203826P	1

The data above are subject to change without notice.

GVH18AG-K3NNB1A/O

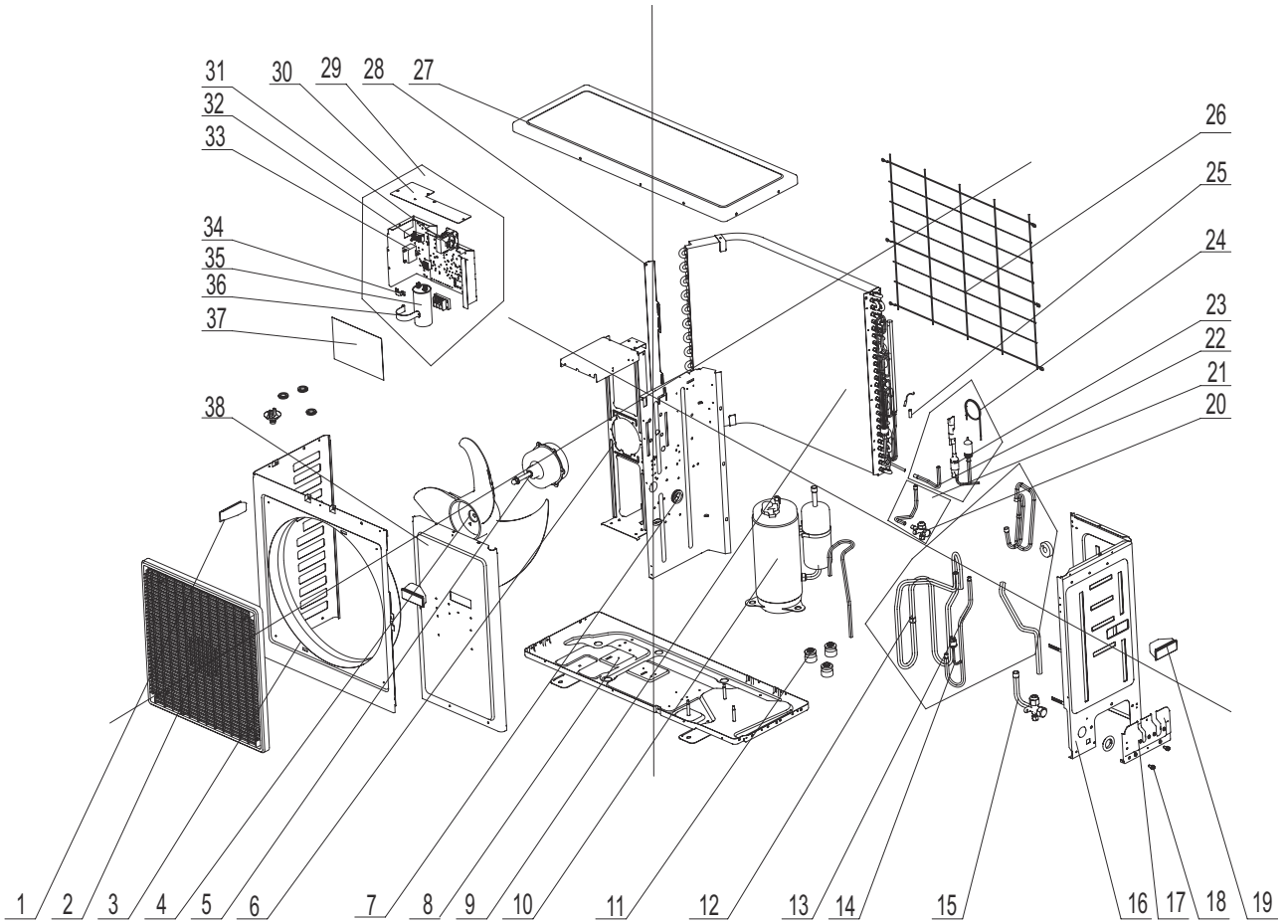


The component picture is only for reference; please refer to the actual product.

