



Service Manual

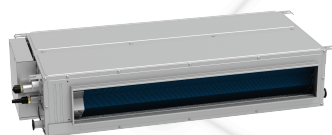
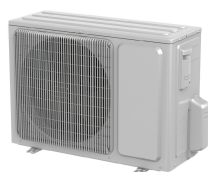
U-MATCH HEAT PUMP AIR CONDITIONING

(GC201902-I)

Capacity: 5.0kW~16.0kW

Rate Frequency: 50Hz

Operation Range: -15°C~48°C






Foreword

Thank you for choosing Gree U-Match air conditioners. In order to correctly install and use our units, and for the satisfactory operation effect, please read this manual carefully.

This manual specifies safe operation requirements from perspectives of product introduction, control, troubleshooting and maintenance, as well as basic principles and implementation methods. Professional operators must abide by relevant national (local) safety requirements and technical specifications set forth in this manual during operations; otherwise, the air conditioning system may fail or be damaged, and personnel safety accident may also occur.

Safety Notice

	Before using the air conditioner, please first read the instruction manual.
	Before installing the air conditioner, please first read the instruction manual.
	Before repairing the air conditioner, please first read the technical service manual.

CONTENTS

Safety Notice on Maintenance	1
Safety Notice on Operation	2
1. Product Introduction	3
1.1 Lists of Units	3
2. Control	8
2.1 Operation Mode.....	8
2.2 Control Mode.....	10
2.3 Functions.....	11
3. Troubleshooting.....	20
3.1 Wiring Diagrams	20
3.2 PCB Layout	25
3.3 Error Code	28
3.4 Troubleshooting.....	29
3.5 Failures Not Caused by Errors.....	46
4. Maintenance	47
4.1 System Diagram.....	47
4.2 Connection Pipe Vacuum Pumping	47
4.3 Refrigerant Charging	48
4.4 Removal of Major Components.....	50
4.5 Explosive View and Lists of Parts.....	87
Appendices.....	142
1. Resistance/temperature lists of temperature sensors	142
2. Temperature/Pressure List of Refrigerant.....	150
3. Operation Tools.....	150

Safety Notice on Maintenance



PROHIBITED:

1. Do not pierce or burn.
2. Please note that refrigerant may be odorless.
3. 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).
4. Using unsuitable parts or tools may lead to electric shock or fire hazard.
5. If refrigerant leaks during maintenance, please ventilate the room immediately. Heavy leakage may lead to breathing difficulty, severe injury or death.
6. Disconnect power before disassembling the appliance for maintenance.



WARNING:

1. If the working place is more than 2m's high, please wear a safety helmet, gloves and a safety belt.
2. Never mix any other substances except the specified refrigerant into the refrigerant circuit.
3. When re-locating the appliance, check whether the new location is strong enough to withstand the weight of the appliance.
4. If there is refrigerant leak, please fix the leak before charging in the refrigerant. After refrigerant is charged, check for refrigerant leaks. If you cannot spot the leak, stop the maintenance work. Please evacuate the system and close the service valve to prevent refrigerant leaking into the room.
5. Prepare suitable tools and protectors.
6. If you need to carry out maintenance or check the electric circuit without cutting off the power, please be careful not to touch the electrical parts.



NOTICE:

1. If the appliance is maintained at a humid place, it should be grounded to avoid electric shock.
2. Never repair the unit with wet hands. Operating the unit with wet hands may lead to electric shock.
3. If the unit is not correctly grounded, please check and fix it.
4. Before cleaning the unit, please disconnect power to prevent the inner fan from starting up and running at high speed; otherwise personal injury may occur.
5. Measure the insulation resistance after maintenance. The resistance must be 1M or higher. Bad insulation may lead to electric shock.
6. Welding and cutting work must be done in a well-ventilated place.
7. Gas appliances, heaters and other fire sources should be kept away from the installation and maintenance site.
8. Maintenance should be done according to suggestions of the manufacturer.
9. Maintenance should be done only after the refrigerant is completely reclaimed from the unit.



OBSERVED:

1. After the maintenance work is done, check the drainage of indoor unit.
2. Do not tilt the unit, otherwise, water may spill out from the unit and make the floor and furniture wet.
3. Disassembly of the unit, handling of the refrigerant, oil and accessories should all be done according to applicable local rules and regulations.

Safety Notice on Operation



PROHIBITED:

1. Never try to modify the unit, otherwise, it may cause electric shock, overheat or fire hazard.
2. If the power cord or conducting wires are scratched or destroyed, please replace them.
3. Never use connected or extended power cord or share the power socket with other appliances.
4. Prepare a specialized power circuit for the appliance.



WARNING:

1. If the power plug is dirty, please clean it before inserting it to the power socket. If the power plug is loose, please tightening it up.
2. Do not damage the power cord. A damaged or refitted power cord may lead to electric shock or fire hazard.
3. Check frequently whether the appliance is in good condition.

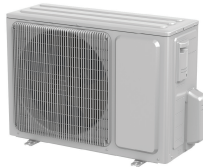
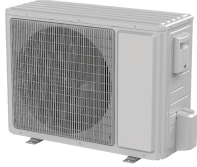
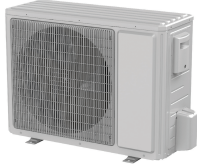




NOTICE:

1. After changing the batteries of remote control, please discard them to avoid being swallowed by children.
2. When the unit is working, do not remove the fan cover.
3. Do not use organic solvents to wipe the controller operating panel.
4. Before cleaning the unit, cut off the power supply.

1. Product Introduction

1.1 Lists of Units

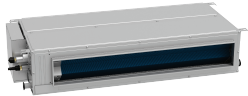
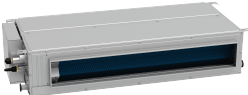



Model	Power Supply	Finished Product Code	Appearance
	V/Ph/Hz		
GU50W/A1-K	220V-240V ~50Hz	CF021W2630	
GU71W/A1-K		CF021W2620	
GU85W/A1-K		CF021W2650	
GU100W/A1-M	380V-415V 3N ~50Hz	CF021W2640	
GU125W/A1-M		CF021W2660	
GU140W/A1-M		CF021W2520	
GU160W/A1-M		CF021W2560	

Note: 1Ton =12000Btu/h = 3.517kW

If one outdoor unit is to be connected with multiple indoor units, the indoor units must have the same cooling capacity and be of the same type.

1.1.2 List of IDUs

Model		Rated Cooling (kW)	Rated Heating (kW)	Power Supply	Finished Product Code	Appearance
				(V,Ph,Hz)		
Cassette Type	GUD50T/A1-K	4.8	5.0	220V-240V ~50Hz	ET010N1750	
	GU71T/A1-K	7.1	7.4		ET010N1760	
	GU85T/A1-K	8.3	9.2		ET010N1820	
	GU100T/A1-K	10.0	12.0		ET010N1770	
	GU125T/A1-K	12.0	13.5		ET010N1830	
	GU140T/A1-K	14.01	15.1		ET01001590	
	GU160T/A1-K	15.0	17.4		ET01001580	
Duct Type	GU50P/A1-K	4.75	4.9	220V-240V ~50Hz	CF022N2330	
	GU71P/A1-K	7.0	7.4		CF022N2360	
	GU85P/A1-K	8.3	9.3		CF022N2400	
	GU100PH/A1-K	10.0	12.0		CF022N2320	
	GU125PH/A1-K	12.0	13.5		CF022N2380	
	GU140PH/A1-K	14.6	16.3		CF022N1950	
	GU160PH/A-1K	16.0	19.0		CF022N1920	

Model		Rated Cooling (kW)	Rated Heating (kW)	Power Supply	Finished Product Code	Appearance	
				(V,Ph,HZ)			
Duct Type(with pump)	GU50PS/A1-K	4.75	4.9	220V-240V ~50Hz	CF022N2340		
	GU71PS/A1-K	7.0	7.4		CF022N2350		
	GU85PS/A1-K	8.3	9.3		CF022N2410		
	GU100PHS/A1-K	10.0	12.0		CF022N2370		
	GU125PHS/A1-K	12.0	13.5		CF022N2390		
	GU140PHS/A1-K	14.6	16.3		CF022N1940		
	GU160PHS/A1-K	16.0	19.0		CF022N1930		
Floor Ceiling Type	GU50ZD/A1-K	5.0	5.2	220V-240V ~50Hz	ED020N2070		
	GU71ZD/A1-K	7.3	7.7		ED020N2080		
	GU85ZD/A1-K	8.6	9.3		ED020N2100		
	GU100ZD/A1-K	10.1	12.0		ED020N2090		
	GU125ZD/A1-K	12.0	13.2		ED020N2110		
	GU140ZD/A1-K	14.1	16.5		ED020N1880		
	GU160ZD/A1-K	15.8	19.1		ED020N1870		

Note:

The outdoor unit is generally suitable to any one of the three types of indoor units with no need of change (limited to cassette type, duct type and floor ceiling type).The above test results were all completed by using the power supply 230V,50Hz. Different power supplies may result in deviation.

1.2 Electrical Parameters

Model	Power Supply	Circuit Breaker Capacity	Min. Sectional Area of Power Cord
	V/Ph/Hz	A	mm ²
GU50W/A1-K	220V-240V ~50Hz	16	1.5
GU71W/A1-K		20	2.5
GU85W/A1-K		25	2.5
GU100W/A1-M	380V-415V 3N ~50Hz	16	1.5
GU125W/A1-M		16	1.5
GU140W/A1-M		16	1.5
GU160W/A1-M		16	1.5

Model	Power Supply	Fuse Capacity	Circuit Breaker Capacity	Min. Sectional Area of Power Cord
	V/Ph/Hz	A	A	mm ²
Indoor unit	220V-240V ~50Hz	3.15	6	1.0



NOTICE:

- ① Fuse is located on the main board.
- ② Install a circuit breaker at every power terminal near the units (indoor and outdoor units) with at least 3mm contact gap. The units must be able to be plugged or unplugged.
- ③ Circuit breaker and power cord specifications listed in the above table are determined based on the maximum power input of the units.
- ④ Supply cords of parts of appliances for outdoor use shall not be lighter than polychloroprene sheathed flexible cord (code designation 60245 IEC57).
- ⑤ Specifications of circuit breaker are based on a working condition where the working temperature is 40°C. If working condition changes, please adjust the specifications according to national standards.
- ⑥ Adopt 2pc of 0.75mm² power cords to be the communication cords between indoor and outdoor units. The maximum length is 100m. Please select a proper length according to local conditions. Communication cords must not be twisted together. To be in compliance IOS5151, it is necessary to use 8 meters long wire.
- ⑦ The wire gauge of communication cord should not be less than 0.75mm². It's recommended to use 0.75mm² power cords as the communication cords.
- ⑧ Calculation of the maximum permissible system impedance:
 - a) The following evaluation procedure shall be applied if the equipment emissions cannot meet the technical requirements of IEC 61000-3-3 and therefore the equipment cannot be declared compliant by the manufacturer in accordance with 6.2.1. In such a case the equipment shall only be connected to a supply having a system impedance lower than Zref.
 - b) To be in compliance with EN 61000-3-11, impedance value of power-supply system connected to product must be less than or equal to the allowable maximum value of |Zsys| in the following sheet:

Models	Max Zsys Unit: ohms
GU50W/A1-K	0.170

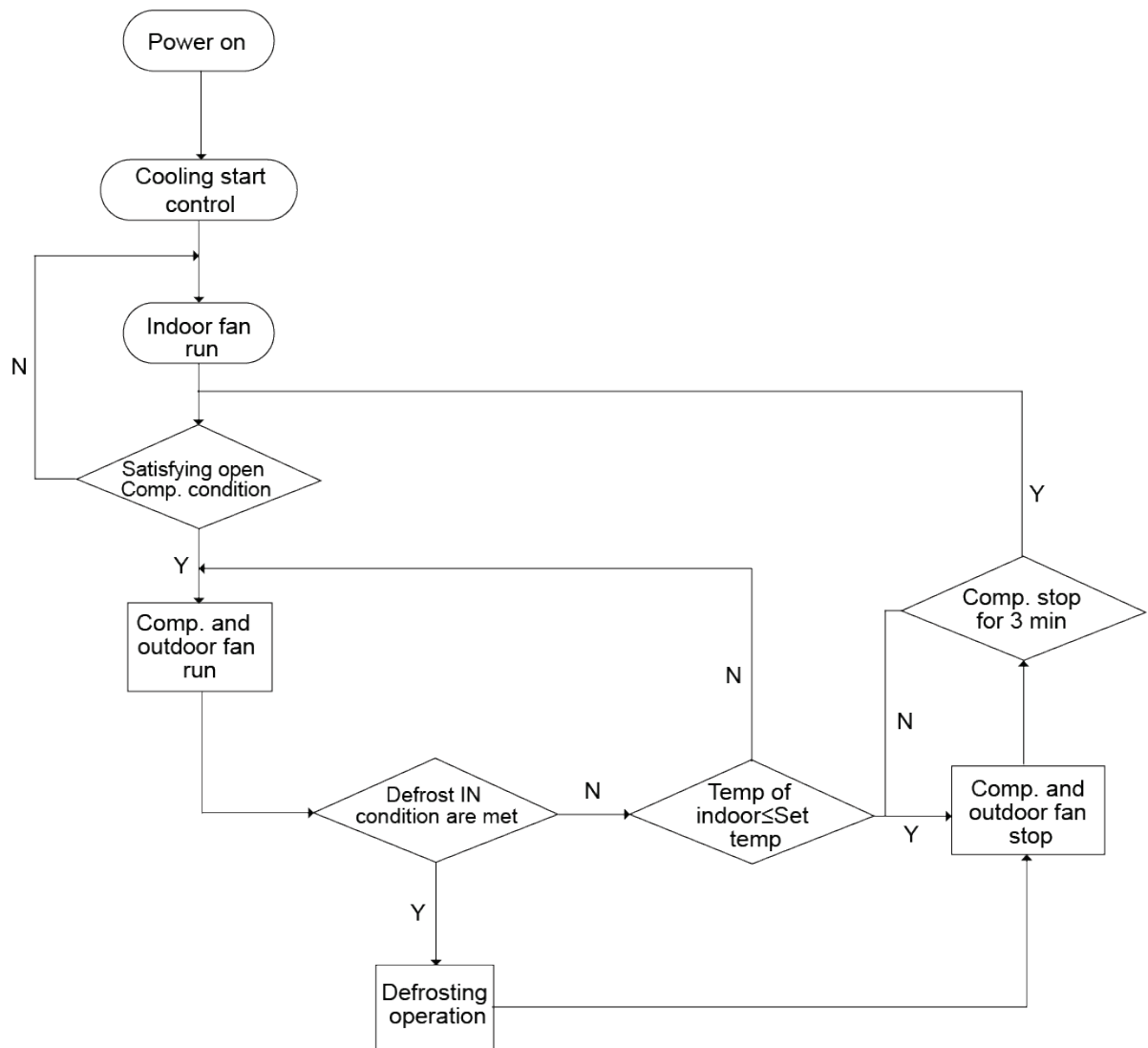
Models	Max Zsys Unit: ohms
GU71W/A1-K	0.090
GU85W/A1-K	0.071
GU100W/A1-M	0.416
GU125W/A1-M	0.142
GU140W/A1-M	0.173
GU160W/A1-M	0.193

- c) Before connecting the product to public power network, please consult your local power supply authority to ensure that the power network has met the above requirements. No requirement for the unlisted product's impedance value of power-supply system.

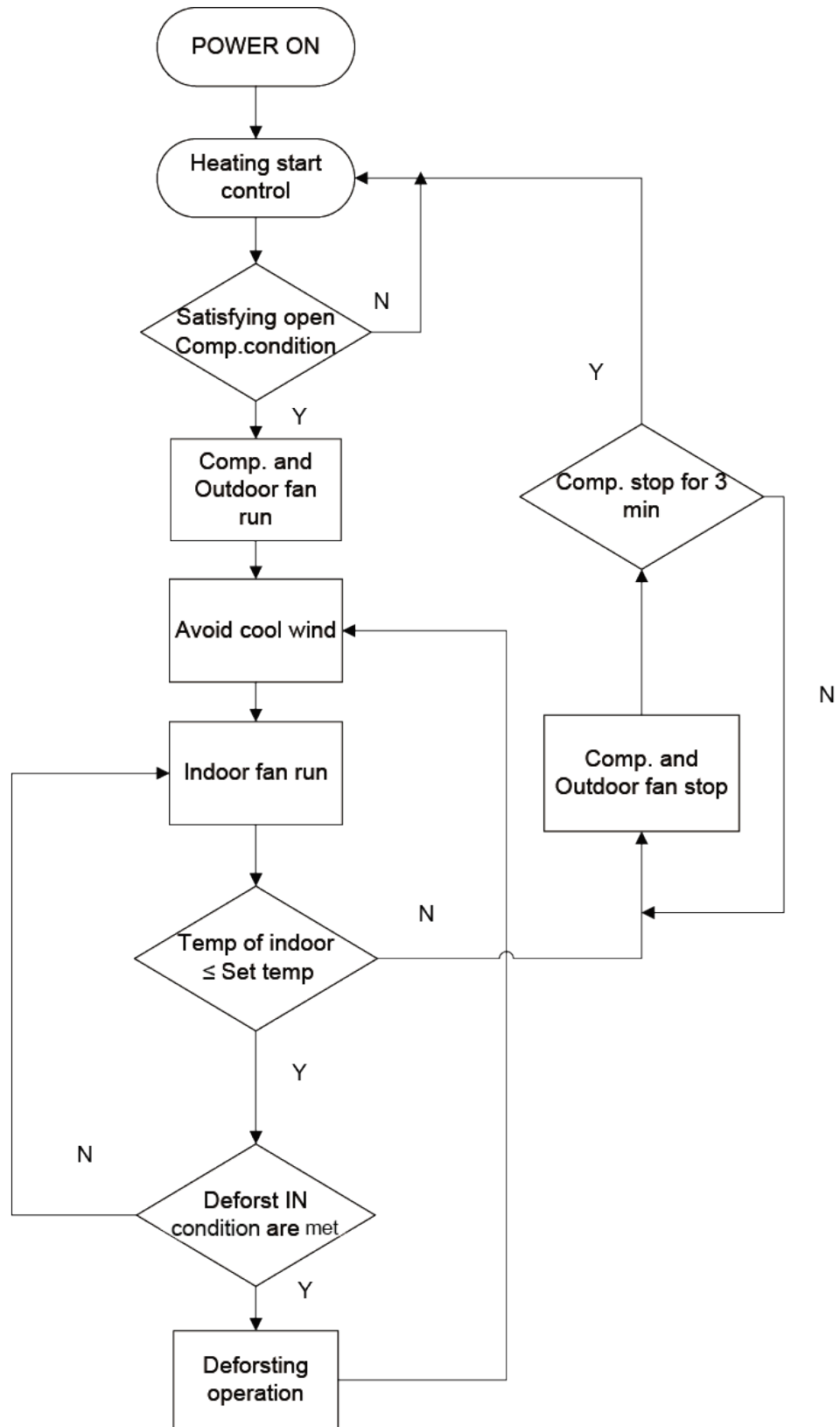
2. Control

2.1 Operation Mode

2.1.1 Cooling Mode



2.1.2 Heating Mode



2.2 Control Mode

2.2.1 Based Control

2.2.1.1 Compressor Control

When cooling mode is turned on, indoor fan will run for a while before the compressor starts. Under different modes, the compressor can only be stopped after running for some time (special cases excluded). This is to protect the compressor from frequent start or stop. Once the compressor is stopped, it must not be restarted right away. Please wait for a few minutes.

2.2.1.2 EXV Control

When the unit is first started, the electronic expansion valve will reset control. During the process, the expansion valve will produce rattling sound. When cooling mode is turned on, the valve will be open at a certain step before the compressor starts. A few minutes later, the valve will start to control according to the target discharge Temperature preset by logic.

2.2.1.3 Outdoor Fan Control

This series air conditioner has one type of outdoor units: one with a single fan. The outdoor fan can run at the highest level 6 and the lowest level 1. By controlling the speed of outdoor fan, the unit can achieve cooling at low temperature. In Fan mode, outdoor fan will not work.

2.2.2 Special Control

2.2.2.1 Refrigerant Recovery Control(Pump Down)

Enabling method: Remote control and wired control both use the same enabling method. That is, within 5min after power is connected, start cooling mode (turn on the unit) and set temperature at 16°C, then press “+, -, +, -, +, -” (6 times of pressing) in 5s to enter the refrigerant recovery mode. If it is successfully enabled, the wired controller will display the corresponding code E3.

After the refrigerant recovery mode is enabled, if remote controller or wired controller sends a signal or the refrigerant recovery mode has been enabled for 10min, system will exit from refrigerant recovery. If outdoor unit is shut down because of malfunction, refrigerant recovery will be stopped immediately.

Please note that refrigerant recovery mode cannot be enabled under the following conditions:

- a) If temperature is shielded remotely, refrigerant recovery mode cannot be enabled. You need to first unlock the remote shield against temperature.
- b) If temperature is higher than 16 degrees under energy-saving mode, refrigerant recovery mode cannot be enabled. You need to first turn off the energy-saving mode.

2.2.2.2 ODU Forced Operation Control

This control is used to quickly check whether the unit can operate normally after installation. Wired control has to be used to enable this control. For cassette type unit, you can enable the control through the light board.

Enabling method through the light board of cassette type unit: After the unit is installed and connected to power, press TEST button on the light board to enter forced operation mode. Short-press TEST button (less than

2s), cooling mode will be activated. Long-press TEST button (more than 2s), heating mode will be activated.

Enabling method through wired control:

Forced cooling: press the “▼” buttons continuously for 5s to enter the forced test mode; Forced heating: press the “▲” continuously for 5s to enter the forced test mode.

During test mode, press any button to quit the test mode.

Note:

Forced test mode can only be enabled when the unit is first turned on and not yet receives any remote control signal or button control signal.

2.2.3 Protection Control

2.2.3.1 High Pressure Protection Control

System will enable high pressure protection control if the high pressure switch is detected open. Under high pressure protection, system will be shut down and display error code E1.


When high pressure protection occurs for the first two time, system will restore operation if the high pressure switch is detected to be reclosed. When high pressure protection occurs for the third time in a certain time period, system will not restore operation. You need to manually turn off the unit and clear the error before restarting up the unit. (If high pressure protection occurs frequently, please send for professional personal to repair).


2.2.3.2 Low Pressure Protection Control

System will enable low pressure protection control if the low pressure switch is detected open. Under low pressure protection, system will be shut down and display error code E3. When low pressure protection occurs, system will restore operation if the low pressure switch is detected to be reclosed within 3s after shutdown. If low pressure protection occurs for 3 times in an hour, system will not restore operation automatically. You need to manually turn off the unit before restarting up the unit.

2.3 Functions

2.3.1 Setting of Filter Cleaning Reminder

When the unit is on, press Function button to switch to filter cleaning reminder. The icon  will blink and then the unit will enter the setting of filter cleaning reminder. Timer zone displays the set pollution level and you can press “▲” or “▼” button to adjust the level. Then press “SWING/ENTER” button to turn on this function.

When filter cleaning reminder is turned on, press Function button to switch to filter cleaning reminder. The icon  will blink. Then press “▲” or “▼” button to adjust the timer zone to “00”. Then press “SWING/ENTER” button to cancel this function.

When setting the filter cleaning reminder, timer zone will display 2 digits, of which the former indicates the pollution degree of operating place and the latter indicates the accumulated operating time of indoor unit. There are 4 types of situations:





- a) Cleaning Reminder is off (Timer zone shows “00”);
- b) Slight pollution: The former digit in timer zone shows “1” while the latter shows “0”, which indicates the accumulated operating time is 5500hr. Each time the latter digit increases 1, the accumulated operating time increases 500hr. When it reaches “9”, it means the accumulated operating time is 10000hr;

- c) Medium pollution: The former digit in timer zone shows “2” while the latter shows “0”, which indicates the accumulated operating time is 1400hr. Each time the latter digit increases 1, the accumulated operating time increases 400hr. When it reaches “9”, it means the accumulated operating time is 5000hr;
- d) Heavy pollution: The former digit in timer zone shows “3” while the latter shows “0”, which indicates the accumulated operating time is 100hr. Each time the latter digit increases 1, the accumulated operating time increases 100hr. When it reaches “9”, it means the accumulated operating time is 1000hr.

The detailed pollution level and the corresponding time are as shown in Table 2-4-1 below:

Pollution Level and Corresponding Time

Pollution Level	Accumulated Operating Time (hour)	Pollution Level	Accumulated Operating Time (hour)	Pollution Level	Accumulated Operating Time (hour)
10	5500	20	1400	30	100
11	6000	21	1800	31	200
12	6500	22	2200	32	300
13	7000	23	2600	33	400
14	7500	24	3000	34	500
15	8000	25	3400	35	600
16	8500	26	3800	36	700
17	9000	27	4200	37	800
18	9500	28	4600	38	900
19	10000	29	5000	39	1000


- (1) If filter cleaning reminder is turned on, the icon “” will be on.
- (2) If cleaning time is not reached, no matter the setting is changed or not, the accumulated operating time won't be recalculated when pressing “SWING/ENTER” button.
- (3) If cleaning time is reached, in unit on or off state, the icon “” will blink every 0.5s to remind the user. Press Function button to switch to the icon “” and press “▲” or “▼” button to adjust the level. Then press “SWING/ENTER” button, so the accumulated operating time won't be cleared (If the adjusted level is higher than the present accumulated operating time, the icon won't blink anymore; if the adjusted level is lower than the present accumulated operating time, the icon will go on blinking).
- (4) The only way to cancel filter cleaning reminder is to press Function button to switch to filter cleaning reminder. When the icon “” blinks, press “▲” or “▼” button to adjust timer zone to “00”. In this case, the accumulated operating time will be cleared.

2.3.2 Low Temperature Drying Function

Under dry mode and when set temperature is 16°C, continuously press “▼” button for twice and then the set temperature will be 12°C. In this case, the unit will enter low temperature drying function.


When low temperature drying function is turned on, press “▲” button or Mode button to exit low temperature drying function.

2.3.3 Lock Function

When the unit is normally turned on or turned off, pressing “▲” and “▼” buttons at the same time for 5s will turn on Lock function. LCD will display “”. Pressing “▲” and “▼” buttons at the same time for 5s to turn off this function.

When Lock function is turned on, any other buttons won't respond when pressing. This function can be memorized after power recovery.

2.3.4 Memory Function

Press Mode and “▲” buttons at the same time for 5s under off state of the unit to turn on or cancel memory function. If memory function is set, “” is displayed. If not, indoor unit is defaulted to be off after power recovery.


If memory function is set, indoor unit will resume original setting state after power recovery.

Note:


If power is cut off within 5s after memorized content is changed, the memorized content may be abnormal. Do not cut off power within 5s after memorized content is changed.

2.3.5 Access Control Function/ Human Sensitive Function

Access control function or human sensitive function can be selected (For more details, please refer to Debugging Function). These two functions can't be turned on at the same time.

When access control function is selected, the wired control will work when the room card is inserted and stop working when the room card is pulled out; when human sensitive function is selected, the wired control will work when it senses there is somebody in the room and stop working when it senses there is nobody in the room. When access control function senses the room card is not inserted or human sensitive function senses there is nobody in the room, wired control will display “”.

Note:

- ① In long-distance monitoring or centralized control, no matter the room card is inserted or not, the “ON/OFF” of unit can be controlled. If long-distance monitoring or centralized control information is received when the room card is not inserted, the icon “” is cleared. When the card is reinserted, access control function is judged to be turned on. If long-distance monitoring or centralized control information is received when the room card is inserted, it will keep the original status.
- ② The unit cannot be controlled by buttons when the card is not inserted.
- ③ When access control function and human sensitive function have been set at the same time, it is defaulted that access control function is valid and human sensitive function is invalid.

Note:

For this series, human sensitive function is invalid.

2.3.6 Switch between Fahrenheit and Centigrade

Under off state of the unit, press Mode and “▼” buttons at the same time for 5s to switch between Fahrenheit and Centigrade.

2.3.7 Enquiry of Ambient Temperature

Under off or on state of the unit, press "SWING/ENTER" for 5s to view the ambient temperature. In this case, timer zone displays ambient temperature type "01" or "02". Ambient temperature zone displays the corresponding temperature of that type. "01" stands for outdoor ambient temperature and "02" stands for indoor ambient temperature after compensation. Press Mode button to switch between "01" and "02". Pressing other buttons except Mode button or receiving remote control signal will exit enquiry state. If there is no operation within 20s, the unit will also exit enquiry state.

Note:

- ① If the unit is not connected to outdoor ambient temperature sensor, display of outdoor ambient temperature will be shielded after being energized for 12hrs.
- ② If there is malfunction of outdoor ambient temperature sensor, display of outdoor ambient temperature will be shielded after being energized for 12hrs.

2.3.8 Enquiry of Historical Malfunction

Under off or on state of the unit, continuously press Function and "▼" buttons for 5s to view historical malfunction.

In enquiry state, set temperature displaying zone displays "00". Press "▲" and "▼" buttons to view the 5 malfunctions happened recently. The timer displaying position displays the specific error code. The 5th displayed malfunction is the last malfunction.

2.3.9 Debugging Function

Under off state of the unit, press Function and Timer buttons at the same time for 5s to go to the debugging menu. Press Mode button to adjust the setting items and press "▲" or "▼" button to set the actual value.

2.3.9.1 Setting ambient temperature sensor (dual ambient temperature sensors function)

Under debugging state, press Mode button to adjust to "00" in temperature displaying zone. Timer zone displays setting state and press "▲" or "▼" button to adjust. There are 3 selections:

- (1) The ambient temperature at air return is set as indoor ambient temperature. (LCD displays 01)
- (2) The temperature at wired controller is set as indoor ambient temperature. (LCD displays 02)
- (3) Select the temperature sensor at air return in cooling, dry and fan mode; select the temperature sensor at wired controller in heating and auto mode. (LCD displays 03)

2.3.9.2 Selecting three speeds in high speed and three speeds in low speed of indoor fan motor

Under debugging state, press Mode button to adjust to "01" in temperature displaying zone. Timer zone displays setting state and press "▲" or "▼" button to adjust. There are 2 selections:

- (1) Three speeds in low speed. (LCD displays 01)
- (2) Three speeds in high speed. (LCD displays 02)

Three speeds in low speed include high, medium and low speeds; three speeds in high speed include super high, high and medium speed.

Note: For this series, this function is invalid.

2.3.9.3 Displaying setting of freeze protection error code

Under debugging state, press Mode button to adjust to "02" in temperature displaying zone. Timer zone displays setting state and press "▲" or "▼" button to adjust. There are 2 selections:

- (1) Displayed (LCD displays 01).
- (2) Not displayed (LCD displays 02).

It is defaulted to be not displayed for export unit and be displayed for domestic unit.

2.3.9.4 Setting refrigerant lacking protection function

Under debugging state, press Mode button to adjust to "04" in temperature displaying zone. Timer zone displays setting state and press "▲" or "▼" button to adjust. There are 2 selections:

- (1) With refrigerant lacking protection function. (LCD displays 01)
- (2) Without refrigerant lacking protection function. (LCD displays 02)

2.3.9.5 Selecting blowing residual heating of indoor unit

Under debugging state, press Mode button to adjust to "05" in temperature displaying zone. Timer zone displays setting state and press "▲" or "▼" button to adjust. There are 2 selections:

- (1) Mode 1 (LCD displays 00).
- (2) Mode 2 (LCD displays 01).

Note:

Blowing residual heating of indoor unit

Mode 1: Unit stops when reaching temperature point and indoor fan motor does not stop in cooling mode; after unit stops when reaching temperature point in heating mode, duct type unit and floor ceiling unit blow residual heat for 60s and then stop indoor unit, while cassette type unit always operates in low fan speed and blows residual heat for 60s when there is malfunction.

Mode 2: After unit stops when reaching temperature point, the indoor fan motor stops operation with a 10s-delay no matter in cooling mode or in heating mode.

2.3.9.6 Mode selecting of compressor electric heating belt

Under debugging state, press Mode button to adjust to "06" in temperature displaying zone. Timer zone displays setting state and press "▲" or "▼" button to adjust. There are 2 selections:

- (1) Mode 1 (LCD displays 00).
- (2) Mode 2 (LCD displays 01).

Note:

Mode 1: Compressor electric heating belt starts when outdoor ambient temperature is below 35°C and stops when outdoor ambient temperature is above 37°C. When outdoor ambient temperature is within 35°C ~ 37°C, the belt will keep its previous operation state.

Mode 2: Compressor electric heating belt starts when outdoor ambient temperature is below -2°C and stops when outdoor ambient temperature is above 0°C. When outdoor ambient temperature is within -2°C ~ 0°C, the belt will keep its previous operation state.

Note:

For this series, this function is invalid.

2.3.9.7 Selecting low-power consumption mode

Under debugging state, press Mode button to adjust to "07" in temperature displaying zone. Timer zone

displays setting state and press “▲” or “▼” button to adjust. There are 2 selections:

- (1) With low-power consumption mode. (LCD displays 00)
- (2) Without low-power consumption mode. (LCD displays 01)

Note:

For this series, this function is invalid.

2.3.9.8 Selecting door control function

Under debugging state, press Mode button to adjust to “08” in temperature displaying zone. Timer zone displays setting state and press “▲” or “▼” button to adjust. There are 2 selections:

- (1) Without door control function. (LCD displays 00)
- (2) With door control function. (LCD displays 01)

2.3.9.9 Selecting human sensitive function

Under debugging state, press Mode button to adjust to “09” in temperature displaying zone. Timer zone displays setting state and press “▲” or “▼” button to adjust. There are 2 selections:

- (1) Without human sensitive function. (LCD displays 00)
- (2) With human sensitive function. (LCD displays 00)

Note: For this series, this function is invalid.

2.3.9.10 Selecting long-distance monitoring or centralized controller

Under debugging state, press Mode button to adjust to “10” in temperature displaying zone. Timer zone displays setting state and press “▲” or “▼” button to adjust. There are 2 selections:

- (1) Centralized controller. (LCD displays 00)
- (2) Long-distance monitoring. (LCD displays 01)

2.3.9.11 Selecting compensation of temperature sensor at air return

Under debugging state, press Mode button to adjust to “12” in temperature displaying zone. Timer zone displays setting state and press “▲” or “▼” button to adjust. There are 16 selections:

- (1) Compensate 0°C (LCD displays 00)
- (2) Compensate 1°C (LCD displays 01)
- (3) Compensate 2°C (LCD displays 02)
- (4) Compensate 3°C (LCD displays 03)
- (5) Compensate 4°C (LCD displays 04)
- (6) Compensate 5°C (LCD displays 05)
- (7) Compensate 6°C (LCD displays 06)
- (8) Compensate 7°C (LCD displays 07)
- (9) Compensate 8°C (LCD displays 08)
- (10) Compensate 9°C (LCD displays 09)
- (11) Compensate 10°C (LCD displays 10)
- (12) Compensate 11°C (LCD displays 11)
- (13) Compensate 12°C (LCD displays 12)
- (14) Compensate 13°C (LCD displays 13)
- (15) Compensate 14°C (LCD displays 14)
- (16) Compensate 15°C (LCD displays 15)

Note:

Indoor ambient temperature compensation can be set through the wired control (E.g.: If 02 is selected, it indicates the compensation temperature is 2°C. If the indoor ambient temperature detected by the temperature sensor at air return is 29°C, the ambient temperature after compensation is $29^{\circ}\text{C} - 2^{\circ}\text{C} = 27^{\circ}\text{C}$).

After finishing setting, press SWING/ENTER button to save and exit setting. After entering this interface, the system will exit this menu if there is no operation on the button within 20s. Normal off state interface will be displayed and present setting will not be saved.

2.3.9.12 Auto mode selection

Under debugging state, press Mode button to adjust to “16” in temperature displaying zone. Timer zone displays setting state and press “▲” or “▼” button to adjust. There are 2 selections:

- (1) Auto mode 1, the set temperature under auto mode can't be adjusted. (LCD displays 01)
- (2) Auto mode 2, the set temperature can be adjusted under auto mode. (LCD displays 02)

2.3.9.13 Defrost mode selection

Under debugging state, press Mode button to adjust to “17” in temperature displaying zone. Timer zone displays setting state and press “▲” or “▼” button to adjust. There are 2 selections:

- (1) Defrost mode 1 (LCD displays 01).
- (2) Defrost mode 2 (LCD displays 02).

Note:

For this series, this function is invalid.

2.3.9.14 Heat pump unit and cooling only unit selection

Under debugging state, press Mode button to adjust to “18” in temperature displaying zone. Timer zone displays setting state and press “▲” or “▼” button to adjust. There are 2 selections:

- (1) Heat pump type unit. (LCD displays 00)
- (2) Cooling only unit. (LCD displays 01)

After finishing setting, press “Swing/Enter” button to save and exit setting. After entering this interface, the system will exit this menu if there is no operation on the button within 20s. Normal off state interface will be displayed and present setting will not be saved.

2.3.10 Connect to Interface of Centralized Control

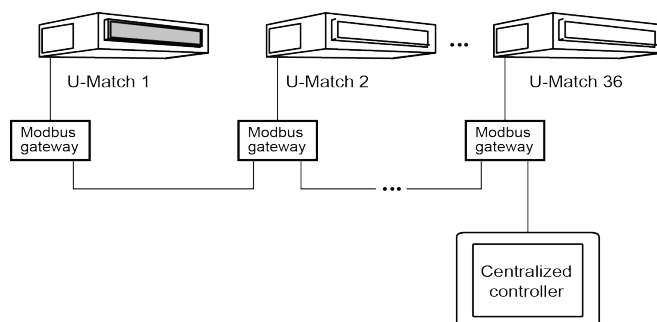
The indoor unit is with the interface of centralized controller. When centralized controller is connected, centralized control of unit can be realized even when the wired controller is not connected;

(1) Interface instruction:

1) The printing of interface on the indoor unit PCB is COM_BMS, before connecting the centralized controller, a gateway model ME50-00/EG(M) is required, The following figure shows an example;

2) Electrical characteristic: none;

3) Working principle: centralized control the communication of indoor mainboard and realize the unit control;



(2) Function instructions:

In order to achieve this function, set the address mode and address through wired controller. Please refer to Point 3 for the setting method. The address mode is defaulted to be connecting to centralized controller mode and the defaulted address is 1;

When the centralized controller is connected, centralized control of the unit can be realized to control unit “ON/OFF”, operation mode, set fan speed/temperature and weekly timer.

(3) Setting method:

1) Centralized control for up to 16 indoor units.

Firstly, set the address mode of wired controller into centralized controller address mode. The setting method is:

Under off state of the unit, press Function and Timer buttons at the same time for 5s to go to the debugging menu. Press Mode button to adjust to “10” in temperature displaying zone. Timer zone displays setting state and press “▲” or “▼” button to adjust. There are 2 selections:

- a. Centralized controller address mode (LCD displays 00).
- b. Long-distance control address mode (LCD displays 01).

Choose the first selection and then press “SWING/ENTER” button to save and exit setting. Now, the address of wired controller is set to match the address of centralized controller. The unit will memorize this setting status. The setting value will be memorized after power failure.

Address setting of each unit: when the address mode is set to be centralized controller address mode. The address setting value range is 01~16. The setting method is:

Under off state of the unit, press Function and Mode buttons at the same time for 5s to enter setting interface of wired controller address. LCD displays address sequence. Press “▲” or “▼” button to adjust the address sequence and then press “SWING/ENTER” button to confirm. The setting value will be memorized after power failure.

When the address is set, the wired controller can be removed and connect the centralized controller to the indoor mainboard. Then connect the required units to realize centralized control of these units;

Note:

- ① When centralized controller is to be connected, set the address mode into centralized controller address mode through wired controller. Long-distance control address mode cannot be set;
- ② The unit addresses in the same network must be different, otherwise, communication malfunction will occur and the unit cannot work normally;
- ③ When centralized controller is to be connected, the unit address range is 1-16. Only 16 sets of unit in maximum can be connected;
- ④ The code and model of wired controller is as below:

Name	Product Code	Remark
Centralized controller CE50-24/E	MC207025	Only 16 sets of unit in Maximum can be connected to this controller

2) Centralized control for up to 36 indoor units.

Firstly, set the address mode of wired controller into Long-distance control address mode. The setting method is:

Under off state of the unit, press Function and Timer buttons at the same time for 5s to go to the debugging menu. Press Mode button to adjust to "10" in temperature displaying zone. Timer zone displays setting state and press "▲" or "▼" button to adjust. There are 2 selections:

- a. Centralized controller address mode (LCD displays 00).
- b. Long-distance control address mode (LCD displays 01).

Choose the second selection and then press "Swing/Enter" button to save and exit setting. Now, the address of wired controller is set to match the address of centralized controller. The unit will memorize this setting status. The setting value will be memorized after power failure.

Address setting of each unit: when the address mode is set to be Long-distance control address mode. The address setting value range is 01~36. The setting method is:

Under off state of the unit, press Function and Mode buttons at the same time for 5s to enter setting interface of wired controller address. LCD displays address sequence. Press "▲" or "▼" button to adjust the address sequence and then press "Swing/Enter" button to confirm. The setting value will be memorized after power failure.

When the address is set, the wired controller can be removed and connect the centralized controller to the indoor mainboard. Then connect the required units to realize centralized control of these units;

Note:

- ① The unit addresses in the same network must be different, otherwise, communication malfunction will occur and the unit cannot work normally.
- ② When centralized controller is to be connected, the unit address range is 1-36. Only 36 sets of unit in maximum can be connected.
- ③ The code and model of wired controller is as below:

Name	Product Code	Remark
Centralized controller CE52-24/F(C)	MC207052	Only 36 sets of unit in maximum can be connected to this controller

3. Troubleshooting

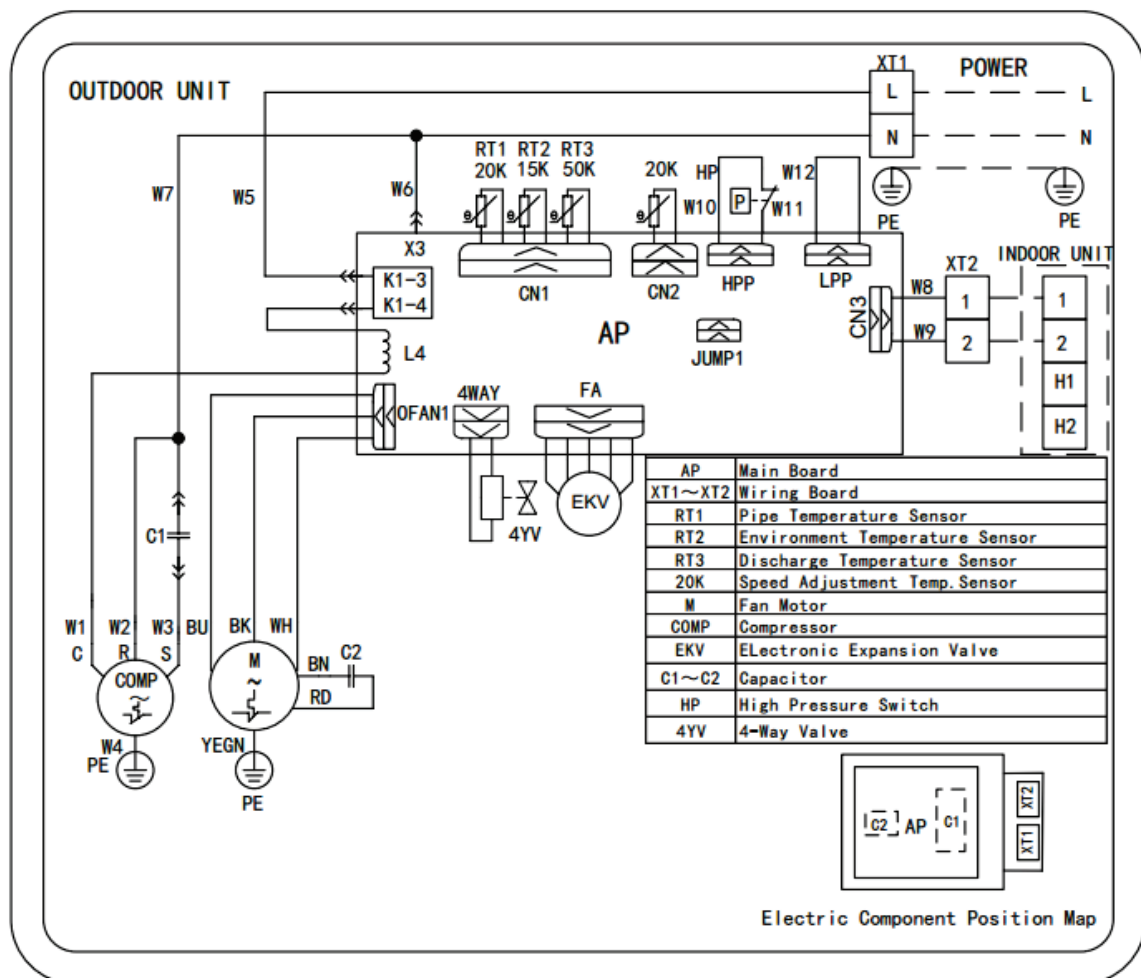
3.1 Wiring Diagrams

Note:

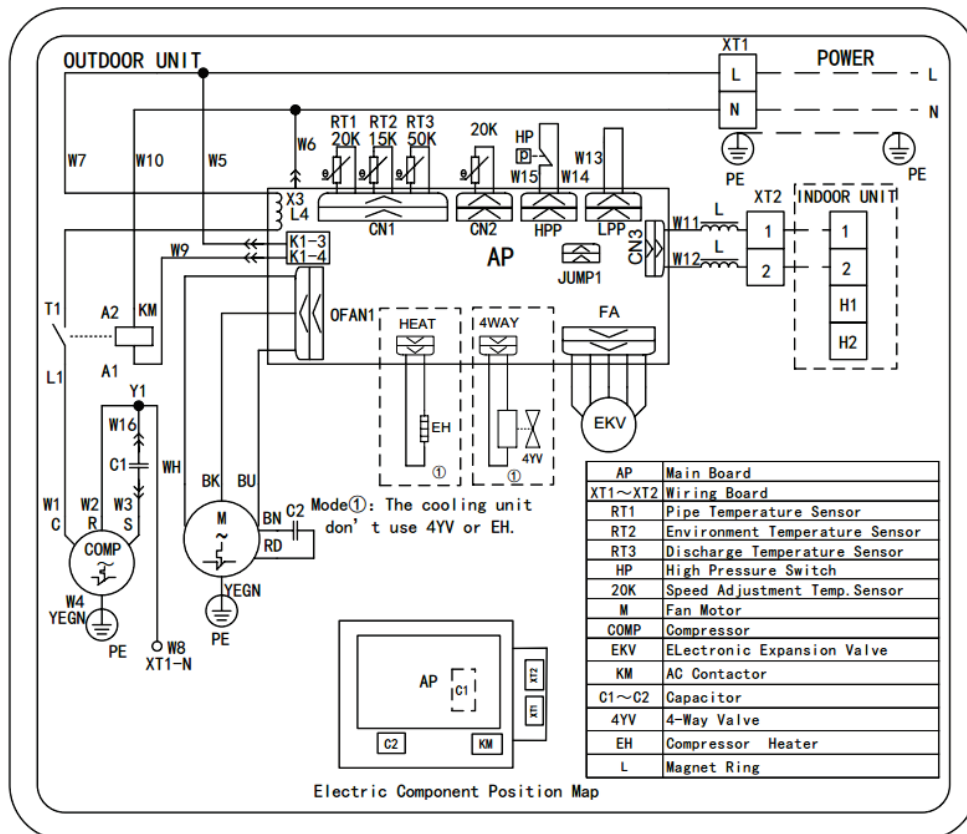
The Wiring Diagrams may be changed due to the product improvement, please check the newest information with the Wiring Diagrams on unit.