No.	Description	Part Code	Qty
		GVH18AG-K3NNB1A/O	
	Product Code	CG143W02100	
1	Front Grill	22415001	1
2	Left Handle	2623525404	1
3	Cabinet	01435001P	1
4	Axial Flow Fan	10335257	1
5	Fan Motor	15015057	1
6	Motor Support Sub-Assy	0170510701	1
7	Top Cover	01255001	1
8	Clapboard Sub-Assy	01233035	1
9	Electric Box Assy	10000202192	1
10	Condenser Assy	01100200452	1
11	Rear Grill	01475004	1
12	Capacitor CBB61	3301074704	1
13	Capacitor CBB65	3300008104	1
14	Terminal Board	42010267	1
15	Right Side Plate	01305095P	1
16	Handle	26235253	1
17	Valve Support Sub-Assy	01715006	1
18	Cut off Valve Sub-Assy	03005700113	1
19	Cut off Valve	07130239	1
20	Capillary Sub-assy	03000600435	1
21	4-Way Valve Assy	03025359	1
22	Compressor and Fittings	00105054	1
23	Chassis Sub-assy	01203826P	1

The data above are subject to change without notice.

GVC24AG-K3NNB1A/O

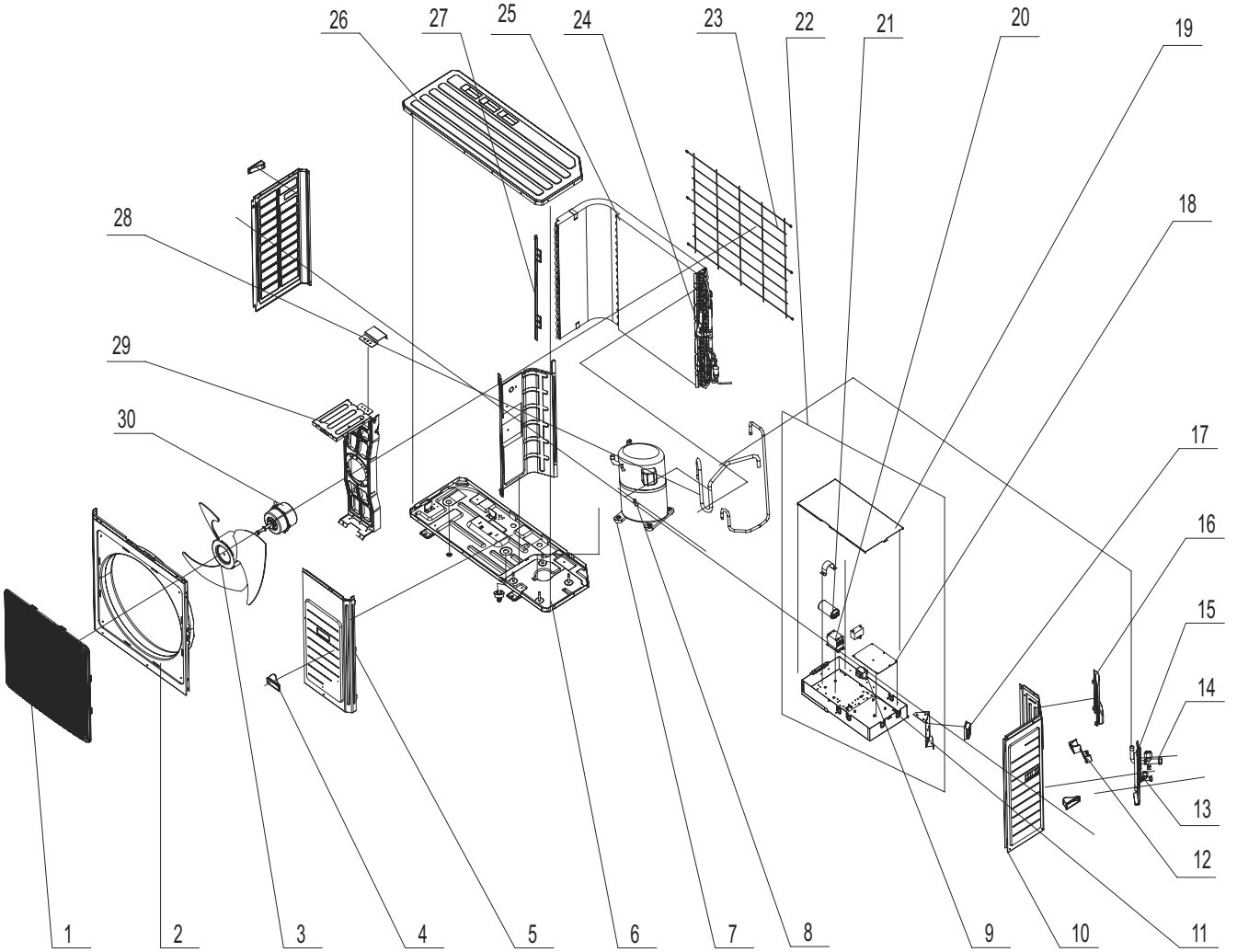


The component picture is only for reference; please refer to the actual product.

No.	Description	Part Code		Qty
		GVC24AG-K3NNB1A/O		
	Product Code	CG143W02200	CG143W02201	
1	Left Handle	26235401	26235401	1
2	Front Grill	22414102	22414102	1
3	Cabinet	01433017P	01433017P	1
4	Axial Flow Fan	10338731	10338731	1
5	Fan Motor	1501542103	1501542103	1
6	Motor Support	01703027	01703027	1
7	Cable Cross Loop	76515202	76515202	1
8	Chassis Sub-assy	012052075	012052075	1
9	Condenser Assy	01100200393	01100200393	1
10	Compressor and Fittings	00103868	00103868	1
11	Compressor Gasket	76711043	76711043	3
12	Inhalation Tube	03500600574	03500600574	1
13	Discharge Tube Sub-assy	03001300274	03001300274	1
14	Pressure Protect Switch	460200061	460200061	1
15	Cut off Valve	07103030	071302391	1
16	Rear Side Plate	01305096P	01305096P	1
17	Valve Support Sub-Assy	01715001	01715001	1
18	Bolt	70210051	70210051	2
19	Handle	26235253	26235253	1
20	Cut off Valve	071302391	071302391	1
21	Cut off Valve Sub-Assy	07135138	03005700090	1
22	Condenser Outlet Pipe	03225894	03323855	1
23	Strainer	07210045	0721004702	1
24	Capillary Sub-assy	03000600376	03000600376	1
25	Temp Sensor Sleeving	05212423	/	1
26	Rear Grill	01473028	01473028	1
27	Coping	01255013P	01255013P	1
28	Condenser Support Plate	01173021	01173021	1
29	Electric Box Assy	10000201855	10000203821	1
30	Electric Box Cover Plate	01413047	01413047	1
31	AC Contactor	44010245	44010245	1
32	Terminal Board	42011113	42011113	1
33	Capacitor CBB61S	3301074705	3301074705	1
34	Wire Clamp	71010102	71010102	1
35	Capacitor CBB65	3300008113	3300008113	1
36	Capacitor Clamp	02143401	02143401	1
37	Insulated Board (Cover of Electric Box)	20113003	20113003	1
38	Front Side Plate	01303309P	01303309P	1

The data above are subject to change without notice.