3.1.1 Wiring Diagrams of ODUs

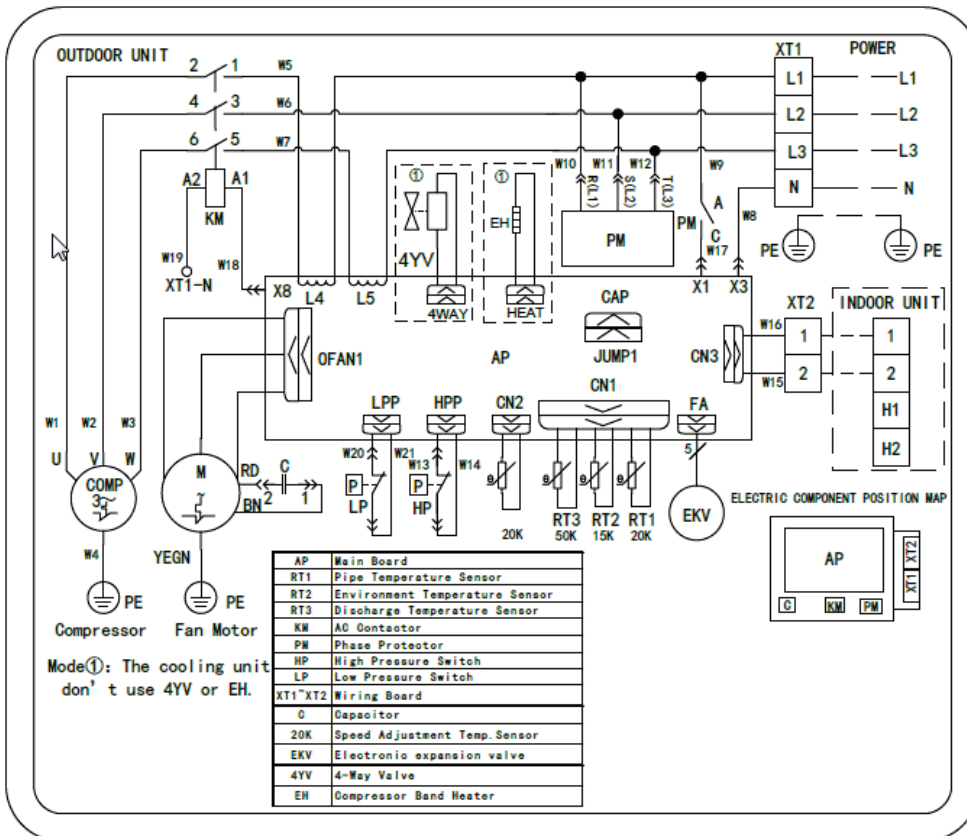
Model: GU50W/A1-K



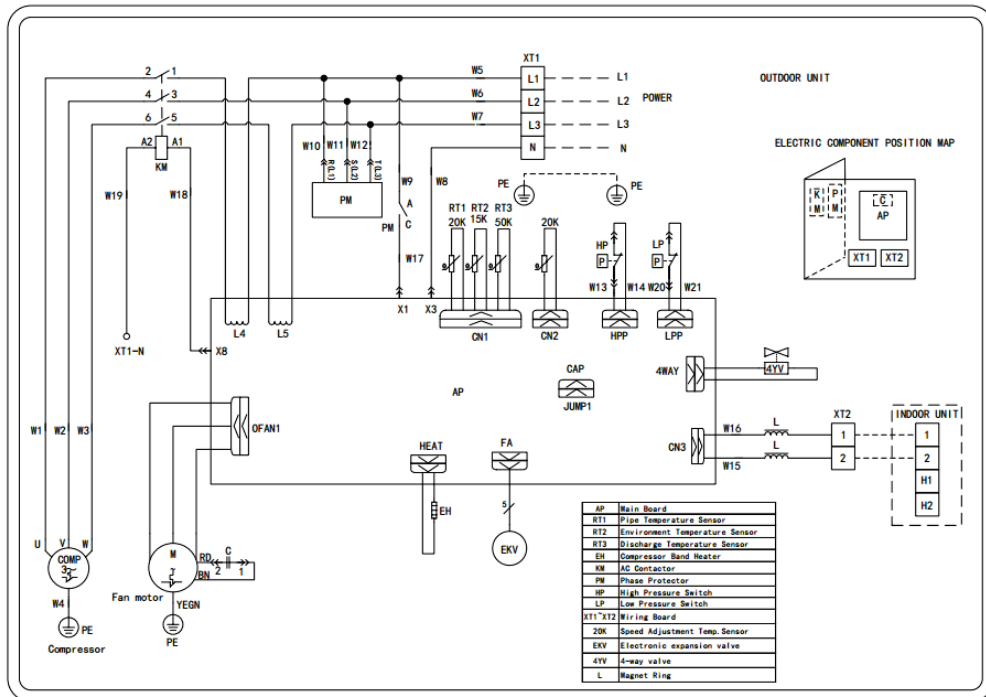
Model: GU71W/A1-K;GU85W/A1-K



Model: GU100W/A1-M



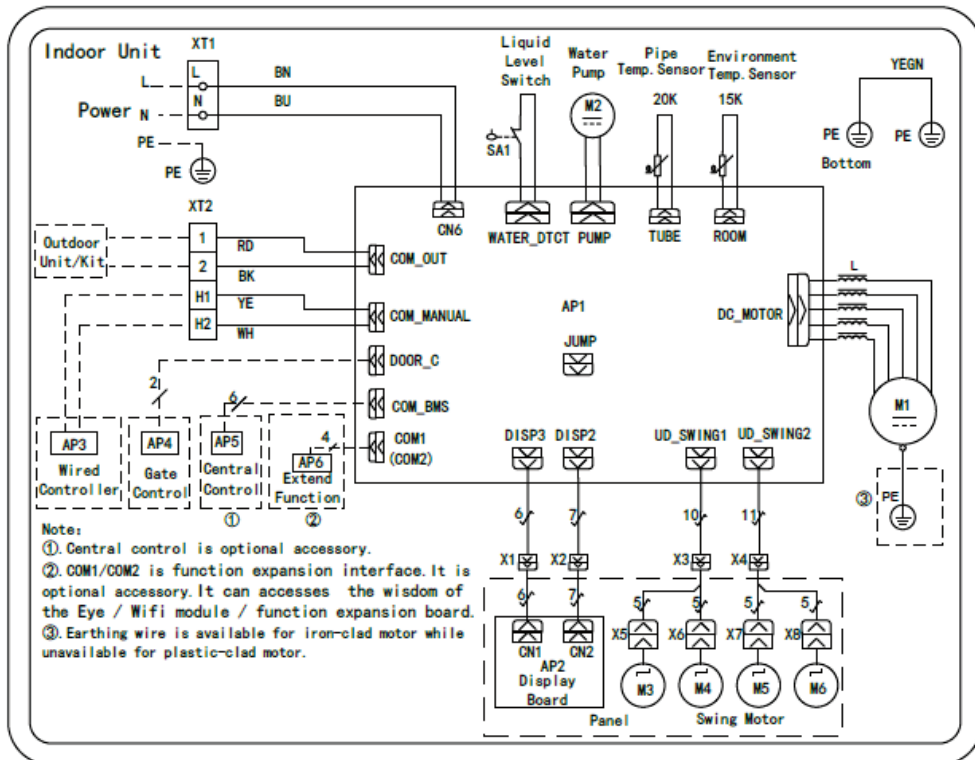
Model: GU125W/A1-M; GU140W/A1-M; GU160W/A1-M



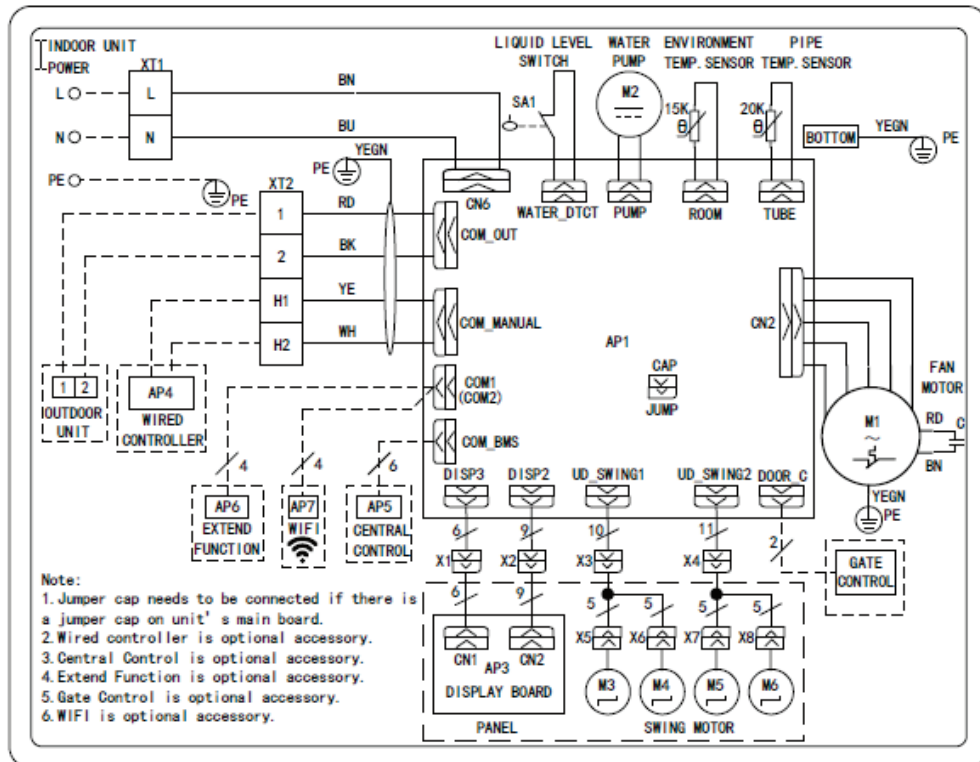
3.1.2 Wiring Diagrams of IDUs

Cassette Type

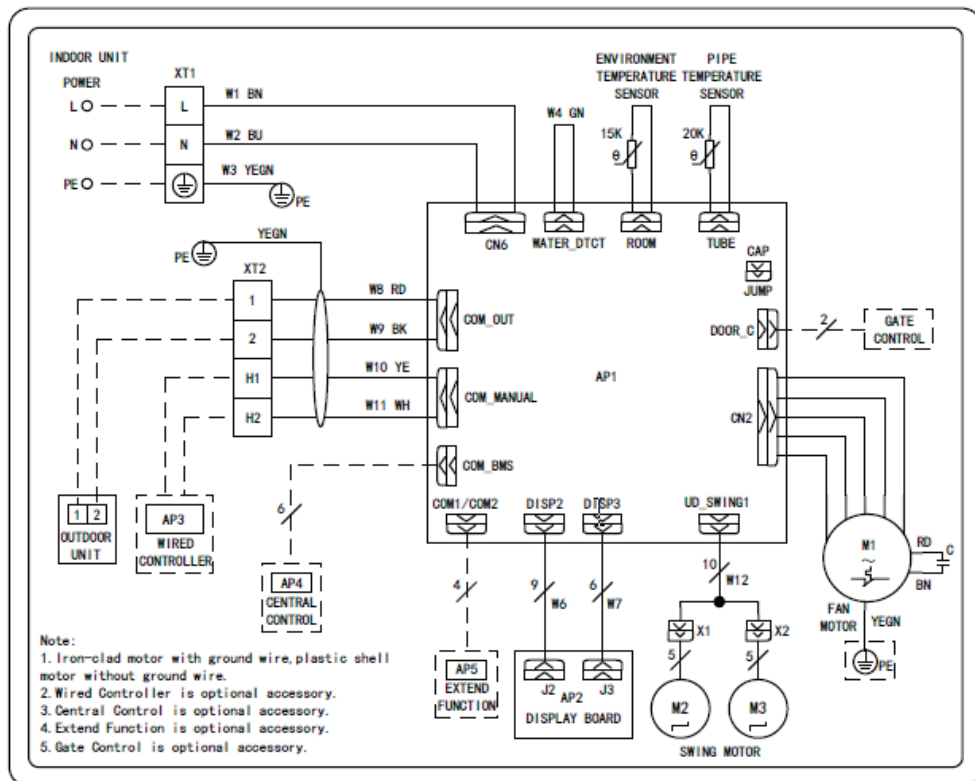
Model: GUD50T/A1-K



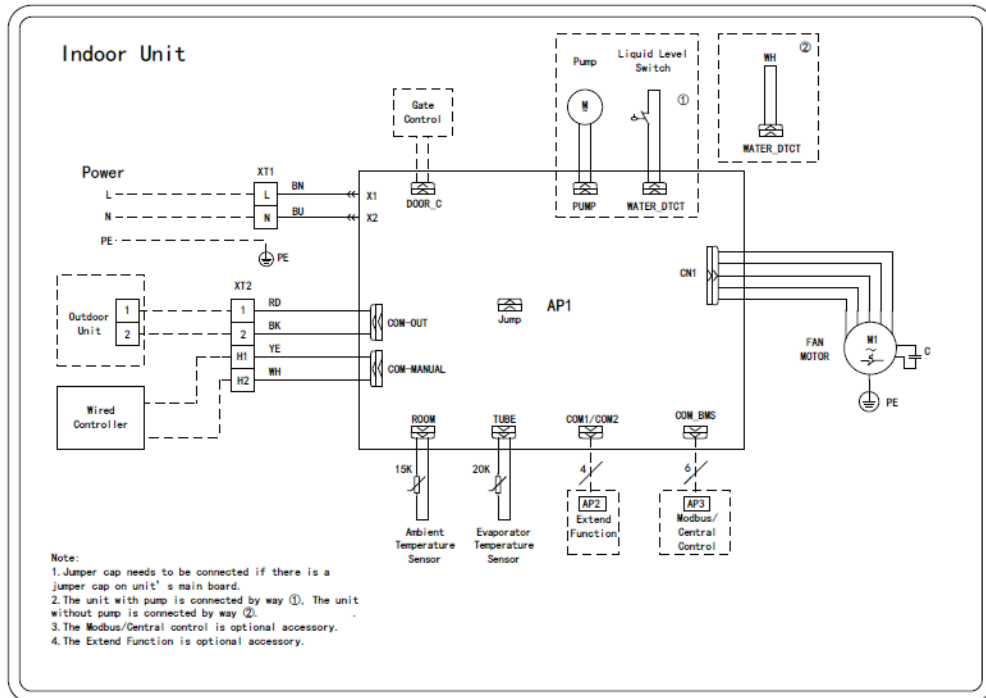
Model: GU71T/A1-K; GU85T/A1-K ;GU100T/A1-K;
GU125T/A1-K; GU140T/A1-K; GU160T/A1-K



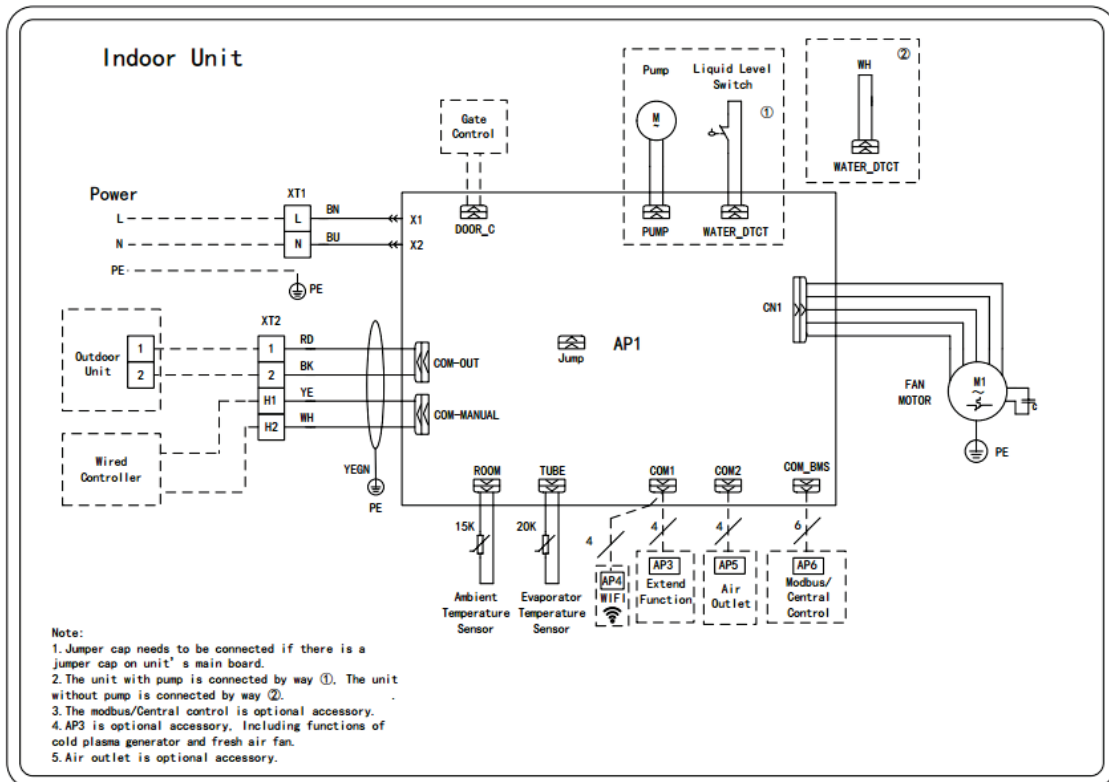
Floor Ceiling Type: GU50ZD/A1-K ; GU71ZD /A1-K; GU85ZD/A1-K ;GU100ZD/A1-K;
GU125ZD/A1-K; GU140ZD /A1-K; GU160ZD/A1-K



Model: GU50P/A1-K; GU71P/A1-K; GU85P/A1-K; GU100PH/A-K;
 GU50PS/A1-K; GU71PS/A1-K; GU85PS/A1-K; GU100PHS/A-K



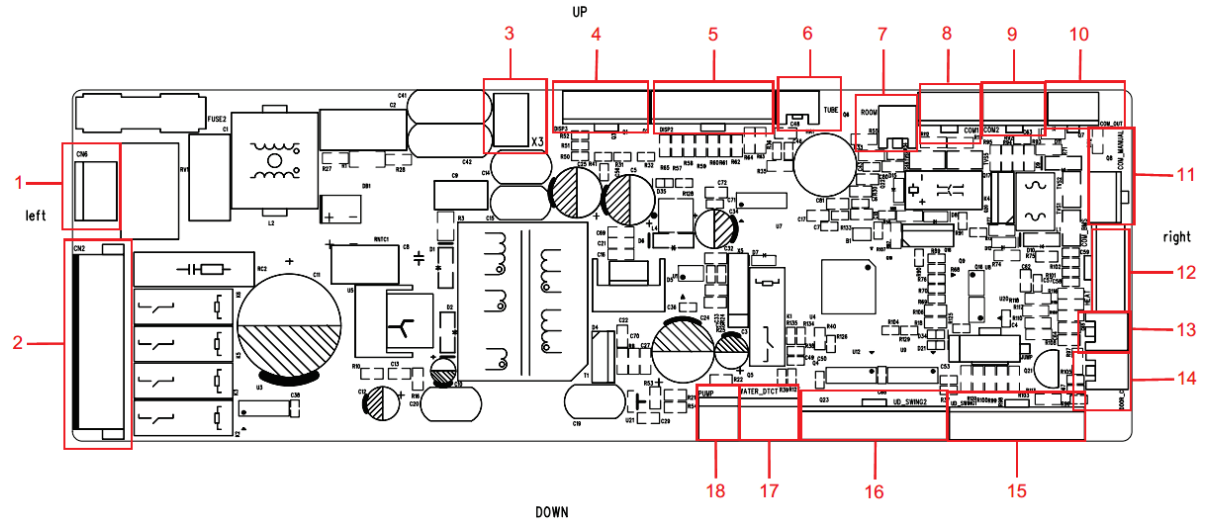
Model: GU125PH/A1-K; GU140PH/A1-K; GU160PH/A1-K;
 GU125PHS/A1-K; GU140PHS/A1-K; GU160PHS/A1-K



3.2 PCB Layout

Indoor Unit:

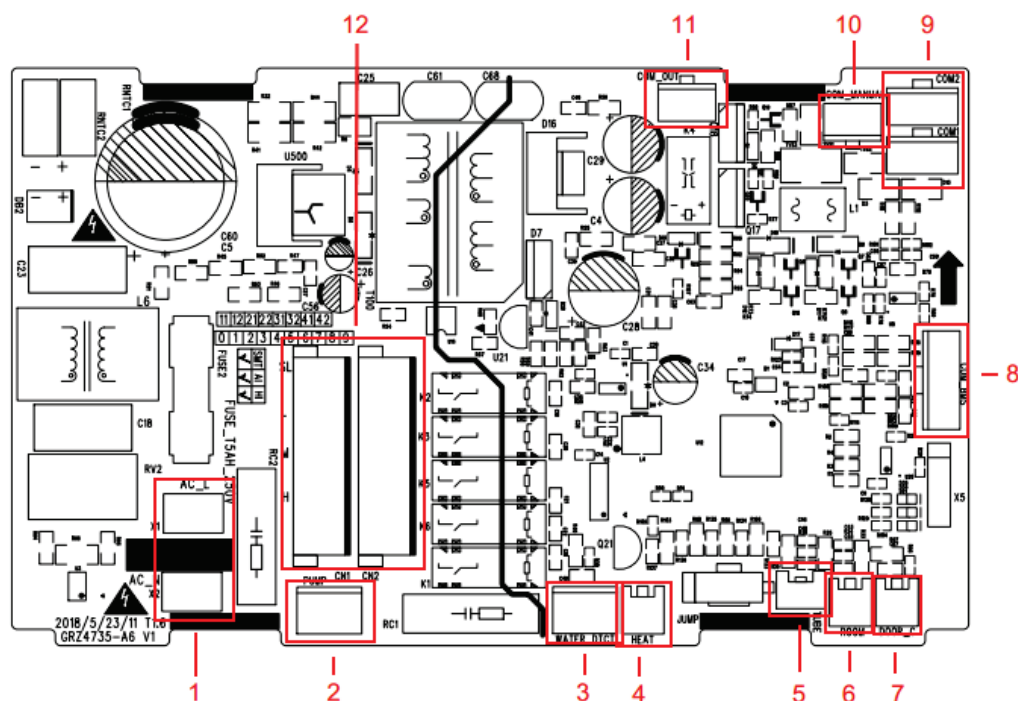
Cassette Type/Floor Ceiling Type:



NO.	Printing	Interface	NO.	Printing	Interface
1	CN6	Power supply	2	CN2	motor Interface
3	X3	Ground wire	4	DISP3	Light board interface 3
5	DISP2	Light board interface 2	6	TUBE	Evaporator temperature sensor
7	ROOM	Ambient temperature	8	COM1	Accessories communication interface 1
9	COM2	Accessories Communication interface 2	10	COM_OUT	ODU communication interface
11	COM_MANAUL	Wired control communication interface	12	COM_BMS	MODBUS gateway interface
13	HEAT	Electric heating interface	14	DOOR_C	Access control interface
15	UD_SWING1	Vertical swing output 1	16	UD_SWING2	Vertical swing output 2
17	WATER_DTCT	Water level switch	18	PUMP	DC water pump

Duct Type:

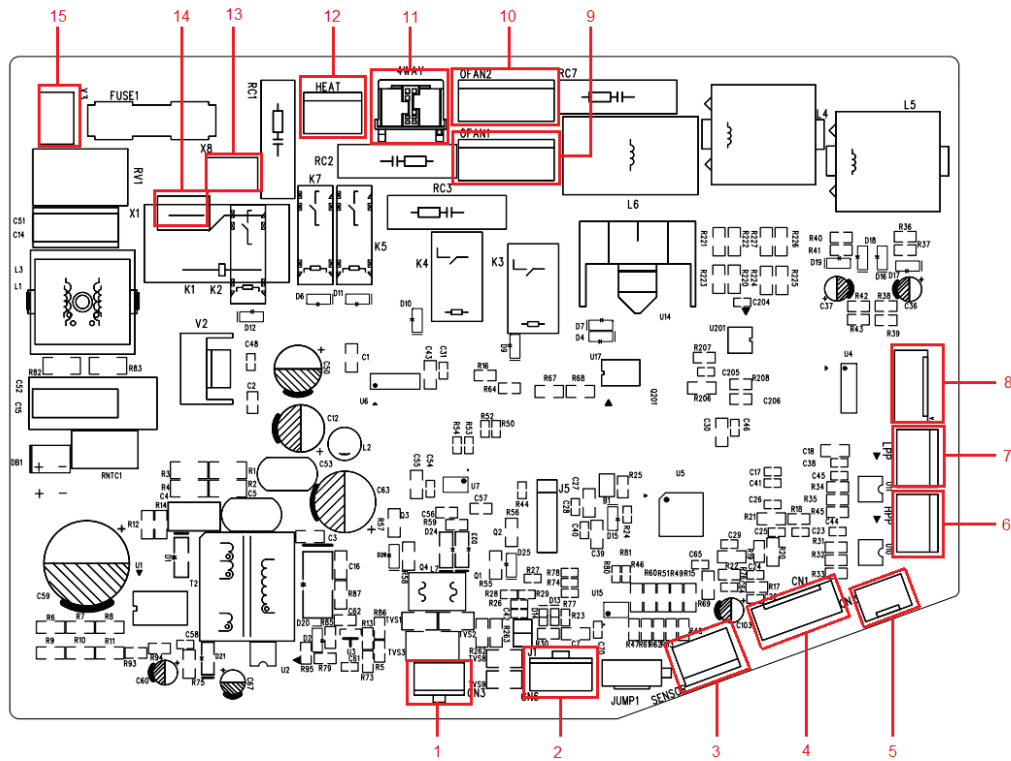
Models: GU50P/A1-K; GU71P/A1-K; GU85P/A1-K; GU100PH/A1-K;
 GU125PH/A1-K; GU140PH/A1-K; GU160PH/A1-K;
 GU50PS/A1-K; GU71PS/A1-K; GU85PS/A1-K; GU100PHS/A1-K;
 GU125PHS/A1-K; GU140PHS/A1-K; GU160PHS/A1-K



NO.	Printing	Interface	NO.	Printing	Interface
1	X1、X2	Power supply	2	PUMP	Water pump interface
3	WATER_DTCT	Water overflow detection	4	HEAT	Auxiliary heating interface (reserved)
5	TUBE	Indoor tube temperature sensor interface	6	ROOM	Room ambient temperature sensor interface
7	DOOR_C	Access control sensing interface	8	COM_BMS	MODBUS gateway interface
9	COM1、COM2	Accessories(Extended function board /WIFI)communication interface	10	COM-MANUAL	Wired control communication interface
11	COM-OUT	ODU communication interface	12	CN1、CN2	AC motor Interfaces

Outdoor unit:

Mainboard

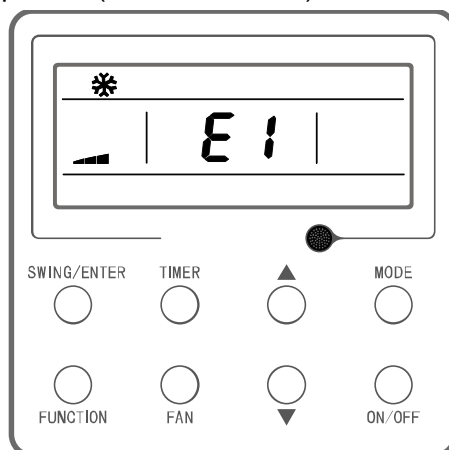


NO.	Printing	Interface	NO.	Printing	Interface
1	CN3	IDU communication interface	2	CN6	GPRS communication interface
3	SENSOR	Pressure sensor interface (with CN2 two-for-one)	4	CN1	Outdoor tube temperature sensor interface; Outdoor ambient temperature sensor interface; Discharge temperature sensor interface
5	CN2	Low temperature cooling temperature sensing	6	HPP	System high pressure protection interface
7	LPP	System low pressure protection interface	8	FA	Electronic expansion valve
9	OFAN1	External drive DC fan	10	OFAN2	External drive DC fan
11	4WAY	4-way valve	12	HEAT	Electric heating interface
13	COMP	Compressor AC contactor interface	14	AC-L	Live wire input
15	AC-N	Neutral wire input			

3.3 Error Code

No.	Error code	Error
1	E1	Compressor high pressure protection.
2	E2	Indoor anti-freeze protection.
3	E3	Compressor low pressure protection, refrigerant lack protection and refrigerant collecting mode.
4	E4	Compressor air discharge high-temperature protection.
5	E6	Communication error.
6	E8	Indoor fan error.
7	E9	Water-full protection.
8	F0	Indoor ambient temperature sensor error.
9	F1	Evaporator temperature sensor error.
10	F2	Condenser temperature sensor error.
11	F3	Outdoor ambient temperature sensor error.
12	F4	Discharge temperature sensor error.
13	F5	Wired control temperature sensor error.
14	C5	IDU jumper cap error.
15	EE	IDU or ODU memory chip error.
16	H3	Compressor overload protection.
17	H4	Overload.
18	C4	ODU jumper cap error.
19	EL	Emergency Stop(Fire Alarm).

If malfunction occurs during operation, LCD temperature display zone will show the failure information. If several malfunctions occur at the same time, their corresponding error codes will be shown in turn. When malfunction occurs, please shut off the unit and send for professional personnel to repair. For example, E1 (as shown below) indicates high pressure protection.



3.4 Troubleshooting

3.4.1 “E1” Compressor High Pressure Protection

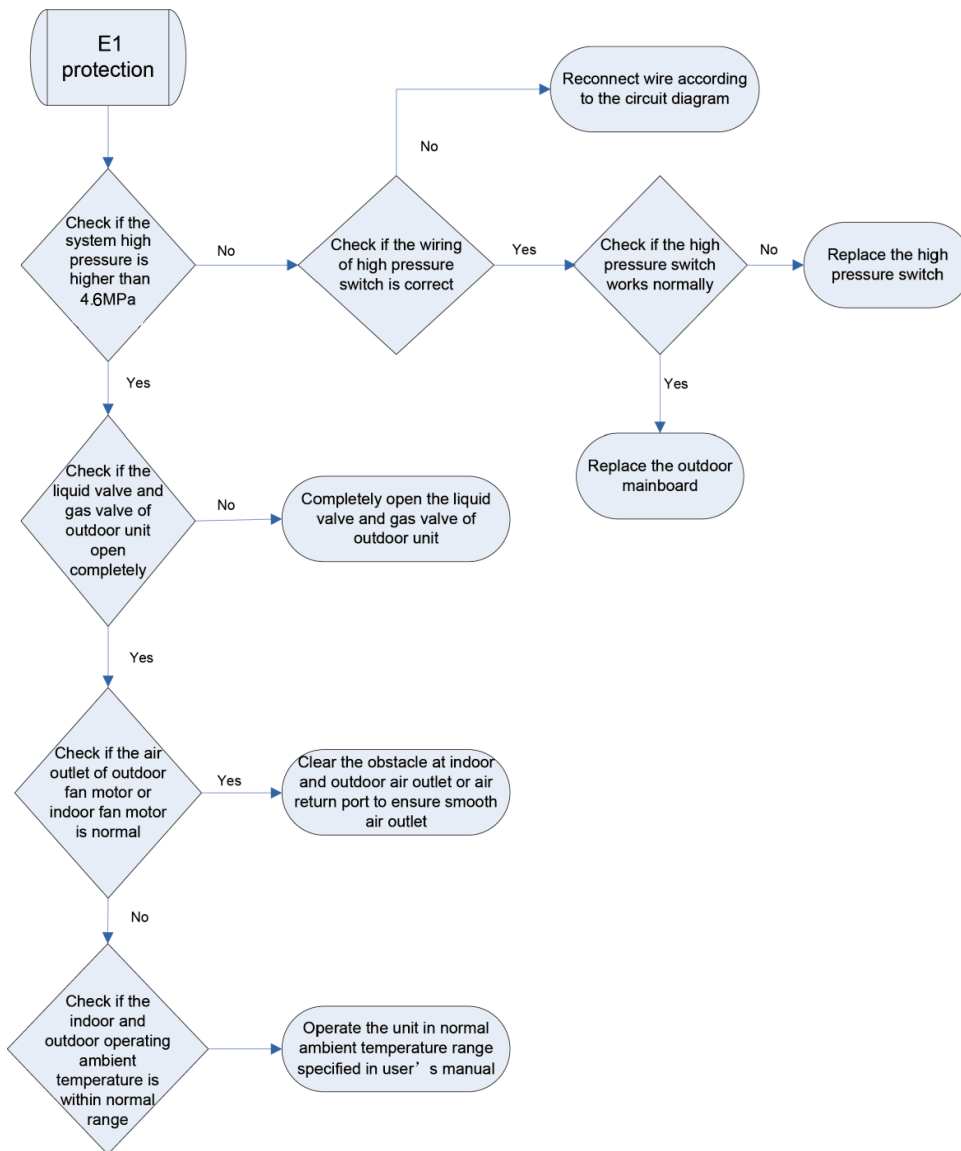
Error display: IDU wired control and IDU receiver light board will display **E1**.

Error judgment condition and method:

It is judged through the action of high pressure switch. If the high pressure switch is cut off, it is judged that high pressure is too high and the system stops operation for protection.

Possible reason:

- Cut-off valve of ODU is not fully opened;
- High pressure switch is abnormal;
- Outdoor or indoor fan is not working properly;
- IDU filter or air duct is blocked (heating mode);
- Ambient temperature is too high;
- Refrigerant charging amount is too much;
- System pipeline is blocked.

Troubleshooting:**3.4.2 “E2” Indoor Anti-freezing Protection**

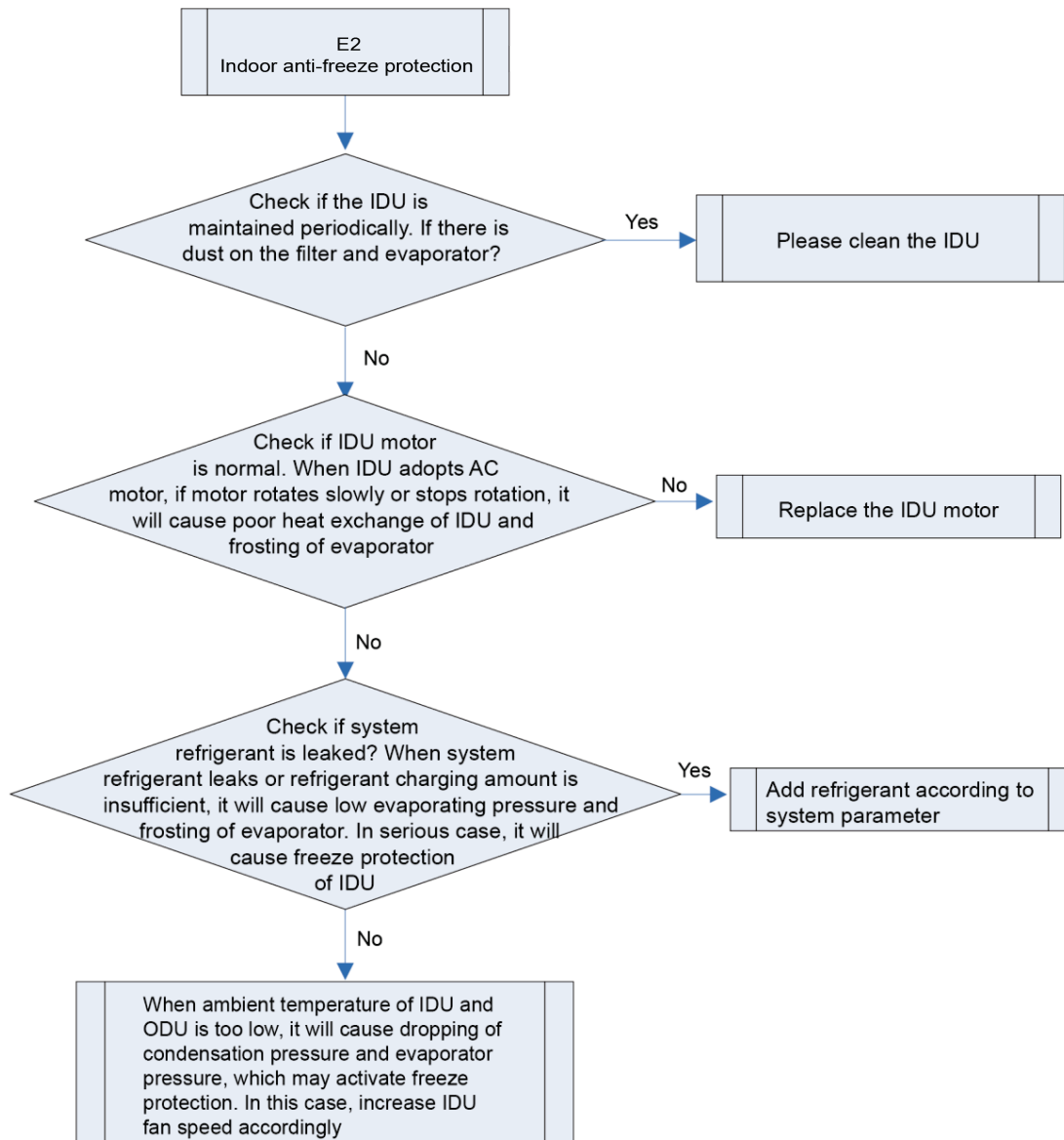
Error display: IDU wired control and IDU receiver light board will display **E2**.

Error judgment condition and method:

Check IDU pipe temperature. When pipe temperature is too low, freeze protection will be activated to prevent freezing damage of evaporator.

Possible reason:

- IDU filter and evaporator are dirty;
- IDU motor is blocked;
- Refrigerant amount is insufficient;
- Ambient temperature of IDU and ODU is too low.

Troubleshooting:**3.4.3 “E3” Compressor Low-pressure Protection, Refrigerant****Shortage Protection, Refrigerant Recovery Mode**

Error display: IDU wired control and IDU receiver light board will display **E3**.

Error judgment condition and method:

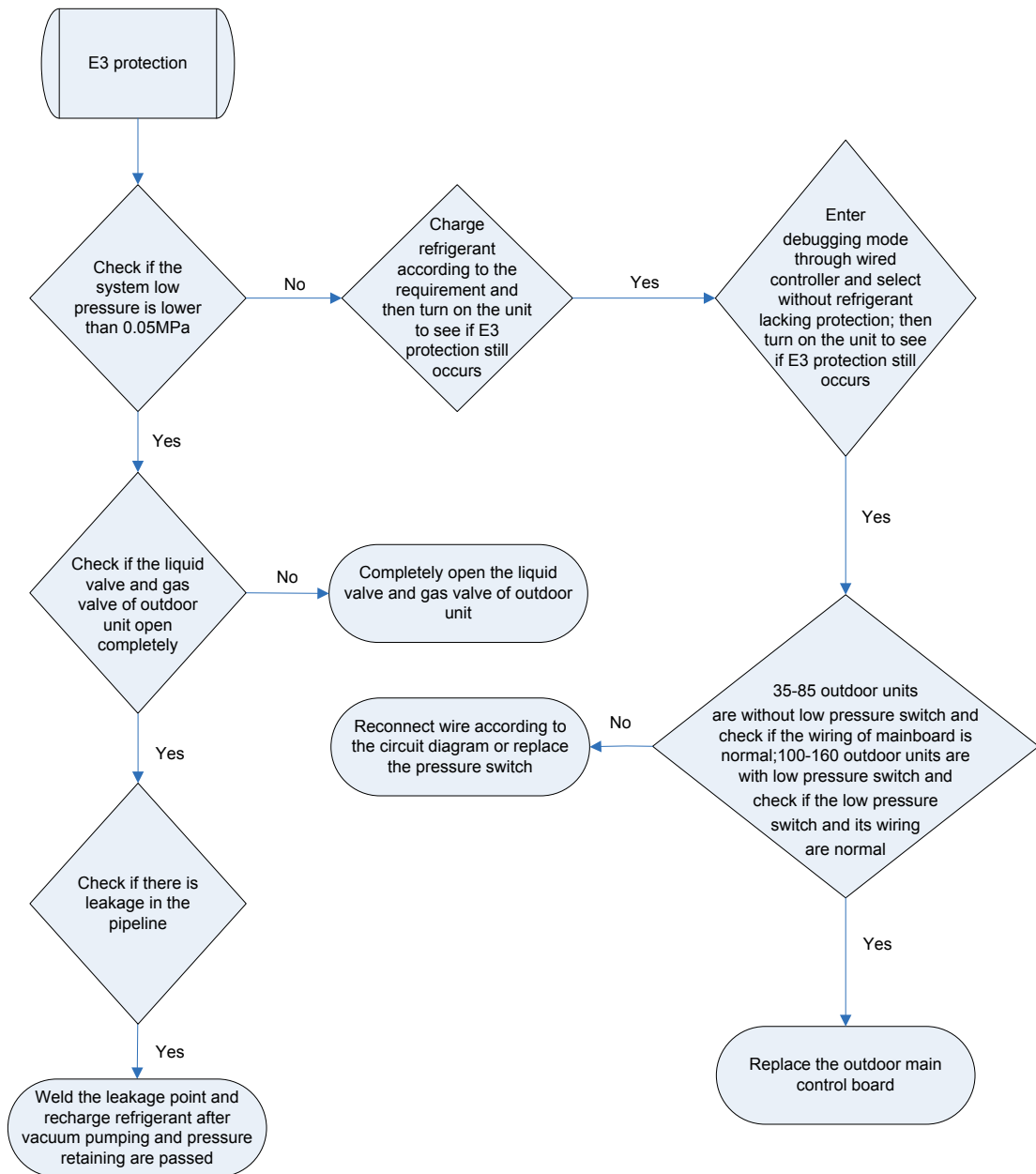
It is judged through the action of low pressure switch. If the low pressure switch is cut off, it is judged that low pressure is too low and the system stops operation for protection.

Possible reason:

- Cut-off valve of ODU is not fully opened;
- Low pressure sensor is abnormal;
- Outdoor or indoor fan is not working properly;
- IDU filter or air duct is blocked (cooling mode);

- Ambient temperature is too low;
- Refrigerant charging amount is insufficient;
- System pipeline is blocked.

Troubleshooting:



3.4.4 “E4” Compressor Air Discharge High-temperature Protection

Error display: IDU wired control and IDU receiver light board will display **E4**.

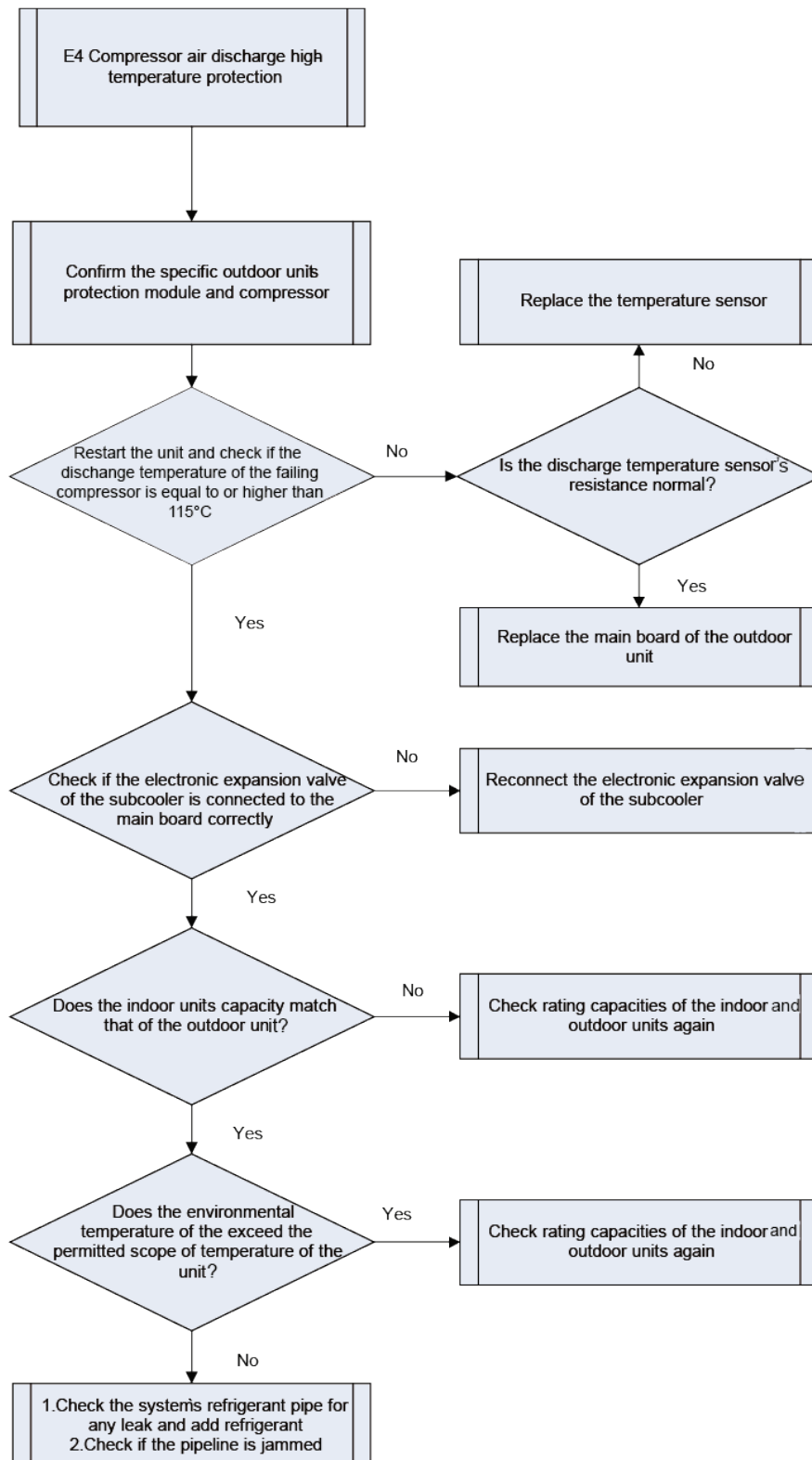
Error judgment condition and method:

Test the compressor discharge temperature through compressor discharge pipe and shell top temperature sensor. If the tested temperature value is higher than 125°C, the unit will stop for protection.

Possible reason:

- Cut-off valve of ODU is not fully opened;
- Electronic expansion valve is abnormal;

- Outdoor or indoor fan is not working properly;
- IDU filter or air duct is blocked (cooling mode);
- Ambient temperature exceeds allowable operation range;
- Refrigerant charging amount is insufficient;
- System pipeline is blocked.

Troubleshooting:

3.4.5 “E6” Communication Error

Error display: IDU wired control and IDU receiver light board will display E6.