GVC36AH-D3NNB1A/O

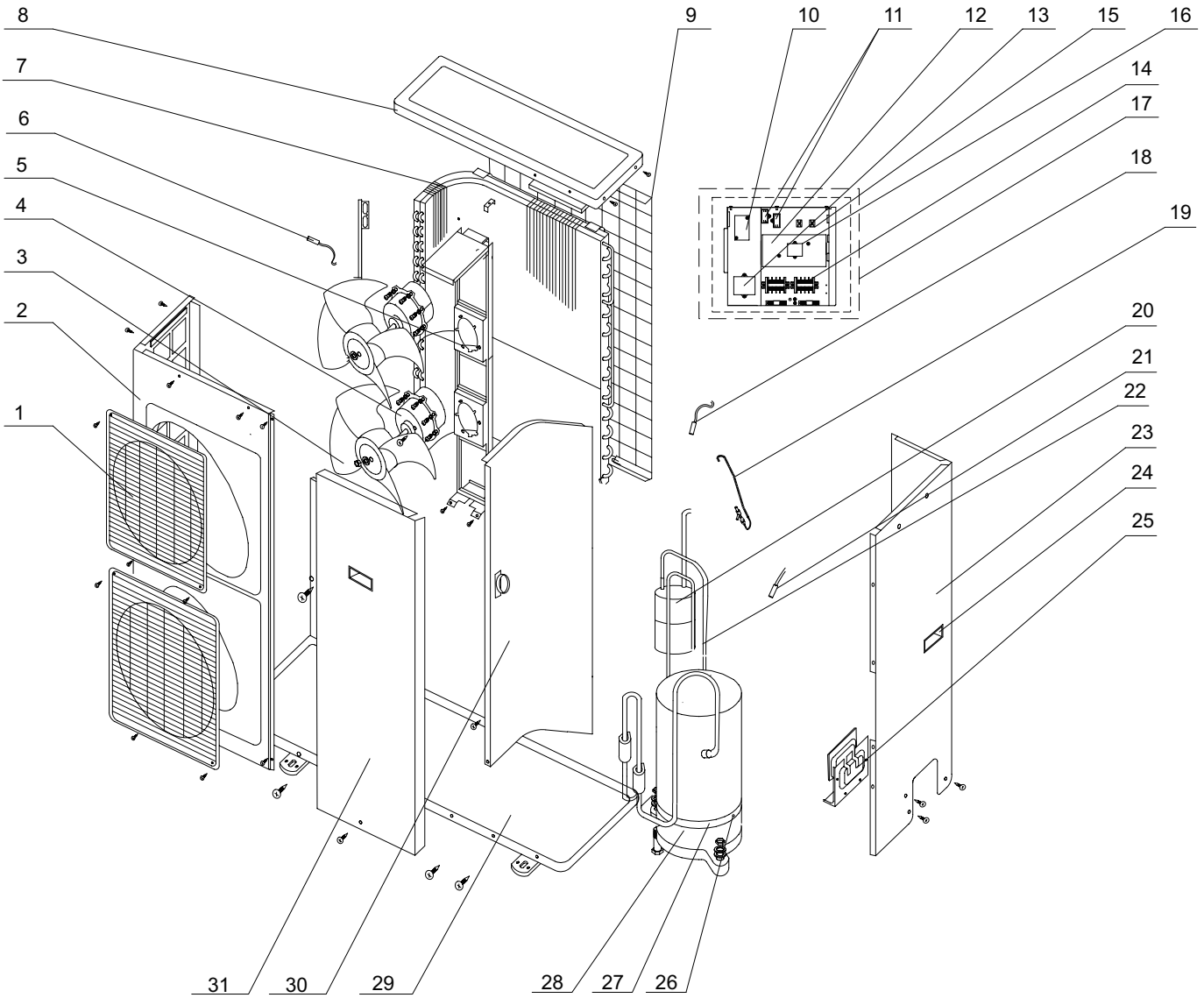


The component picture is only for reference; please refer to the actual product.