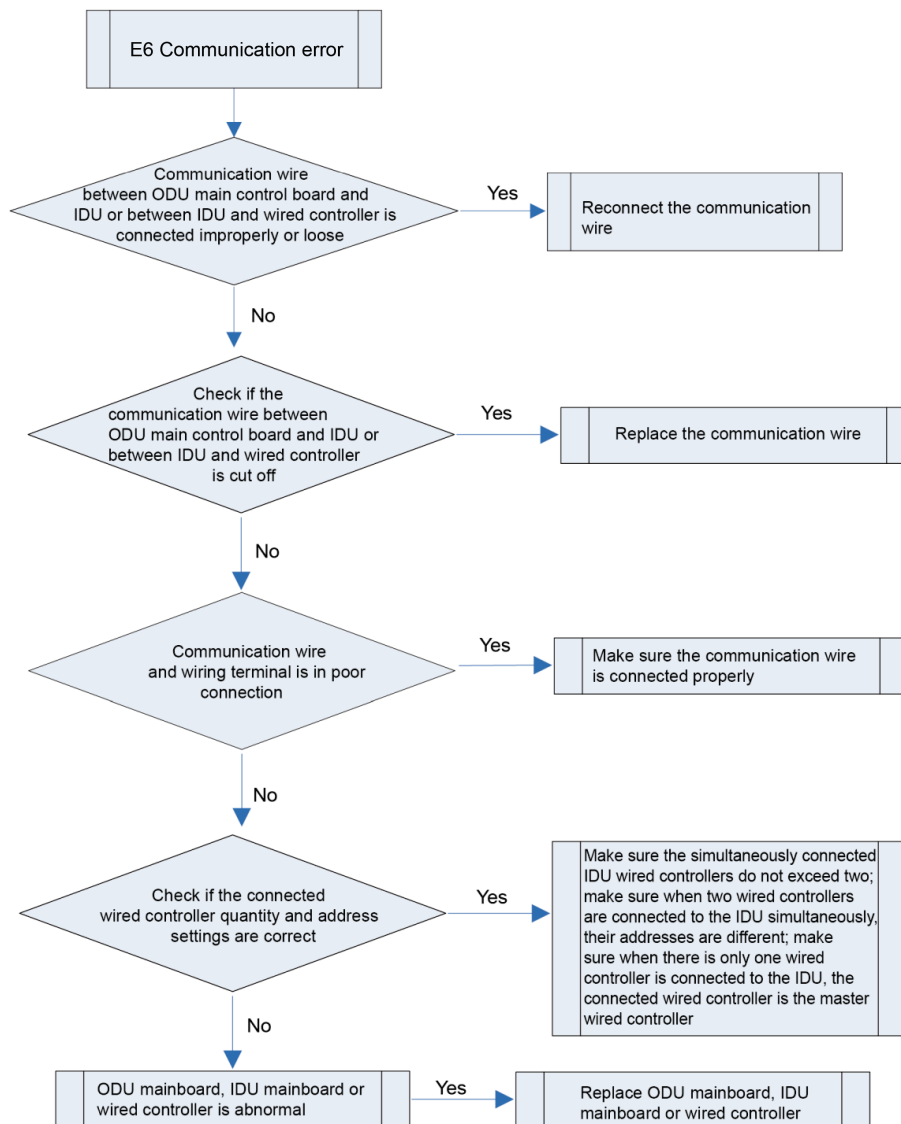
Error judgment condition and method:

If no communication between ODU and IDU or between IDU and wired control in continuously 120s, this error will be reported.

Possible reason:

- Communication wire is connected improperly or loose;
- Communication wire is cut off;
- Communication wire is in poor connection;
- Connected wired controller quantity or address setting is improper;
- Controller is abnormal.

Troubleshooting:



3.4.6 “E9” Water Overflow Protection

Error display: IDU wired control and IDU receiver light board will display **E9**.

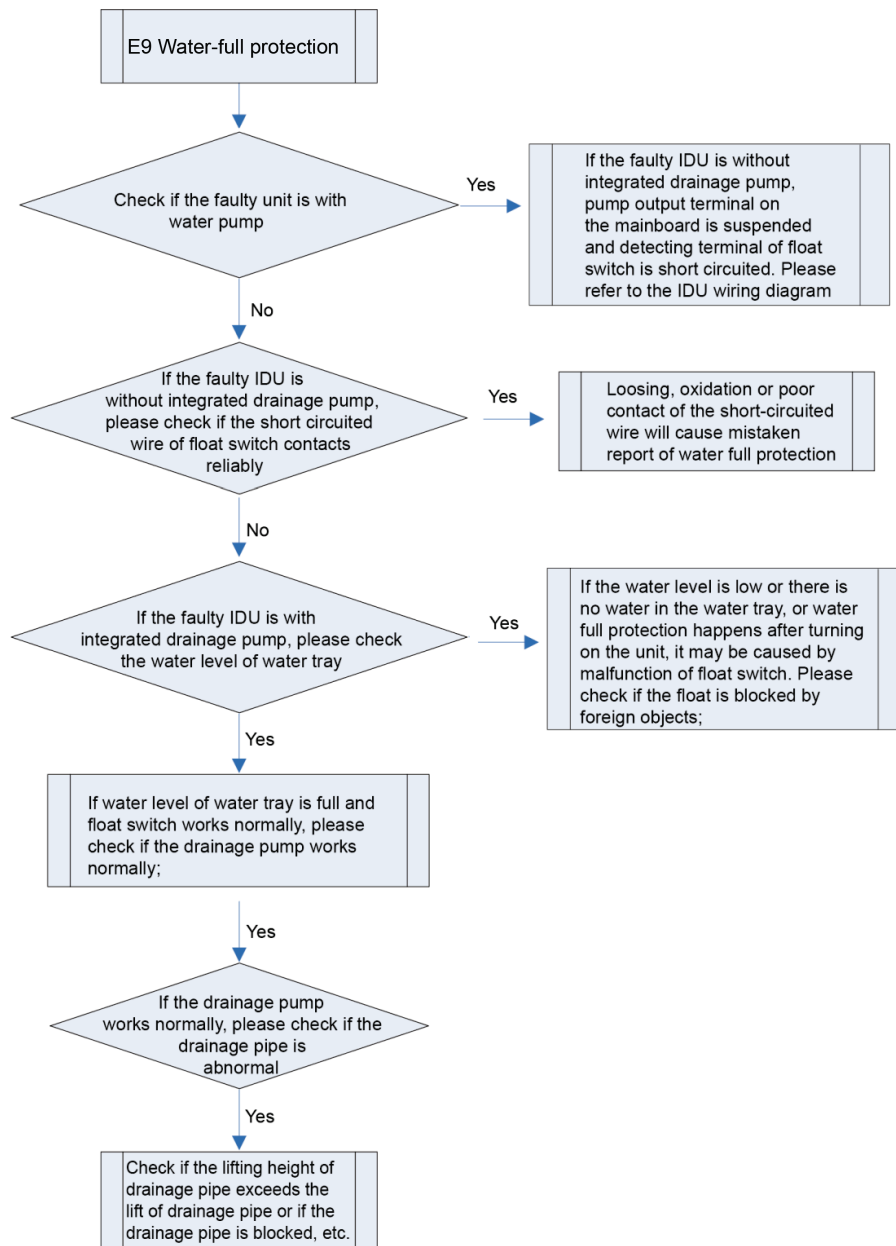
Error judgment condition and method:

Check the status of IDU float switch. When water level is too high, float switch is activated, so water full protection happens.

Possible reason:

- IDU is installed improperly;
- Drainage pump is broken;
- Float switch operates abnormally;
- IDU mainboard is abnormal.

Troubleshooting:



3.4.7 “F0” Indoor Ambient Temperature Sensor Error

Error display: IDU wired control and IDU receiver light board will display **F0**.

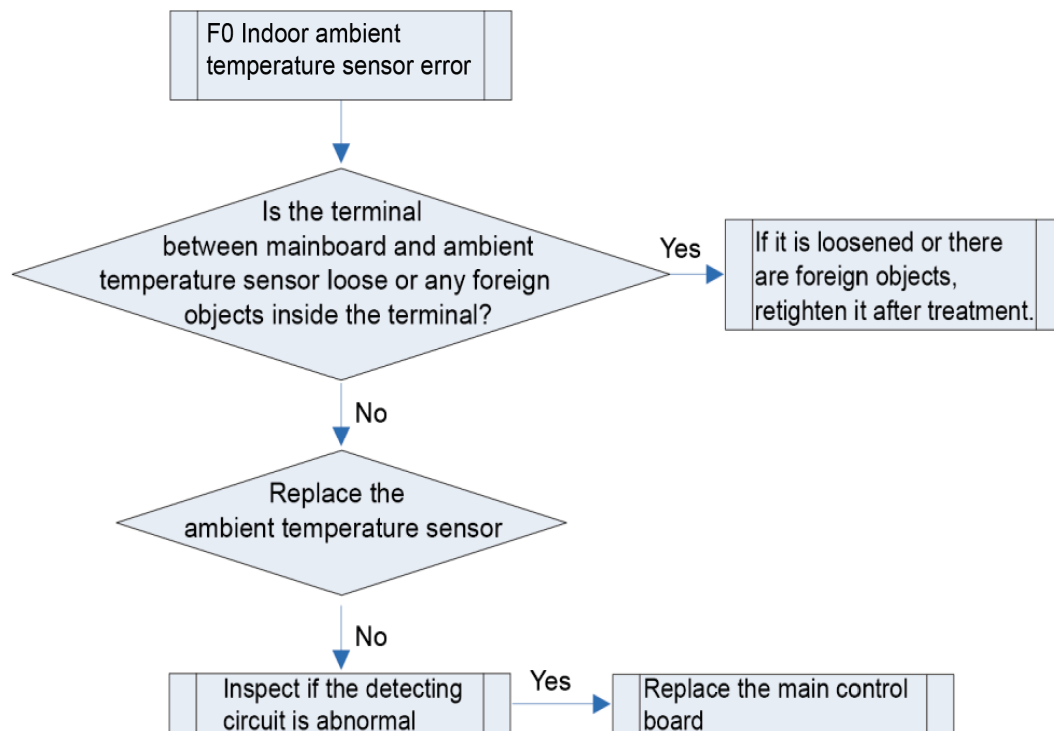
Error judgment condition and method:

Sample the AD value of temperature sensor through temperature sensor detecting circuit and judge the range of AD value, if the sampling AD value exceeds upper limit and lower limit in 5 seconds continuously, report the error.

Possible reason:

- Poor contact between ambient temperature sensor and terminal in mainboard interface;
- Ambient temperature sensor is abnormal;
- Detecting circuit is abnormal.

Troubleshooting:



3.4.8 “F1” Evaporator Temperature Sensor Error

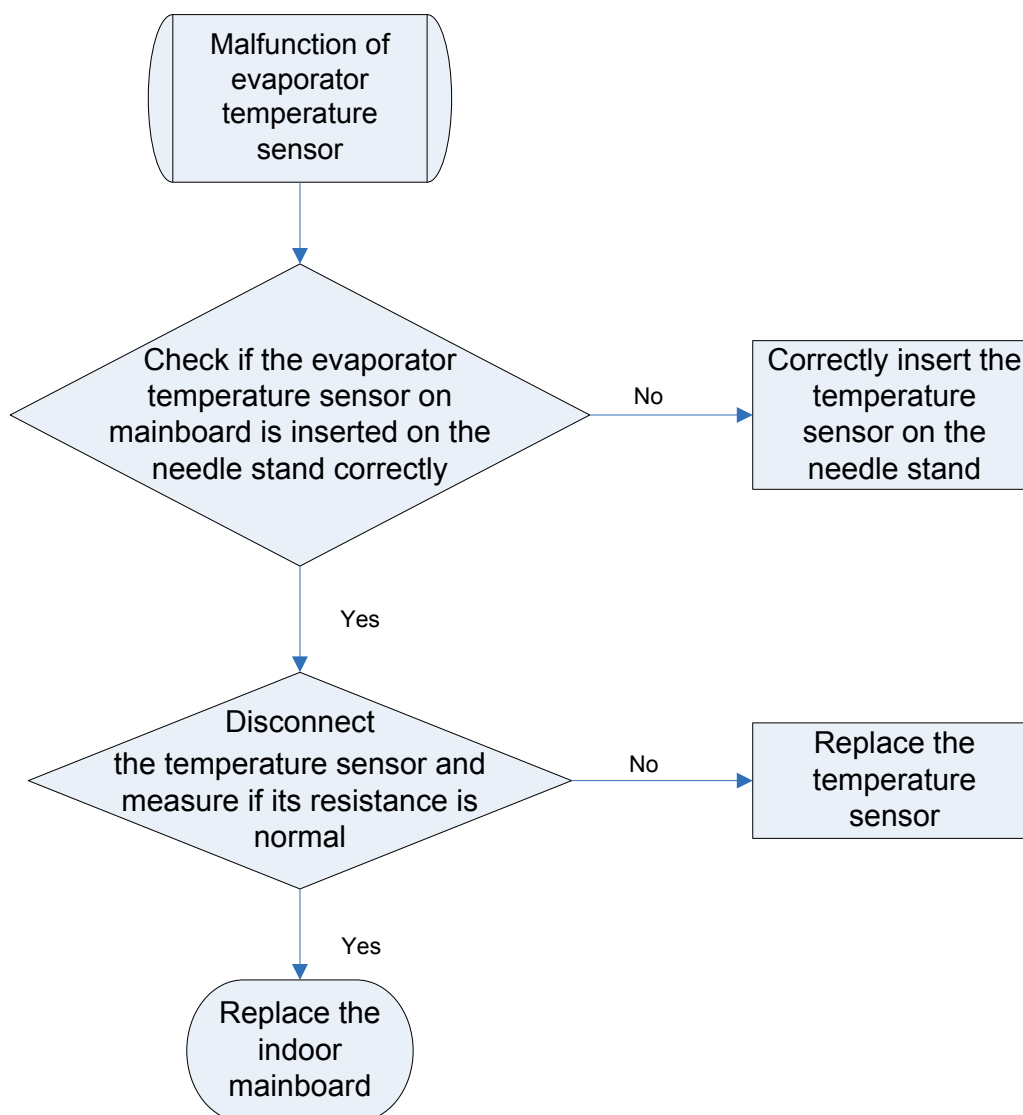
Error display: IDU wired control and IDU receiver light board will display **F1**.

Error judgment condition and method:

Sample the AD value of temperature sensor through temperature sensor detecting circuit and judge the range of AD value, if the sampling AD value exceeds upper limit and lower limit in 5 seconds continuously, report the error.

Possible reason:

- Poor contact between temperature sensor and terminal in mainboard interface;
- Temperature sensor is abnormal;
- Detecting circuit is abnormal.

Troubleshooting:**3.4.9 “F2” Condenser Temperature Sensor Error**

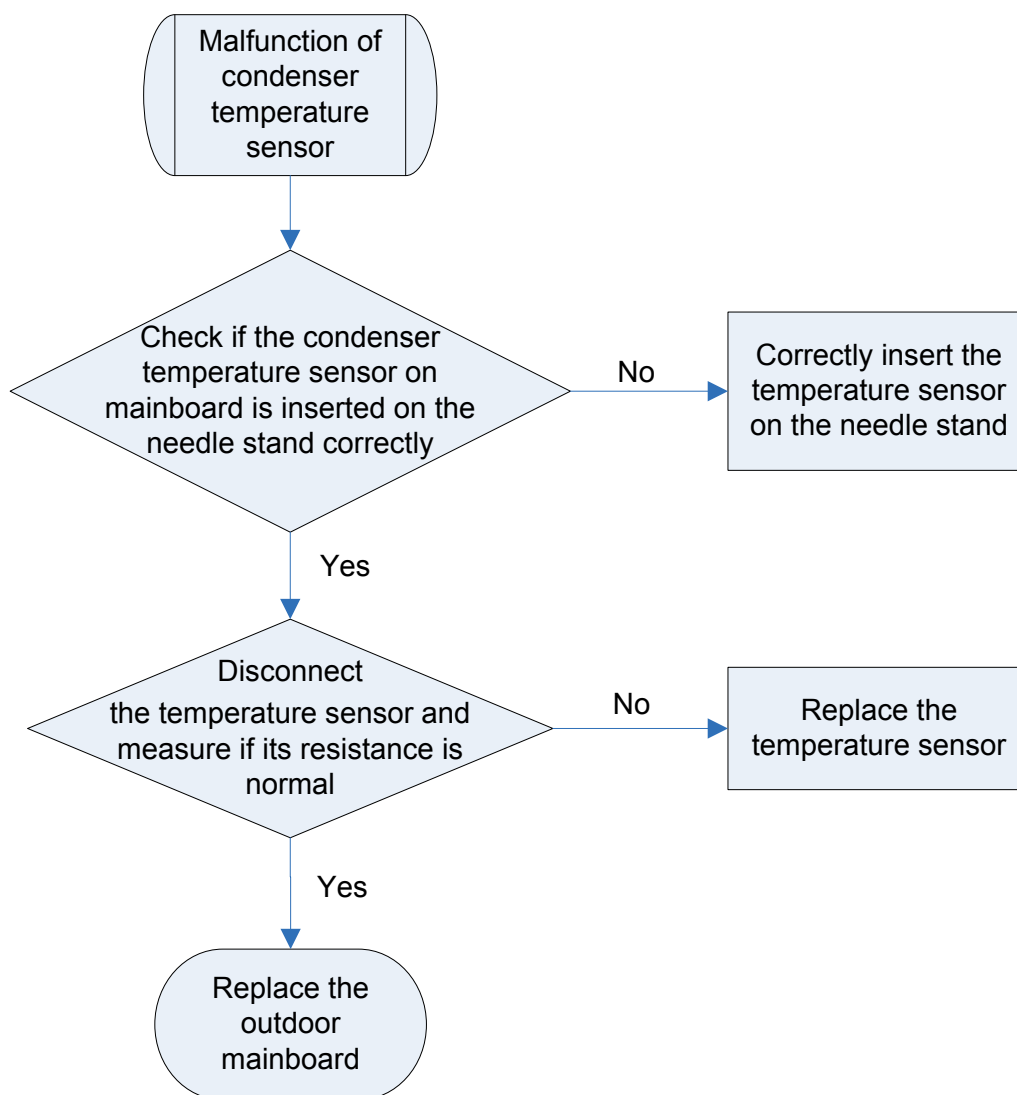
Error display: IDU wired control and IDU receiver light board will display: **F2**.

Error judgment condition and method:

Sample the AD value of temperature sensor through temperature sensor detecting circuit and judge the range of AD value, if the sampling AD value exceeds upper limit and lower limit in 5 seconds continuously, report the error.

Possible reason:

- Poor contact between temperature sensor and terminal in mainboard interface;
- Temperature sensor is abnormal;
- Detecting circuit is abnormal.

Troubleshooting:**3.4.10 “F3” Outdoor Ambient Temperature Sensor Error**

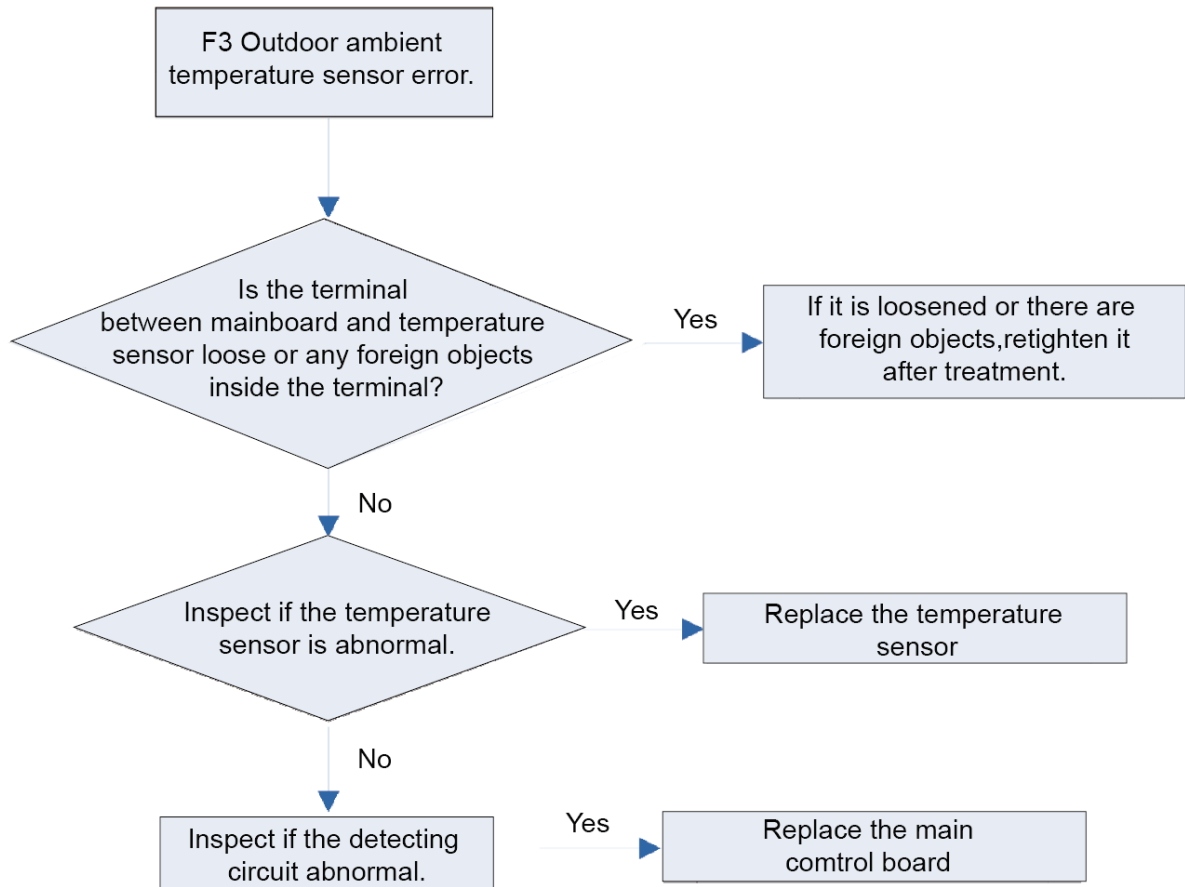
Error display: IDU wired control and IDU receiver light board will display: **F3**.

Error judgment condition and method:

Sample the AD value of temperature sensor through temperature sensor detecting circuit and judge the range of AD value, if the sampling AD value exceeds upper limit and lower limit in 5 seconds continuously, report the error.

Possible reason:

- Poor contact between ambient temperature sensor and terminal in mainboard interface;
- Ambient temperature sensor is abnormal;
- Detecting circuit is abnormal.

Troubleshooting:**3.4.11 “F4” Discharge Temperature Sensor Error**

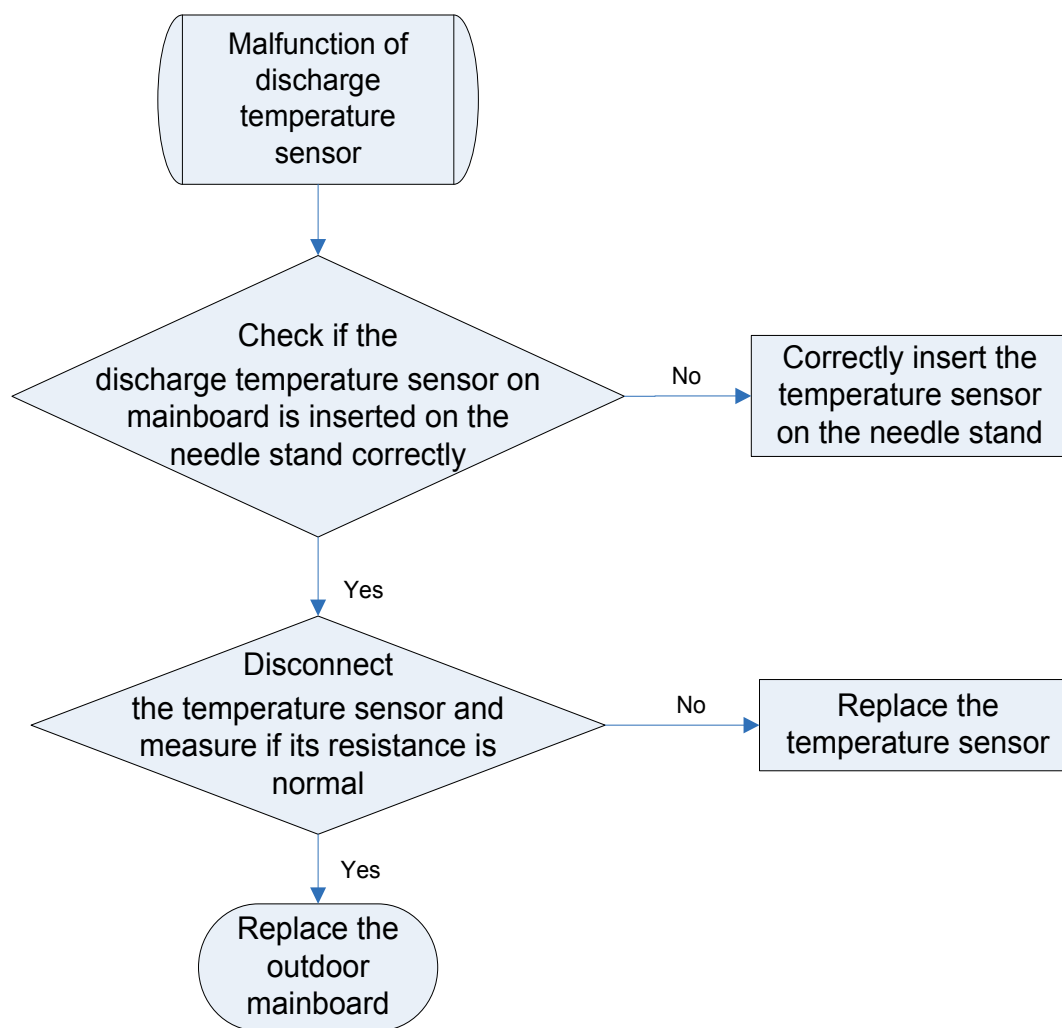
Error display: IDU wired control and IDU receiver light board will display **F4**.

Error judgment condition and method:

Sample the AD value of temperature sensor through temperature sensor detecting circuit and judge the range of AD value, if the sampling AD value exceeds upper limit and lower limit in 5 seconds continuously, report the error.

Possible reason:

- Poor contact between temperature sensor and terminal in mainboard interface;
- Temperature sensor is abnormal;
- Detecting circuit is abnormal.

Troubleshooting:**3.4.12 “F5” Wired Control Temperature Sensor Error**

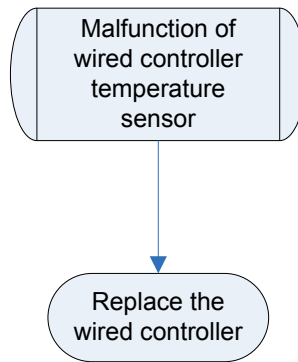
Error display : IDU wired control and IDU receiver light board will display **F5**.

Error judgment condition and method:

Sample the AD value of temperature sensor through temperature sensor detecting circuit and judge the range of AD value, if the sampling AD value exceeds upper limit and lower limit in 5 seconds continuously, report the error.

Possible reason:

- Poor contact between temperature sensor and terminal in mainboard interface;
- Temperature sensor is abnormal;
- Detecting circuit is abnormal.

Troubleshooting:**3.4.13 “C5” IDU Jumper Cap Error**

Error display: IDU wired control and IDU receiver light board will display **C5**.

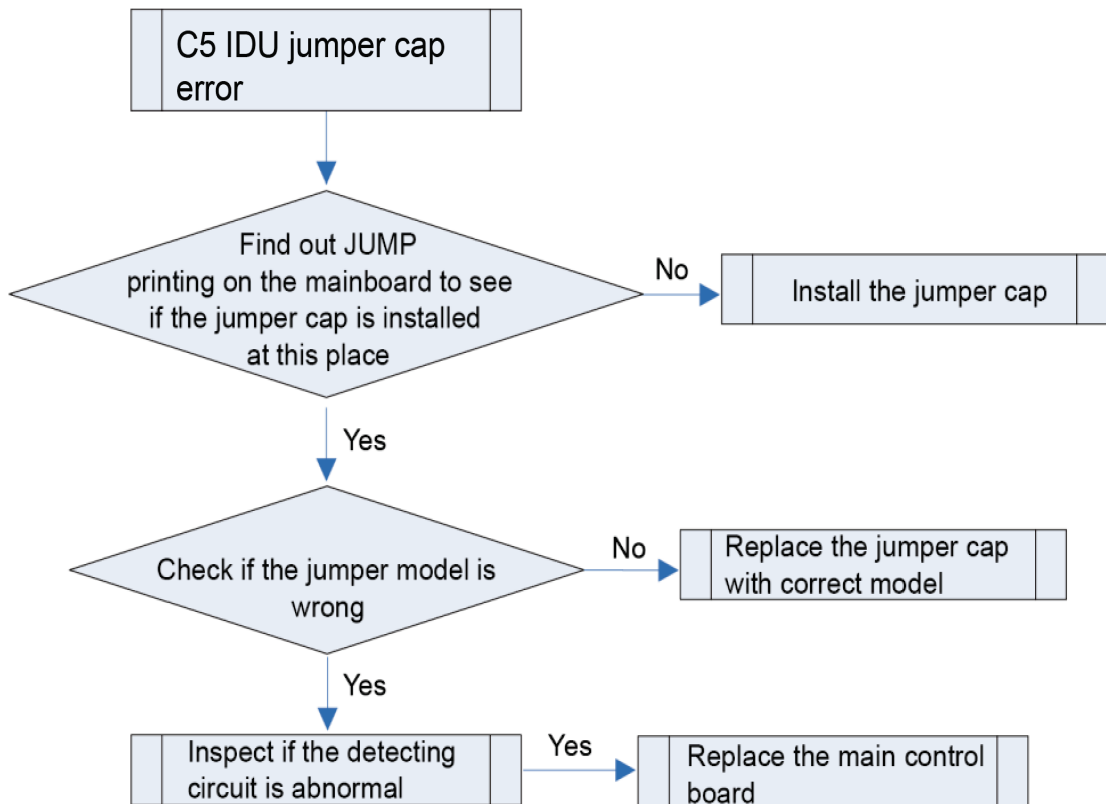
Error judgment condition and method:

If jumper cap model doesn't match with mainboard, this error will be reported.

Possible reason:

- Jumper cap is not installed;
- Jumper cap model is wrong;
- Detecting circuit is abnormal.

Troubleshooting:



3.4.14 “EE” IDU or ODU Memory Chip Error

Error display: IDU wired control and IDU receiver light board will display **EE**.

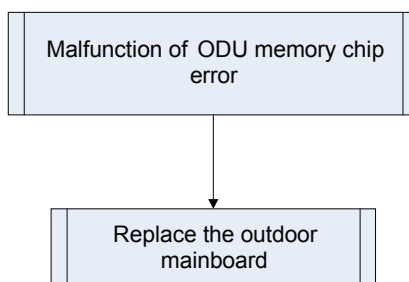
Error judgment condition and method:

If ODU mainboard cannot read the memory chip, this error will be reported.

Possible reason:

- Memory chip on the ODU mainboard is damaged;
- Memory chip is weakly welded;
- Memory chip lead is short-circuited.

Troubleshooting:



3.4.15 “H3” Compressor Overload Protection

Error display: IDU wired control and IDU receiver light board will display **H3**.

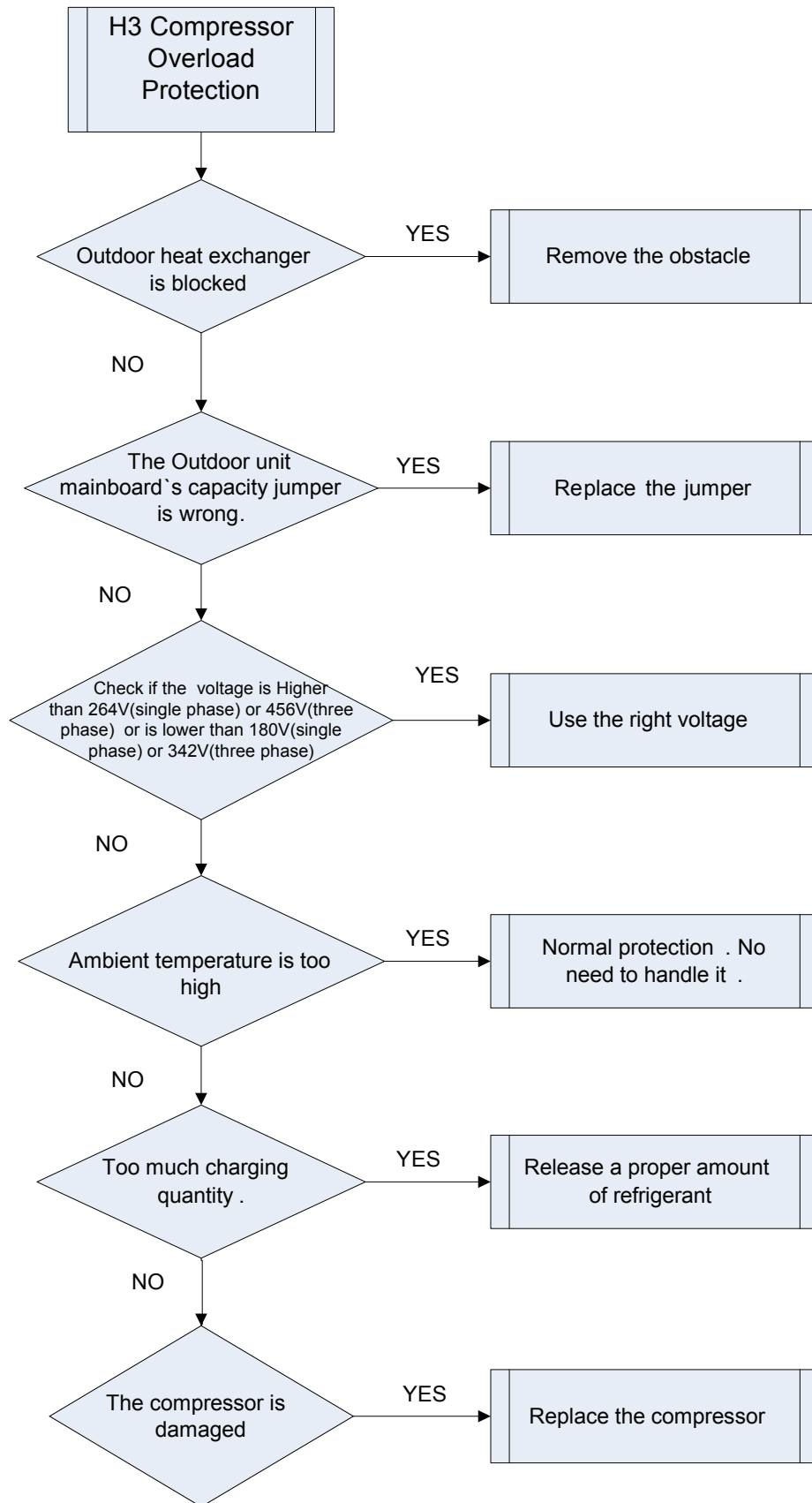
Error judgment condition and method:

When the outdoor unit mainboard’s current sensor interface detects the compressor is over-current, error H3 will be reported.

Possible reason:

- The Outdoor unit mainboard’s capacity jumper is not correct;
- ODU mainboard is damaged;
- Power supply voltage is too high or too low;
- Ambient temperature is too high;
- The unit is over-charged;
- Compressor is damaged.

Troubleshooting:



3.4.16 “H4” Overload

Error display: IDU wired control and IDU receiver light board will display **H4**.

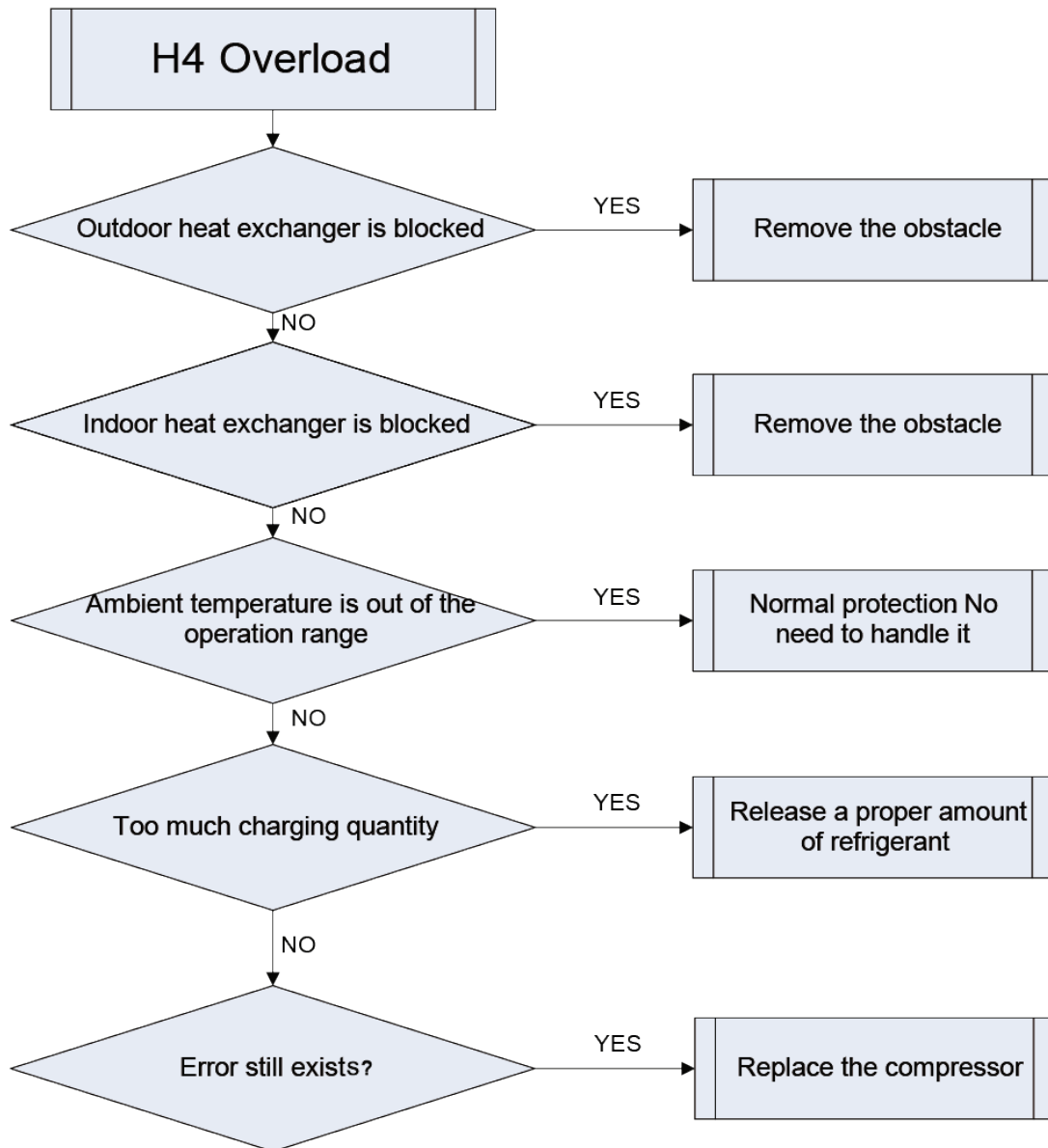
Error judgment condition and method:

When tube temperature is higher than the protection value, system will report overload protection.

Possible reason:

- Cooling ODU heat exchanger is blocked or heat exchange is bad;
- Heating IDU heat exchanger is blocked or heat exchange is bad;
- Operating temperature is too high;
- System charging quantity is too much.

Troubleshooting:



3.4.17 “c4” ODU Jumper Cap Error

Error display: IDU wired control and IDU receiver light board will display **c4**.

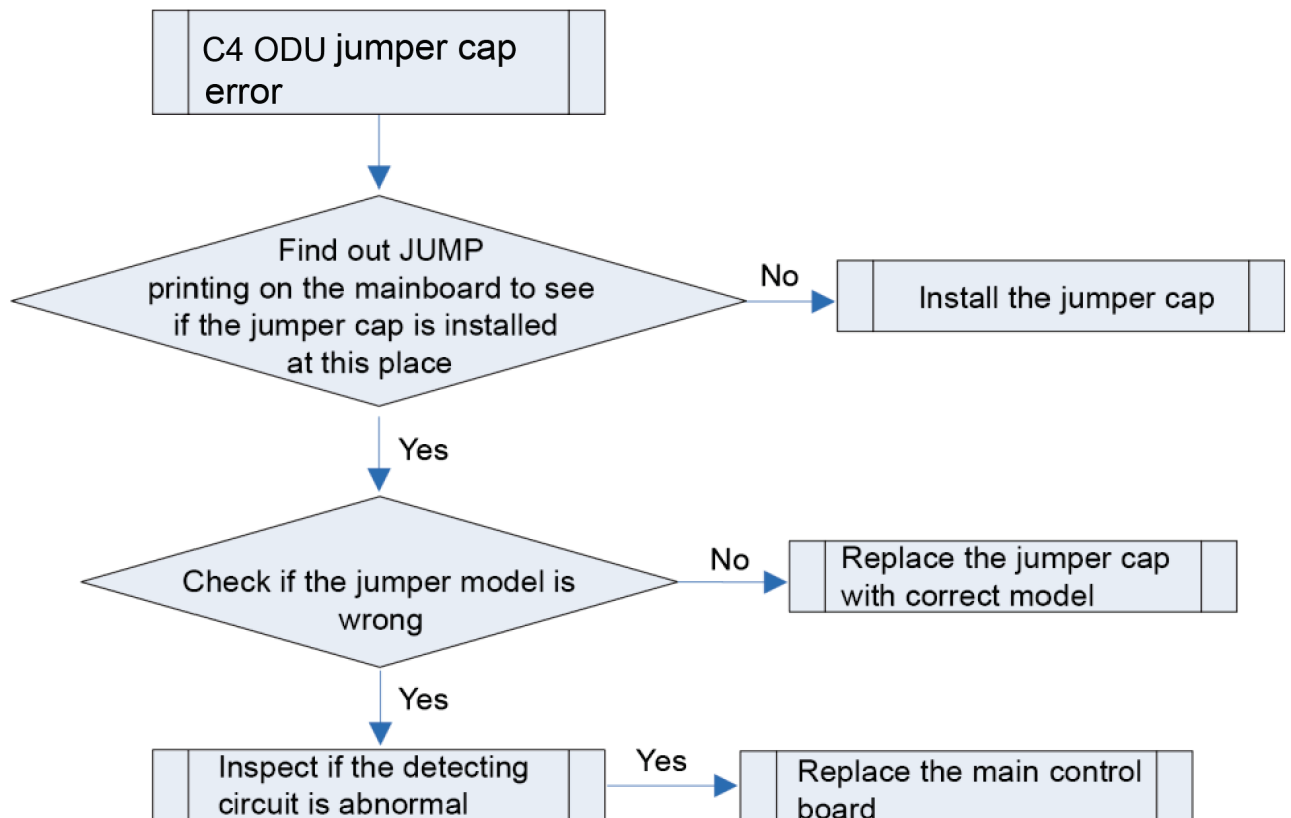
Error judgment condition and method:

If jumper cap model doesn't match with mainboard, report the error.

Possible reason:

- Jumper cap is not installed;
- Jumper cap model is wrong;
- Detecting circuit is abnormal.

Troubleshooting:



3.4.18 “EL” Emergency stop (fire alarm)

If fire alarm terminal is enabled after the IDU mainboard connects to function expansion board, error EL will be reported.

3.5 Failures Not Caused by Errors

If your air-conditioning unit suffers from abnormal operation or failure, please first check the following points before repair:

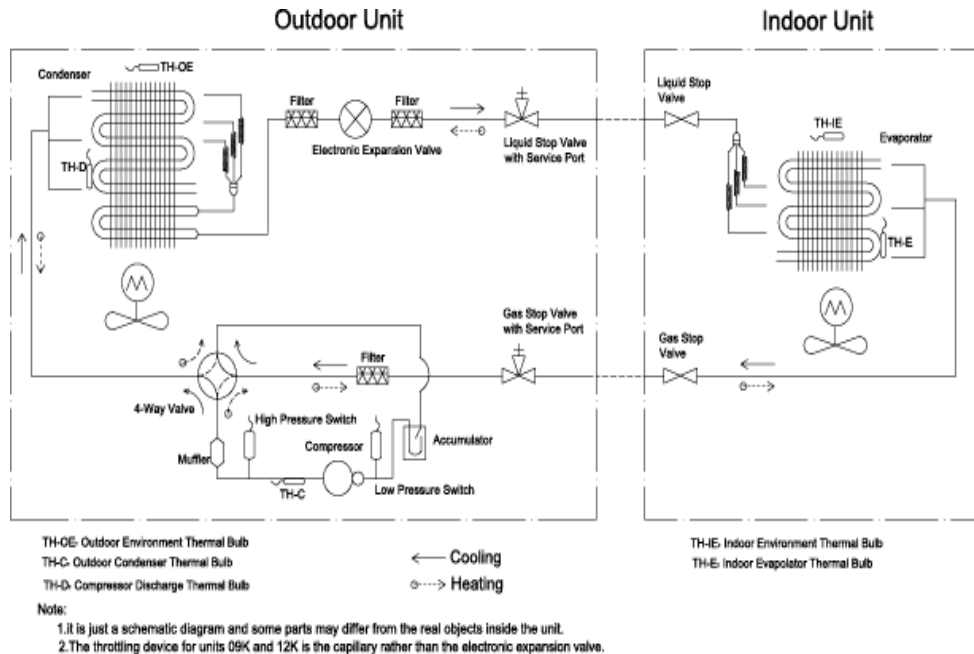
Failure	Possible Reasons
The unit cannot be started.	1) The power supply is not connected. 2) Electrical leakage of air-conditioning unit causes tripping of the leakage switch. 3) The operating keys are locked. 4) The control loop has failure.
The unit operates for a while and then stops.	1) There is obstacle in front of the condenser. 2) The control loop is abnormal.
Poor cooling effect.	1) The air filter is dirty or blocked. 2) There is heat source or too many people inside the room. 3) The door or window is open. 4) There is obstacle at the air intake or outlet. 5) The set temperature is too high. 6) There is refrigerant leakage. 7) The performance of room temperature sensor becomes worse.



NOTICE: Check the above items and adopt the corresponding corrective measures. If the air conditioner continues to function poorly, please stop the air conditioner immediately and contact Gree's authorized local service center. Ask our professional service staff to check and repair the unit.

4. Maintenance

4.1 System Diagram



4.2 Connection Pipe Vacuum Pumping



NOTICE

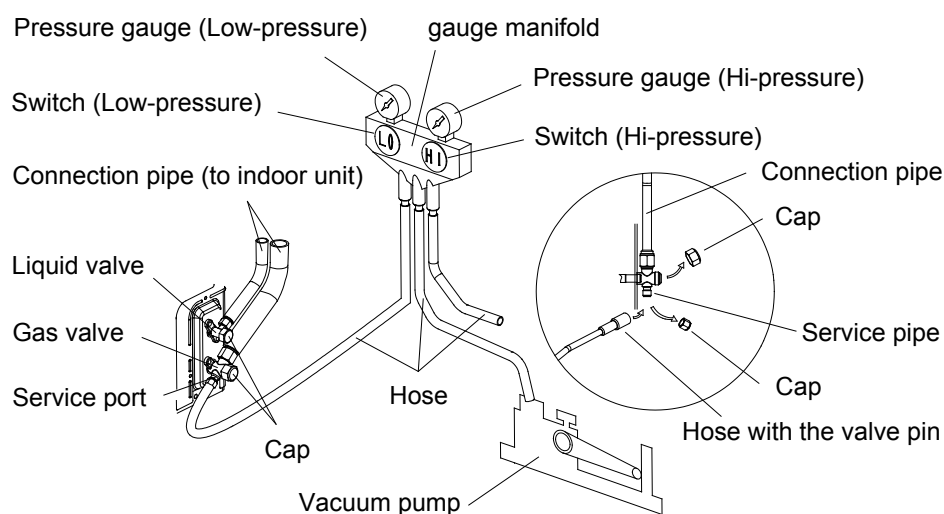
Make sure the outlet of vacuum pump is away from fire source and is well-ventilated.

- (1) Remove the caps of the liquid valve, gas valve and also the service port.
- (2) Connect the hose at the low pressure side of the manifold valve assembly to the service port of the unit's gas valve, and meanwhile the gas and liquid valves should be kept closed in case of refrigerant leak.
- (3) Connect the hose used for evacuation to the vacuum pump.
 Open the switch at the lower pressure side of the manifold valve assembly and start the vacuum pump. Meanwhile, the switch at the high pressure side of the manifold valve assembly should be kept closed, otherwise evacuation would fail.
- (4) The evacuation duration depends on the unit's capacity, generally.

Model	Time(min)
GU50W/A1-K	20
GU71W/A1-K; GU85W/A1-K; GU100W/A1-M	30
GU125W/A1-M; GU140W/A1-M; GU160W/A1-M	45

And verify if the pressure gauge at the low pressure side of the manifold valve assembly reads -1.0Mp (-75cmHg), if not, it indicates there is leak somewhere. Then, close the switch fully and then stop the vacuum pump.

- (1) Wait for 10min to see if the system pressure can remain unchanged. During this time, the reading of the pressure gauge at the low pressure side cannot be larger than 0.005Mp (0.38cmHg).
- (2) Slightly open the liquid valve and let some refrigerant go to the connection pipe to balance the pressure inside and outside of the connection pipe, so that air will not come into the connection pipe when removing the hose. Note that the gas and liquid valve can be opened fully only after the manifold valve assembly is removed.
- (3) Place back the caps of the liquid valve, gas valve and also the service port.



Notice: For large-size units, there are maintenance ports for liquid valve and gas valve. During evacuation, you may connect the two hoses of the branch valve assembly to the maintenance ports to speed up the evacuation.

4.3 Refrigerant Charging

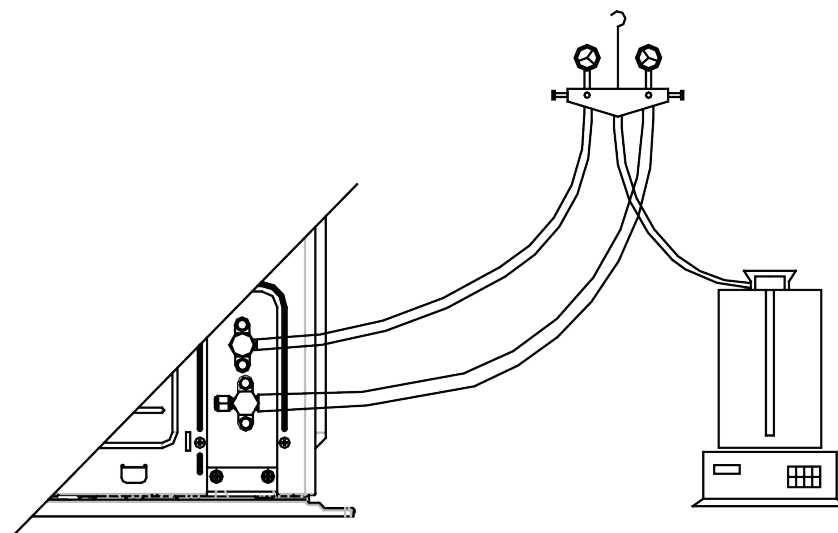
Pre-charging

Step 1: Connect the high pressure gauge line to the valve of liquid pipe and connect the low pressure gauge line to the valve of gas pipe. Connect the middle gauge line to the vacuum pump. Power on the vacuum pump and perform vacuum drying.

Step 2: After vacuum drying, close the high and low pressure gauge valves. Then remove the middle gauge line from the connector of vacuum pump. Then connect to the refrigerant tank.

Step 3: Loosen the middle gauge line from the connector of pressure gauge to a proper extent and slightly open the valve of refrigerant tank. Evacuate the middle gauge line. Then tighten up the connector again and completely open the valve of refrigerant tank at the same time.

Step 4: Keep the refrigerant tank erect and put it on an electronic scale. Record the current weight as m_1 .



Step 5: Open the high pressure gauge valve (Keep the low pressure gauge valve closed). Then charge refrigerant into the system. Meanwhile, record the weight of refrigerant tank as m_2 .

Step 6: $m_1 - m_2 = m$. If m equals to the required charging quantity M , close the valve of refrigerant tank at once. Then move to step 8.

Step 7: If you can't continue to charge refrigerant into the system and the quantity of charged refrigerant is less than the required charging quantity, then record the current quantity of charged refrigerant:

$$m = m_1 - m_2$$

$$m' = M - m$$

The remaining charging quantity is: $m' = M - m$

Step 8: After charging, remove the pressure gauge.

Refrigerant charging when unit is turned on:

Step 1: Close the valve of refrigerant tank. First remove the pressure gauge lines and connect the outdoor unit to the indoor unit. Then reconnect the pressure gauge lines. Connect the low pressure gauge line to the other joint of gas valve and connect the high pressure gauge line to the liquid valve. Connect the middle gauge line to the vacuum pump. Power on the vacuum pump and perform vacuum drying.

Step 2: After vacuum drying, close the high and low pressure gauge valves. Then remove the middle gauge line from the connector of vacuum pump. Then connect to the refrigerant tank.

Step 3: Loosen the middle gauge line from the connector of pressure gauge to a proper extent and slightly open the valve of refrigerant tank. Evacuate the middle gauge line. Then tighten up the connector again and completely open the valve of refrigerant tank at the same time.

Step 4: Turn on the air conditioner and let it run for a while.

Step 5: Open the low pressure gauge valve (Keep the high pressure gauge valve closed).

Then charge in the remaining charging quantity m`.

Step 6: After all, required refrigerant is charged in, close the valve of refrigerant tank.

Step 7: Remove the pressure gauge to finish the refrigerant charging work.

Procedure of refrigerant charging

Following is the supplementary requirement for refrigerant charging on the basis of normal procedure:

1) Make sure that when charging refrigerant into the system, no other types of refrigerant will be mixed. The pipeline for refrigerant charging should be as short as possible to reduce the amount of refrigerant left in it.

2) The refrigerant tank should stand erect.

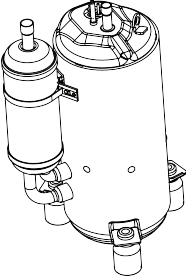
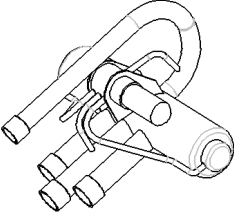
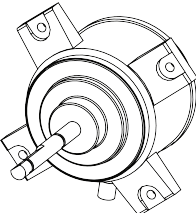
3) Make sure the refrigerating system is already grounded before refrigerant charging.

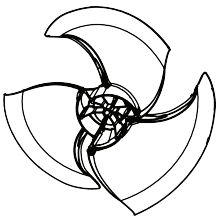
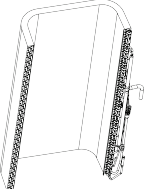
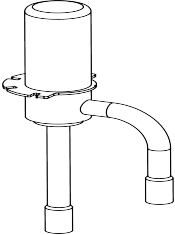
4) When charging is completed (or not yet completed), stick a label on the system.

5) Before re-charging refrigerant into the system, use oxygen-free nitrogen to perform pressure test. When charging is completed, perform leak test before trial running. Before leaving the workplace, perform a leak test again.

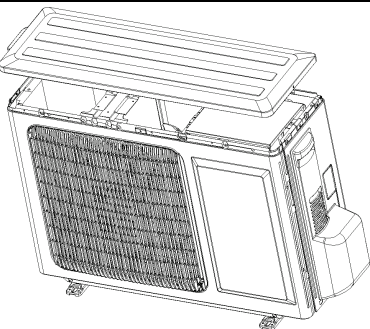
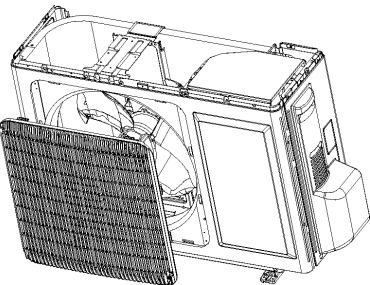
4.4 Removal of Major Components

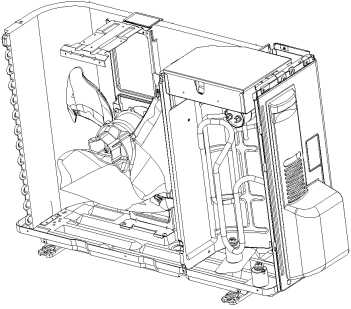
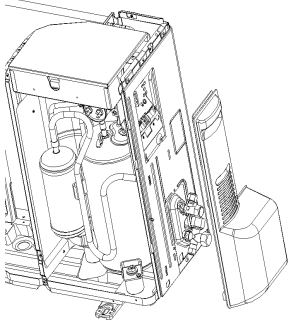
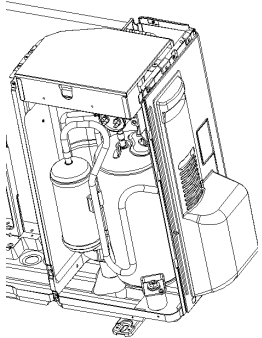
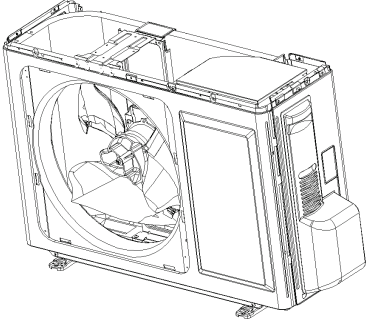
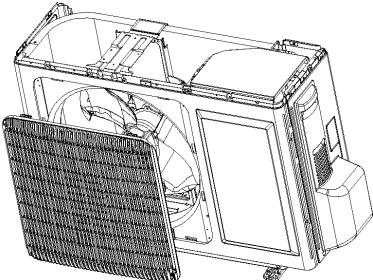
4.4.1 Removal of ODU Major Components

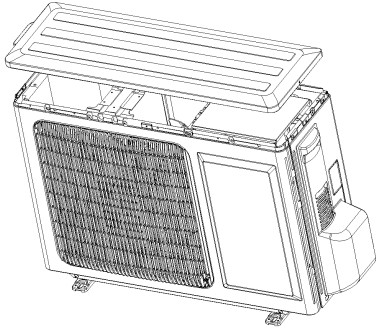
Picture	Name	Function
	Compressor	Through compression, the low pressure refrigerant occupies a less space. As its pressure and temperature both rise, it becomes high pressure and high temperature refrigerant. It is the power drive of the system.
	4-way valve	It is used to change directions, the flow of refrigerant in cooling/heating.
	Motor	The power drive of the fan. It enables the fan to run so as to provide smooth currents of air for forced convection and heat exchange of condenser and evaporator.

Picture	Name	Function
	Fan	It is used to provide smooth currents of air for forced convection and heat exchange of condenser and evaporator.
	Condenser	It is used to transfer partial heat of the hot flow to the cold flow so that the flow temperature can reach the specified index. It is an energy exchanging device.
	Electronic expansion valve	It is used to lower the pressure and temperature of liquefied refrigerant and adjust the flow of refrigerant entering the evaporator.

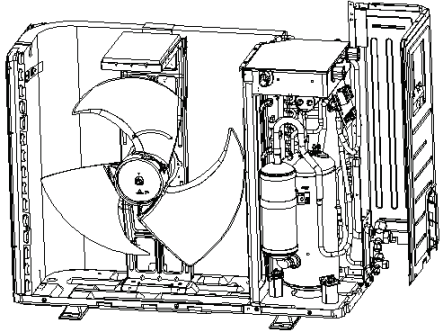
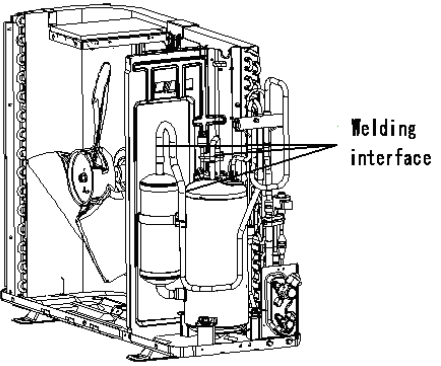
Model: GU50W/A1-K; GU71W/A1-K; GU85W/A1-K

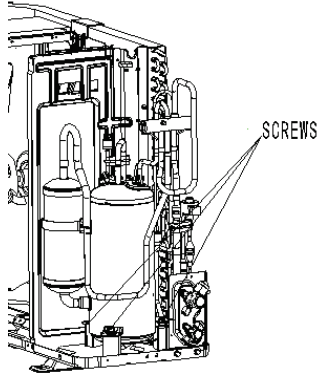
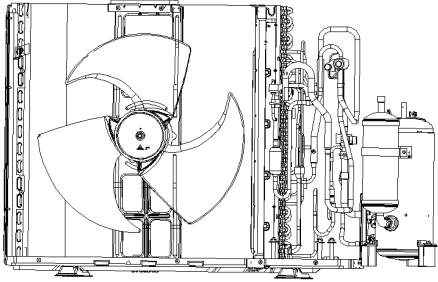
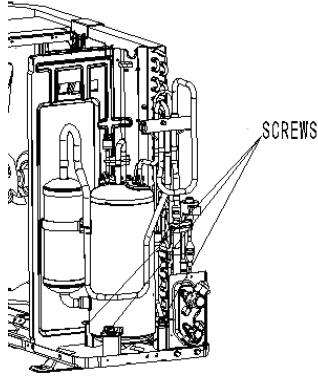
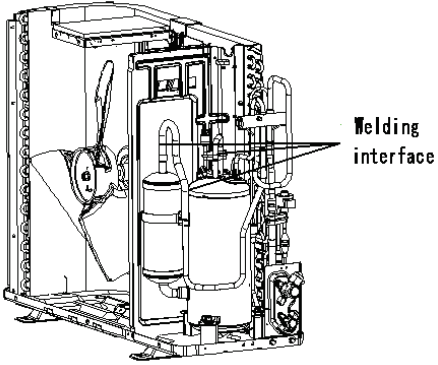
Removal of front panel		
Note: Before removing the front panel, make sure power is cut off.		
Step	Picture	Work instruction
1.Remove the upper cover plate.		Unscrew the screws of the upper cover plate with a screwdriver.
2.Remove the front grill.		Unscrew the screws of the front grill with a screwdriver.

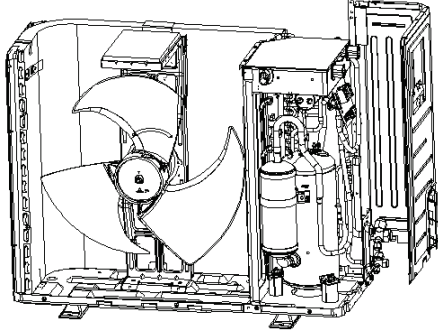
Removal of front panel		
Note: Before removing the front panel, make sure power is cut off.		
Step	Picture	Work instruction
3.Remove the front panel.		Unscrew the screws that connect the front panel to the middle insulating board and screws around the front panel.
4.Remove the right side plate.		Unscrew the screws that connect the right side plate to the electric box and the screws around the right side plate.
5.Install the right side plate		Screw up the screws around the right side plate. Be careful to handle well the clasps at the bottom of the right side plate.
6.Install the front side plate.		Tighten up the screws around the front side plate.
7.Install the grill.		Attach the grill back in place and tighten up the screws.

Removal of front panel		
Note: Before removing the front panel, make sure power is cut off.		
Step	Picture	Work instruction
8. Install the upper cover plate.		Tighten up the screws around the upper cover plate.

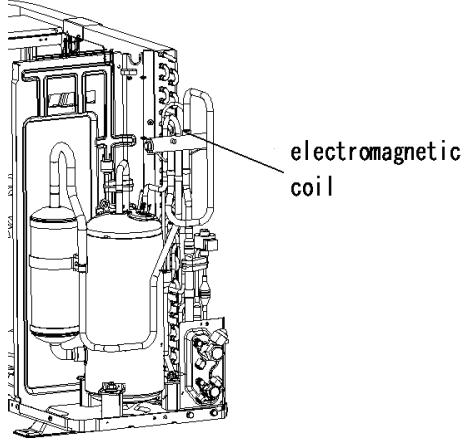
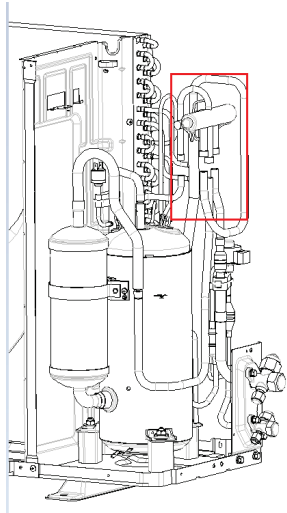
Model: GU50W/A1-K;GU71W/A1-K;GU85W/A1-K

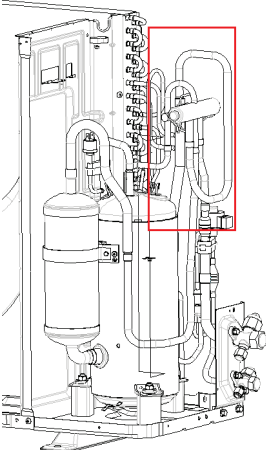
Removal of compressor		
Note: Before removing the compressor, make sure there is no refrigerant in the pipeline and power is cut off.		
Step	Picture	Work instruction
1. Remove wires.		Loosen the securing screws of the wires with a screwdriver. Remove the wires. Note: When removing the wires, mark the wire terminals corresponding to their color so as to avoid misconnection.
2. Break off the pipes that connecting to the compressor.		Weld the pipes that are connected to the compressor. Then remove the pipes. Note: When welding the pipes, do not let the flame burn the other components.

Removal of compressor		
Note: Before removing the compressor, make sure there is no refrigerant in the pipeline and power is cut off.		
Step	Picture	Work instruction
3. Loosen the securing screws at the foot of compressor.	 <p>Diagram showing the compressor assembly with screws at the base being loosened. A label 'SCREWS' points to the base of the compressor.</p>	Use a wrench to twist off the screws at the foot of compressor.
4. Remove the compressor from the chassis.	 <p>Diagram showing the compressor being removed from the chassis. A fan is visible on the left side of the chassis.</p>	Take out the compressor and replace it. Note: When replacing the compressor, avoid touching the nearby pipeline and components.
5. Fix the new compressor back onto the chassis.	 <p>Diagram showing the new compressor being fixed back onto the chassis. A label 'SCREWS' points to the base of the compressor.</p>	After replacing the compressor, tighten up the screws at the foot of compressor.
6. Connect the compressor suction port and exhaust port with the pipes.	 <p>Diagram showing the compressor suction and exhaust ports being connected to the pipes. A label 'Welding interface' points to the connection point.</p>	Weld the compressor connection pipes and connect them to the compressor. Note: When replacing the compressor, avoid touching the nearby pipeline and components.

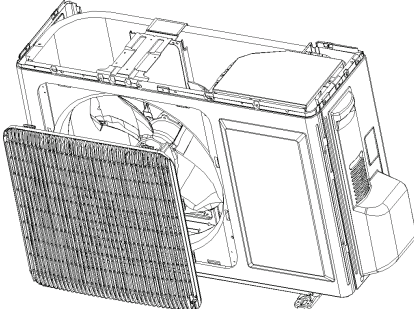
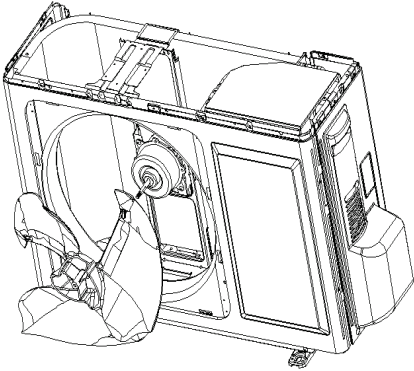
Removal of compressor		
Note: Before removing the compressor, make sure there is no refrigerant in the pipeline and power is cut off.		
Step	Picture	Work instruction
7. Connect the compressor wires.		<p>Connect the compressor wires to the wire terminals on the top of compressor.</p> <p>Note: When connecting the wires, be sure to match the colors with the corresponding wire terminals.</p>

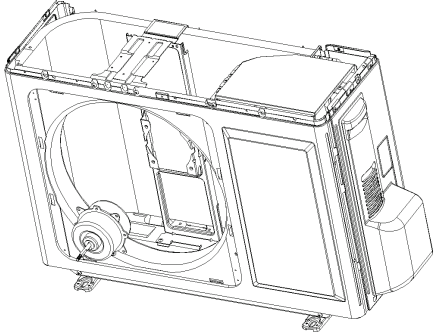
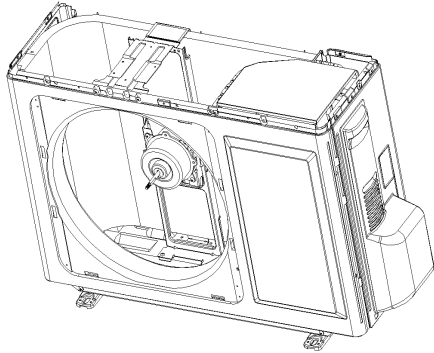
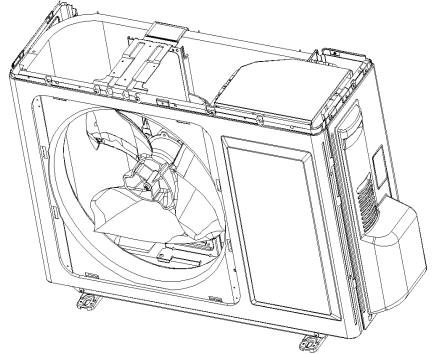
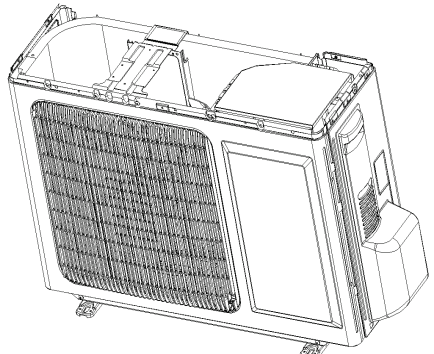
Model: GU50W/A1-K; GU71W/A1-K; GU85W/A1-K

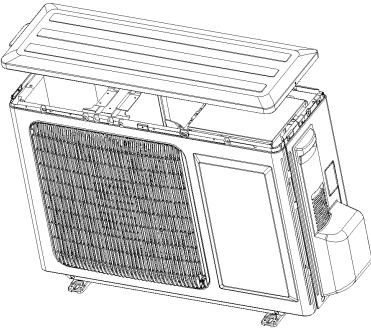
Removal of 4-way valve		
Note: Before removing the 4-way valve, make sure refrigerant is fully discharged from the unit and power is cut off.		
Step	Picture	Work instruction
1. Take off the electromagnetic coil of the 4-way valve.		<p>Carefully unscrew the screws of electromagnetic coil with a screwdriver.</p>
2. Break off the connection pipes from the 4-way valve.		<p>Use a soldering gun to loosen the 4 joints on the 4-way valve and then remove the connection pipes.</p> <p>Note: When welding the pipes, the 4-way valve should be wrapped with wet cloth for cooling. Do not let the flame burn the other components.</p>

Removal of 4-way valve		
Note: Before removing the 4-way valve, make sure refrigerant is fully discharged from the unit and power is cut off.		
Step	Picture	Work instruction
3. Replace the 4-way valve and connect it to the connection pipes.		<p>Replace the 4-way valve and then use a soldering gun to weld the 4 joints of the 4-way valve.</p> <p>Tighten up the screws of electromagnetic coil with a screwdriver.</p> <p>Note: When welding the pipes, the 4-way valve should be wrapped with wet cloth for cooling. Do not let the flame burn the other components.</p>

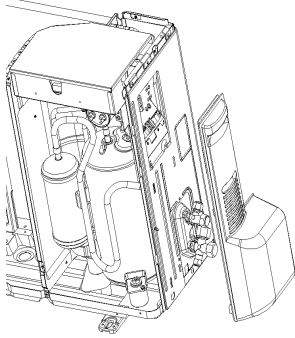
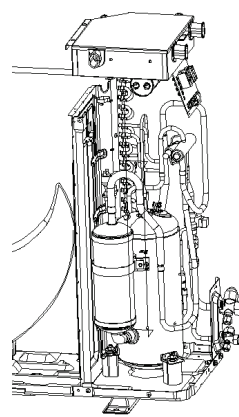
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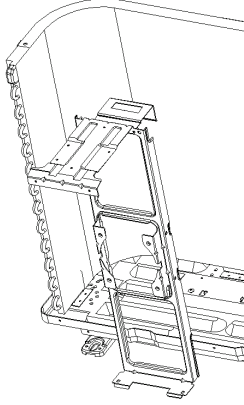
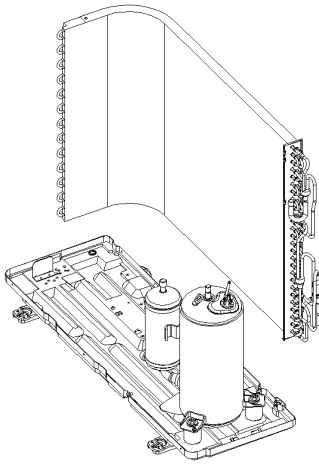
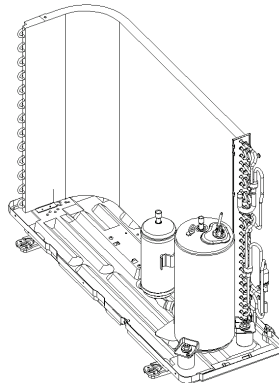
Removal of fan and motor		
Note: Before removing the fan, make sure power is cut off.		
Step	Picture	Work instruction
1. Remove the grill.		Use a screwdriver to unscrew the two screws on the upper left and lower right corners.
2. Remove the fan.		<p>Use a wrench to remove the specialized nut and gasket of the fan.</p> <p>Note: Please keep the nut and gasket safe after removing them from the fan.</p>

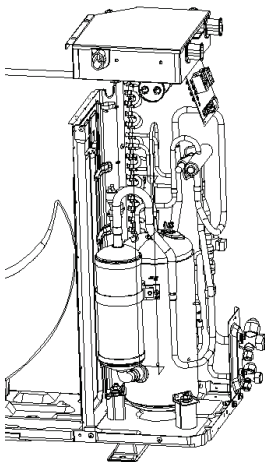
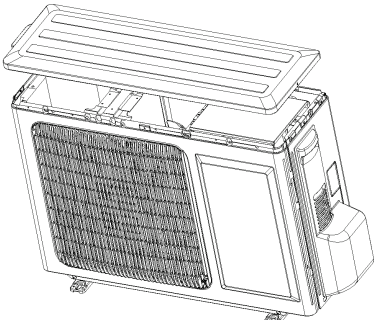
Removal of fan and motor		
Note: Before removing the fan, make sure power is cut off.		
Step	Picture	Work instruction
3.Remove motor.		Use a screwdriver to unscrew the bolt of motor. Note: Motor wire should be first removed from the electric box.
4.Install the motor.		Replace with a new motor. Then tighten up the screw bolt.
5.Install the fan.		Install the fan in place. Put on the gasket and use a wrench to secure the screw nut. Note: After installing the fan, turn the fan by hand to see if it can run normally. If not, please check for the reason.
6.Install the grill.		Attach the grill back in place and tighten up the screws.

Removal of fan and motor		
Note: Before removing the fan, make sure power is cut off.		
Step	Picture	Work instruction
7. Install the upper cover plate.		Tighten up the screws around the upper cover plate.

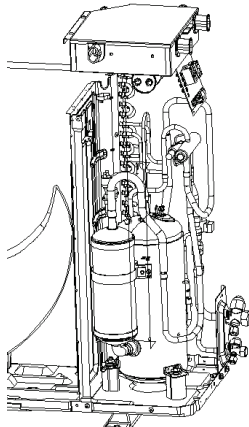
Model: GU50W/A1-K; GU71W/A1-K ; GU85W/A1-K

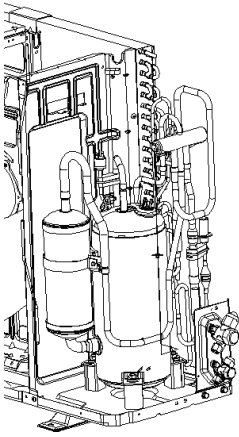
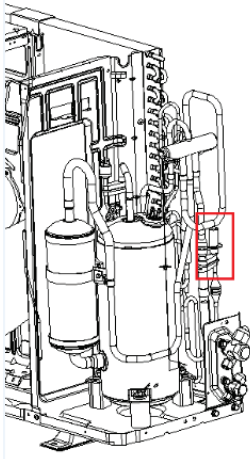
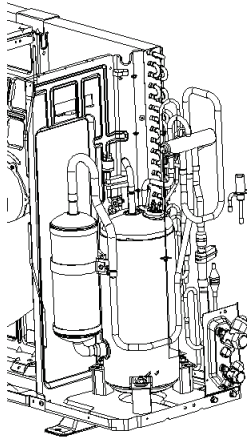
Removal of condenser		
Note: Before removing the condenser, make sure there is no refrigerant in the pipeline and power is cut off.		
Step	Picture	Work instruction
1. Remove the panels.		Remove the upper, lower and front panels.
2. Remove the electric box.		Loosen the wire clamp at the bottom of the electric box. Unscrew the screws of electric box. The connection wires inside and outside the electric box should be removed.

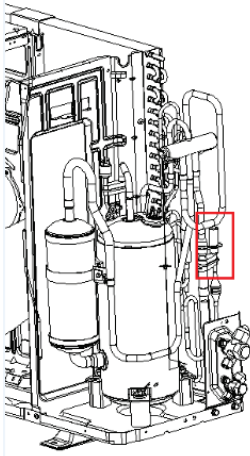
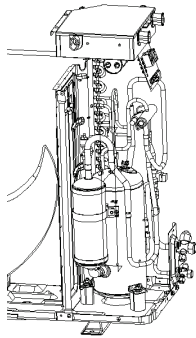
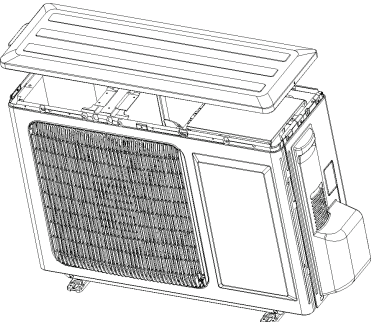
Removal of condenser		
Note: Before removing the condenser, make sure there is no refrigerant in the pipeline and power is cut off.		
Step	Picture	Work instruction
3.Remove motor support.		When removing the motor support, be careful to protect the components.
4.Remove the condenser.		Heat up the welding points of connection pipes through gas welding until the pipes break off. Loosen the securing screws of condenser support. Take off the plate type heat exchanger and the support as a whole. Note: When welding the pipes, do not let the flame burn the other components. The welding points of condenser are steel and copper welding points. Be sure to maintain the welding quality.
5.Install the new condenser.		Secure the screws of condenser and support. Then fix them together on the chassis. Install the condenser by referring to the positions of entering and leaving pipes. Weld the connection pipes. Nitrogen welding: the pressure of nitrogen is $0.5\pm 0.1\text{kgf/cm}^2$ (relative pressure). Note: When welding the pipes, do not let the flame burn the other components.

Removal of condenser		
Note: Before removing the condenser, make sure there is no refrigerant in the pipeline and power is cut off.		
Step	Picture	Work instruction
6. Secure the electric box and arrange the wires according to the requirement.		Put the electric box in place and tighten up the screws of electric box. Arrange and secure the wires as original.
7. Check and open the upper and side panels.		Check whether each component and connection wire is well connected. If everything is OK, place back the upper, left and right side panels.

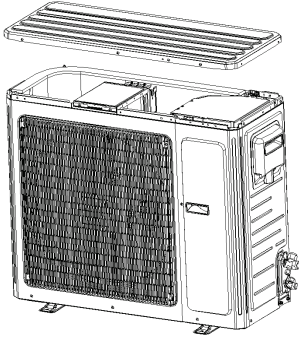
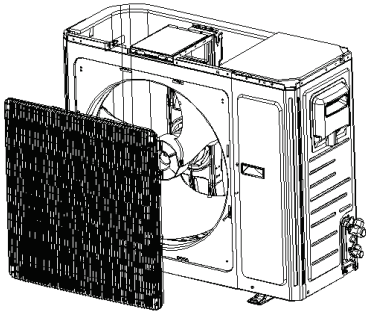
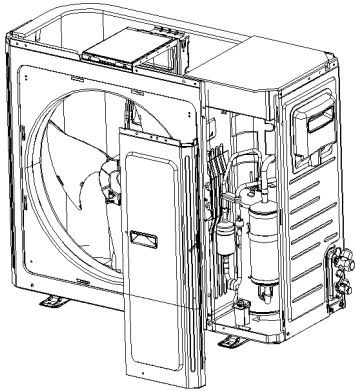
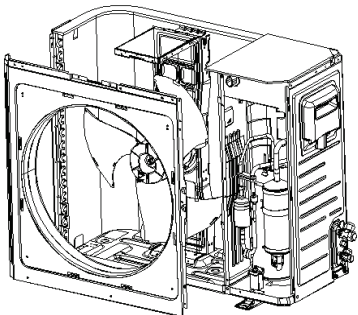
Model: GU50W/A1-K; GU71W/A1-K; GU85W/A1-K

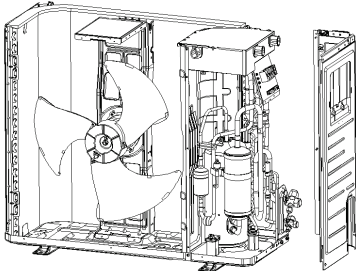
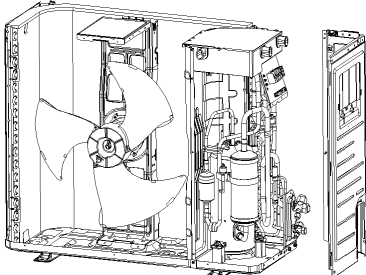
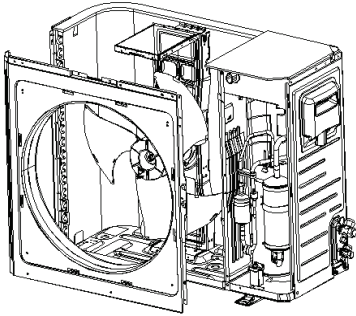
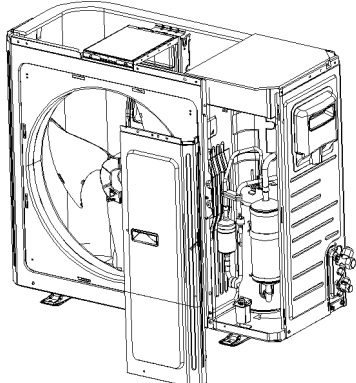
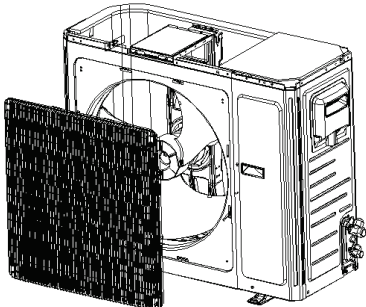
Removal of electronic expansion valve		
Note: Before removing the electronic expansion valve, make sure there is no refrigerant in the pipeline and power is cut off.		
Step	Picture	Work instruction
1. Loosen the wire clamp at the bottom of the electric box and the screws of electric box.		Remove the upper, lower and front panels. Loosen the wire clamp at the bottom of the electric box. Unscrew the screws of electric box.

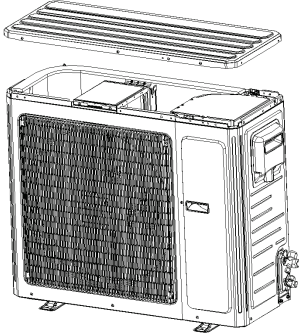
Removal of electronic expansion valve		
Note: Before removing the electronic expansion valve, make sure there is no refrigerant in the pipeline and power is cut off.		
Step	Picture	Work instruction
2.Remove the electric box.		The connection wires inside and outside the electric box should be removed. When removing the electric box, be careful to protect the components.
3.Remove the electronic expansion valve.		Take off the coil of electronic expansion valve. Loosen the connection pipe of electronic expansion valve by welding. Then remove the connection pipe. Note: When welding the pipe, do not let the flame burn the other components.
4.Take out the electronic expansion valve.		Take out the electronic expansion valve

Removal of electronic expansion valve		
Note: Before removing the electronic expansion valve, make sure there is no refrigerant in the pipeline and power is cut off.		
Step	Picture	Work instruction
5. Install the new electronic expansion valve.		<p>Weld the connection pipe of electronic expansion valve.</p> <p>When welding the electronic expansion valve, the valve should be wrapped with wet cloth.</p> <p>Nitrogen welding: the pressure of nitrogen is $0.5 \pm 0.1 \text{ kgf/cm}^2$ (relative pressure).</p> <p>Note: When welding the pipes, do not let the flame burn the other components.</p> <p>Install the coil of electronic expansion valve.</p>
6. Secure the electric box and arrange the wires as required.		<p>Put the electric box back in place and tighten up the screws.</p> <p>Arrange the wires as original.</p>
7. Check and install the panels.		<p>Check whether each component and connection wire is well connected.</p> <p>If everything is OK, install the upper, left and right panels. Tighten up the screws.</p>

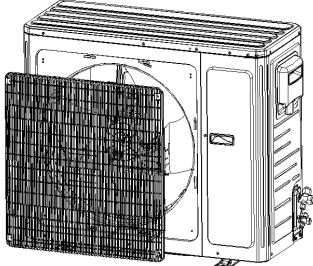
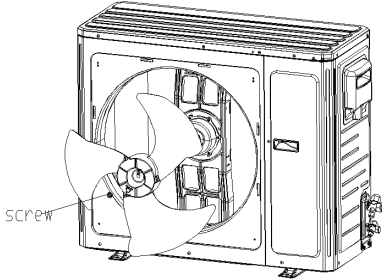
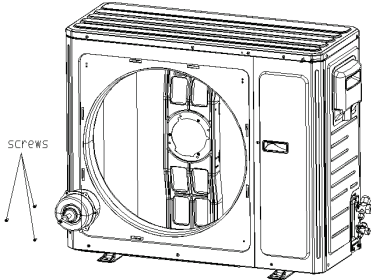
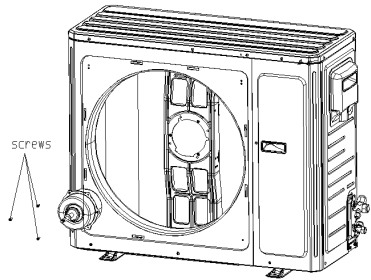
Model: GU100W/A1-M

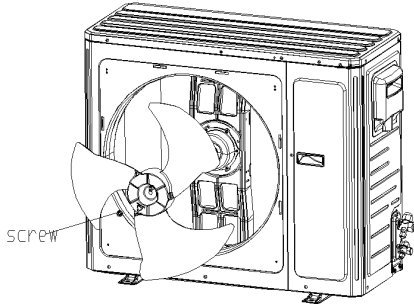
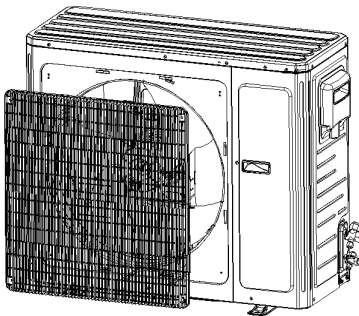
Removal of front panel		
Note: Before removing the front panel, make sure power is cut off.		
Step	Picture	Work instruction
1.Remove the upper cover plate.		Unscrew the screws of the upper cover plate with a screwdriver.
2.Remove the front grill.		Unscrew the screws of the front grill with a screwdriver.
3.Remove the front panel.		Unscrew the screws that connect the front panel to the middle insulating board and screws around the front panel.
		

Removal of front panel		
Note: Before removing the front panel, make sure power is cut off.		
Step	Picture	Work instruction
4.Remove the right side plate.		Unscrew the screws that connect the right side plate to the electric box and the screws around the right side plate.
5.Install the right side plate		Screw up the screws around the right side plate. Be careful to handle well the clasps at the bottom of the right side plate.
6.Install the front side plate.		Tighten up the screws around the front side plate.
		
7.Install the grill.		Attach the grill back in place and tighten up the screws.

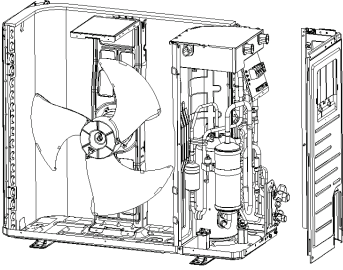
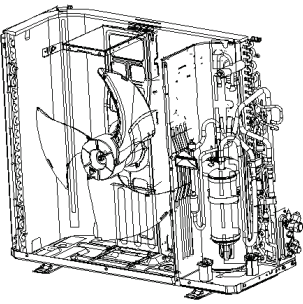
Removal of front panel		
Note: Before removing the front panel, make sure power is cut off.		
Step	Picture	Work instruction
8. Install the upper cover plate.		Tighten up the screws around the upper cover plate.

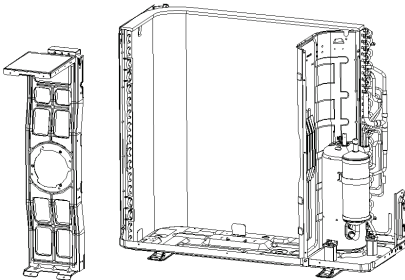
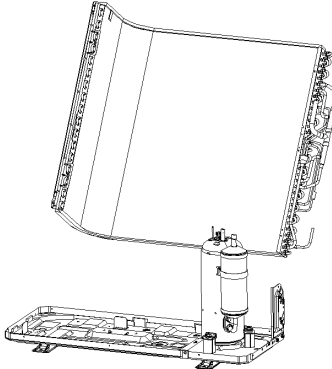
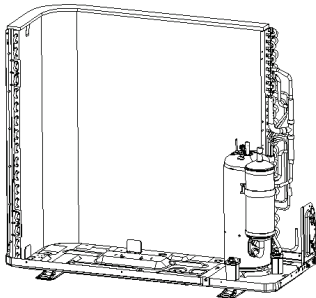
Model: GU100W/A1-M

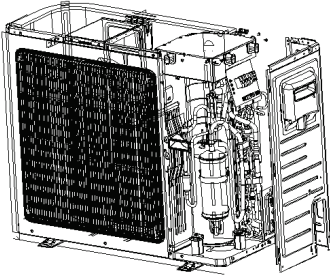
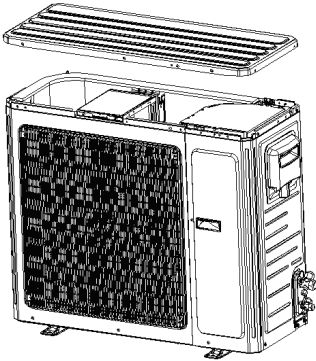
Removal of fan and motor		
Note: Before removing the fan, make sure power is cut off.		
Step	Picture	Work instruction
1. Remove the grill.		Use a screwdriver to unscrew the two screws on the upper left and lower right corners.
2. Remove the fan.		Use a wrench to remove the specialized nut and gasket of the fan. Note: Please keep the nut and gasket safe after removing them from the fan.
3. Remove motor.		Use a screwdriver to unscrew the bolt of motor. Note: Motor wire should be first removed from the electric box.
4. Install a new motor.		Replace with a new motor. Then tighten up the screw bolt.

Removal of fan and motor		
Note: Before removing the fan, make sure power is cut off.		
Step	Picture	Work instruction
5. Install the fan.		<p>Install the fan in place. Put on the gasket and use a wrench to secure the screw nut.</p> <p>Note: After installing the fan, turn the fan by hand to see if it can run normally. If not, please check for the reason.</p>
6. Install the grill.		<p>After replacing the motor, use a screwdriver to tighten up the screw bolt that secures the motor.</p>

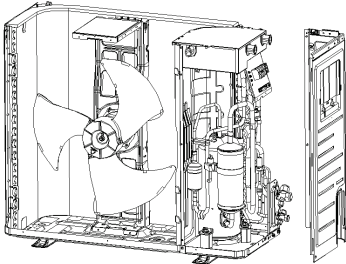
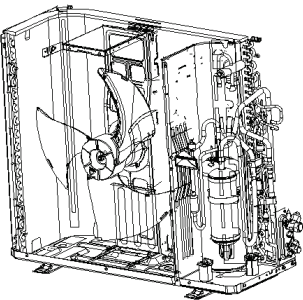
Model: GU100W/A1-M

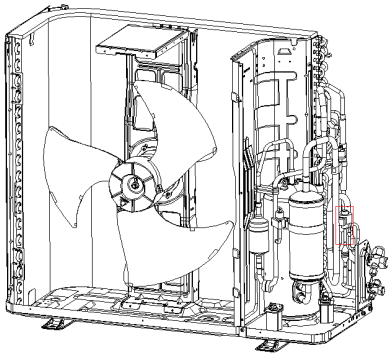
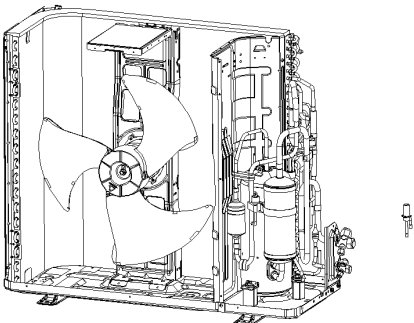
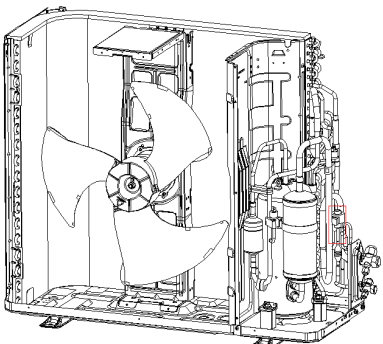
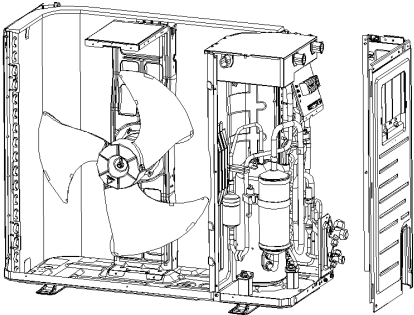
Removal of condenser		
Note: Before removing the condenser, make sure there is no refrigerant in the pipeline and power is cut off.		
Step	Picture	Work instruction
1. Remove the panels.		<p>Remove the upper, lower and front panels.</p>
2. Remove the electric box.		<p>Loosen the wire clamp at the bottom of the electric box.</p> <p>Unscrew the screws of electric box.</p> <p>The connection wires inside and outside the electric box should be removed.</p>

Removal of condenser		
Note: Before removing the condenser, make sure there is no refrigerant in the pipeline and power is cut off.		
Step	Picture	Work instruction
3.Remove motor support.		When removing the motor support, be careful to protect the components.
4.Remove the condenser.		Heat up the welding points of connection pipes through gas welding until the pipes break off. Loosen the securing screws of condenser support. Take off the plate type heat exchanger and the support as a whole. Note: When welding the pipes, do not let the flame burn the other components. The welding points of condenser are steel and copper welding points. Be sure to maintain the welding quality.
5.Install the new condenser.		Secure the screws of condenser and support. Then fix them together on the chassis. Install the condenser by referring to the positions of entering and leaving pipes. Weld the connection pipes. Nitrogen welding: the pressure of nitrogen is $0.5 \pm 0.1 \text{ kgf/cm}^2$ (relative pressure). Note: When welding the pipes, do not let the flame burn the other components.