No.	Description	Part Code	Qty
		GVC24AG-K3NNB1A/O	
	Product Code	CG143W02200	
1	Front Grill	22415003	1
2	Cabinet	01435004P	1
3	Axial Flow Fan	10335014	1
4	Left Handle	26235401	1
5	Front Side Plate	01315355P	1
6	Chassis Sub-assy	01700000119P	1
7	Compressor Gasket	76812206	3
8	Compressor	00202200007	1
9	Transformer	4311023601	1
10	Right Side Plate	01315354P	1
11	Cable Cross Loop	76510021	1
12	Cable clamp	26905213	1
13	Cut off Valve	07130239	1
14	Cut off Valve	07133157	1
15	Valve Support Sub-Assy	01713096P	1
16	Cover Plate of Terminal Board	26905212	1
17	Terminal Board	420101942	1
18	Main Board	30135813	1
19	Electric Box Cover	01425292	1
20	AC Contactor	44010256	1
21	Capacitor CBB65	3300008107	1
22	Electric Box Assy	10000202004	1
23	Rear Grill	0147307003	1
24	Condenser Support Plate	01175092	1
25	Condenser Assy	01100200413	1
26	Top Cover Sub-Assy	01265368	1
27	Left Side Plate	01305043P	1
28	Inhalation Tube Sub-assy	03001000309	1
29	Motor Support Sub-Assy	01805408	1
30	Fan Motor	1501403402	1

The data above are subject to change without notice.

GVC60AH-F3NNB1A/O



The component picture is only for reference; please refer to the actual product.

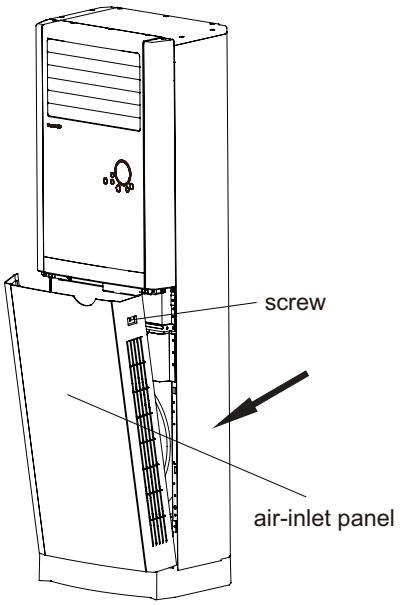
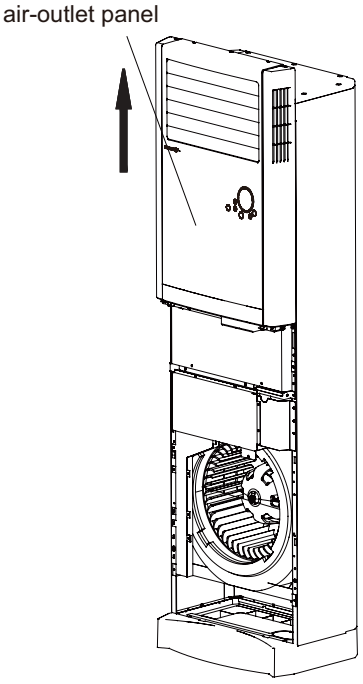
No.	Description	Part Code	Qty
		GVC60AH-F3NNB1A/O	
	Product Code	CG143W02700	
1	Front Grill	22415002	2
2	Cabinet	01515204P	1
3	Axial Flow Fan	10335008	2
4	Fan Motor	15705324	2
5	Motor Support Sub-Assy	01805761	1
6	Temperature Sensor	390002062	1
7	Condenser Assy	01100200001	1
8	Top Cover Sub-Assy	01265368	1
9	Rear Grill	01575205	1
10	AC Contactor	44010214	1
11	Capacitor CBB61	3301074711	2
12	Over Current Protector	46020113	1
13	Anti-phase Protector	46020066	1
14	Terminal Board	42011222	1
15	Terminal Board	42011147	1
16	Transformer	4311023601	1
17	Electric Box Assy	10000202180	1
18	Outdoor Tube Sensor	3900020723	1
19	Valve Support Sub-Assy	07135443	1
20	Gas-liquid Separator Sub-Assy	07225016	1
21	Air-out Temp. Sensor	3900012136	1
22	Inhalation Tube Sub-assy	03001000290	1
23	Rear Side Plate Sub-Assy	01314328P	1
24	Handle	26235253	1
25	Valve Support Sub-Assy	01713096P	1
26	Connection Terminal φ3	42010157	2
27	electrical heater	7651540701	1
28	Compressor and Fittings	00105268	1
29	Chassis Sub-assy	01195714P	1
30	Clapboard Sub-Assy	01245241	1
31	Front Side Plate	01315364P	1

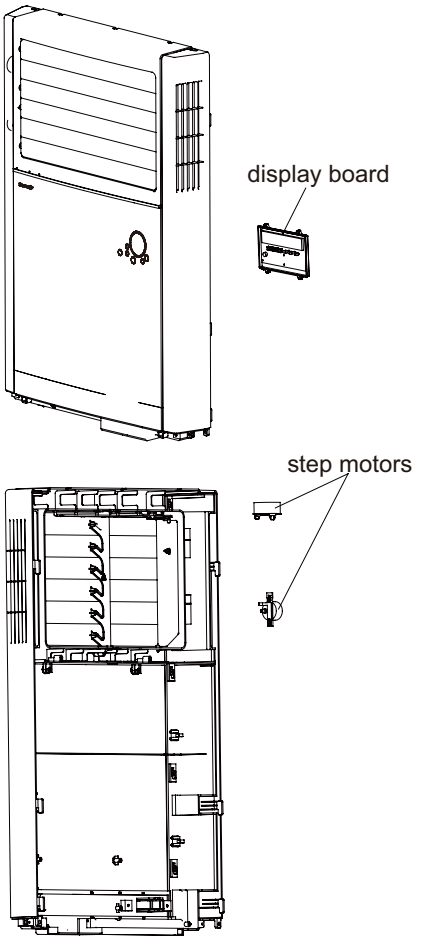
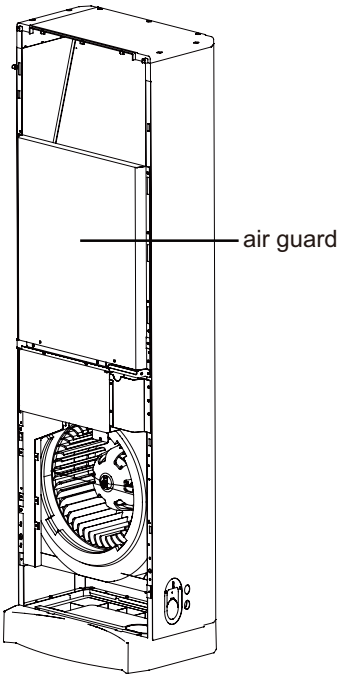
The data above are subject to change without notice.