Removal of condenser		
Note: Before removing the condenser, make sure there is no refrigerant in the pipeline and power is cut off.		
Step	Picture	Work instruction
6. Secure the electric box and arrange the wires according to the requirement.		Put the electric box in place and tighten up the screws of electric box. Arrange and secure the wires as original.
7. Check and back the upper and side panels.		Check whether each component and connection wire is well connected. If everything is OK, place back the upper, left and right side panels.

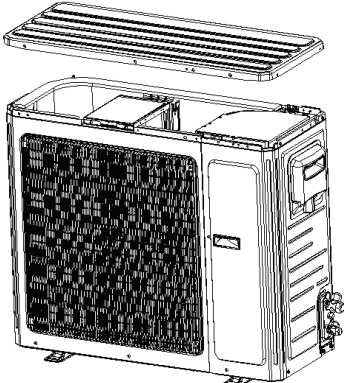
Model: GU100W/A1-M

Removal of electronic expansion valve		
Note: Before removing the electronic expansion valve, make sure there is no refrigerant in the pipeline and power is cut off.		
Step	Picture	Work instruction
1. Loosen the wire clamp at the bottom of the electric box and the screws of electric box.		Remove the upper, lower and front panels. Loosen the wire clamp at the bottom of the electric box. Unscrew the screws of electric box.
2. Remove the electric box.		The connection wires inside and outside the electric box should be removed. When removing the electric box, be careful to protect the components.

Removal of electronic expansion valve		
Note: Before removing the electronic expansion valve, make sure there is no refrigerant in the pipeline and power is cut off.		
Step	Picture	Work instruction
3.Remove the electronic expansion valve.		Take off the coil of electronic expansion valve. Loosen the connection pipe of electronic expansion valve by welding. Then remove the connection pipe. Note: When welding the pipe, do not let the flame burn the other components.
4.Take out the electronic expansion valve.		Take out the electronic expansion valve.
5.Install the new electronic expansion valve.		Weld the connection pipe of electronic expansion valve. When welding the electronic expansion valve, the valve should be wrapped with wet cloth. Nitrogen welding: the pressure of nitrogen is $0.5 \pm 0.1 \text{ kgf/cm}^2$ (relative pressure). Note: When welding the pipes, do not let the flame burn the other components. Install the coil of electronic expansion valve.
6.Secure the electric box and arrange the wires as required.		Put the electric box back in place and tighten up the screws. Arrange the wires as original.

Removal of electronic expansion valve

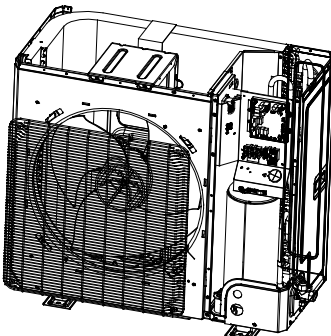
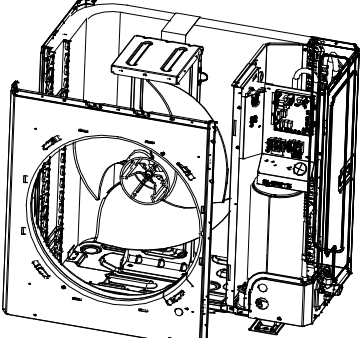
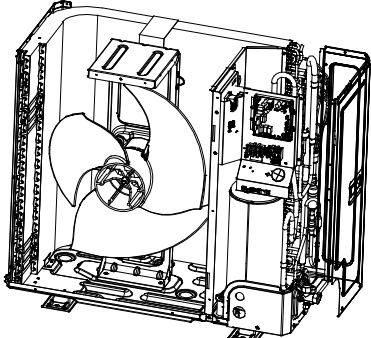
Note: Before removing the electronic expansion valve, make sure there is no refrigerant in the pipeline and power is cut off.

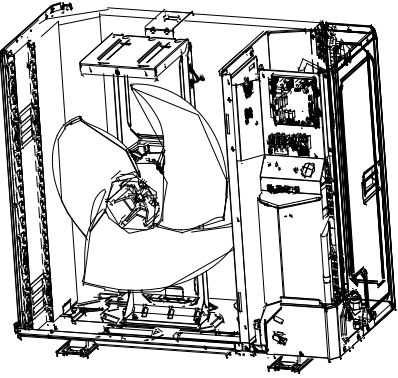
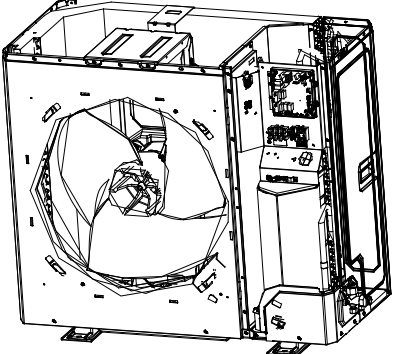
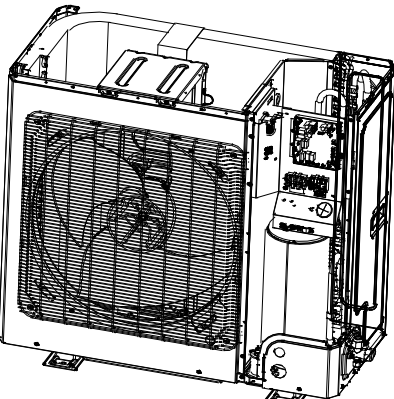
Step	Picture	Work instruction
7. Check and install the panels.		<p>Check whether each component and connection wire is well connected.</p> <p>If everything is OK, install the upper, left and right panels.</p> <p>Tighten up the screws.</p>

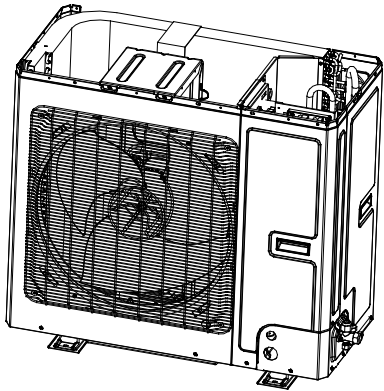
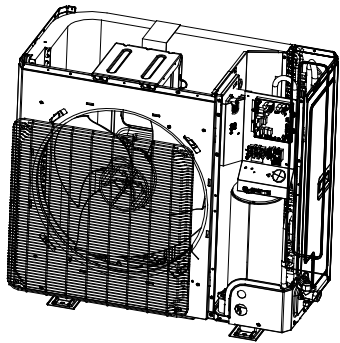
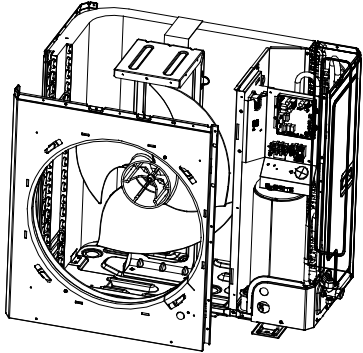
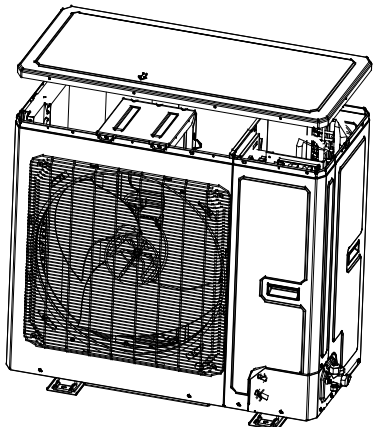
Model: GU125W/A1-M; GU140W/A1-M; GU160W/A1-M

Removal of front panel

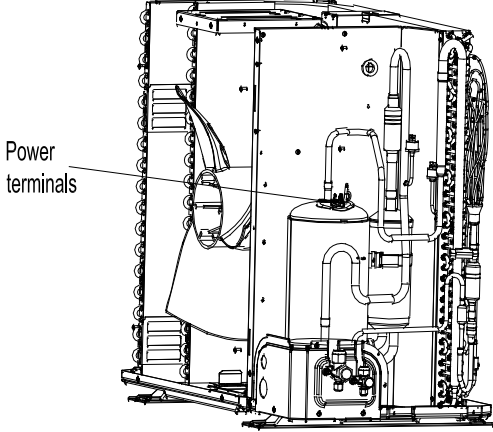
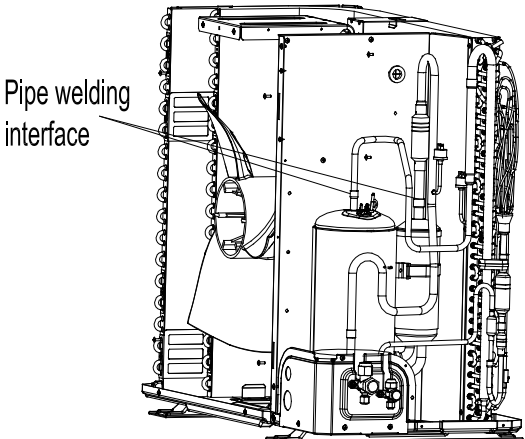
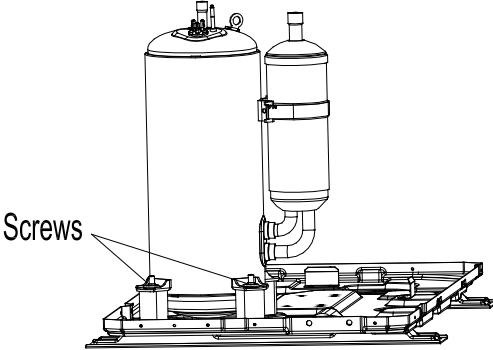
Note: Before removing the front panel, make sure power is cut off.

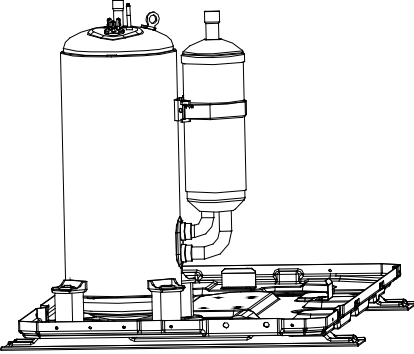
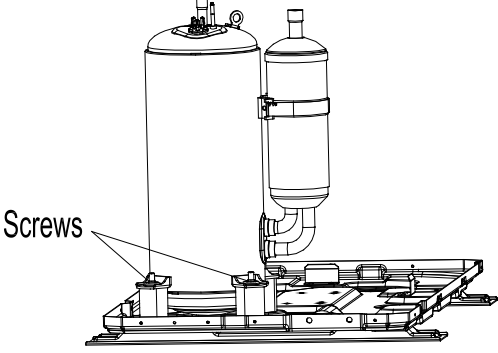
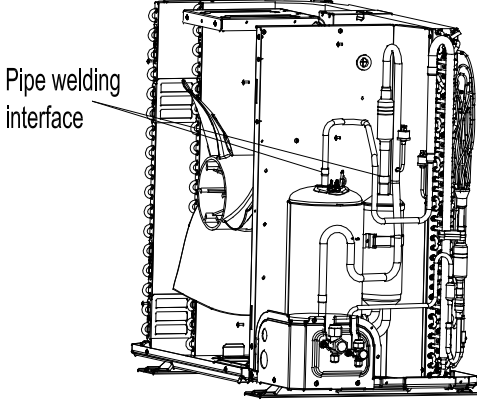
Step	Picture	Work instruction
1. Remove the upper cover plate.		<p>Unscrew the screws of the upper cover plate with a screwdriver.</p>
2. Remove the front side plate.		<p>Unscrew the screws of the upper and front side plate with a screwdriver.</p>
3. Remove the front grill.		<p>Unscrew the screws of the front grill with a screwdriver.</p>

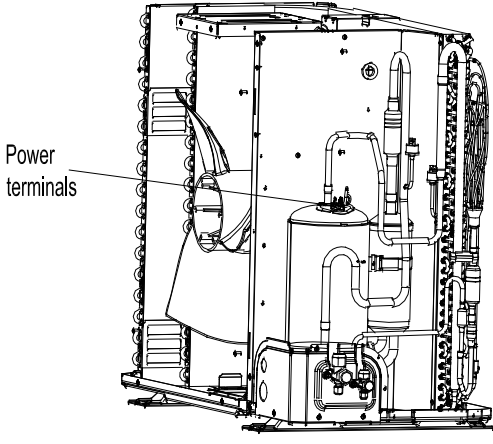
Removal of front panel		
Note: Before removing the front panel, make sure power is cut off.		
Step	Picture	Work instruction
4.Remove the front panel.		Unscrew the screws that connect the front panel to the middle insulating board and screws around the front panel.
5.Remove the right side plate.		Unscrew the screws that connect the right side plate to the electric box and the screws around the right side plate.
6.Install the right side plate.		Screw up the screws around the right side plate. Be careful to handle well the clasps at the bottom of the right side plate.

Removal of front panel		
Note: Before removing the front panel, make sure power is cut off.		
Step	Picture	Work instruction
7. Install the front panel.		Install the front panel by mounting on 6 clasps on its both sides. Please note that there is one screw on the lower right side.
8. Install the grill.		Attach the grill back in place and tighten up the screws.
9. Install the front side plate.		Fix the clasps on both sides of the plate and tighten up the screws.
10. Install the upper cover plate.		Tighten up the screws around the upper cover plate.

Model: GU125W/A1-M;GU140W/A1-M;GU160W/A1-M

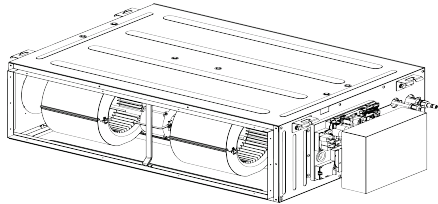
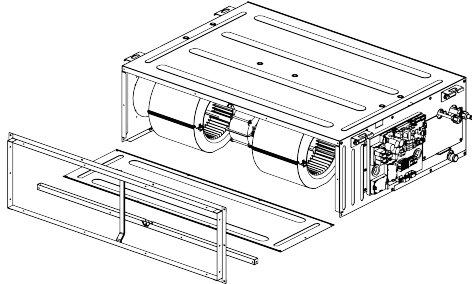
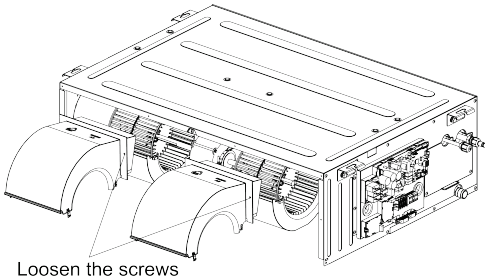
Removal of compressor/gas liquid separator		
Note: Before removing the compressor/gas liquid separator, make sure there is no refrigerant in the pipeline and power is cut off.		
Step	Picture	Work instruction
1.Remove wires.		<p>Loosen the securing screws of the wires with a screwdriver.</p> <p>Remove the wires.</p> <p>Note: When removing the wires, mark the wire terminals corresponding to their color so as to avoid misconnection.</p>
2.Break off the pipes that connecting to the compressor/gas liquid separator.		<p>Weld the pipes that are connected to the compressor.</p> <p>Then remove the pipes.</p> <p>Note: When welding the pipes, do not let the flame burn the other components.</p>
3.Loosen the compressor's base connectors base nuts.		<p>Use a wrench to twist off the compressor base nuts.</p>

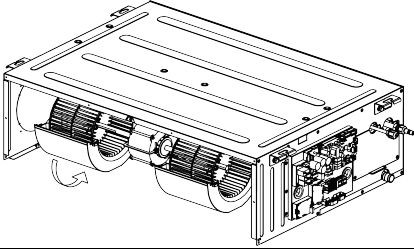
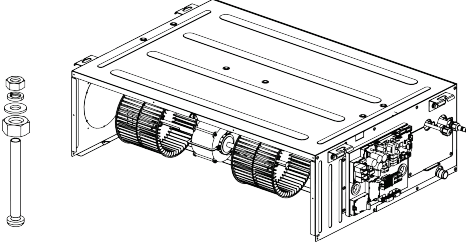
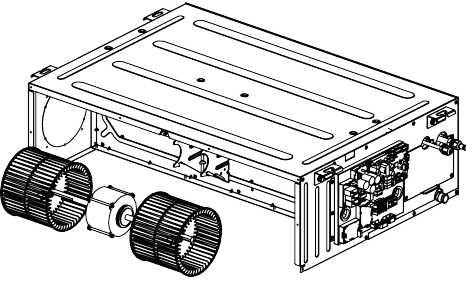
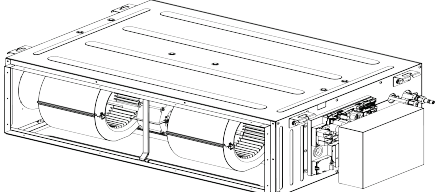
Removal of compressor/gas liquid separator		
Note: Before removing the compressor/gas liquid separator, make sure there is no refrigerant in the pipeline and power is cut off.		
Step	Picture	Work instruction
4.Remove the compressor from the chassis.		<p>Take away the compressor and replace with a new one.</p> <p>Note: When replacing the compressor, avoid touching the nearby pipeline and components.</p>
5.Install the new compressor onto the chassis.		<p>After replacing the compressor, tighten up the base screw nuts.</p>
6.Connect the welding interfaces of compressor to the pipeline.		<p>Weld the connection pipes of compressor so as to connect them to the compressor.</p> <p>Note: When replacing the compressor, avoid touching the nearby pipeline and components.</p>

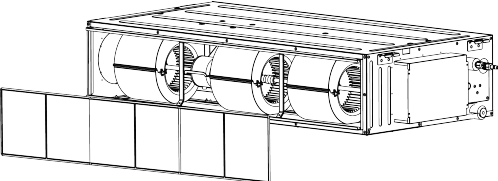
Removal of compressor/gas liquid separator		
Note: Before removing the compressor/gas liquid separator, make sure there is no refrigerant in the pipeline and power is cut off.		
Step	Picture	Work instruction
7. Connect the compressor wires.		<p>Connect the compressor wires to the wire terminals on the top of compressor.</p> <p>Note: When connecting the wires, be sure to match the colors with the corresponding wire terminals.</p>

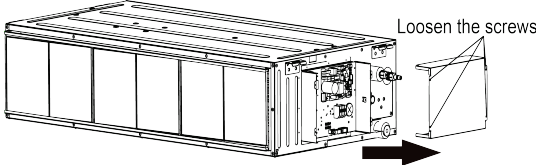
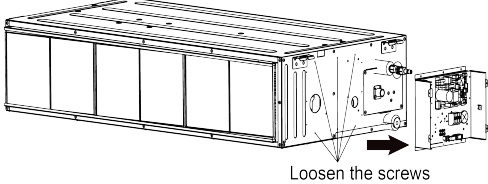
4.4.2 Removal of IDU Major Components

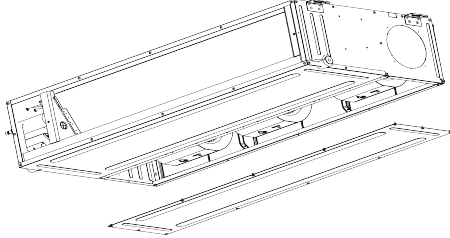
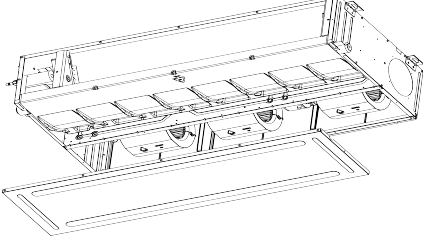
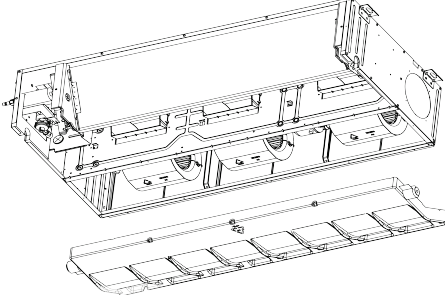
4.4.2.1 Duct Type Unit

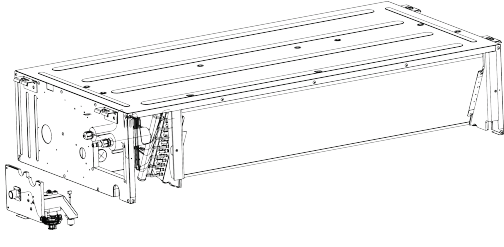
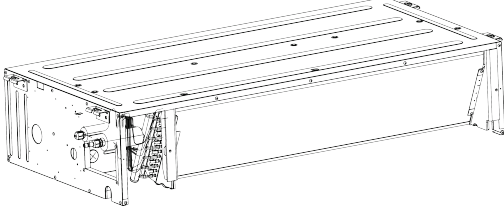
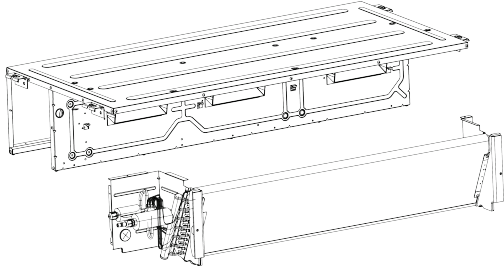
Removal of fan and motor		
Note: Before removing the motor, make sure power is cut off.		
Step	Picture	Work instruction
1. Remove the cover of electric box.		Turn off the power supply of indoor unit. Use a screwdriver to remove the cover of electric box. Disconnect the motor wire inside the electric box.
2. Remove air return plate, the longitudinal component and air return frame.		Use a hex wrench to loosen the screws of fan. Order of removal: air return plate, air return frame, longitudinal component, cross beam.
3. Remove the upper volute.		Loosen the screws of upper volute and then pull out the upper volute.

Removal of fan and motor		
Note: Before removing the motor, make sure power is cut off.		
Step	Picture	Work instruction
4.Remove the lower volute.		Loosen the screws of lower volute and then rotate in the direction shown by the arrow.
5.Remove the motor and fan.		Use a screwdriver to remove the clamping band of motor. Then remove the motor and fan as a whole.
6.Replace the motor.		Remove the motor from the motor support. Use a hexwrench to loosen the screws of fan. Remove the fan from the motor. Replace with a new motor.
7.Re-install the device in a reverse order of the removal procedure.		Re-install the device in a reverse order of the removal procedure. Then connect power and test it.

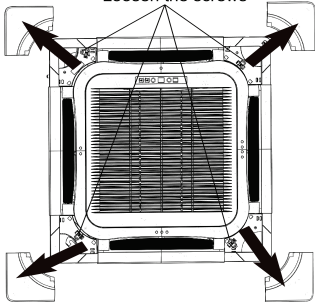
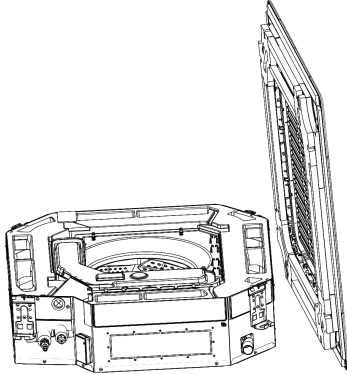
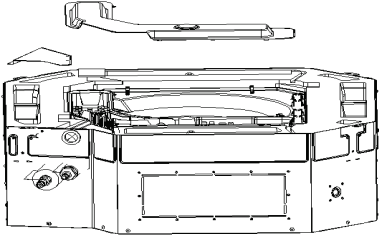
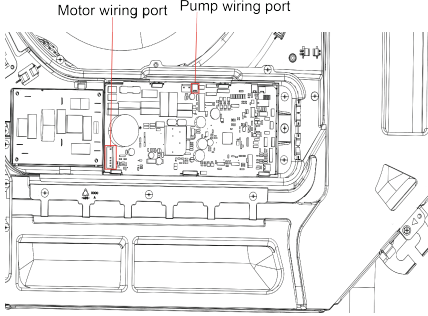
Removal of air return filter		
Note: Before removal, make sure power is cut off. During the removal procedure, take good care of all the components. Do not place the filter near any heat source.		
Step	Picture	Work instruction
Remove air return filter.		Press the air return filters on the guideway sponge. There are 2 or 3 air return filters.

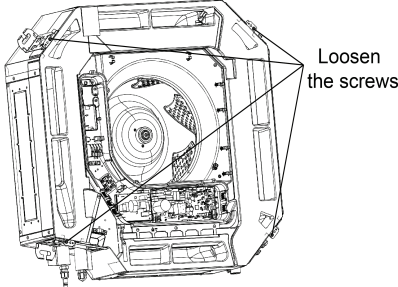
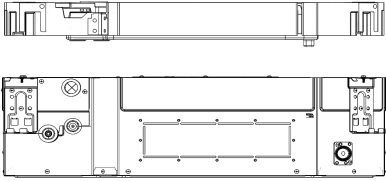
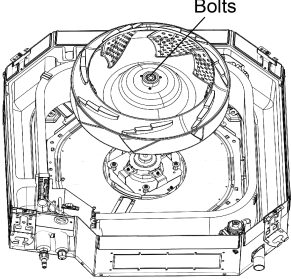
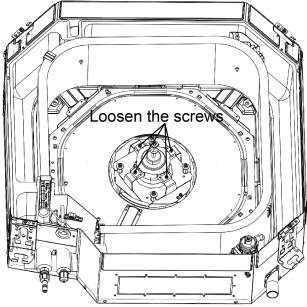
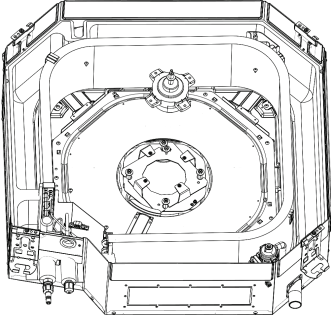
Removal of the cover of electric box and the electric box		
<p>Note: Before removal, make sure power is cut off. During the removal procedure, take good care of all the components, especially the electric components. Do not hit or beat.</p>		
Step	Picture	Work instruction
1.Remove the cover of electric box.		Loosen the screws as shown by the circle and the box. Remove the box in the direction shown by the arrow.
2.Remove the electric box.		Loosen the securing screws and remove the electric box.

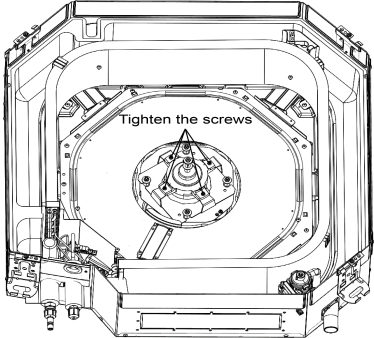
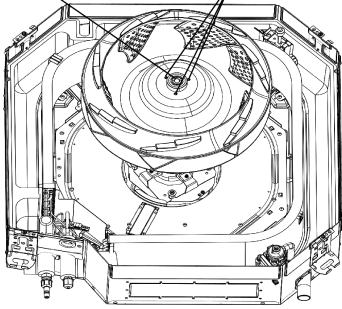
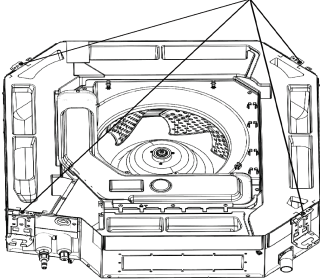
Removal of water tray		
<p>Note: Before removal, make sure power is cut off. During the removal procedure, take good care of all the components.</p>		
Step	Picture	Work instruction
1.Remove the cover plate.		Loosen the screws of cover plate and then remove the cover plate. (As shown in the picture, the circle indicates 6 screws of the cover plate.)
		
2.Remove the water tray.		Loosen the screws of water trap. Pull it up and remove it. The removed water tray is as shown in the picture.

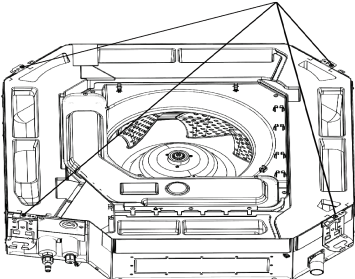
Removal of evaporator		
Note: Make sure power is cut off. Take good care of the copper pipe and aluminum fins. If the removal takes a long time, please put the copper pipe under pressure.		
Step	Picture	Work instruction
1.Remove the screws on the side plate of evaporator.		Remove the screws of evaporator and the screws that connect the upper cover plate to the left and right side plates.
2.Remove the sealing plate the connects to the evaporator valve and the screws that connect to the flange.		Remove the screws of the sealing plate of valve. Then remove the sealing plate of valve. Remove the screws that connect the evaporator to the flange.
3.Remove the evaporator.		Take off the evaporator. The removed evaporator is as shown in the picture.

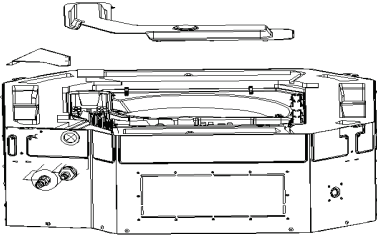
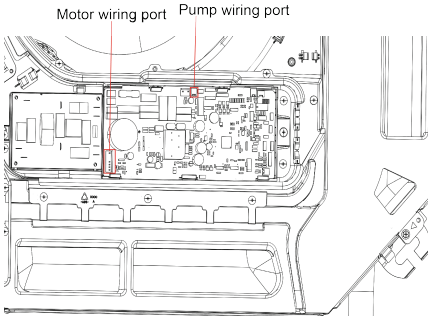
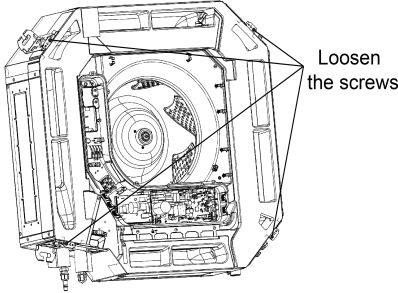
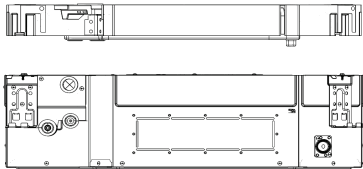
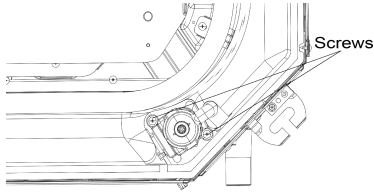
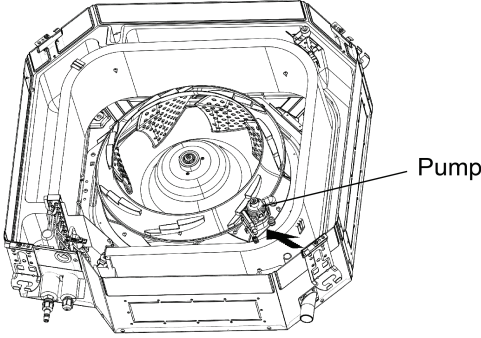
4.2.2.2 Cassette Type Unit

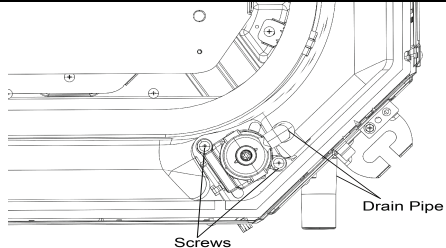
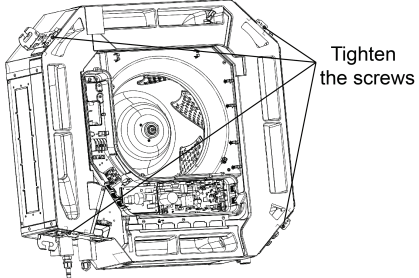
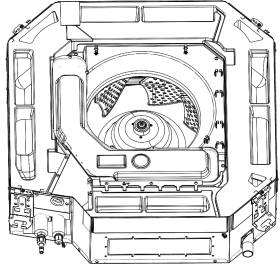
Removal of fan and motor		
Note: Before removing the motor, power must be cut off.		
Step	Picture	Work instruction
1.Remove the front panel.		<p>Turn off the power supply of indoor unit.</p> <p>Push the 4 corner plates in the directions shown by the arrows. Loosen the screws and remove the front panel.</p>
		
2.Remove the cover of electric box and the clamp of power cord.		<p>Twist off the screws. Open the cover of electric box and the clamp of power cord.</p>
3.Remove the motor wire and water pump wire.		<p>Remove the motor wire and water pump of the electric box.</p>

Removal of fan and motor		
Note: Before removing the motor, power must be cut off.		
Step	Picture	Work instruction
4.Remove the water tray.		Loosen the screws in the 4 corners and then remove the water tray.
		
5.Remove the fan.		Use a screwdriver to remove the clamping band of motor. Then remove the fan.
6.Remove motor.		Use a screwdriver to unscrew the 4 screws of motor. Then remove the motor.
		

Removal of fan and motor		
Note: Before removing the motor, power must be cut off.		
Step	Picture	Work instruction
7. Replace and install the motor.		<p>Remove the motor from motor support and then replace with a new motor.</p> <p>Tighten the 4 screws of motor with a screwdriver.</p>
8. Install the fan.		<p>Direct the hole of fan to the motor shaft and then mount on the fan.</p> <p>Tighten the clamping band of motor with a wrench.</p>
9. Install the water tray.		<p>Direct the 4 corners of water tray to the 4 corners of the unit and then press them. Use a screwdriver to tighten the screws in the 4 corners.</p> <p>Connect the power cord and water pump wire.</p> <p>Place back the cover of electric box and the clamp of power cord.</p> <p>Then tighten the screws with a screwdriver.</p>

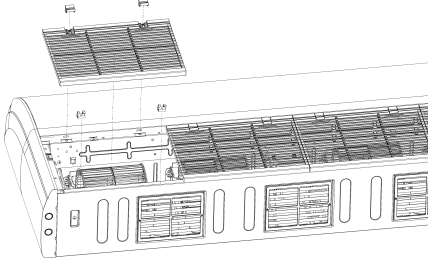
Removal and installation of drain pump		
Step	Picture	Work instruction
1. After removing the front panel as instructed above, loosen the screws of the water tray.		<p>Use a screwdriver to loosen the screws of water tray.</p>

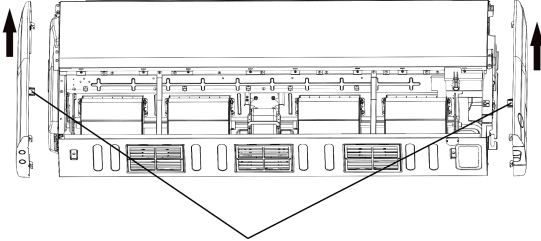
Removal and installation of drain pump		
Step	Picture	Work instruction
2.Remove the cover of electric box and the clamp of power cord.		Twist off the screws and open the cover of electric box and the clamp of power cord.
3.Remove the motor wire and water pump wire.		Remove the motor wire and water pump wire in the electric box.
4.Remove the water tray.		Loosen the screws in the 4 corners and then remove the water tray.
		
5.Remove the drain pipe and loosen the screws of water pump.		Take out the drain pipe and use a screwdriver to loosen the screws of water pump.
6.Remove and replace the pump.		Remove the pump and replace with a new one.

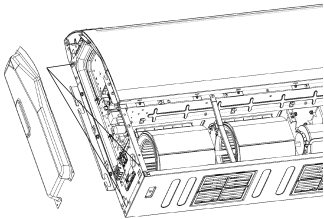
Removal and installation of drain pump		
Step	Picture	Work instruction
7. Connect the drain pipe and tighten the screws of water pump.		Connect the drain pipe and tighten the screws of water pump.
8. Install the water tray and tighten the screws.		Direct the 4 corners of the water tray to the 4 corners of the unit and press them. Then use a screwdriver to tighten the screws.
9. Connect the water pump wire and power cord, and then put back the cover of electric box and the clamp of power cord.		Connect the water pump wire and motor wire according to the wiring diagram. Put back the cover of electric box and the clamp of power cord. Then tighten the screws.

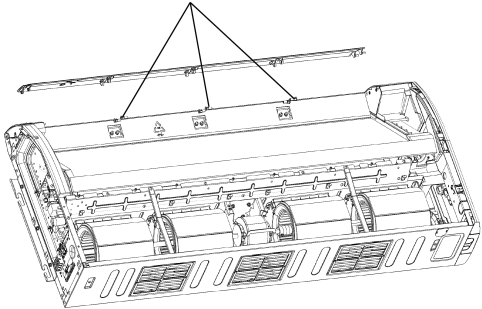
4.2.2.3 Floor Ceiling Unit

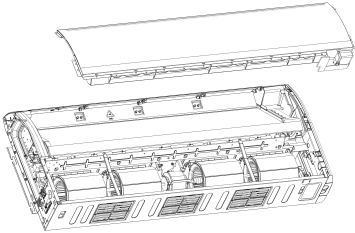
Take model GU160ZD/A-K as an example.

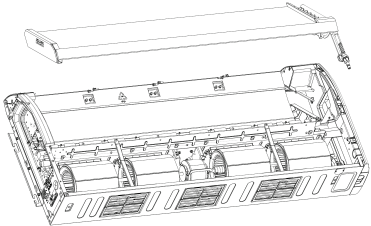
Removal of front grill		
Note: Before removal, make sure power is cut off. During the removal procedure, take good care of all the components. Do not place the filter near any heat source.		
Step	Picture	Work instruction
Remove the sub-assembly of front grill.		Twist off the 2 hooks of the grill and the screws of the hooks. Open the grill and remove 2 lower clamps. Then remove the grill.

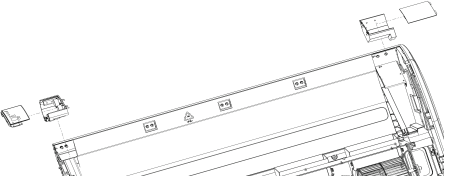
Remove the right and left decorative boards		
Note: Before removal, make sure power is cut off. During the removal procedure, take good care of all the components. Do not scratch the appearance components.		
Step	Picture	Work instruction
Remove the left and right panels.		Use a screwdriver to loosen the screws, as shown in the picture. Then pull the right and left panels upward (Lines in the picture indicate the positions of screws).

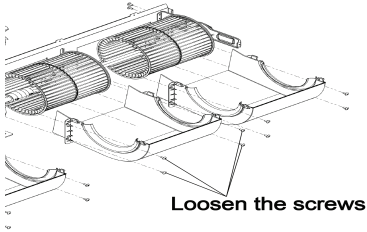
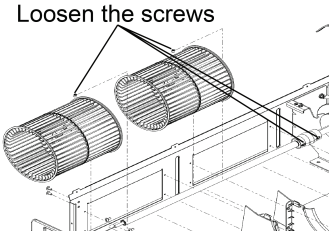
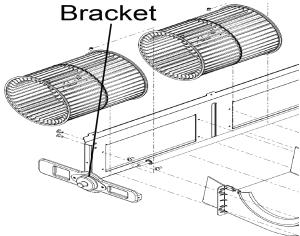
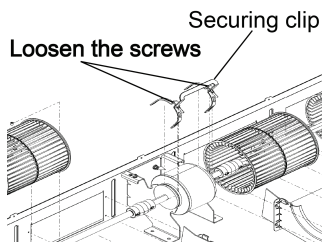
Removal of electric box assembly		
Note: Before removal, make sure power is cut off. During the removal procedure, take good care of all the components, especially the components in electric box. Protect it from water and collision.		
Step	Picture	Work instruction
Remove the electric box.		Unscrew 34 screws as shown in the left picture and then remove the electric box.

Removal of air guide louver		
Note: Before removal, make sure power is cut off. During the removal procedure, take good care of all the components, especially the connectors of air guide louver.		
Step	Picture	Work instruction
Remove the air guide louver assembly.		Remove the air guide louver from its supporting assembly. Then take off the connectors from the swing motor. (As shown in the picture, the lines indicate the supporting assembly).

Removal of water tray		
Note: Before removal, make sure power is cut off. During the removal procedure, take good care of all the components.		
Step	Picture	Work instruction
Remove the water tray.		Remove the water tray.

Removal of evaporator		
Note: Make sure power is cut off. Take good care of the copper pipe and aluminum fins. If the removal takes a long time, seal the copper pipe.		
Step	Picture	Work instruction
Remove the evaporator assembly.		Twist off the 6 screws of the evaporator, 3 screws of the plate board of water releasing flume, and 2 screws of the water tray. Then remove the evaporator.

Removal of display panel and fan assembly		
Note: Before removal, make sure power is cut off. During the removal procedure, take good care of all the components.		
Step	Picture	Work instruction
Remove the display panel and fan assembly.		First remove the display panel, next the bracket and then the swing motor mounting plate.

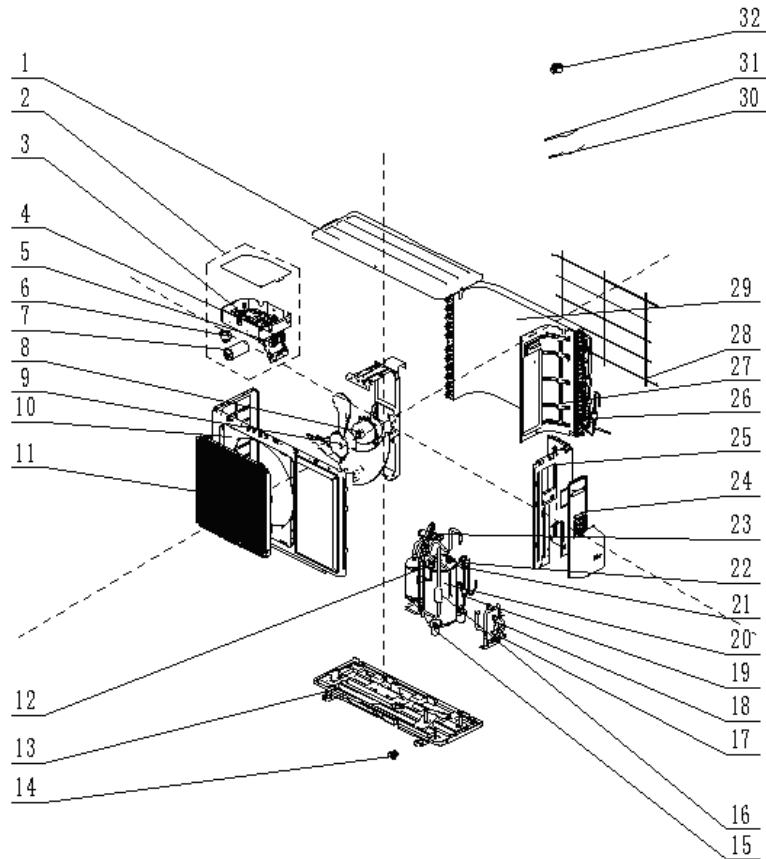
Removal of fan and motor		
Note: Before removal, make sure power is cut off. During the removal procedure, take good care of all the components, especially the screws of fan.		
Step	Picture	Work instruction
1.Remove the volutes.	 <p>Loosen the screws</p>	Press the retaining ring at the joint of front and rear volutes. Then pull up the front volute. Then loosen the screws of the rear volute. Lift up the retaining ring of the rear volute and take it off. (As shown in the picture, the lines indicate the screws on both sides of the volutes.
2.Remove the fan.	 <p>Loosen the screws</p>	Loosen the 2 screws of the coupler. Take out the shaft and axial flow fan. Loosen the screws of axial flow fan and remove the axial flow fan.
3.Remove the bearing fixed plate.	 <p>Bracket</p>	Twist off the screws and nuts of bracket. Then remove the bracket.
4.Remove the motor.	 <p>Loosen the screws</p> <p>Securing clip</p>	Loosen the 2 screws of the motor securing clip. Remove the motor securing clip and its assembly.

4.5 Explosive View and Lists of Parts

4.5.1 ODU Explosive View and Lists of Parts

Model: GU50W/A1-K

Product Code: CF021W2630

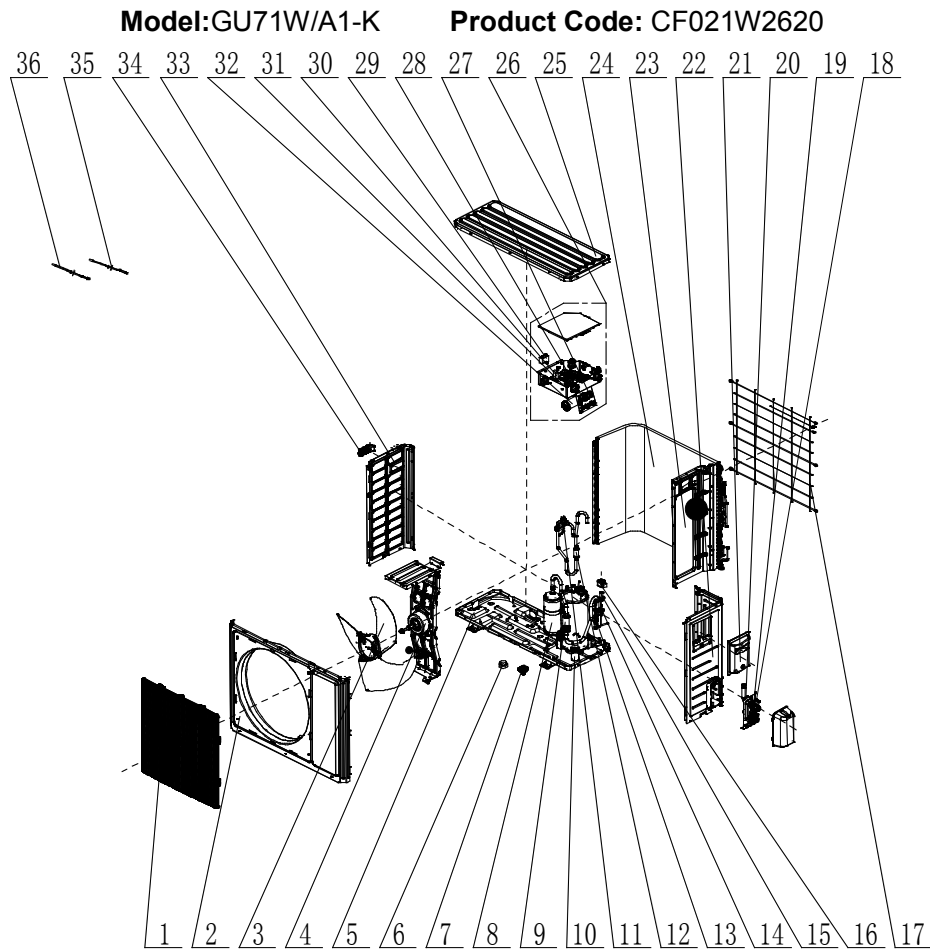


No.	Material Name	Finished Product Code	Quantity
1	Coping	01253107	1
2	Electric Box Assy	012017060058	1
3	Main Board	300027060279	1
4	Terminal Board	3301074702	1
5	Terminal Board	3301074702	1
6	Capacitor	3301074702	1
7	Capacitor	3300008113	1
8	Fan Motor	1501306748	1
9	Axial Flow Fan	10333004	1
10	Front Panel	0153303204	1
11	Front Grill	22413043	3
12	Pressure Protect Switch	4602000603	1
13	Chassis Sub-Assy	017000060300	1

No.	Material Name	Finished Product Code	Quantity
14	Drainage Joint	06123401	1
15	Compressor Gasket	009012000004	1
16	Silencer	07245007	1
17	Valve	07100003	1
18	Valve	07100006	1
19	Strainer A	07210022	1
20	Compressor and Fittings	009001000074	1
21	Electronic Expansion Valve	43042800063	1
22	Electric Expand Valve Fitting	4300034401	1
23	4-Way Valve	030152060266	1
24	Big Handle	262334332	1
25	Right Side Plate	0130317201	1
26	Strainer	07225088	1
27	Clapboard	012334191	1
28	Rear Grill	01473057	1
29	Condenser Assy	01133179	1
30	Temperature Sensor	3900028033	1
31	Temperature Sensor	3900028033	1
32	4 Way Valve Coil	4300040087	1

Note:

Finished Product Code may be changed due to the product improvement, please check the newest information with the sales rep.



No.	Material Name	Finished Product Code	Quantity
1	Front Grill	22415010	1
2	Front Panel	01535013	1
3	Axial Flow Fan	10335008	1
4	Fan Motor	1501506311	1
5	Chassis Sub-assy	017000000171	1
6	Drainage Hole Cap	06813401	3
7	Drainage Joint	06123401	1
8	Compressor and Fittings	009001000217	1
9	Bidirection Strainer	0721212101	1
10	Compressor Gasket	00901200008	1
11	Pressure Protect Switch	4602000603	1
12	Silencer	07245007	1
13	Furcate Filter	07213043	1
14	Strainer	0721304401	1
15	Electronic Expansion Valve	43005016	1
16	Electric Expand Valve Fitting	4300034401	1
17	Rear Grill	01473043	1
18	Cut off Valve	07133157	1
19	Cut off Valve	071302391	1
20	Valve Support Sub-Assy	01713098	1

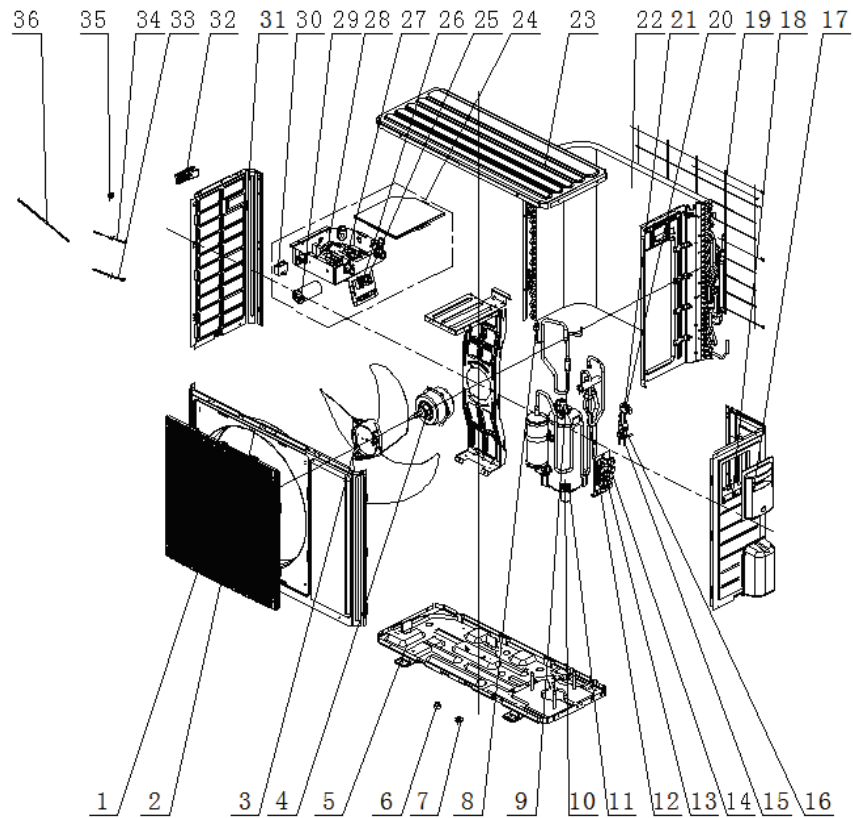
No.	Material Name	Finished Product Code	Quantity
21	Handle	2623525404	1
22	Right Side Plate	0130509402	1
23	Clapboard Sub-Assy	017021060207	1
24	Condenser Assy	011002060544	1
25	Coping	012049000007	1
26	Electric Box Assy	100002064700	1
27	Terminal Board	422000000007	1
28	Terminal Board	42000100000101	1
29	Capacitor	3300008113	1
30	Main Board	300027060279	1
31	AC Contactor	44010245	1
32	Capacitor	3301074706	1
33	Left Side Plate	01305093	1
34	Handle	26233053	1
35	Temperature Sensor	3900007207	1
36	Temperature Sensor	3900800004902G	1

Note:

The Finished Product Code may be changed due to the product improvement, please check the newest information with the sales rep.

Model: GU85W/A1-K

Product Code: CF021W2650

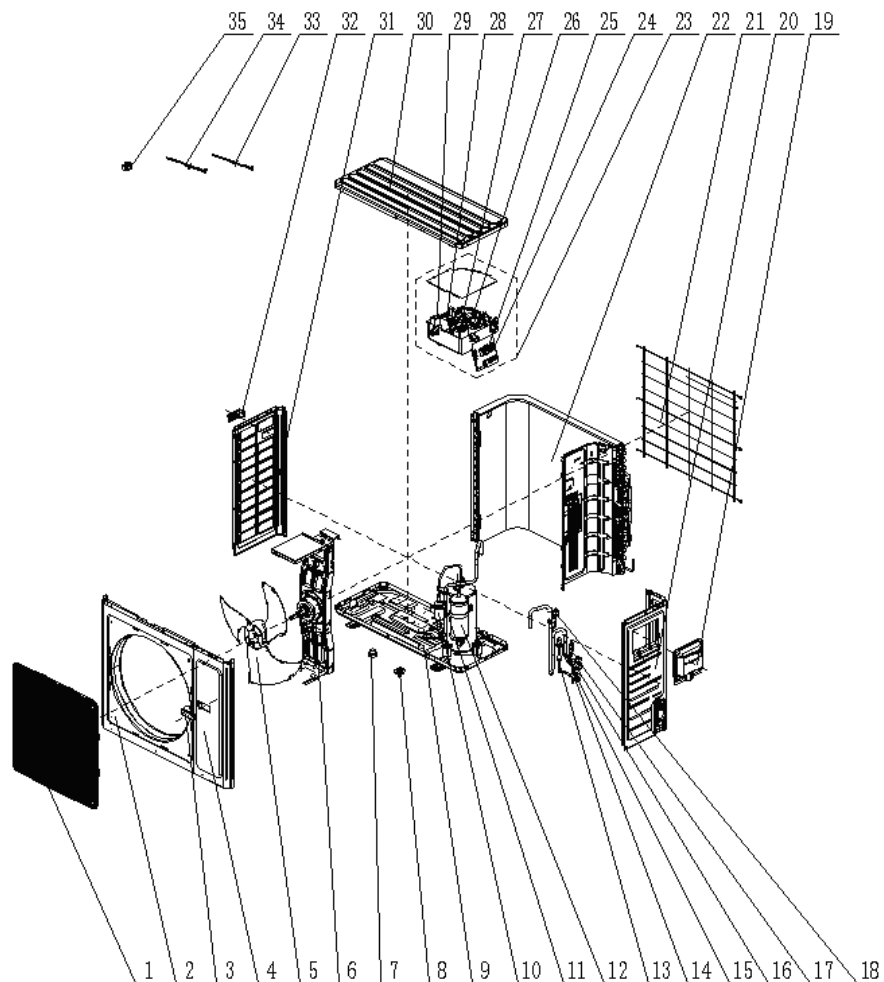


No.	Material Name	Finished Product Code	Quantity
1	Front Grill	22415010	1
2	Front Panel	01535013	1
3	Axial Flow Fan	10335008	1
4	Fan Motor	1501506311	1
5	Chassis Sub-Assy	017000000171	1
6	Drainage Hole Cap	06813401	3
7	Drainage Joint	06123401	1
8	Pressure Protect Switch	4602000603	1
9	Silencer	0724300102	1
10	Compressor And Fittings	009001060051	1
11	Compressor Gasket	00901200008	1
12	4-Way Valve	4300008201	1
13	Cut Off Valve	07133157	1
14	Cut Off Valve	071302391	1
15	Furcate Filter	07213043	1
16	Strainer	0721304401	1
17	Handle	2623525404	1
18	Right Side Plate	0130509402	1
19	Rear Grill	01473043	1
20	Electric Expand Valve Fitting	4300034401	1
21	Electronic Expansion Valve	43005016	1

No.	Material Name	Finished Product Code	Quantity
22	Condenser Assy	011002060622	1
23	Coping	012049000007	1
24	Electric Box Assy	100002064700	1
25	Terminal Board	42000100000101	1
26	Terminal Board	422000000007	1
27	Main Board	300027060279	1
28	AC Contactor	44010245	1
29	Capacitor	3301074706	1
30	Capacitor	3300008107	1
31	Left Side Plate	01305093	1
32	Handle	26233053	1
33	Temperature Sensor	3900800004902G	1
34	Temperature Sensor	3900007207	1
35	Magnet Coil	4300040045	1
36	Electrical Heater	7651521241	1

Model:GU100W/A1-M

Product Code: CF021W2640



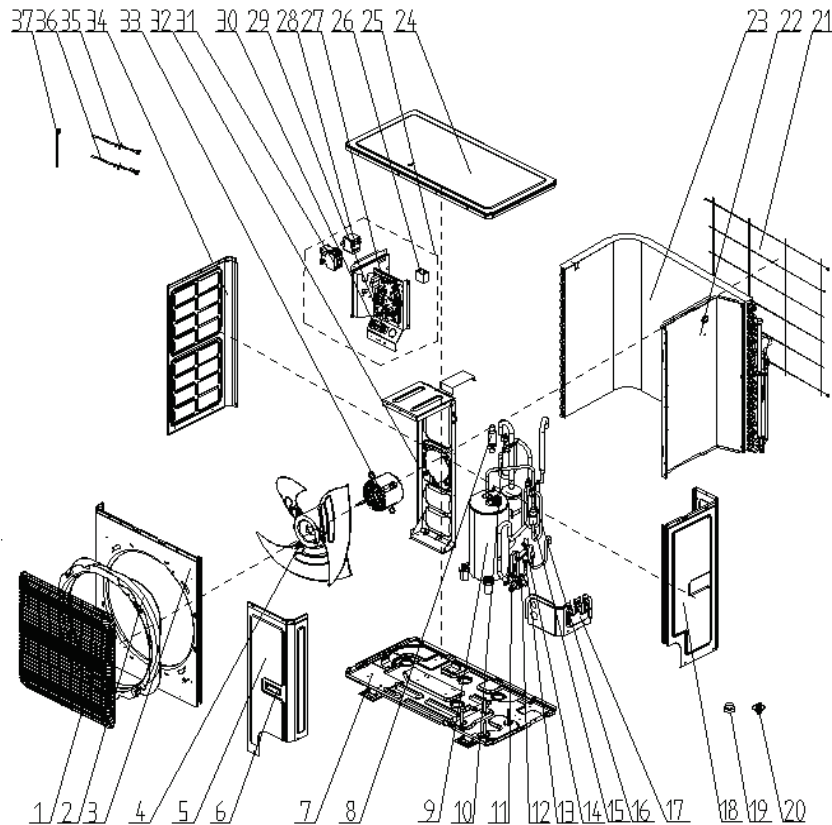
No.	Material Name	Finished Product Code	Quantity
1	Rear Grill	01475013	1
2	Cabinet	01435004	1
3	Handle	26233053	1
4	Front Side Plate	01305086	1
5	Axial Flow Fan	10335014	1
6	Drainage Hole Cap	06813401	3
7	Drainage Joint	06123401	3
8	Chassis Sub-Assy	017000000274	1
9	Fan Motor	15010100000112	1
10	Compressor and Fittings	009001060152	1
11	Compressor Gasket	00901200008	1
12	Cut Off Valve	071302391	1
13	Cut Off Valve	07133157	1
14	Right Side Plate	0130504401	1
15	Big Handle	26235001	1
16	Magnet Coil	4300040045	1
17	Electric Expand Valve Fitting	4300034419	1
18	Temperature Sensor	3900007205	1
19	Temperature Sensor	3900028020G	1
20	Front Grill	22415011	1
21	Condenser Assy	0112520030701	1
22	Strainer	0721304401	1
23	Strainer	07225088	1
24	Strainer	0721212101	1
25	Electronic Expansion Valve	072009000018	1
26	Pressure Protect Switch	4602000603	1
27	4-way Valve	4300008201	1
28	Coping	01255020	1
29	Pressure Protect Switch	46020007	1
30	Silencer	0724300102	1
31	Electric Box Assy	100002064929	1
32	Terminal Board	422000000007	1
33	Terminal Board	42018000593	1
34	Main Board	300027060277	1
35	AC Contactor	44010287	1
36	Phase Reverse Protector	430055000001	1

No.	Material Name	Finished Product Code	Quantity
37	Capacitor	3301074708	1
38	Left Side Plate	01305043	1
39	Left Handle	26235401	1

Note:

The Finished Product Code may be changed due to the product improvement, please check the newest information with the sales rep.

Model:GU125W/A1-M **Product Code:** CF021W2660



No.	Material Name	Finished Product Code	Quantity
1	Front Grill	01572800003	1
2	Diversion Circle	10474100003	1
3	Cabinet	012022000003	1
4	Axial Flow Fan	1043410000801	1
5	Front Side Plate	012050000007	1
6	Handle	26904100016	2
7	Base Plate Sub-Assay	01700006013501	1
8	Compressor and Fittings	009001060110	1
9	Strainer	07413900026	1
10	Cut off Valve	07103030	1
11	Cut off Valve	07130209	1
12	Pressure Protect Switch	46020007	1
13	Pressure Protect Switch	4602000603	1

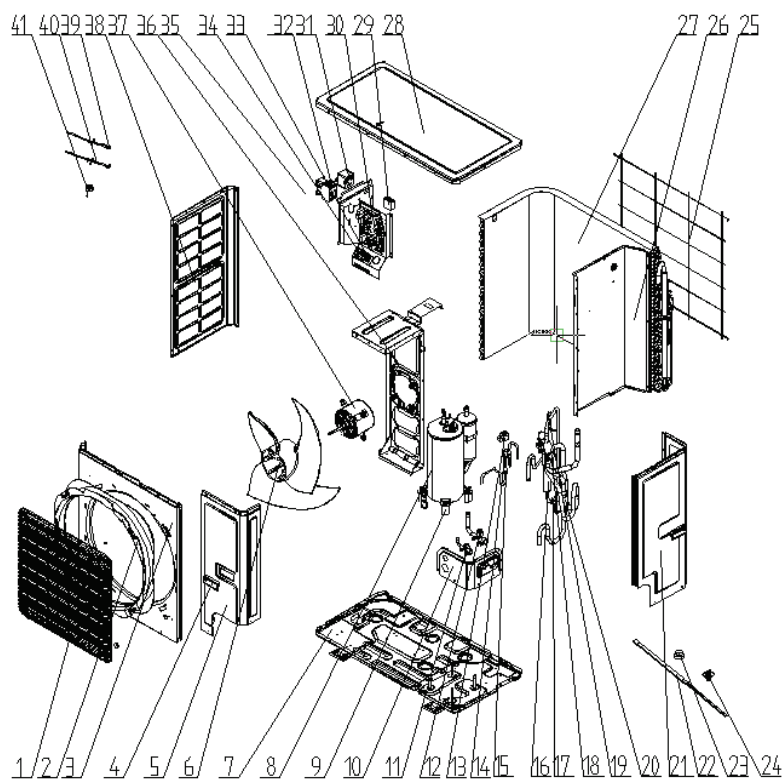
No.	Material Name	Finished Product Code	Quantity
14	Strainer	0721304401	2
15	Electronic Expansion Valve	43005017	1
16	Strainer	0721304401	1
17	Valve Support Sub-Assay	017104000021	1
18	Rear Side Plate	012076000021	1
19	Drainage Hole Cap	76715005	3
20	Drainage Joint	26113009	1
21	Rear Grill	01574100014	1
22	Clapboard Sub-Assay	017021000138	1
23	Condenser Assay	011002060347	1
24	Coping	01264100052	1
25	Electric Box Assay	100002062936	1
26	Capacitor	3301074719	1
27	Main Board	300027060278	1
28	Phase Reverse Protector	430055000001	1
29	Terminal Board	422000000007	1
30	Terminal Board	42018000593	1
31	AC Contactor	441007000001	1
32	Motor Support	012048000023	1
33	Fan Motor	15010106006101	1
34	Left Side Plate	012055000007	1
35	Temperature Sensor	39008000049G	1
36	Temperature Sensor	3900007201	1
37	Electric Expand Valve Fitting	43000344	1

Note:

The Finished Product Code may be changed due to the product improvement, please check the newest information with the sales rep.

Model:GU140W/A1-M

Product Code: CF021W2520



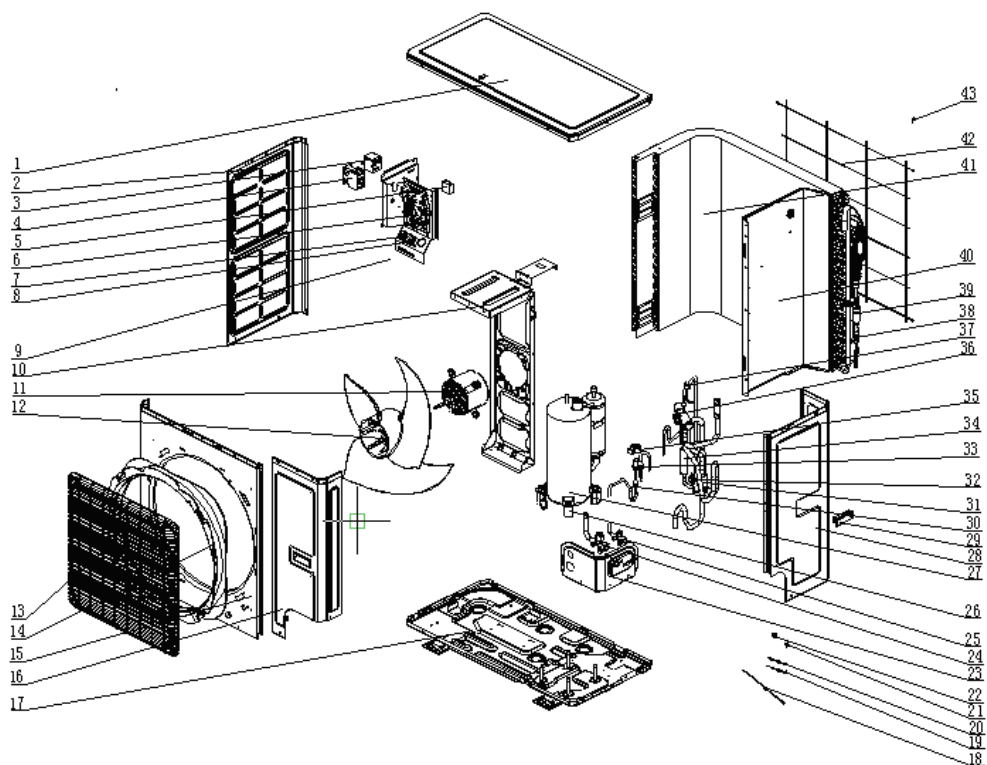
No.	Material Name	Finished Product Code	Quantity
1	Front Grill	01572800003	1
2	Diversion Circle	10474100003	1
3	Cabinet	012022000003	1
4	Handle	26904100016	2
5	Front Side Plate	012050000007	1
6	Axial Flow Fan	1043410000801	1
7	Base Plate Sub-Assy	01700006013501	1
8	Compressor and Fittings	009001060110	1
9	Compressor Gasket	009012000001	1
10	Valve Support Sub-Assy	017104000021	1
11	Cut off Valve	07103030	1
12	Cut off Valve	07130209	1
13	Electric Expand Valve Fitting	43000344	1
14	Electronic Expansion Valve	43005017	1
15	Strainer	07413900026	1
16	Silencer 1	07243050	1
17	Pressure Protect Switch	46020007	1
18	4-way Valve	072007000001	1
19	Pressure Protect Switch	4602000603	1
20	Strainer	0721304401	1
21	Rear Side Plate	012076000021	1

No.	Material Name	Finished Product Code	Quantity
22	Electrical Heater(Compressor)	7651540735	1
23	Drainage Hole Cap	76715005	3
24	Drainage Joint	26113009	1
25	Rear Grill	01574100014	1
26	Clapboard Sub-Assy	017021000138	1
27	Condenser Assy	011002060190	1
28	Coping	01264100052	1
29	Capacitor	3301074719	1
30	Main Board	300027060277	1
31	Phase Reverse Protector	430055000001	1
32	AC Contactor	441007000001	1
33	Terminal Board	42018000593	1
34	Terminal Board	422000000007	1
35	Electric Box Assy	100002063567	1
36	Motor Support Sub-Assy	01701200006201	1
37	Fan Motor	15010106006101	1
38	Left Side Plate	012055000007	1
39	Temperature Sensor	3900007201	1
40	Temperature Sensor	3900030904	1
41	Magnet Coil	4300040045	1

Note:

The Finished Product Code may be changed due to the product improvement, please check the newest information with the sales rep.

Model:GU160W/A1-M Product Code:CF021W2560



No.	Material Name	Finished Product Code	Quantity
1	Coping	01264100052	1
2	Left Side Plate	012055000007	1
3	Phase Reverse Protector	430055000001	1
4	AC Contactor	441007000001	1
5	Capacitor	3301074719	1
6	Main Board	300027060277	1
7	Terminal Board	42018000593	1
8	Terminal Board	422000000007	1
9	Electric Box Assy	100002063567	1
10	Motor Support Sub-Assy	017012000062	1
11	Fan Motor	15010106006101	1
12	Axial Flow Fan	1043410000801	1
13	Front Grill	01572800003	1
14	Diversion Circle	10474100003	1
15	Cabinet	012022000003	1
16	Front Side Plate	012050000007	1
17	Base Plate Sub-Assy	01700006013502	1
18	Electrical Heater(Compressor)	7651540735	1
19	Temperature Sensor	3900030904	1
20	Temperature Sensor	3900030904	1
21	Drainage Joint	26113009	1

No.	Material Name	Finished Product Code	Quantity
22	Drainage Hole Cap	76715005	3
23	Valve Support Sub-Assy	01710400021	1
24	Cut off Valve	07103030	1
25	Cut off Valve	07130209	1
26	Compressor Gasket	00901200001	1
27	Compressor and Fittings	009001000235	1
28	Rear Side Plate	01207600021	1
29	Handle	26904100016	2
30	Strainer	0721212101	1
31	Strainer	0721212101	1
32	Pressure Protect Switch	46020007	1
33	Electronic Expansion Valve	43005017	1
34	Silencer 1	07243050	1
35	Electric Expand Valve Fitting	43000344	1
36	4-way Valve	072007000001	1
37	Pressure Protect Switch	46020007	1
38	Strainer	0721212101	1
39	Silencer	07245012	1
40	Clapboard Sub-Assy	017021000138	1
41	Condenser Assy	01100200031501	1
42	Rear Grill	01574100014	1
43	Magnet Coil	4300040045	1

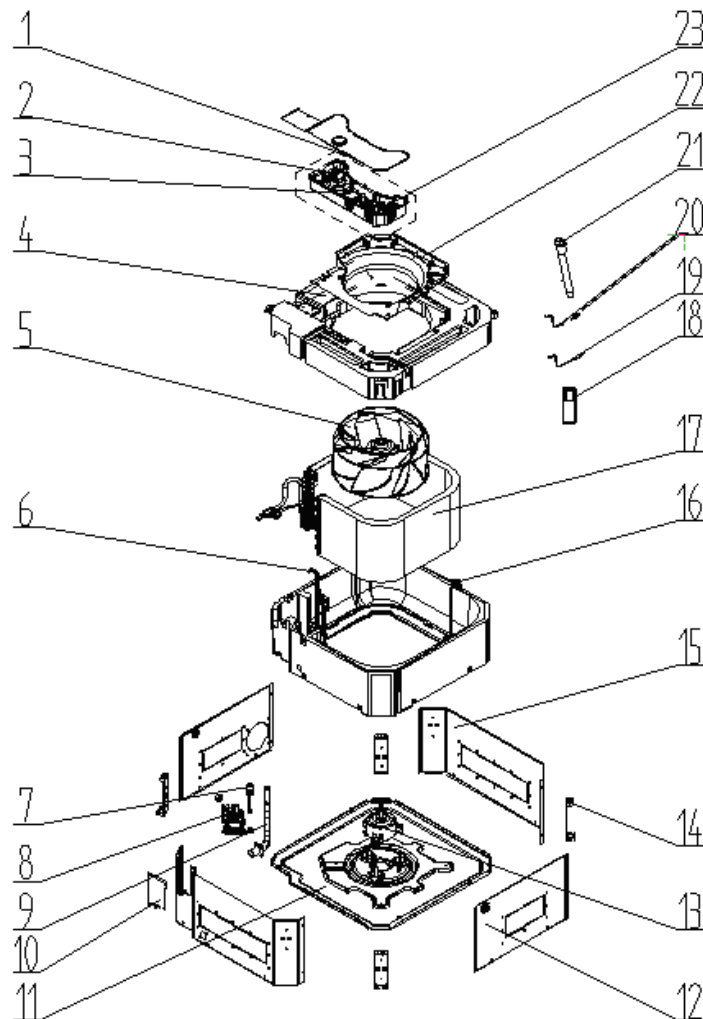
Note:

The Finished Product Code may be changed due to the product improvement, please check the newest information with the sales rep.

4.5.2 IDU Explosive View and Lists of Parts

Model:GUD50T/A1-K

Product Code: ET010N1750



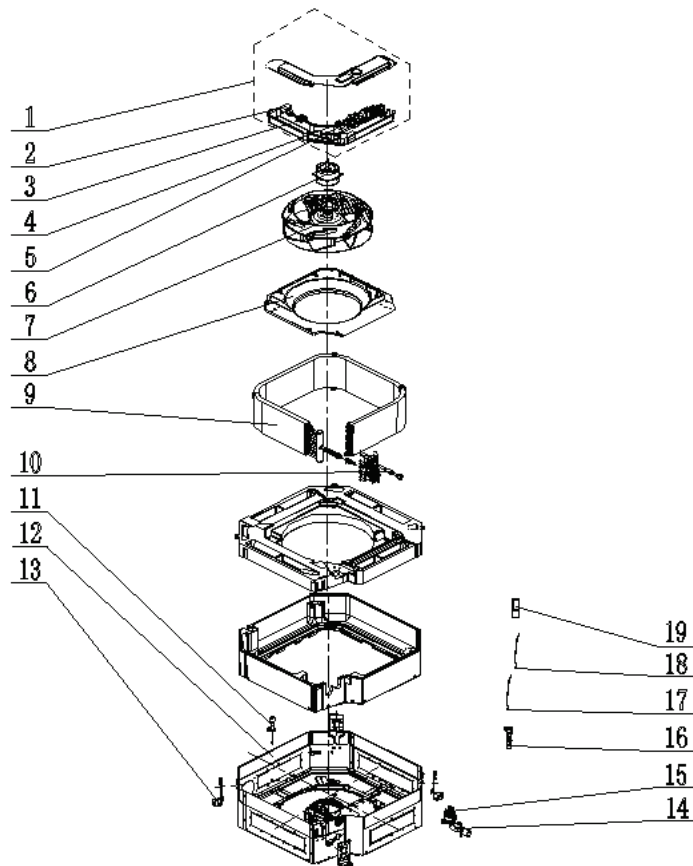
No.	Material Name	Finished Product Code	Quantity
1	Electric Box Assy	100002003276	1
2	Terminal Board	42011106	1
3	Main Board	300002060465	1
4	Water Tray Assy	000069060065	1
5	Centifugal Fan	103003060008	1
6	Connection Sheet Sub-Assy	017025060047	1
7	Water Level Switch	430024000005	1
8	Water Pump	4313800005802	1
9	Drain Pipe	200070060005	1
10	Sealplate	110000061319	1
11	Seat Board Sub-Assy	017080060023	1

No.	Material Name	Finished Product Code	Quantity
12	Side Plate	01201006017701	1
13	Brushless DC Motor	150104060012	1
14	Mounting Rack Sub-Assy	017044060011	1
15	Side Plate	012010060175	1
16	Support	012060061048	1
17	Evaporator Assy	011001060300	1
18	Remote Control	30510516	1
19	Room Sensor	39000191	1
20	Temperature Sensor	390001921	1
21	Drain Hose Sub-Assy	007008000001	1
22	Flow Guide Loop	200150060003	1
23	Terminal Board	42018000551	1

Note:

The Finished Product Code may be changed due to the product improvement, please check the newest information with the sales rep.

Model:GU71T/A1-K **Product Code:** ET010N1760

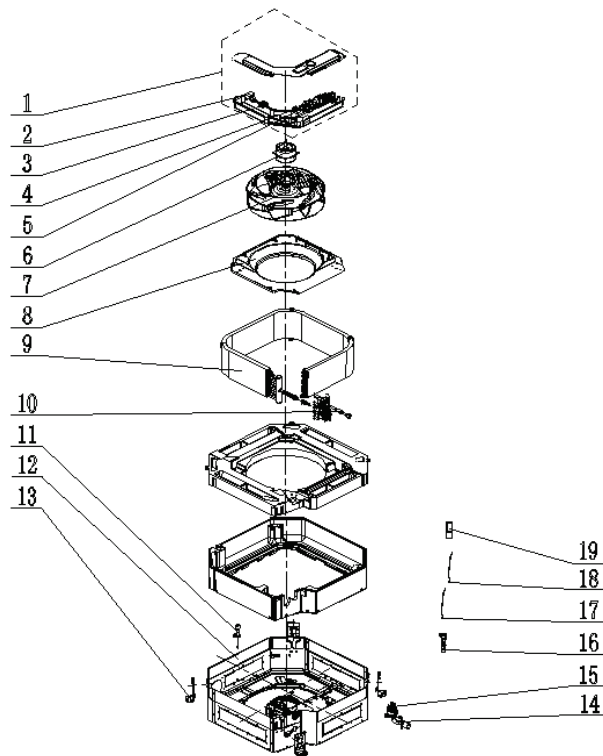


No.	Material Name	Finished Product Code	Quantity
1	Electric Box Assay	100002063468	1
2	Capacitor	3301074705	1
3	Terminal Board	42018000551	1
4	Terminal Board	42011106	1
5	Main Board	300002060419	1
6	Fan Motor	15709400011	1
7	Centrifugal Fan	10429400004	1
8	Diversion Circle	26909400067	1
9	Evaporator Assay	011001000115	1
10	Strainer	07213050	1
11	Liquid Level Switch	4502021602	1
12	Rear Case Assay	01519400003	1
13	Body Installing Plate	01332701	4
14	Drainage Pipe Sub-Assay	26909400055	1
15	Water Pump	43138000058	1
16	Drain Hose Sub-Assay	05232702	1
17	Temperature Sensor	390000453	1
18	Temperature Sensor	39000286	1
19	Remote Control	30510516	1

Note:

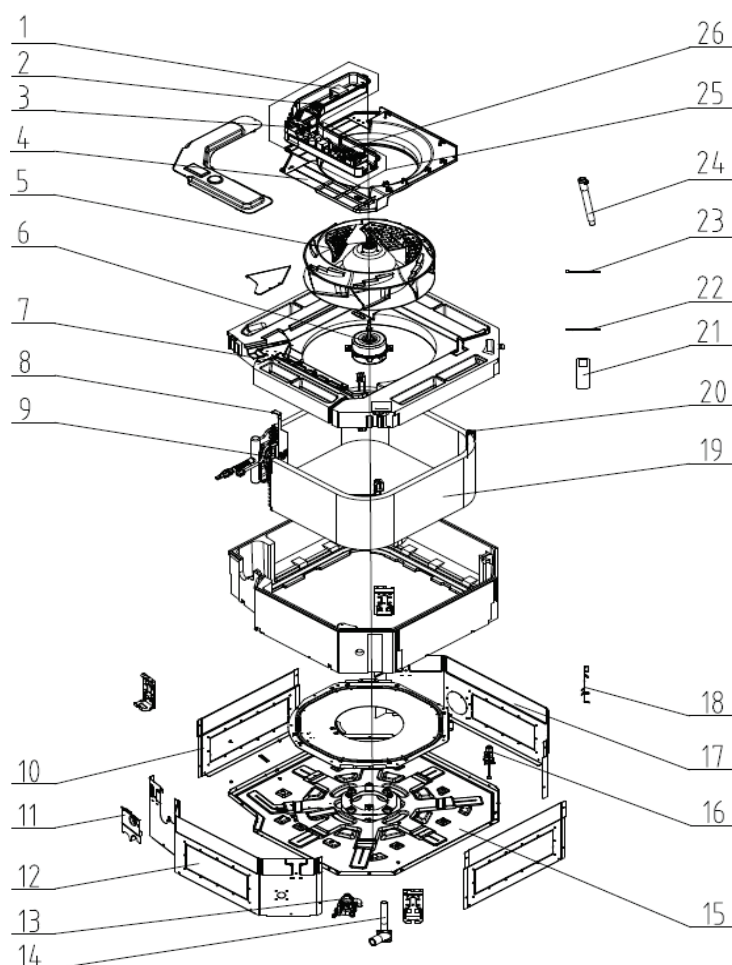
The Finished Product Code may be changed due to the product improvement, please check the newest information with the sales rep.

Model:GU85T/A1-K Product Code: ET010N1820



No.	Material Name	Finished Product Code	Quantity
1	Electric Box Assy	100002063468	1
2	Capacitor	3301074705	1
3	Terminal Board	42018000551	1
4	Terminal Board	42011106	1
5	Main Board	300002060419	1
6	Fan Motor	15709400011	1
7	Centrifugal Fan	10429400004	1
8	Diversion Circle	26909400067	1
9	Evaporator Assy	011001000115	1
10	Strainer	07213050	1
11	Liquid Level Switch	4502021602	1
12	Rear Case Assy	01519400003	1
13	Body Installing Plate	01332701	4
14	Drainage Pipe Sub-Assay	26909400055	1
15	Water Pump	43138000058	1
16	Drain Hose Sub-Assay	05232702	1
17	Temperature Sensor	390000453	1
18	Temperature Sensor	39000286	1
19	Remote Control	30510516	1

Model:GU100T/A1-K **Product Code:** ET010N1770



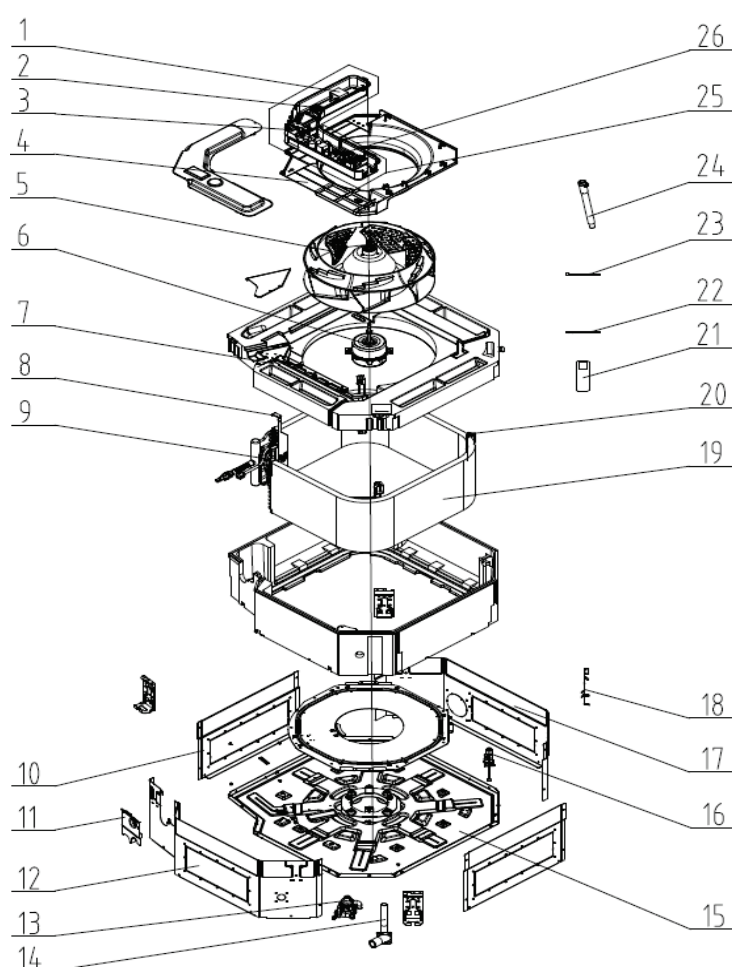
No.	Material Name	Finished Product Code	Quantity
1	Electric Box Assay	100002062940	1
2	Capacitor	3301074706	1
3	Diversion Circle	26909400067	1
4	Water Tray Assay	000069060008	1
5	Centrifugal Fan	10429400004	1
6	Liquid Level Switch	4502021601	1
7	Body Installing Plate	01332701	4
8	Seal Plate Assay	01499400003	1
9	Fixed Mount	01849400020	3
10	Evaporator Assay	01100100025401	1
11	Side Plate 1	01319400049	1
12	Side Plate 3	01319400051	2
13	Side Plate 2	01319400050	1
14	Seat Board Sub-Assay	02229400011	1
15	Strainer	07213050	1
16	Fan Motor	1570940001102	1
17	Water Pump	43138000058	1
18	Drainage Pipe Sub-Assay	26909400055	1

No.	Material Name	Finished Product Code	Quantity
19	Remote Control	305001060020	1
20	Temperature Sensor	390000453	1
21	Temperature Sensor	39000286	1
22	Drain Hose	05232044	1
23	Terminal Board	42018000551	1
24	Terminal Board	42011106	1
25	Main Board	300002060419	1

Note:

The Finished Product Code may be changed due to the product improvement, please check the newest information with the sales rep.

Model:GU125T/A1-K **Product Code:** ET010N1830



No.	Material Name	Finished Product Code	Quantity
1	Electric Box Assy	100002062940	1
2	Capacitor	3301074706	1
3	Diversion Circle	26909400067	1
4	Water Tray Assy	000069060008	1
5	Centrifugal Fan	10429400004	1
6	Liquid Level Switch	4502021601	1

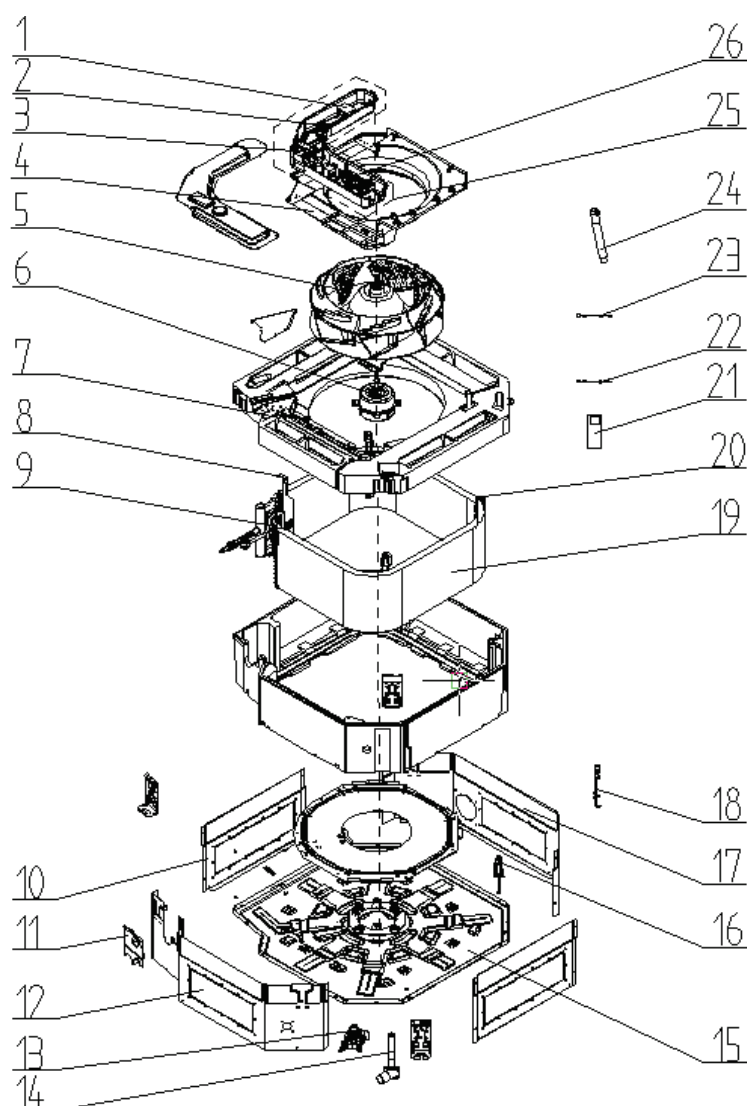
No.	Material Name	Finished Product Code	Quantity
7	Body Installing Plate	01332701	4
8	Seal plate Assay	01499400003	1
9	Fixed Mount	012078060022	3
10	Evaporator Assay	011001060201	1
11	Side Plate 1	01319400049	1
12	Side Plate 3	01319400051	2
13	Side Plate 2	01319400050	1
14	Seat Board Sub-Assay	02229400011	1
15	Support	012060060787	1
16	Fan Motor	1570940001102	1
17	Water Pump	43138000058	1
18	Drainage Pipe Sub-Assay	26909400055	1
19	Remote Control	305001060020	1
20	Temperature Sensor	39000286	1
21	Temperature Sensor	390000453	1
22	Drain Hose	05232044	1
23	Terminal Board	4201800002601	1
24	Terminal Board	42011106	1
25	Main Board	300002060419	1

Note:

The Finished Product Code may be changed due to the product improvement, please check the newest information with the sales rep.

Model:GU140T/A1-K Product Code: ET01001590

Model GU160T/A1-K Product Code: ET01001580



No.	Material Name	Finished Product Code	Quantity
1	Capacitor	3301074708	1
2	Terminal Board	42018000551	1
3	Terminal Board	42011106	1
4	Diversion Circle	10479400002	1
5	Centrifugal Fan	10429400003	1
6	Fan Motor	15709400010	1
7	Water Tray Assay	000069060008	1
8	Connection Sheet Assay	01349400025	1
9	Strainer	07415210	1
10	Side Plate 3	01319400036	2
11	Seal plate Assay	01499400001	1
12	Side Plate 2	01319400026	1
13	Water Pump	43138000058	1

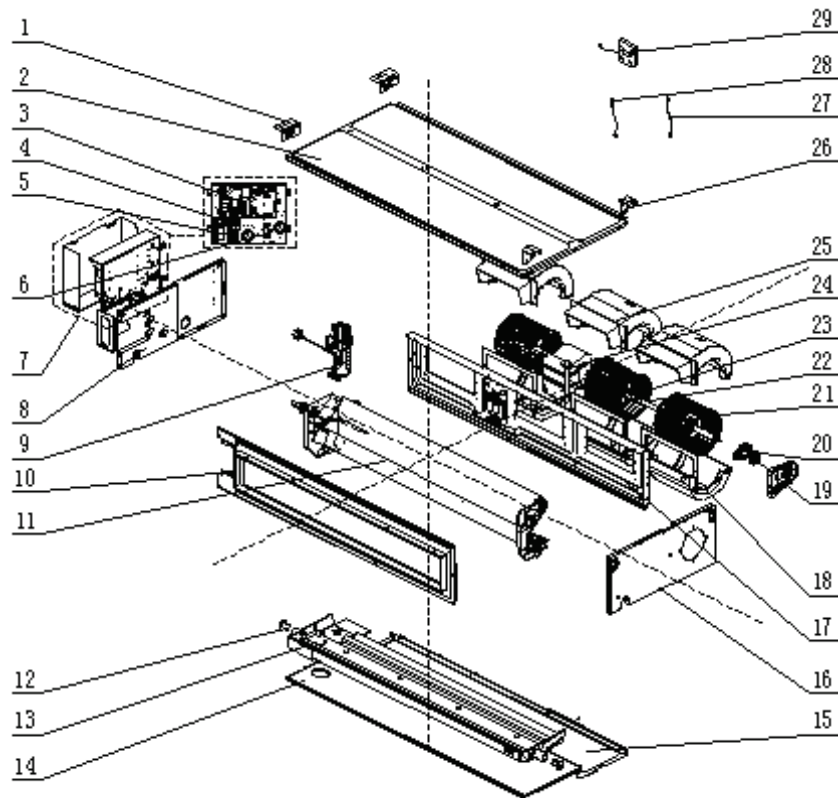
No.	Material Name	Finished Product Code	Quantity
14	Drainage Pipe Sub-Assay	26909400055	1
15	Seat Board Sub-Assay	02229400011	1
16	Liquid Level Switch	4502021601	1
17	Side Plate 1	01319400025	1
18	Body Installing Plate	01332701	4
19	Evaporator Assay	011001000225	1
20	Fixed Mount1	01849400007	3
21	Remote Controller	305001060020	1
22	Temperature Sensor	390000453	1
23	Temperature Sensor	39000286	1
24	Drain Hose Sub-Assay	05232702	1
25	Electric Box Assay	100002062906	1
26	Main Board	300002060419	1

Note:

The Finished Product Code may be changed due to the product improvement, please check the newest information with the sales rep.