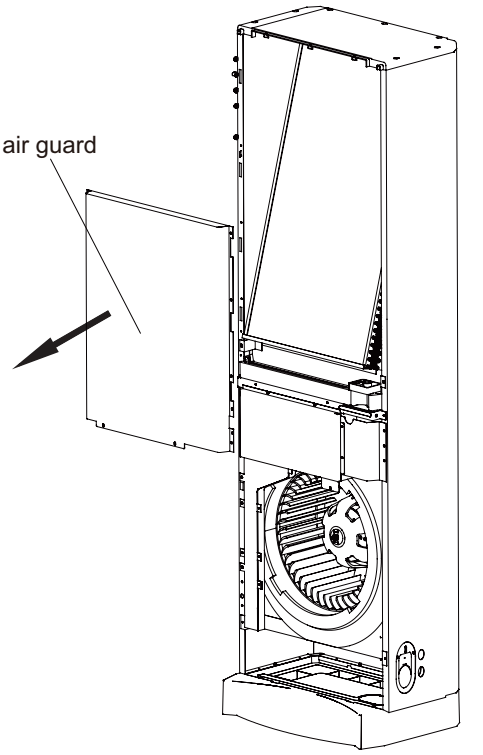
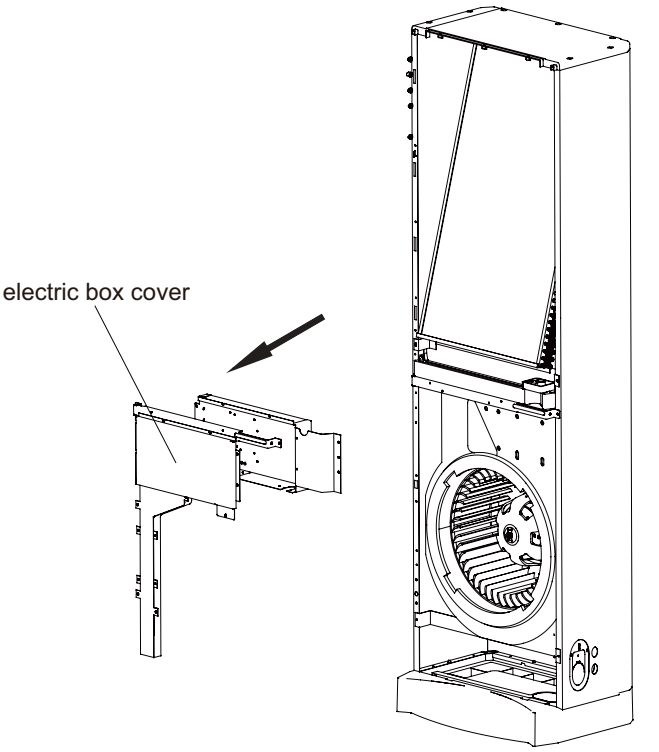
11. Removal Procedure

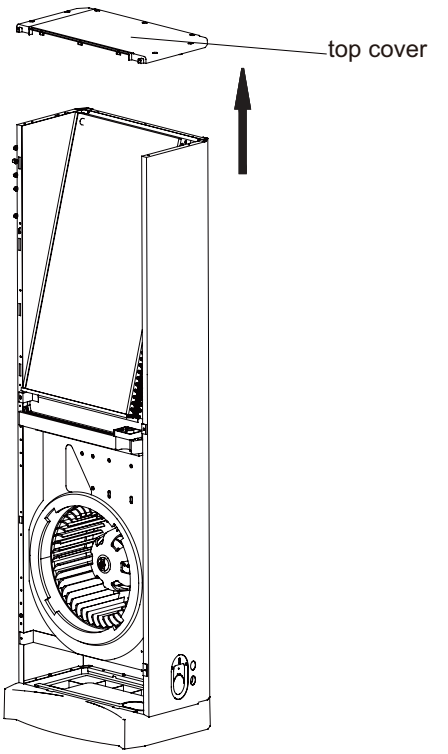
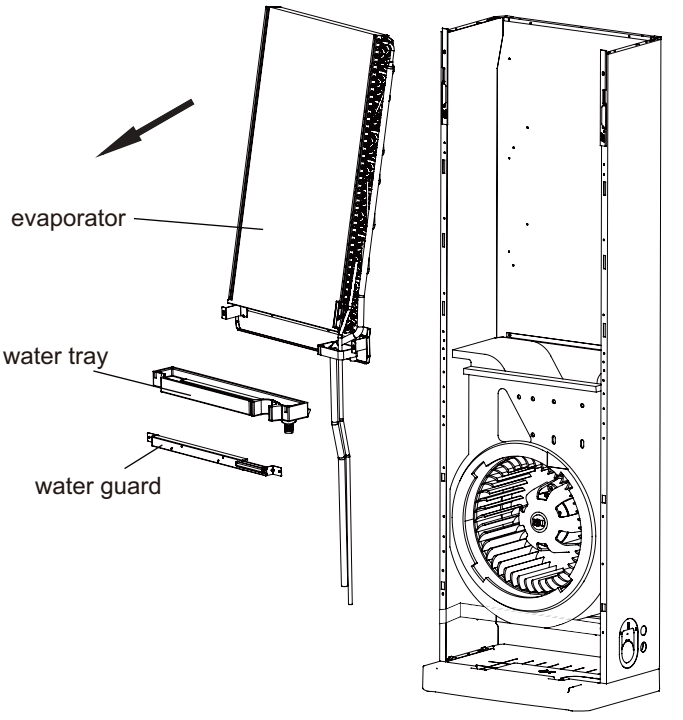
⚠ **Caution: discharge the refrigerant completely before removal.**