Model:GU50P/A1-K

Product Code: CF022N2330



No.	Material Name	Finished Product Code	Quantity
1	Water Tray	01344100034	1
2	Hook 2	0126520014801	1
3	Top Cover Board Sub-Assy	300002060315	1
4	Main Board	42011106	1
5	Terminal Board	42018000551	1
6	Terminal Board	3301074704	1
7	Capacitor	100002064143	3
8	Electric Box Assy	01315200168	3
9	Left Side Plate Sub-Assy	0721200102	1
10	Strainer	01375200041	3
11	Air Outlet Frame Sub-Assy	011001060080	1
12	Evaporator Assy	76815200002	1
13	Rubber Plug	110000002214	1
14	Water Tray	01265200152	1
15	Cover Plate Sub-Assy	011657060129	1
16	Right Side Plate Sub-Assy	01315200167	1
17	Blower Mounting Plate Sub-Assy	01325200095	1

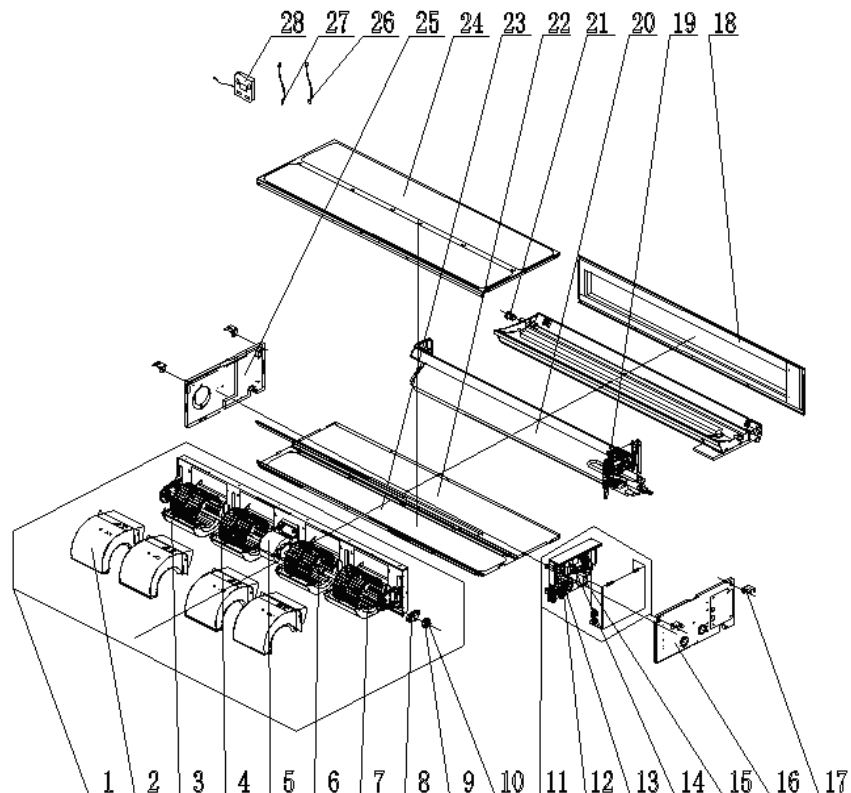
No.	Material Name	Finished Product Code	Quantity
18	Propeller Housing(Lower)	26905200123	1
19	Bearing Holder Sub-Assy	26151139	1
20	Support Of Motor Bearing	02285200001	2
21	Centrifugal Fan	10425200004	1
22	Rotary Axis Sub-Assy	73018761	1
23	Joint Slack	73018731	1
24	Fan Motor	150101000074	1
25	Propeller Housing(Upper)	26905200122	1
26	Hook	01344100034	2
27	Temperature Sensor	3900004508	1
28	Temperature Sensor	390001921	1
29	Display Board	300001000204	1

Note:

The Finished Product Code may be changed due to the product improvement, please check the newest information with the sales rep.

Model:GU71P/A1-K

Product Code: CF022N2360



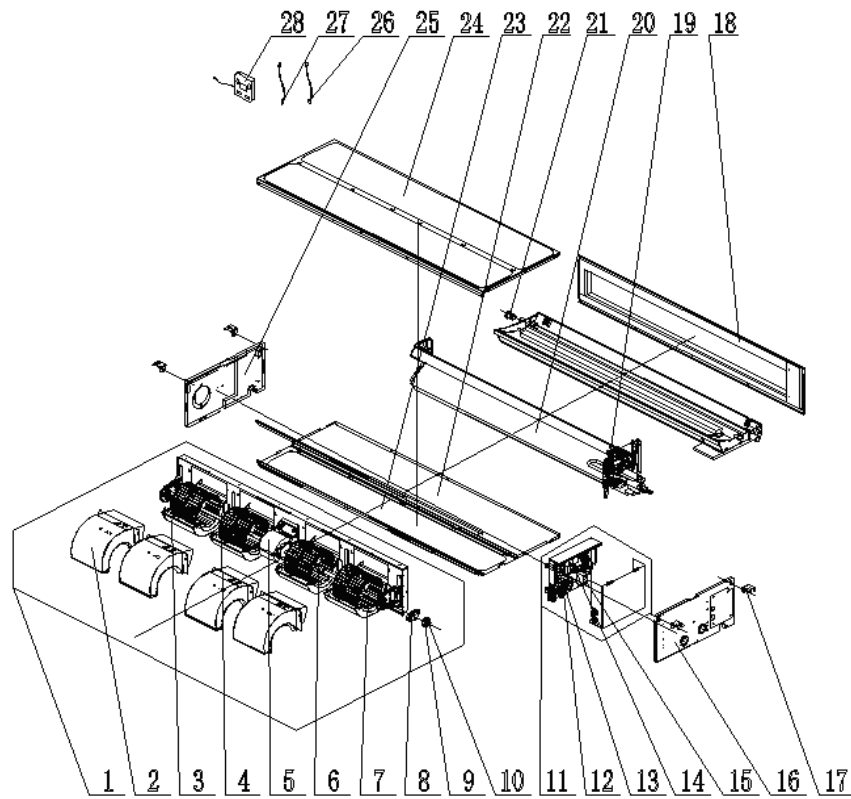
No.	Material Name	Finished Product Code	Quantity
1	Centrifugal fan assy	000052000168	1
2	Propeller Housing(Upper)	26905200122	4

No.	Material Name	Finished Product Code	Quantity
3	Propeller Housing(Lower)	26905200123	4
4	Centrifugal Fan	10425200004	4
5	Fan Motor	150101000059	1
6	Joint Slack	73018731	2
7	Rotary Axis Sub-Assay	73018761	2
8	Support Of Motor Bearing	02285200001	2
9	Bearing Holder	26151138	1
10	Fan Bearing	76512210	1
11	Electric Box Assay	100002063341	1
12	Terminal Board	42018000551	1
13	Terminal Board	42011106	1
14	Main Board	300002060315	1
15	Capacitor CBB61S	3301074705	1
16	Left Side Plate Sub-Assay	01315200168	1
17	Hook 2	01344100034	4
18	Air Outlet Frame Sub-assy	01375200041	1
19	Strainer	0721200102	1
20	Evaporator Assay	011001060080	1
21	Water Tray	26905200031	1
22	Bottom Cover Plate	01265200156	1
23	Cover Plate Sub-Assay	011657060059	1
24	Top Cover Board Sub-assy	0126520014801	1
25	Right Side Plate Sub-Assay	01315200167	1
26	Temperature Sensor	390001921	1
27	Temperature Sensor	390000451	1
28	Display Board	300001000204	1

Note:

The Finished Product Code may be changed due to the product improvement, please check the newest information with the sales rep.

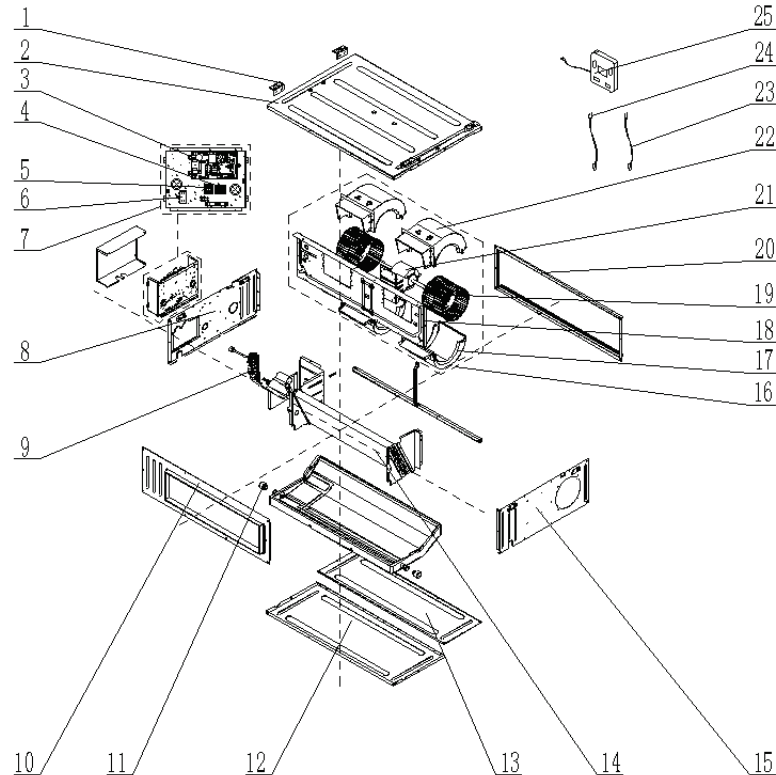
Model:GU85P/A1-K Product Code: CF022N1860



No.	Material Name	Finished Product Code	Quantity
1	Centrifugal fan assy	000052000168	1
2	Propeller Housing(Upper)	26905200122	4
3	Propeller Housing(Lower)	26905200123	4
4	Centrifugal Fan	10425200004	4
5	Fan Motor	150101000059	1
6	Joint Slack	73018731	2
7	Rotary Axis Sub-Assay	73018761	2
8	Support Of Motor Bearing	02285200001	2
9	Bearing Holder	26151138	1
10	Fan Bearing	76512210	1
11	Electric Box Assay	100002063341	1
12	Terminal Board	42018000551	1
13	Terminal Board	42011106	1
14	Main Board	300002060315	1
15	Capacitor CBB61S	3301074705	1
16	Left Side Plate Sub-Assay	01315200168	1
17	Hook 2	01344100034	4
18	Air Outlet Frame Sub-assy	01375200041	1
19	Strainer	0721200102	1
20	Evaporator Assay	011001060080	1
21	Water Tray	26905200031	1

No.	Material Name	Finished Product Code	Quantity
22	Bottom Cover Plate	01265200156	1
23	Cover Plate Sub-Assay	011657060059	1
24	Top Cover Board Sub-assy	0126520014801	1
25	Right Side Plate Sub-Assay	01315200167	1
26	Temperature Sensor	390001921	1
27	Temperature Sensor	390000451	1
28	Display Board	300001000204	1

Model:GU100PH/A1-K **Product Code:** CF022N2320



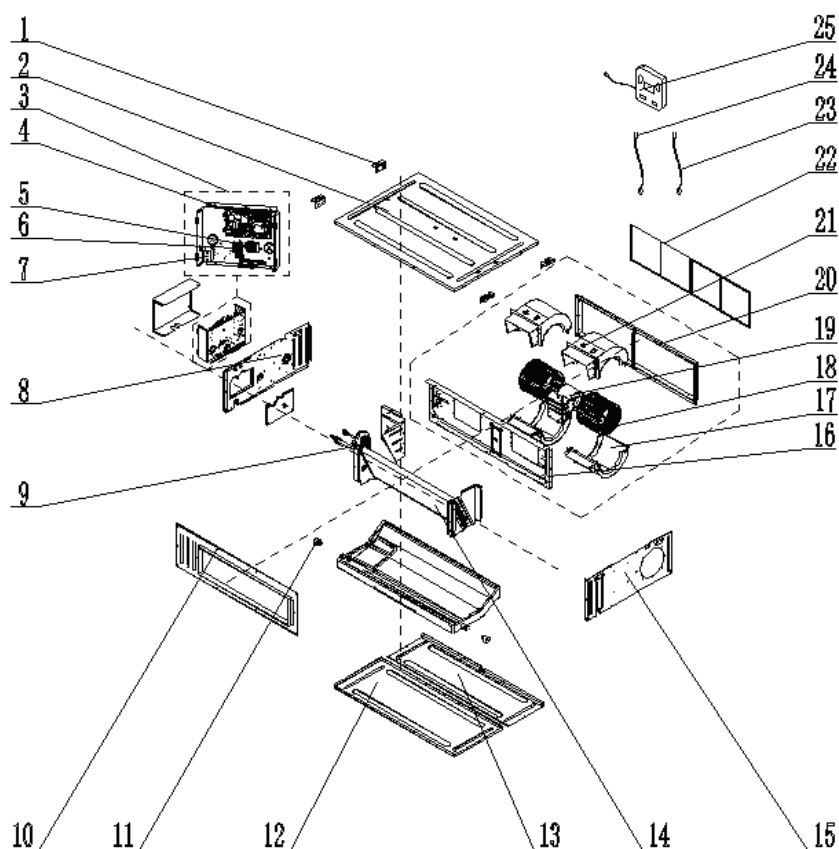
No.	Material Name	Finished Product Code	Quantity
1	Hook	02112466	4
2	Top Cover Board Sub-Assay	01265200129	1
3	Main Board	300002060315	1
4	Terminal Board	42018000551	1
5	Terminal Board	4200010000101	1
6	Capacitor	3301074708	1
7	Electric Box Assay	100002062426	1
8	Left Side Plate Sub-Assay	01315200123	1
9	Strainer	07415210	1
10	Air Outlet Frame Assay	01375200026	1
11	Choke Plug of Drain Pipe	76815214	1
12	Bottom Cover Plate	01265200131	1
13	Cover Of Air-In	01265200132	1
14	Evaporator Assay	011001060271	1

No.	Material Name	Finished Product Code	Quantity
15	Right Side Plate Sub-Assay	01315200122	1
16	Centrifugal fan assy	000052060117	1
17	Propeller Housing(Lower)	26905200079	2
18	Blower Mounting Plate Sub-Assay	01325200079	1
19	Centrifugal Fan	10455200003	2
20	Return Air Frame Sub-Assay	017026000002	1
21	Fan Motor	15010106006601	1
22	Propeller Housing(Upper)	26905200078	2
23	Temperature Sensor	390001921	1
24	Ambient Temperature Sensor	3900012123	1
25	Display Board	300001000204	1

Note:

The Finished Product Code may be changed due to the product improvement, please check the newest information with the sales rep.

Model:GU125PH/A1-K **Product Code:** CF022N1860



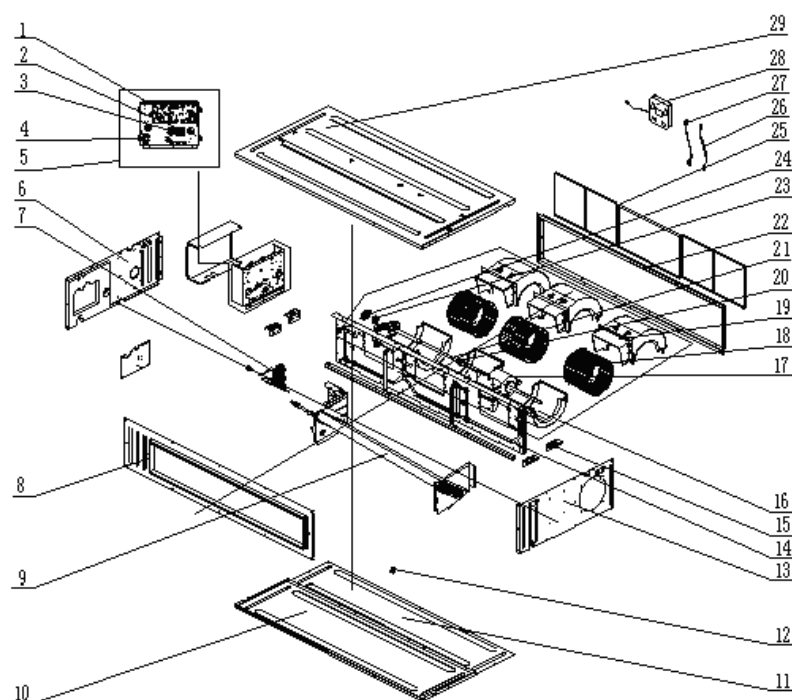
No.	Material Name	Finished Product Code	Quantity
1	Hook	02112466	4
2	Top Cover Board Sub-assy	01265200129	1
3	Electric Box Assay	100002062426	1
4	Main Board	300002060315	1

No.	Material Name	Finished Product Code	Quantity
5	Terminal Board	42018000551	1
6	Terminal Board	42000100000101	1
7	Capacitor CBB61S	3301074708	1
8	Left Side Plate Sub-Assay	01315200123	1
9	Pump Drainpipe	200070060004	1
10	Liquid Level Switch	430024000005	1
11	Water Pump	81200706001601	1
12	Strainer	07415210	1
13	Air Outlet Frame Sub-assy	01375200025	1
14	Choke Plug of Drain Pipe	76815214	2
15	Bottom Cover Plate	01265200131	1
16	Cover Of Air-In	01265200132	1
17	Evaporator Assay	011001060271	1
18	Right Side Plate Sub-Assay	01315200122	1
19	Blower Mounting Plate Sub-Assay	01325200079	1
20	Propeller Housing(Lower)	26905200079	2
21	Centrifugal Fan	10455200003	2
22	Fan Motor	15010106006601	1
23	Return Air Frame Sub-Assay	017026000002	1
24	Propeller Housing(Upper)	26905200078	2
25	Filter Sub-Assay	111001000045	2
26	Ambient Temperature Sensor	3900012123	1
27	Temperature Sensor	390001921	1
28	Display Board	300001000204	1

Note:

The Finished Product Code may be changed due to the product improvement, please check the newest information with the sales rep.

Model:GU140PH/A1-K **Product Code:** CF022N1790



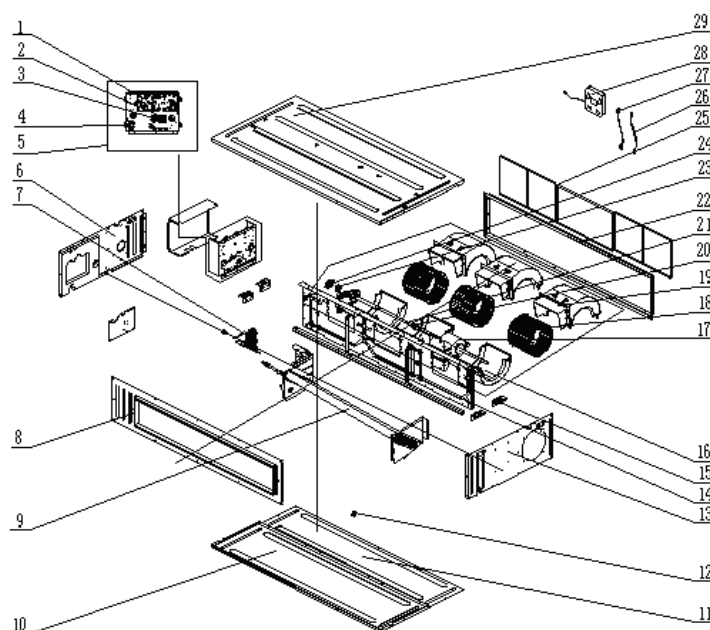
No.	Finished Product Code	Material Name	Quantity
1	Main Board	300002060315	1
2	Terminal Board	42018000551	1
3	Terminal Board	42000100000101	1
4	Capacitor	3301074719	1
5	Electric Box Assy	100002062425	1
6	Left Side Plate Sub-Assay	01315200123	1
7	Strainer	07415210	1
8	Air Outlet Frame Sub-Assay	01375200020	1
9	Evaporator Assy	01055200034	1
10	Bottom Cover Plate	01265200125	1
11	Cover Plate(Air Return)	01265200123	1
12	Choke Plug of Drain Pipe	76815214	1
13	Right Side Plate Sub-Assay	01315200122	1
14	Blower Mounting Plate Sub-Assay	01325200076	1
15	Hook	02112466	4
16	Propeller Housing(Lower)	26905200079	3
17	Fan Motor	15010106006701	1
18	Centrifugal Fan	10455200003	3
19	Propeller Housing(Upper)	26905200078	3
20	Joint Slack	73018731	1
21	Rotary Axis Sub-Assay	73018000117	1
22	Return Air Frame Sub-Assay	017026000003	1
23	Bearing Holder	26151138	1
24	Support Of Motor Bearing	02285200001	1

No.	Finished Product Code	Material Name	Quantity
25	Filter Sub-Assay	111001000052	3
26	Ambient Temperature Sensor	3900012123	1
27	Temperature Sensor	390001921	1
28	Display Board	300001000204	1
29	Top Cover Board Sub-Assay	01265200120	1

Note:

The Finished Product Code may be changed due to the product improvement, please check the newest information with the sales rep.

Model:GU160PH/A1-K **Product Code:** CF022N1920



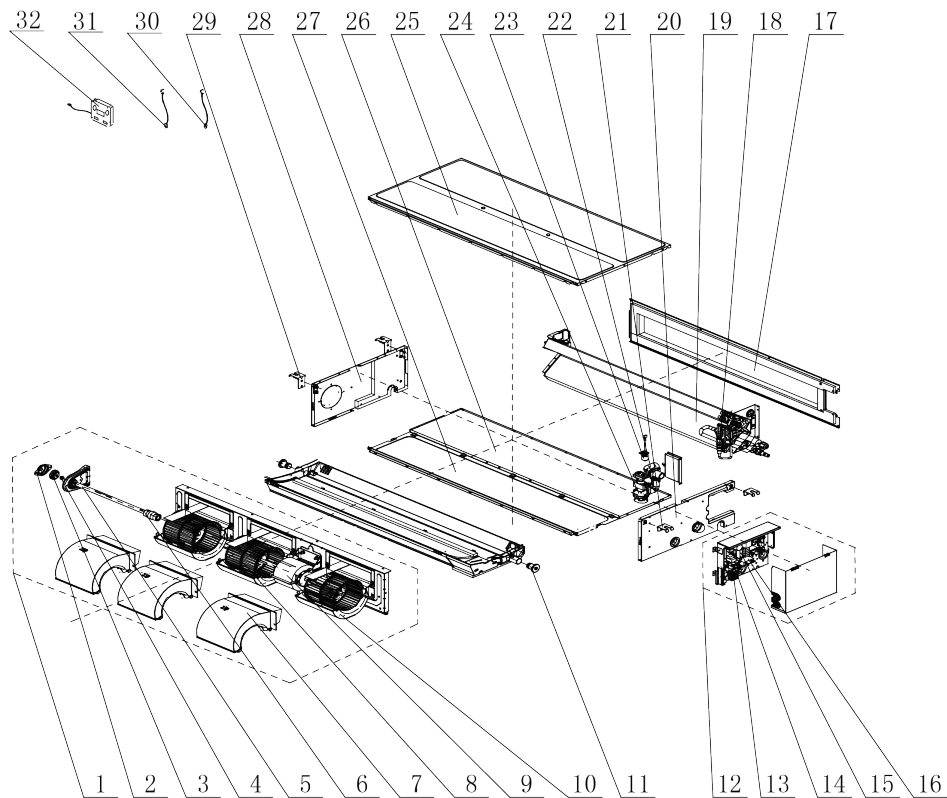
No.	Finished Product Code	Material Name	Quantity
1	Main Board	300002060315	1
2	Terminal Board	42018000551	1
3	Terminal Board	42000100000101	1
4	Capacitor	3301074719	1
5	Electric Box Assay	100002062425	1
6	Left Side Plate Sub-Assay	01315200123	1
7	Strainer	07415210	1
8	Air Outlet Frame Sub-Assay	01375200020	1
9	Evaporator Assay	011001060186	1
10	Bottom Cover Plate	01265200125	1
11	Cover Plate(Air Return)	01265200123	1
12	Choke Plug of Drain Pipe	76815214	1
13	Right Side Plate Sub-Assay	01315200122	1
14	Blower Mounting Plate Sub-Assay	01325200076	1
15	Hook	02112466	4
16	Propeller Housing(Lower)	26905200079	3

No.	Finished Product Code	Material Name	Quantity
17	Fan Motor	15010106006701	1
18	Centrifugal Fan	10455200003	3
19	Propeller Housing(Upper)	26905200078	3
20	Joint Slack	73018731	1
21	Rotary Axis Sub-Assay	73018000117	1
22	Return Air Frame Sub-Assay	017026000003	1
23	Bearing Holder	26151138	1
24	Support Of Motor Bearing	02285200001	1
25	Filter Sub-Assay	111001000052	3
26	Ambient Temperature Sensor	3900012123	1
27	Temperature Sensor	390001921	1
28	Display Board	300001000204	1
29	Top Cover Board Sub-Assay	01265200120	1

Note:

The Finished Product Code may be changed due to the product improvement, please check the newest information with the sales rep.

Model:GU50PS/A1-K Product Code: CF022N2340



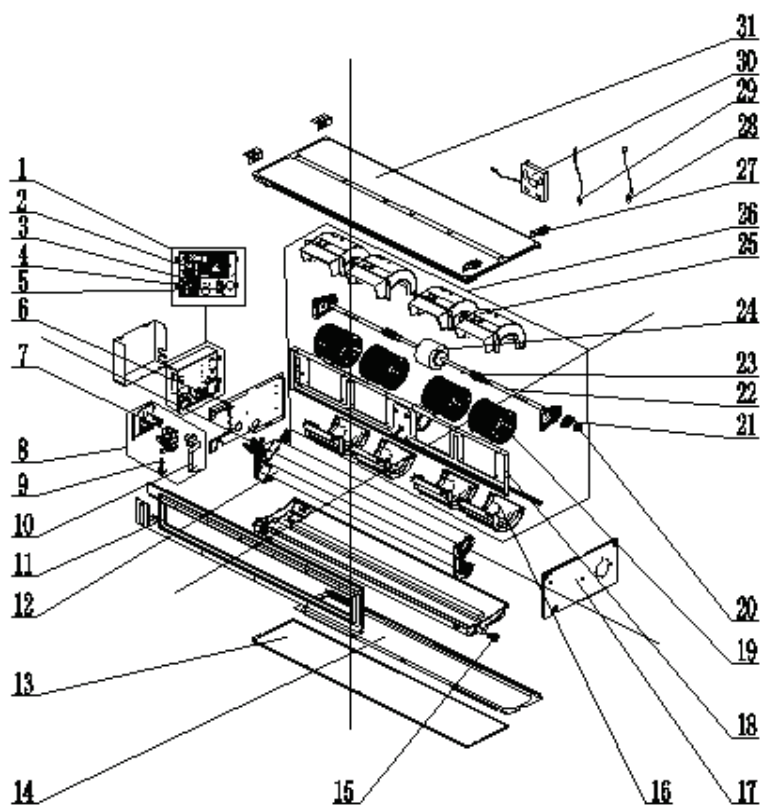
No.	Material Name	Finished Product Code	Quantity
1	Centrifugal Fan Assay	000052000076	1
2	Support Of Motor Bearing	02285200001	1
3	Bearing Holder	26151138	1
4	Fan Bearing	26151138	1
5	Rotary Axis Sub-Assay	73018761	1
6	Joint Slack	73018731	1
7	Propeller Housing(Upper)	26905200018	3
8	Centrifugal Fan	10425200003	3
9	Fan Motor	1570520104	1
10	Propeller Housing(Lower)	26905200019	3
11	Rubber Plug	76815200002	1
12	Electric Box Assay	100002063343	1
13	Terminal Board	42018000551	1
14	Terminal Board	42011106	1
15	Main Board	300002060315	1
16	Capacitor	3301074704	1
17	Air Outlet Frame Sub-Assay	01374100055	1
18	Strainer	0721200102	1
19	Evaporator Assay	011001000536	1
20	Left Side Plate Sub-Assay	017037000041	1
21	Hook 2	01344100034	2

No.	Material Name	Finished Product Code	Quantity
22	Drainage Pipe(Rubber)	760022000001	1
23	Liquid Level Switch	430024000005	1
24	Water Pump	812007060016	1
25	Top Cover Board Sub-Assay	01265200069	1
26	Bottom Cover Plate	01265200072	1
27	Cover Plate Sub-Assay	011657060003	1
28	Right Side Plate Sub-Assay	01315200052	1
29	Hook	02112446	2
30	Temperature Sensor	3900004508	1
31	Temperature Sensor	390001921	1
32	Display Board	300001000204	1

Note:

The Finished Product Code may be changed due to the product improvement, please check the newest information with the sales rep.

Model:GU71PS/A1-K **Product Code:** CF022N2350



No.	Material Name	Finished Product Code	Quantity
1	Display Board	300001000204	1
2	Terminal Board	42011106	1
3	Terminal Board	42018000551	1
4	Capacitor CBB61S	3301074705	1
5	Main Board	300002060315	1

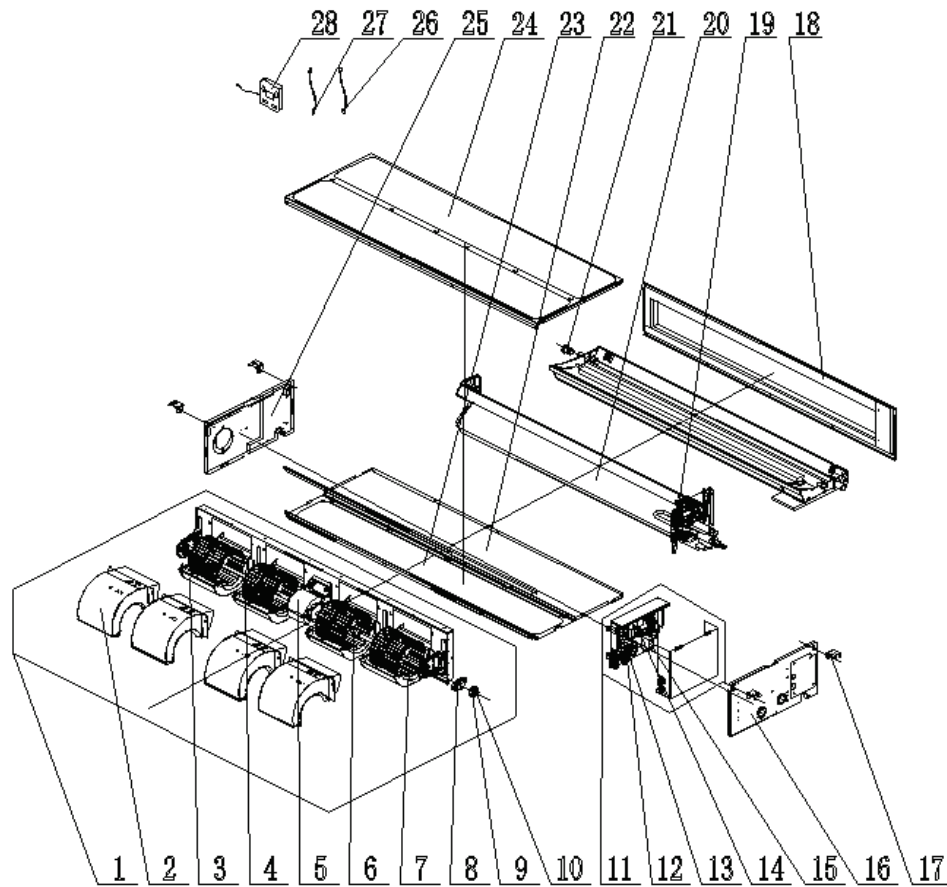
No.	Material Name	Finished Product Code	Quantity
6	Electric Box Assay	100002063341	1
7	Hook 2	01344100034	4
8	Filter Sub-Assay	111253039	2
9	Cover Of Air-In	01265200158	1
10	Air Outlet Frame Assay	000141000016	1
11	Bottom Cover Plate Assay	01265200152	1
12	Water Tray Assay	000069000103	1
13	Water Pump	812007060016	1
14	Water Pump Assay	000104060009	1
15	Temperature Sensor	390000451	1
16	Temperature Sensor	390001921	1
17	Liquid Level Switch	430024000005	1
18	Strainer	0721200102	1
19	Evaporator Assay	011001060083	1
20	Left Side Plate Assay	000080000025	1
21	Right Side Plate Assay	01315200169	1
22	Bearing Holder	26151138	1
23	Bearing Holder Sub-assy	26151139	2
24	Rotary Axis Sub-Assay	73018761	2
25	Joint Slack	73018731	2
26	Propeller Housing(Lower)	26905200123	4
27	Propeller Housing(Upper)	26905200122	4
28	Centrifugal Fan	10425200004	4
29	Fan Motor	150101000059	1
30	Centrifugal fan assy	000052000168	1
31	Top Cover Board Assay	0126520015101	1

Note:

The Finished Product Code may be changed due to the product improvement, please check the newest information with the sales rep.

Model:GU85PS/A1-K

Product Code: CF022N2410

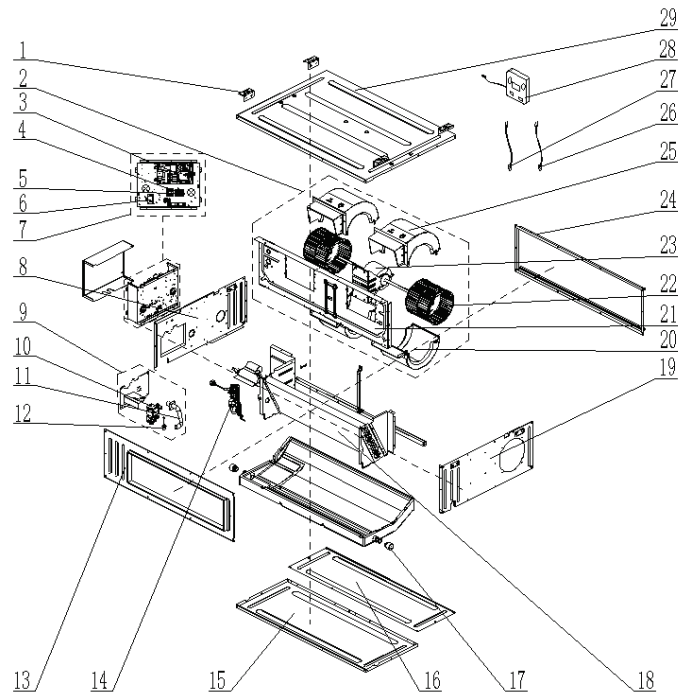


No.	Finished Product Code	Material Name	Quantity
1	000052000168	Centrifugal fan assy	1
2	26905200122	Propeller Housing(Upper)	4
3	26905200123	Propeller Housing(Lower)	4
4	10425200004	Centrifugal Fan	4
5	150101000059	Fan Motor	1
6	73018731	Joint Slack	2
7	73018761	Rotary Axis Sub-Assay	2
8	02285200001	Support Of Motor Bearing	2
9	26151138	Bearing Holder	1
10	76512210	Fan Bearing	1
11	100002063341	Electric Box Assay	1
12	42018000551	Terminal Board	1
13	42011106	Terminal Board	1
14	300002060315	Main Board	1
15	3301074705	Capacitor CBB61S	1
16	01315200168	Left Side Plate Sub-Assay	1
17	01344100034	Hook 2	4
18	01375200041	Air Outlet Frame Sub-assy	1
19	0721200102	Strainer	1
20	011001060080	Evaporator Assay	1

No.	Finished Product Code	Material Name	Quantity
21	26905200031	Water Tray	1
22	01265200156	Bottom Cover Plate	1
23	011657060059	Cover Plate Sub-Assay	1
24	0126520014801	Top Cover Board Sub-assy	1
25	01315200167	Right Side Plate Sub-Assay	1
26	390001921	Temperature Sensor	1
27	390000451	Temperature Sensor	1
28	300001000204	Display Board	1
28	300001000204	Display Board	1

Model:GU100PHS/A1-K

Product Code: CF022N2370



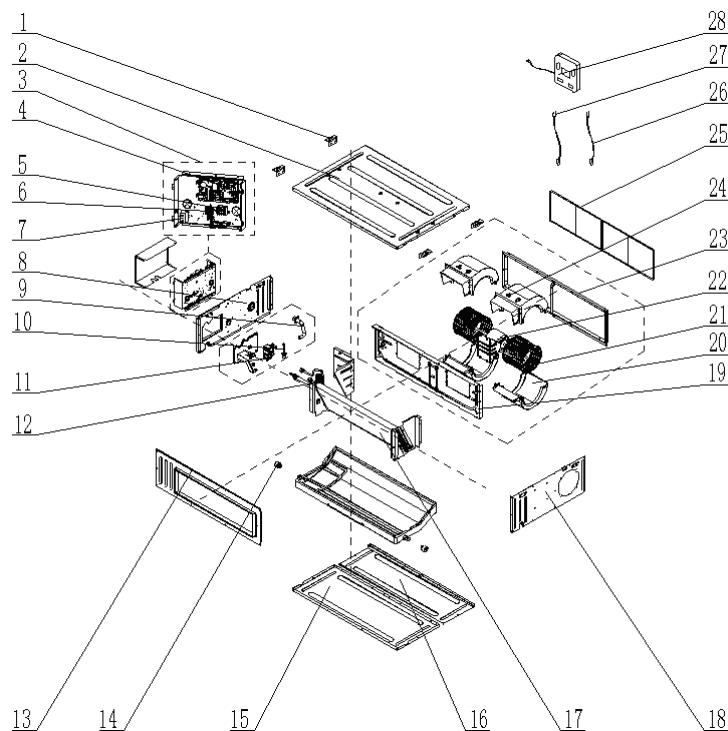
No.	Material Name	Finished Product Code	Quantity
1	Hook	02112466	4
2	Centrifugal fan Assay	000052060117	1
3	Main Board	300002060315	1
4	Terminal Board	42018000551	1
5	Terminal Board	42000100000101	1
6	Capacitor	3301074708	1
7	Electric Box Assay	100002062426	1
8	Left Side Plate Sub-Assay	01315200123	1
9	Water Pump Assay	000104060016	1
10	Water Pump	81200706001601	1
11	Pump Drainpipe	200070060004	1
12	Liquid Level Switch	430024000005	1
13	Air Outlet Frame Assay	01375200026	1
14	Strainer	07415210	1

No.	Material Name	Finished Product Code	Quantity
15	Bottom Cover Plate	01265200131	1
16	Cover Of Air-In	01265200132	1
17	Choke Plug of Drain Pipe	76815214	2
18	Evaporator Assay	011001060271	1
19	Right Side Plate Sub-Assay	01315200122	1
20	Propeller Housing(Lower)	26905200079	2
21	Blower Mounting Plate Sub-Assay	01325200079	1
22	Centrifugal Fan	10455200003	2
23	Fan Motor	15010106006601	1
24	Return Air Frame Sub-Assay	017026000002	1
25	Propeller Housing(Upper)	26905200078	2
26	Temperature Sensor	390001921	1
27	Ambient Temperature Sensor	3900012123	1
28	Display Board	300001000204	1
29	Top Cover Board Assay	01265200130	1

Note:

The Finished Product Code may be changed due to the product improvement, please check the newest information with the sales rep.

Model:GU125PHS/A1-K **Product Code:** CF022N2390



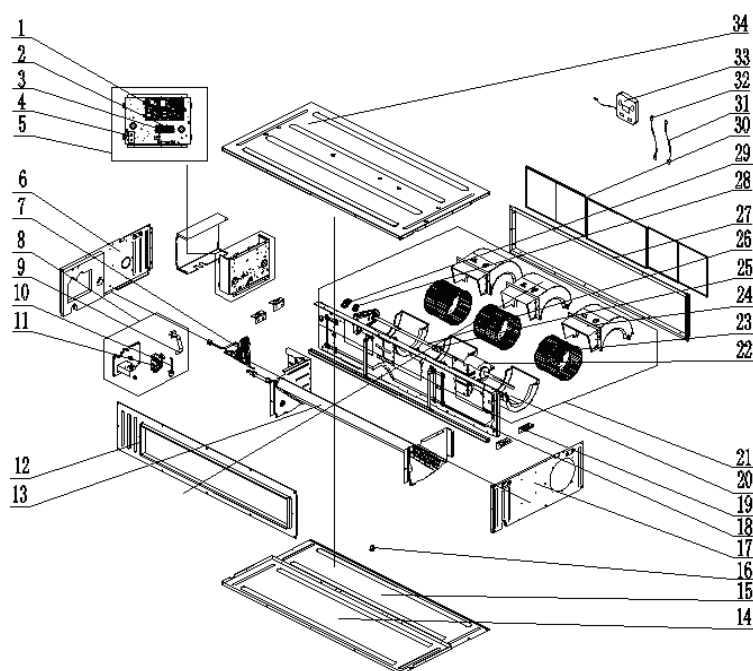
No.	Material Name	Finished Product Code	Quantity
1	Hook	02112466	4
2	Top Cover Board Sub-assy	01265200129	1
3	Electric Box Assay	100002062426	1

No.	Material Name	Finished Product Code	Quantity
4	Main Board	300002060315	1
5	Terminal Board	42018000551	1
6	Terminal Board	42000100000101	1
7	Capacitor CBB61S	3301074708	1
8	Left Side Plate Sub-Assay	01315200123	1
9	Pump Drainpipe	200070060004	1
10	Liquid Level Switch	430024000005	1
11	Water Pump	81200706001601	1
12	Strainer	07415210	1
13	Air Outlet Frame Sub-assy	01375200025	1
14	Choke Plug of Drain Pipe	76815214	2
15	Bottom Cover Plate	01265200131	1
16	Cover Of Air-In	01265200132	1
17	Evaporator Assay	011001060271	1
18	Right Side Plate Sub-Assay	01315200122	1
19	Blower Mounting Plate Sub-Assay	01325200079	1
20	Propeller Housing(Lower)	26905200079	2
21	Centrifugal Fan	10455200003	2
22	Fan Motor	15010106006601	1
23	Return Air Frame Sub-Assay	017026000002	1
24	Propeller Housing(Upper)	26905200078	2
25	Filter Sub-Assay	111001000045	2
26	Ambient Temperature Sensor	3900012123	1
27	Temperature Sensor	390001921	1
28	Display Board	300001000204	1

Note:

The Finished Product Code may be changed due to the product improvement, please check the newest information with the sales rep.

Model:GU140PHS/A1-K **Product Code:** CF022N1940



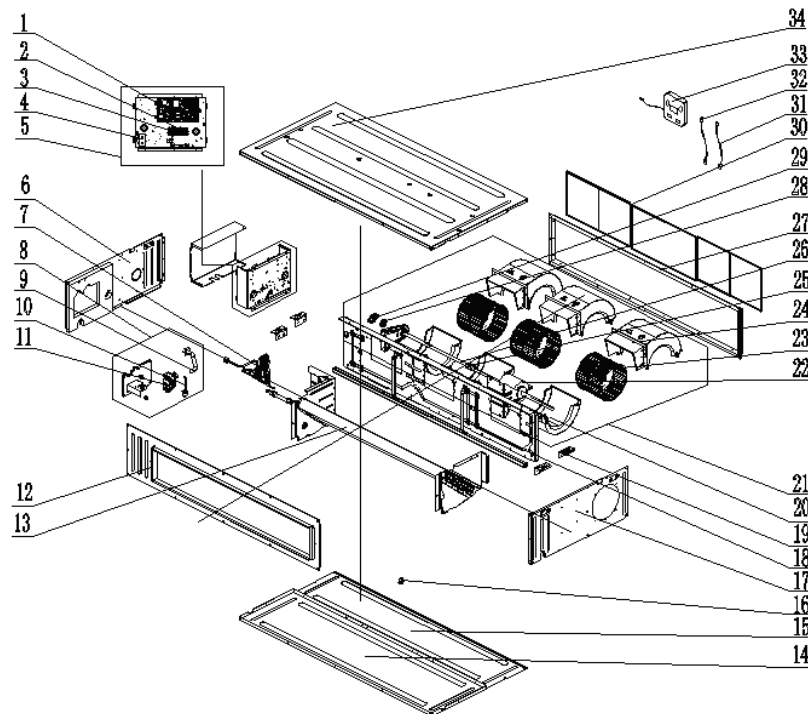
No.	Material Name	Finished Product Code	Quantity
1	Main Board	300002060315	1
2	Terminal Board	42018000551	1
3	Terminal Board	42000100000101	1
4	Capacitor	3301074719	1
5	Electric Box Assy	100002062425	1
6	Left Side Plate Sub-Assay	01315200123	1
7	Strainer	07415210	1
8	Water Pump Assy	000104060016	1
9	Pump Drainpipe	200070060004	1
10	Liquid Level Switch	430024000005	1
11	Water Pump	81200706001601	1
12	Air Outlet Frame Sub-Assay	01375200020	1
13	Evaporator Assy	011001060191	1
14	Bottom Cover Plate	01265200125	1
15	Cover Plate(Air Return)	01265200123	1
16	Choke Plug of Drain Pipe	76815214	2
17	Right Side Plate Sub-Assay	01315200122	1
18	Blower Mounting Plate Sub-Assay	01325200076	1
19	Hook	02112466	4
20	Propeller Housing(Lower)	26905200079	3
21	Centrifugal Fan Assy	000052060118	1
22	Fan Motor	15010106006701	1
23	Centrifugal Fan	10455200003	3
24	Propeller Housing(Upper)	26905200078	3

No.	Material Name	Finished Product Code	Quantity
25	Joint Slack	73018731	1
26	Rotary Axis Sub-Assay	73018000117	1
27	Return Air Frame Sub-Assay	017026000003	1
28	Bearing Holder	26151138	1
29	Support Of Motor Bearing	02285200001	1
30	Filter Sub-Assay	111001000052	1
31	Ambient Temperature Sensor	3900012123	1
32	Temperature Sensor	390001921	1
33	Display Board	300001000204	1
34	Top Cover Board Sub-Assay	01265200120	1

Note:

The Finished Product Code may be changed due to the product improvement, please check the newest information with the sales rep.

Model:GU160PHS/A1-K **Product Code:** CF022N1930



No.	Material Name	Finished Product Code	Quantity
1	Main Board	300002060315	1
2	Terminal Board	42018000551	1
3	Terminal Board	42000100000101	1
4	Capacitor	3301074719	1
5	Electric Box Assay	100002062425	1
6	Left Side Plate Sub-Assay	01315200123	1
7	Strainer	07415210	1
8	Water Pump Assay	000104060016	1
9	Pump Drainpipe	200070060004	1

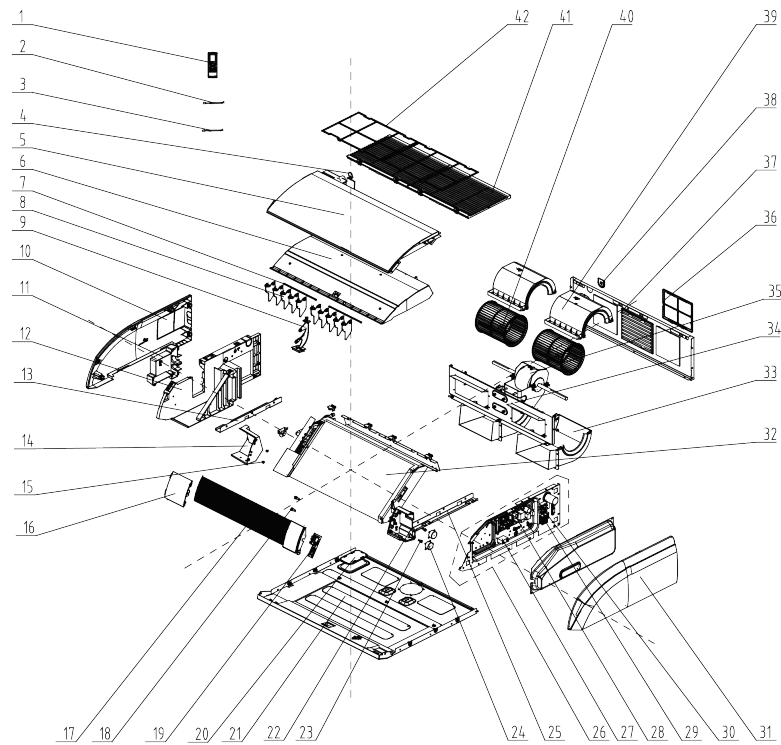
No.	Material Name	Finished Product Code	Quantity
10	Liquid Level Switch	430024000005	1
11	Water Pump	81200706001601	1
12	Air Outlet Frame Sub-Assay	01375200020	1
13	Evaporator Assay	011001060186	1
14	Bottom Cover Plate	01265200125	1
15	Cover Plate(Air Return)	01265200123	1
16	Choke Plug of Drain Pipe	76815214	2
17	Right Side Plate Sub-Assay	01315200122	1
18	Blower Mounting Plate Sub-Assay	01325200076	1
19	Hook	02112466	4
20	Propeller Housing(Lower)	26905200079	3
21	Centrifugal Fan Assay	000052060118	1
22	Fan Motor	15010106006701	1
23	Centrifugal Fan	10455200003	3
24	Propeller Housing(Upper)	26905200078	3
25	Joint Slack	73018731	1
26	Rotary Axis Sub-Assay	73018000117	1
27	Return Air Frame Sub-Assay	017026000003	1
28	Bearing Holder	26151138	1
29	Support Of Motor Bearing	02285200001	1
30	Filter Sub-Assay	111001000052	1
31	Ambient Temperature Sensor	3900012123	1
32	Temperature Sensor	390001921	1
33	Display Board	300001000204	1
34	Top Cover Board Sub-Assay	01265200120	1

Note:

The Finished Product Code may be changed due to the product improvement, please check the newest information with the sales rep.

Model:GU50ZD/A1-K

Product Code: ED020N2070



No.	Material Name	Finished Product Code	Quantity
1	Remote Control	305001060020	1
2	Temperature Sensor	3900012123	1
3	Ambient Temperature Sensor	390001923	1
4	Drainage Pipe Sub-Assay	05235434	1
5	Top Cover	012148000046	1
6	Water Tray	200063000024	1
7	Swing Lever	10582009	2
8	Air Louver	20000700000101	10
9	Support	2690940007601	4
10	Right Side Plate	2690940007101	1
11	Cover Plate(Inlet and Outlet Pipe)	26909452	1
12	Right Side Plate	26909400074	1
13	Installation Supporting Frame(Right)	01809402	1
14	Mounting Rack Sub-Assay	017044000007	1
15	Axile Bush	10542704	2
16	Front Panel	20000300000101	1
17	Guide Louver	20000400004601	2
18	Rotating Shaft 3	26909430	2
19	Display Board	30294000009	1
20	Cover Plate(Inlet and Outlet Pipe)	012035000009	1

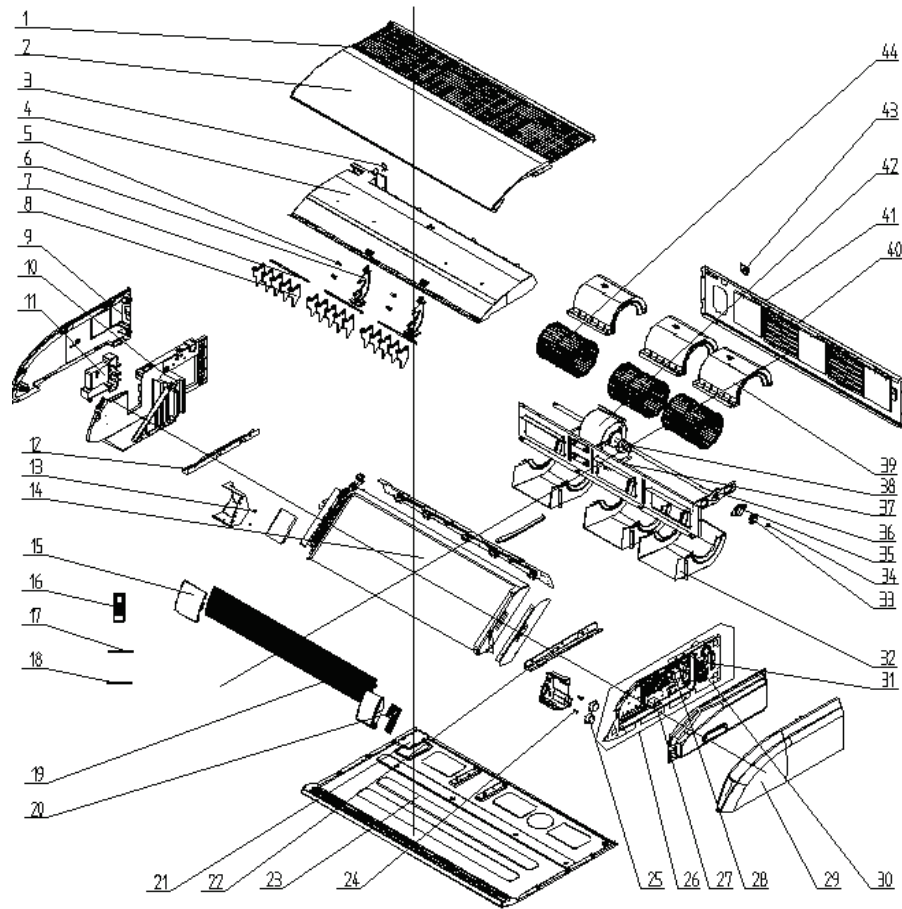
No.	Material Name	Finished Product Code	Quantity
21	Base Plate Assay	011007060037	1
22	Mounting Rack Sub-Assay	017044060010	1
23	Crankshaft	200023000001	2
24	Stepping Motor	1521240215	2
25	Installation Supporting Frame(Left)	01809401	1
26	Electric Box Assay	100002063455	1
27	Capacitor CBB61S	3301074701	1
28	Main Board	300002060419	1
29	Terminal Board	42000100000204	1
30	Terminal Board	42018000551	1
31	Left Side Plate	2690940007001	1
32	Evaporator Assay	011001000487	1
33	Propeller Housing(Lower)	200230000001	2
34	Clapboard Sub-Assay	017021000088	1
35	Fan Motor	1570940901	1
36	Filter Sub-Assay	111001000001	1
37	Rear Side Plate Sub-Assay	017051000046	1
38	Adhesive Cover (Drainage Pipe)	26909453	1
39	Propeller Housing(Upper)	200230000002	2
40	Centrifugal Fan	103003000001	2
41	Front Grill	20022600000401	2
42	Filter Sub-Assay	111001000072	2

Note:

The Finished Product Code may be changed due to the product improvement, please check the newest information with the sales rep.

Model:GU71ZD/A1-K

Product Code: ED020N2080



No.	Material Name	Finished Product Code	Quantity
1	Front Grill	2690940006601	3
2	Top Cover	01269400012P01	1
3	Drainage Pipe Sub-assy	05235434	1
4	Water Tray	200063000003	1
5	Rotating Shaft 3	26909430	4
6	Support	2690940007601	2
7	Swing Lever	10582009	3
8	Air Louver	20000700000101	15
9	Right Side Plate	2690940007101	1
10	Right Side Plate	269094000074	1
11	Cover Plate(Inlet and outlet Pipe)	012035000009	1
12	Installation Supporting Frame(right)	01809402	1
13	Axile Bush	10542704	2
14	Evaporator Assay	011001000201	1
15	Front Panel	20000300000101	1
16	Remote Control	305001060020	1
17	Ambient Temperature Sensor	3900012123	1
18	Temperature Sensor	3900019204	1
19	Guide Louver	20000450042201	1

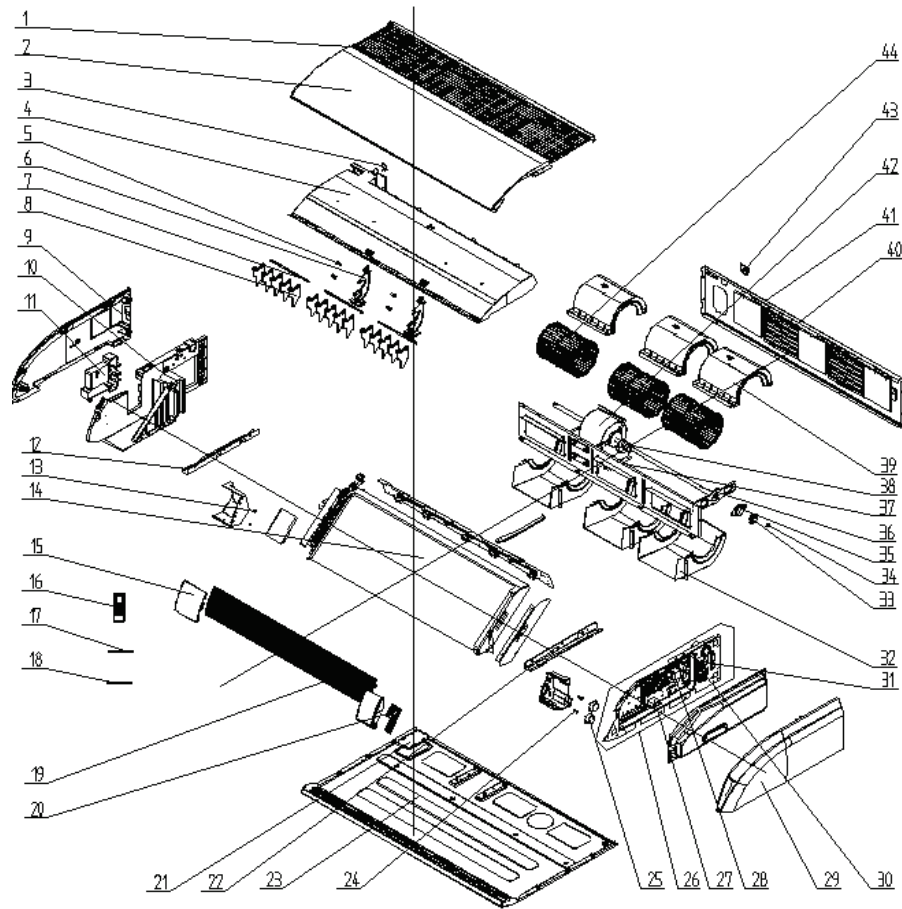
No.	Material Name	Finished Product Code	Quantity
20	Display Board	30294000009	1
21	Cover Plate(Inlet and outlet Pipe)	26909452	1
22	Installation Supporting Frame(left)	01809401	1
23	Base Plate Assay	011007060035	1
24	Crankshaft	200023000001	2
25	Stepping Motor	1521240215	2
26	Electric Box Assay	100002063456	1
27	Capacitor CBB61S	3301074702	1
28	Main Board	300002060419	1
29	Left Side Plate	2690940007001	1
30	Terminal Board	42018000551	1
31	Terminal Board	42000100000204	1
32	Propeller Housing(Lower)	200230000001	3
33	O-Gasket of Bearing	76512404	1
34	Fan Bearing	76512210	1
35	Support Of Motor Bearing	01792408	1
36	Roller Wheel	700004500433	1
37	Clapboard Sub-Assay	01249400018	1
38	Joint Slack	73018731	1
39	Propeller Housing(Upper)	200230000002	3
40	Filter Sub-Assay	111001000001	2
41	Rear Side Plate Sub-Assay	017051000005	1
42	Fan Motor	15709408	1
43	Adhesive Cover (Drainage Pipe)	26909453	1
44	Centrifugal Fan	103003000001	3

Note:

The Finished Product Code may be changed due to the product improvement, please check the newest information with the sales rep.

Model:GU85ZD/A1-K

Product Code: ED020N2100



No.	Material Name	Finished Product Code	Quantity
1	Front Grill	2690940006601	3
2	Top Cover	01269400012P01	1
3	Drainage Pipe Sub-assy	05235434	1
4	Water Tray	200063000003	1
5	Rotating Shaft 3	26909430	4
6	Support	2690940007601	2
7	Swing Lever	10582009	3
8	Air Louver	20000700000101	15
9	Right Side Plate	2690940007101	1
10	Right Side Plate	269094000074	1
11	Cover Plate(Inlet and outlet Pipe)	012035000009	1
12	Installation Supporting Frame(right)	01809402	1
13	Axile Bush	10542704	2
14	Evaporator Assay	011001000201	1
15	Front Panel	20000300000101	1
16	Remote Control	305001060020	1
17	Ambient Temperature Sensor	3900012123	1
18	Temperature Sensor	3900019204	1
19	Guide Louver	20000450042201	1

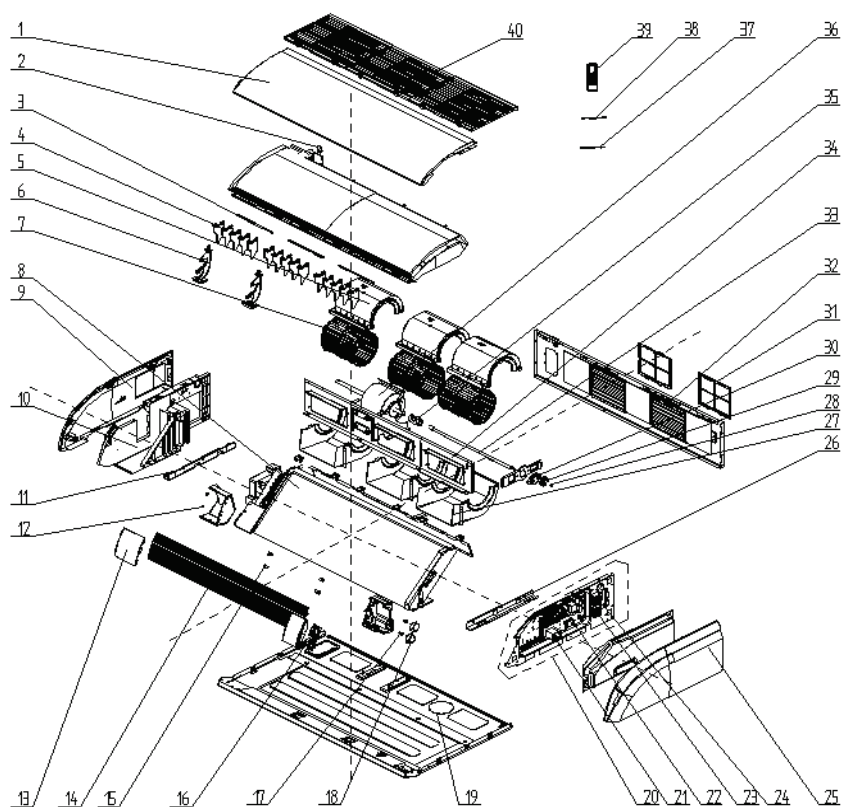
No.	Material Name	Finished Product Code	Quantity
20	Display Board	30294000009	1
21	Cover Plate(Inlet and outlet Pipe)	26909452	1
22	Installation Supporting Frame(left)	01809401	1
23	Base Plate Assay	011007060035	1
24	Crankshaft	200023000001	2
25	Stepping Motor	1521240215	2
26	Electric Box Assay	100002063456	1
27	Capacitor CBB61S	3301074704	1
28	Main Board	300002060419	1
29	Left Side Plate	2690940007001	1
30	Terminal Board	42018000551	1
31	Terminal Board	42000100000204	1
32	Propeller Housing(Lower)	200230000001	3
33	O-Gasket of Bearing	76512404	1
34	Fan Bearing	76512210	1
35	Support Of Motor Bearing	01792408	1
36	Roller Wheel	700004500433	1
37	Clapboard Sub-Assay	01249400018	1
38	Joint Slack	73018731	1
39	Propeller Housing(Upper)	200230000002	3
40	Filter Sub-Assay	111001000001	2
41	Rear Side Plate Sub-Assay	017051000005	1
42	Fan Motor	15709408	1
43	Adhesive Cover (Drainage Pipe)	26909453	1
44	Centrifugal Fan	103003000001	3

Note:

The Finished Product Code may be changed due to the product improvement, please check the newest information with the sales rep.

Model:GU100ZD/A1-K

Product Code: ED020N2090



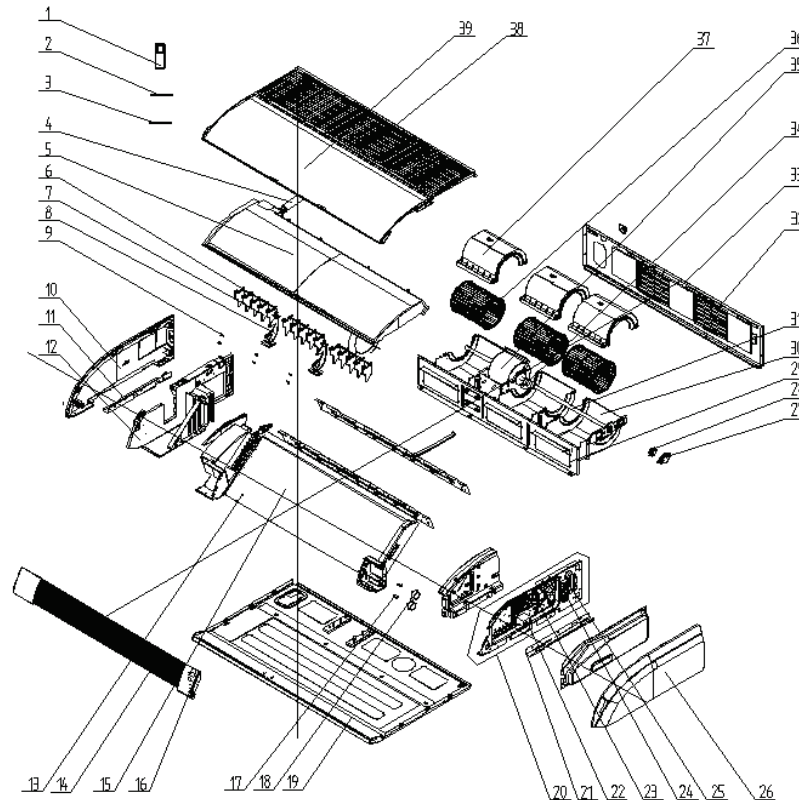
No.	Material Name	Finished Product Code	Quantity
1	Top Cover	01269400012P01	1
2	Drainage Pipe Sub-Assay	05235434	1
3	Swing Lever	10582009	3
4	Air Louver	20000700000101	15
5	Propeller Housing(Upper)	200230000002	3
6	Support	2690940007601	2
7	Centrifugal Fan	103003000001	3
8	Evaporator Assay	011001000453	1
9	Right Side Plate	26909400074	1
10	Right Side Plate	2690940007101	1
11	Installation Supporting Frame(Right)	01809402	1
12	Axile Bush	10542704	2
13	Front Panel	20000300000101	1
14	Guide Louver	20000450042201	1
15	Rotating Shaft 3	26909430	4
16	Display Board	30294000009	1
17	Crankshaft	200023000001	2
18	Stepping Motor	1521240215	2
19	Seat Board Sub-Assay	02229400033	1
20	Electric Box Assay	100002062427	1
21	Capacitor	3301074719	1

No.	Material Name	Finished Product Code	Quantity
22	Main Board	300002060419	1
23	Terminal Board	42018000551	1
24	Terminal Board	42000100000204	1
25	Left Side Plate	2690940007001	1
26	Installation Supporting Frame(Left)	01809401	1
27	Propeller Housing(Lower)	200230000001	3
28	Fan Bearing	76512210	1
29	O-Gasket of Bearing	76512404	1
30	Support Of Motor Bearing	01792408	1
31	Filter Sub-Assay	111001000001	2
32	Rear Side Plate Sub-Assay	017051000005	1
33	Roller Wheel	700004500433	1
34	Clapboard Assay	01249400029	1
35	Joint Slack	73018731	1
36	Fan Motor	150101000056	1
37	Ambient Temperature Sensor	3900012123	1
38	Temperature Sensor	3900019204	1
39	Remote Control	305001060020	1
40	Front Grill	2690940006601	3

Note:

The Finished Product Code may be changed due to the product improvement, please check the newest information with the sales rep.

Model:GU125ZD/A1-K **Product Code:** ED020N2110



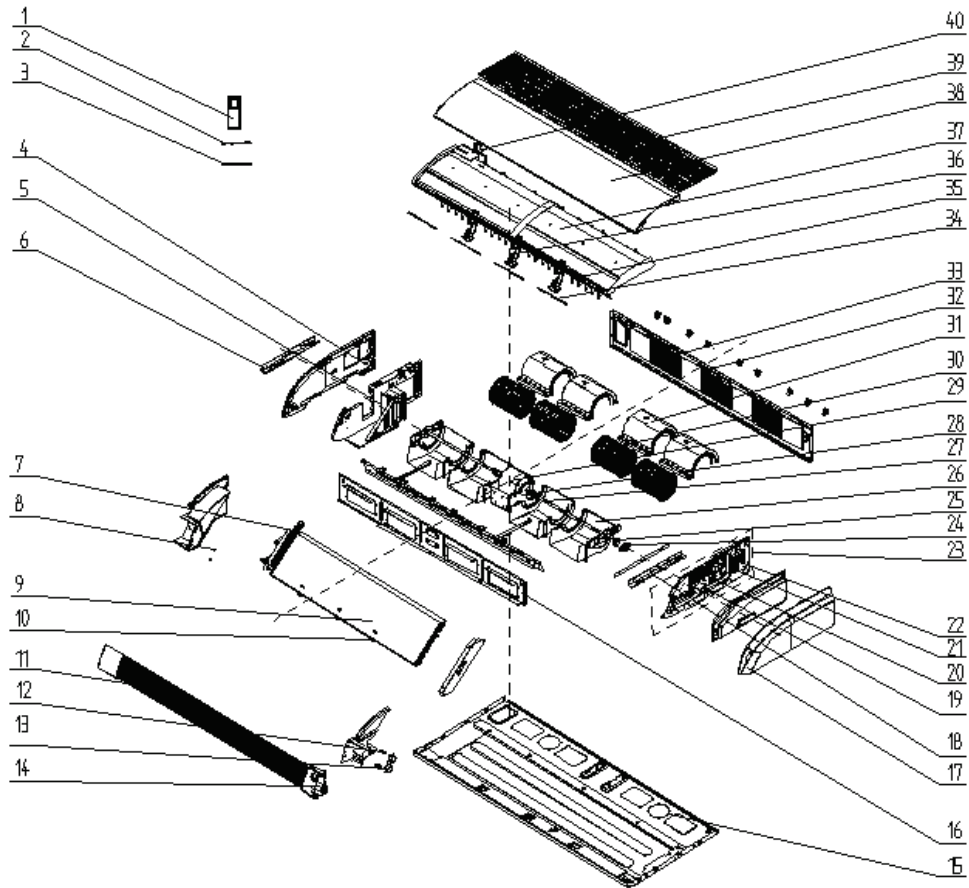
No.	Material Name	Finished Product Code	Quantity
1	Remote Control	305001060020	1
2	Temperature Sensor	390001923	1
3	Ambient Temperature Sensor	3900012123	1
4	Drainage Pipe Sub-Assay	05235434	1
5	Water Tray	200063000003	1
6	Swing Lever	10582009	3
7	Air Louver	20000700000101	15
8	Support	2690940007601	2
9	Rotating Shaft 3	26909430	4
10	Right Side Plate	2690940007101	1
11	Installation Supporting Frame(Right)	01809402	1
12	Right Side Plate	26909400074	1
13	Axile Bush	10542704	2
14	Guide Louver	20000450042201	2
15	Evaporator Assay	011001000609	1
16	Display Board	30294000009	1
17	Crankshaft	200023000001	2
18	Stepping Motor	1521240215	2
19	Seat Board Sub-Assay	02229400033	1
20	Electric Box Assay	100002062427	1
21	Installation Supporting Frame(Left)	01809401	1
22	Capacitor	3301074719	1
23	Main Board	300002060419	1
24	Terminal Board	42018000551	1
25	Terminal Board	42000100000204	1
26	Left Side Plate	2690940007001	1
27	Support Of Motor Bearing	01792408	1
28	O-Gasket of Bearing	76512404	1
29	Clapboard Sub-Assay	01249400018	1
30	Propeller Housing(Lower)	200230000001	3
31	Roller Wheel	700004500433	1
32	Filter Sub-Assay	111001000001	2
33	Rear Side Plate Sub-Assay	017051000005	1
34	Joint Slack	73018731	1
35	Fan Motor	150101000056	1
36	Centrifugal Fan	103003000001	3
37	Propeller Housing(Upper)	200230000002	3
38	Front Grill	2690940007201	1
39	Top Cover	01269400012P01	1

Note:

The Finished Product Code may be changed due to the product improvement, please check the newest information with the sales rep.

Model:GU140ZD/A1-K

Product Code: ED020N1880



No.	Material Name	Finished Product Code	Quantity
1	Remote Control	305001060020	1
2	Ambient Temperature Sensor	3900012123	1
3	Tube Sensor	3900020720G	1
4	Right Side Plate	2690940007101	1
5	Right Side Plate	269094000074	1
6	Installation Supporting Frame(Right)	01809402	1
7	Corrugated Pipe	0502511201	1
8	Axile Bush	10542704	2
9	Evaporator Assay	011001060184	1
10	Rotating Shaft 3	26909430	6
11	Guide Louver	20000450042601	2
12	Crankshaft	200023000001	2
13	Stepping Motor	1521240215	2
14	Display Board	30294000009	1
15	Seat Board Sub-Assay	02229400023	1
16	Clapboard Sub-Assay	01249400019	1
17	Left Side Plate	2690940007001	1
18	Installation Supporting Frame(Left)	01809401	1
19	Capacitor	3301074719	1
20	Main Board	300002060419	1

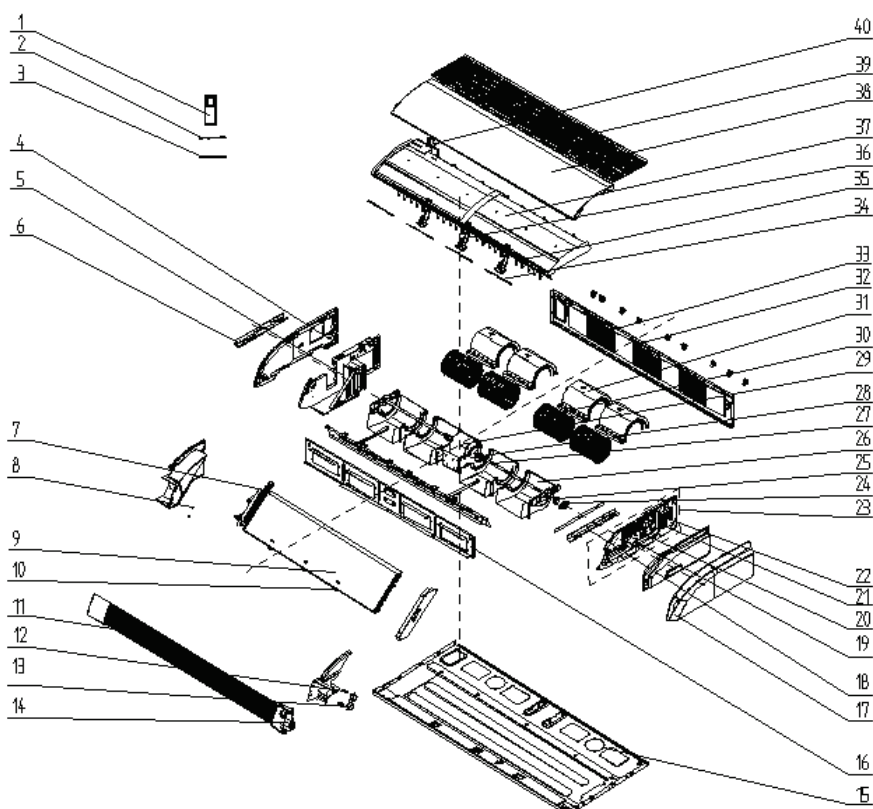
No.	Material Name	Finished Product Code	Quantity
21	Terminal Board	42018000551	1
22	Terminal Board	42000100000204	1
23	Electric Box Assay	100002063290	1
24	Support Of Motor Bearing	01792408	2
25	O-Gasket of Bearing	76512404	1
26	Propeller Housing(Lower)	200230000001	4
27	Roller Wheel	700004000001	2
28	Joint Slack	73018731	2
29	Fan Motor	15709405	1
30	Centrifugal Fan	103003000001	4
31	Propeller Housing(Upper)	200230000002	4
32	Rear Side Plate Sub-Assay	017051000006	1
33	Filter Sub-Assay	111001000001	3
34	Swing Lever	10582009	4
35	Air Louver	20000700000101	20
36	Support	2690940007601	3
37	Water Tray	200063000002	1
38	Top Cover	01269400013P01	1
39	Front Grill	2690940007201	1
40	Drainage Pipe Sub-Assay	05235434	1

Note:

The Finished Product Code may be changed due to the product improvement, please check the newest information with the sales rep.

Model:GU160ZD/A1-K

Product Code: ED020N1870



No.	Material Name	Finished Product Code	Quantity
1	Remote Control	305001060020	1
2	Ambient Temperature Sensor	3900012123	1
3	Tube Sensor	3900020720G	1
4	Right Side Plate	2690940007101	1
5	Right Side Plate	269094000074	1
6	Installation Supporting Frame(Right)	01809402	1
7	Corrugated Pipe	0502511201	1
8	Axile Bush	10542704	2
9	Evaporator Assay	011001060177	1
10	Rotating Shaft 3	26909430	6
11	Guide Louver	20000450042601	2
12	Crankshaft	200023000001	2
13	Stepping Motor	1521240215	2
14	Display Board	30294000009	1
15	Seat Board Sub-Assay	02229400023	1
16	Clapboard Sub-Assay	01249400019	1
17	Left Side Plate	2690940007001	1
18	Installation Supporting Frame(Left)	01809401	1
19	Capacitor	3301074719	1
20	Main Board	300002060419	1
21	Terminal Board	42018000551	1

No.	Material Name	Finished Product Code	Quantity
22	Terminal Board	42000100000204	1
23	Electric Box Assay	100002063290	1
24	Support Of Motor Bearing	01792408	2
25	O-Gasket of Bearing	76512404	1
26	Propeller Housing(Lower)	200230000001	4
27	Roller Wheel	700004000001	2
28	Joint Slack	73018731	2
29	Fan Motor	15709405	1
30	Centrifugal Fan	103003000001	4
31	Propeller Housing(Upper)	200230000002	4
32	Rear Side Plate Sub-Assay	017051000006	1
33	Filter Sub-Assay	111001000001	3
34	Swing Lever	10582009	4
35	Air Louver	20000700000101	20
36	Support	2690940007601	3
37	Water Tray	200063000002	1
38	Top Cover	01269400013P01	1
39	Front Grill	2690940007201	1
40	Drainage Pipe Sub-Assay	05235434	1

Note:

The Finished Product Code may be changed due to the product improvement, please check the newest information with the sales rep.

Appendices

1. Resistance/temperature lists of temperature sensors

1.1 Voltage list of 15 kΩ temperature sensors (including ODU and IDU temperature sensors)

Temperature (°C)	Resistance (kΩ)	Voltage (V)	Temperature (°C)	Resistance (kΩ)	Voltage (V)
-20	147.68	0.461	71	2.523	4.280
-19	136.05	0.497	72	2.439	4.301
-18	128.55	0.522	73	2.358	4.321
-17	121.58	0.549	74	2.280	4.340
-16	114.98	0.577	75	2.205	4.359
-15	108.75	0.606	76	2.133	4.378
-14	102.90	0.636	77	2.064	4.395
-13	97.43	0.667	78	1.997	4.412
-12	92.25	0.699	79	1.933	4.429
-11	87.38	0.733	80	1.871	4.445
-10	82.73	0.767	81	1.811	4.461
-9	78.45	0.803	82	1.754	4.476
-8	74.35	0.839	83	1.699	4.491
-7	70.50	0.877	84	1.646	4.506
-6	66.88	0.916	85	1.594	4.520
-5	63.46	0.956	86	1.544	4.533
-4	60.23	0.997	87	1.497	4.546
-3	57.18	1.039	88	1.451	4.559
-2	54.31	1.082	89	1.406	4.571
-1	51.59	1.126	90	1.364	4.583
0	49.03	1.171	91	1.322	4.595
1	46.60	1.218	92	1.283	4.606
2	44.31	1.265	93	1.244	4.617
3	42.14	1.313	94	1.207	4.628
4	40.10	1.361	95	1.171	4.638
5	38.15	1.411	96	1.136	4.648
6	36.32	1.462	97	1.103	4.658
7	34.58	1.513	98	1.070	4.667
8	32.94	1.564	99	1.040	4.676
9	31.38	1.617	100	1.010	4.685

Temperature (°C)	Resistance (kΩ)	Voltage (V)	Temperature (°C)	Resistance (kΩ)	Voltage (V)
10	29.90	1.670	101	0.980	4.693
11	28.51	1.724	102	0.952	4.702
12	27.18	1.778	103	0.925	4.710
13	25.93	1.833	104	0.899	4.717
14	24.74	1.888	105	0.873	4.725
15	23.60	1.943	106	0.848	4.732
16	22.53	1.998	107	0.824	4.740
17	21.51	2.054	108	0.802	4.746
18	20.54	2.110	109	0.779	4.753
19	19.63	2.166	110	0.758	4.760
20	18.76	2.222	111	0.737	4.766
21	17.93	2.278	112	0.717	4.772
22	17.14	2.334	113	0.697	4.778
23	16.39	2.389	114	0.678	4.784
24	15.68	2.445	115	0.660	4.789
25	15.00	2.500	116	0.642	4.795
26	14.36	2.555	117	0.625	4.800
27	13.74	2.610	118	0.608	4.805
28	13.16	2.663	119	0.592	4.810
29	12.60	2.717	120	0.577	4.815
30	12.08	2.770	121	0.561	4.820
31	11.57	2.822	122	0.547	4.824
32	11.09	2.874	123	0.532	4.829
33	10.64	2.926	124	0.519	4.833
34	10.19	2.977	125	0.505	4.837
35	9.78	3.027	126	0.492	4.841
36	9.38	3.076	127	0.480	4.845
37	9.00	3.125	128	0.467	4.849
38	8.64	3.173	129	0.456	4.853
39	8.30	3.220	130	0.444	4.856
40	7.97	3.266	131	0.433	4.860
41	7.650	3.311	132	0.422	4.863
42	7.352	3.355	133	0.412	4.866
43	7.065	3.399	134	0.401	4.870
44	6.791	3.442	135	0.391	4.873
45	6.529	3.484	136	0.382	4.876
46	6.278	3.525	137	0.372	4.879
47	6.038	3.565	138	0.363	4.882
48	5.809	3.604	139	0.355	4.885
49	5.590	3.643	140	0.346	4.887
50	5.380	3.680	141	0.338	4.890
51	5.179	3.717	142	0.330	4.893

Temperature (°C)	Resistance (kΩ)	Voltage (V)	Temperature (°C)	Resistance (kΩ)	Voltage (V)
52	4.986	3.753	143	0.322	4.895
53	4.802	3.787	144	0.314	4.897
54	4.625	3.822	145	0.307	4.900
55	4.457	3.855	146	0.299	4.902
56	4.295	3.887	147	0.292	4.904
57	4.139	3.919	148	0.286	4.907
58	3.990	3.949	149	0.279	4.909
59	3.848	3.979	150	0.272	4.911
60	3.711	4.008	151	0.266	4.913
61	3.580	4.037	152	0.260	4.915
62	3.454	4.064	153	0.254	4.917
63	3.332	4.091	154	0.248	4.919
64	3.217	4.117	155	0.243	4.920
65	3.105	4.143	156	0.237	4.922
66	2.999	4.167	157	0.232	4.924
67	2.896	4.191	158	0.227	4.926
68	2.797	4.214	159	0.222	4.927
69	2.702	4.237	160	0.217	4.929
70	2.611	4.259			

1.2 Voltage list of 20 kΩ pipeline temperature sensors (including temperature sensors for defroster, IDU and ODU pipes)

Temperature (°C)	Resistance (kΩ)	Voltage (V)	Temperature (°C)	Resistance (kΩ)	Voltage (V)
-30	361.8	0.262	66	3.998	4.167
-29	339.8	0.278	67	3.861	4.191
-28	319.2	0.295	68	3.729	4.214
-27	300	0.313	69	3.603	4.237
-26	282.2	0.331	70	3.481	4.259
-25	265.5	0.350	71	3.364	4.280
-24	249.9	0.371	72	3.252	4.301
-23	235.3	0.392	73	3.144	4.321
-22	221.6	0.414	74	3.04	4.340
-21	208.9	0.437	75	2.94	4.359
-20	196.9	0.461	76	2.844	4.378
-19	181.4	0.497	77	2.752	4.395
-18	171.4	0.522	78	2.663	4.412
-17	162.1	0.549	79	2.577	4.429
-16	153.3	0.577	80	2.495	4.445

Temperature (°C)	Resistance (kΩ)	Voltage (V)	Temperature (°C)	Resistance (kΩ)	Voltage (V)
-15	145	0.606	81	2.415	4.461
-14	137.2	0.636	82	2.339	4.476
-13	129.9	0.667	83	2.265	4.491
-12	123	0.699	84	2.194	4.506
-11	116.5	0.732	85	2.125	4.520
-10	110.3	0.767	86	2.059	4.533
-9	104.6	0.803	87	1.996	4.546
-8	99.13	0.839	88	1.934	4.559
-7	94	0.877	89	1.875	4.571
-6	89.17	0.916	90	1.818	4.583
-5	84.61	0.956	91	1.763	4.595
-4	80.31	0.997	92	1.71	4.606
-3	76.24	1.039	93	1.658	4.617
-2	72.41	1.082	94	1.609	4.628
-1	68.79	1.126	95	1.561	4.638
0	65.37	1.171	96	1.515	4.648
1	62.13	1.218	97	1.47	4.658
2	59.08	1.265	98	1.427	4.667
3	56.19	1.313	99	1.386	4.676
4	53.46	1.361	100	1.346	4.685
5	50.87	1.411	101	1.307	4.693
6	48.42	1.462	102	1.269	4.702
7	46.11	1.513	103	1.233	4.710
8	43.92	1.564	104	1.198	4.717
9	41.84	1.617	105	1.164	4.725
10	39.87	1.670	106	1.131	4.732
11	38.01	1.724	107	1.099	4.740
12	36.24	1.778	108	1.069	4.746
13	34.57	1.832	109	1.039	4.753
14	32.98	1.888	110	1.01	4.760
15	31.47	1.943	111	0.9825	4.766
16	30.04	1.998	112	0.9556	4.772
17	28.68	2.054	113	0.9295	4.778
18	27.39	2.110	114	0.9043	4.784
19	26.17	2.166	115	0.8799	4.789
20	25.01	2.222	116	0.8562	4.795
21	23.9	2.278	117	0.8333	4.800
22	22.85	2.334	118	0.8111	4.805
23	21.85	2.389	119	0.7895	4.810
24	20.9	2.445	120	0.7687	4.815
25	20	2.500	121	0.7485	4.820
26	19.14	2.555	122	0.7289	4.824

Temperature (°C)	Resistance (kΩ)	Voltage (V)	Temperature (°C)	Resistance (kΩ)	Voltage (V)
27	18.32	2.610	123	0.7099	4.829
28	17.55	2.663	124	0.6915	4.833
29	16.8	2.717	125	0.6736	4.837
30	16.1	2.770	126	0.6563	4.841
31	15.43	2.822	127	0.6395	4.845
32	14.79	2.874	128	0.6232	4.849
33	14.18	2.926	129	0.6074	4.853
34	13.59	2.977	130	0.5921	4.856
35	13.04	3.027	131	0.5772	4.860
36	12.51	3.076	132	0.5627	4.863
37	12	3.125	133	0.5487	4.866
38	11.52	3.173	134	0.5351	4.870
39	11.06	3.220	135	0.5219	4.873
40	10.62	3.266	136	0.509	4.876
41	10.2	3.311	137	0.4966	4.879
42	9.803	3.355	138	0.4845	4.882
43	9.42	3.399	139	0.4727	4.885
44	9.054	3.442	140	0.4613	4.887
45	8.705	3.484	141	0.4502	4.890
46	8.37	3.525	142	0.4394	4.893
47	8.051	3.565	143	0.4289	4.895
48	7.745	3.604	144	0.4187	4.897
49	7.453	3.643	145	0.4088	4.900
50	7.173	3.680	146	0.3992	4.902
51	6.905	3.717	147	0.3899	4.904
52	6.648	3.753	148	0.3808	4.907
53	6.403	3.787	149	0.3719	4.909
54	6.167	3.822	150	0.3633	4.911
55	5.942	3.855	151	0.3549	4.913
56	5.726	3.887	152	0.3468	4.915
57	5.519	3.919	153	0.3389	4.917
58	5.32	3.949	154	0.3312	4.919
59	5.13	3.979	155	0.3237	4.920
60	4.948	4.008	156	0.3164	4.922
61	4.773	4.037	157	0.3093	4.924
62	4.605	4.064	158	0.3024	4.926
63	4.443	4.091	159	0.2956	4.927
64	4.289	4.117	160	0.2891	4.929
65	4.14	4.143			

1.3 Voltage list of 50 kΩ discharge temperature sensors (including discharge air temperature sensor)

Temperature (°C)	Resistance (kΩ)	Voltage (V)	Temperature (°C)	Resistance (kΩ)	Voltage (V)
-30	911.56	0.054	61	11.736	2.300
-29	853.66	0.058	62	11.322	2.345
-28	799.98	0.062	63	10.925	2.389
-27	750.18	0.066	64	10.544	2.434
-26	703.92	0.070	65	10.178	2.478
-25	660.93	0.075	66	9.8269	2.522
-24	620.94	0.079	67	9.4896	2.565
-23	583.72	0.084	68	9.1655	2.609
-22	549.04	0.089	69	8.9542	2.638
-21	516.71	0.095	70	8.5551	2.695
-20	486.55	0.101	71	5.9676	2.737
-19	458.4	0.107	72	7.9913	2.779
-18	432.1	0.113	73	7.7257	2.821
-17	407.51	0.120	74	7.4702	2.862
-16	384.51	0.127	75	7.2245	2.903
-15	362.99	0.134	76	6.9882	2.943
-14	342.83	0.142	77	6.7608	2.983
-13	323.94	0.150	78	6.542	3.023
-12	306.23	0.158	79	6.3315	3.062
-11	289.61	0.167	80	6.1288	3.100
-10	274.02	0.176	81	5.9336	3.138
-9	259.37	0.186	82	5.7457	3.175
-8	245.61	0.196	83	5.5647	3.212
-7	232.67	0.206	84	5.3903	3.249
-6	220.5	0.217	85	5.2223	3.285
-5	209.05	0.228	86	5.0605	3.320
-4	195.97	0.240	87	4.9044	3.355
-3	188.12	0.252	88	4.7541	3.389
-2	178.65	0.265	89	4.6091	3.423
-1	169.68	0.278	90	4.4693	3.456
0	161.02	0.292	91	4.3345	3.488
1	153	0.307	92	4.2044	3.520
2	145.42	0.322	93	4.0789	3.551
3	135.96	0.337	94	3.9579	3.582
4	131.5	0.353	95	3.841	3.612
5	126.17	0.367	96	3.7283	3.642
6	119.08	0.387	97	3.6194	3.671
7	113.37	0.405	98	3.5143	3.700

Temperature (°C)	Resistance (kΩ)	Voltage (V)	Temperature (°C)	Resistance (kΩ)	Voltage (V)
8	107.96	0.424	99	3.4128	3.728
9	102.85	0.443	100	3.3147	3.755
10	98.006	0.463	101	3.22	3.782
11	93.42	0.483	102	3.1285	3.809
12	89.075	0.505	103	3.0401	3.834
13	84.956	0.527	104	2.9547	3.860
14	81.052	0.549	105	2.8721	3.884
15	77.349	0.572	106	2.7922	3.909
16	73.896	0.596	107	2.715	3.932
17	70.503	0.621	108	2.6404	3.956
18	67.338	0.647	109	2.5682	3.978
19	64.333	0.673	110	2.4983	4.001
20	61.478	0.700	111	2.4308	4.022
21	58.766	0.727	112	2.3654	4.044
22	56.189	0.755	113	2.3021	4.064
23	53.738	0.784	114	2.2409	4.085
24	51.408	0.814	115	2.1816	4.105
25	49.191	0.845	116	2.1242	4.124
26	47.082	0.876	117	2.0686	4.143
27	45.074	0.908	118	2.0148	4.162
28	43.163	0.941	119	1.9626	4.180
29	41.313	0.974	120	1.9123	4.197
30	39.61	1.008	121	1.8652	4.214
31	37.958	1.043	122	1.8158	4.232
32	36.384	1.078	123	1.7698	4.248
33	34.883	1.114	124	1.7253	4.264
34	33.453	1.151	125	1.6821	4.280
35	32.088	1.188	126	1.6402	4.295
36	30.787	1.226	127	1.5996	4.310
37	29.544	1.264	128	1.5602	4.325
38	28.359	1.303	129	1.522	4.340
39	27.227	1.343	130	1.485	4.354
40	26.147	1.383	131	1.449	4.367
41	25.114	1.424	132	1.4141	4.381
42	24.128	1.465	133	1.3803	4.394
43	23.186	1.507	134	1.3474	4.406
44	22.286	1.549	135	1.3155	4.419
45	21.425	1.591	136	1.2846	4.431
46	20.601	1.634	137	1.2545	4.443
47	19.814	1.677	138	1.2233	4.455
48	19.061	1.721	139	1.1969	4.466
49	18.34	1.764	140	1.1694	4.477

Temperature (°C)	Resistance (kΩ)	Voltage (V)	Temperature (°C)	Resistance (kΩ)	Voltage (V)
50	17.651	1.808	141	1.1476	4.485
51	16.99	1.853	142	1.1166	4.498
52	16.358	1.897	143	1.0913	4.508
53	15.753	1.942	144	1.0667	4.518
54	15.173	1.986	145	1.0429	4.528
55	14.618	2.031	146	1.0197	4.537
56	14.085	2.076	147	0.9971	4.547
57	13.575	2.121	148	0.9752	4.556
58	13.086	2.166	149	0.9538	4.565
59	12.617	2.211	150	0.9331	4.573
60	12.368	2.235			

2. Temperature/Pressure List of Refrigerant

R410A							
Pressure	Temperature		Pressure	Temperature		Pressure	Temperature
Kpa	°C		Kpa	°C		Kpa	°C
100	-51.909		1250	14.153		2400	38.688
150	-43.635		1300	15.52		2450	39.529
200	-37.323		1350	16.847		2500	40.358
250	-32.15		1400	18.138		2550	41.173
300	-27.731		1450	19.395		2600	41.977
350	-23.85		1500	20.619		2650	42.769
400	-20.378		1550	21.813		2700	43.55
450	-17.225		1600	22.978		2750	44.32
500	-14.331		1650	24.116		2800	45.079
550	-11.65		1700	25.229		2850	45.828
600	-9.1503		1750	26.317		2900	46.567
650	-6.8046		1800	27.382		2950	47.296
700	-4.5925		1850	28.425		3000	48.015
750	-2.4975		1900	29.447		3050	48.726
800	-0.50613		1950	30.448		3100	49.428
850	1.393		2000	31.431		3150	50.121
900	3.2092		2050	32.395		3200	50.806
950	4.9506		2100	33.341		3250	51.482
1000	6.624		2150	34.271		3300	52.15
1050	8.2352		2200	35.184		3350	52.811
1100	9.7896		2250	36.082		3400	53.464
1150	11.291		2300	36.965		3450	54.11
1200	12.745		2350	37.834		3500	54.748

3. Operation Tools

The following tools will be used: 1) Liquid-level gauge; 2) Screwdriver; 3) Electric driven rotary hammer; 4) Drill; 5) Pipe expander; 6) Torque wrench; 7) Open-end wrench; 8) Pipe cutter; 9) Leak detector; 10) Vacuum pump; 11) Pressure gauge; 12) Universal meter; 13) Hexagon wrench; 14) Tapeline.



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