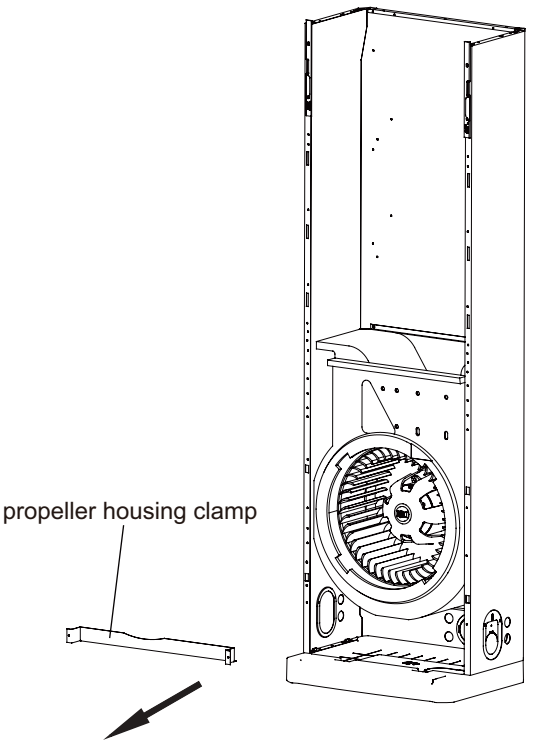
11.1 Removal Procedure of Indoor Unit

Steps	Procedure	
1. Remove air-inlet panel		
	Remove the screw stopper; remove the screws fixing air-inlet panel and pull the upper part of air-inlet panel outwards.	
2. Remove air-outlet panel		
	Remove the screws fixing the top and lower part of air-outlet panel; push the air-outlet panel upwards slightly and then remove the air-outlet panel.	

Steps	Procedure
3. Remove display board, horizontal swing motor and vertical swing motor Remove the screws fixing controller box; remove the controller box cover to remove the display board; remove the screw fixing motor in the air-outlet panel sub-assy; remove the horizontal swing motor and vertical swing motor.	
4. Remove air guard Remove the screw fixing air guard and then remove the air guard.	

Steps	Procedure	
		
5. Remove electric box assy		
	Remove the screw fixing electric box cover to remove the electric box cover; disconnect each wiring terminal; remove the relevant electrical elements according to the requirement; remove the screw fixing electric box to remove the electric box assy.	

Steps	Procedure
6. Remove top cover	
	Remove the screw fixing top cover to remove the top cover.
	
7. Remove evaporator assy	
	Remove the screws fixing the top connection plate and lower connection plate of evaporator; pull the left side plate and right side plate outwards slightly to remove the evaporator, water guard and water tray; after removing the evaporator, remove the left and right air guard and water guard at the top side of evaporator.
	

Steps	Procedure
8. Remove propeller housing clamp	
	Remove the screws fixing propeller housing clamp and then pull the propeller housing clamp outwards to remove the propeller housing clamp.
	
9. Remove propeller housing sub-assy	
	Remove the screws fixing propeller housing to remove the propeller housing sub-assy.