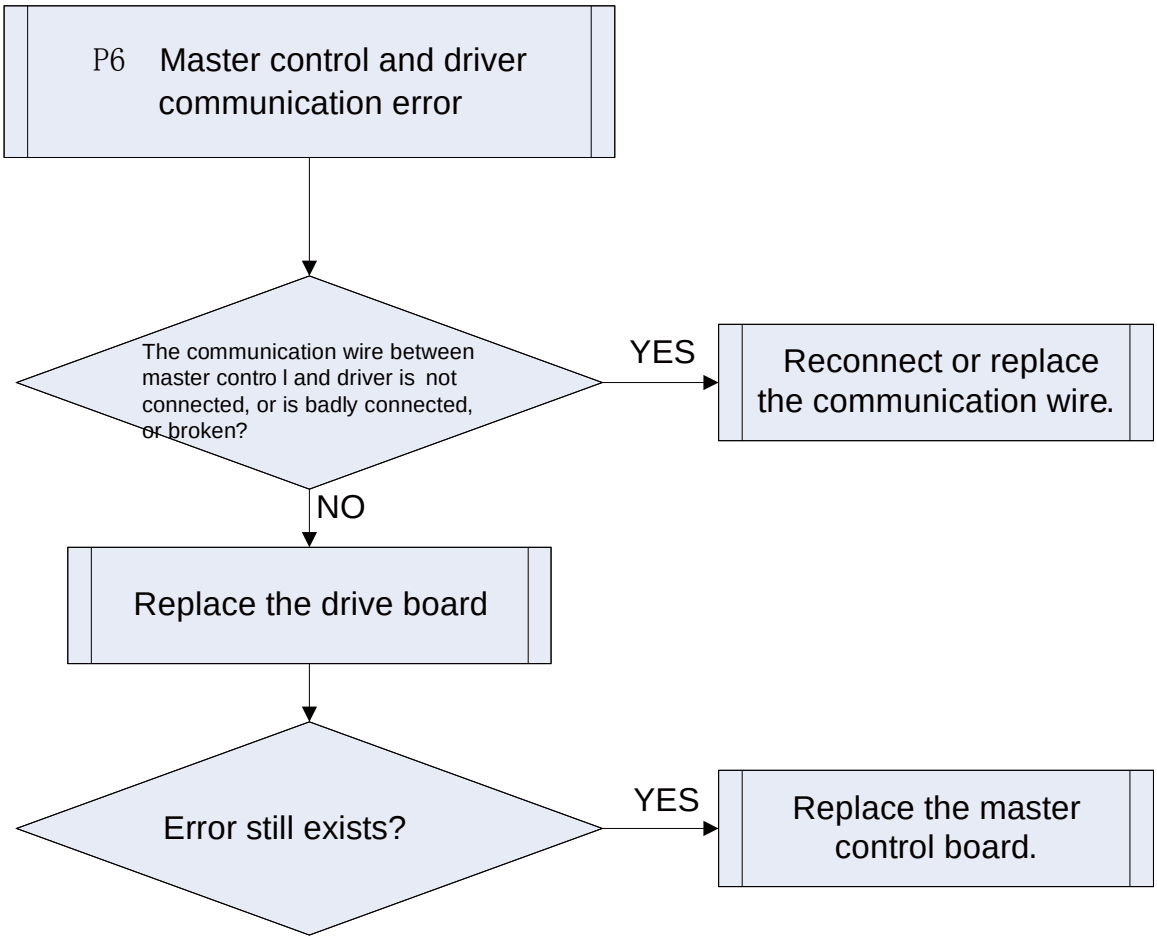
Troubleshooting：



3.4.29 “P7” Driver Module Sensor Error

Error display: ODU mainboard, IDU wired control and IDU receiver light board will display

Error judgment condition and method:

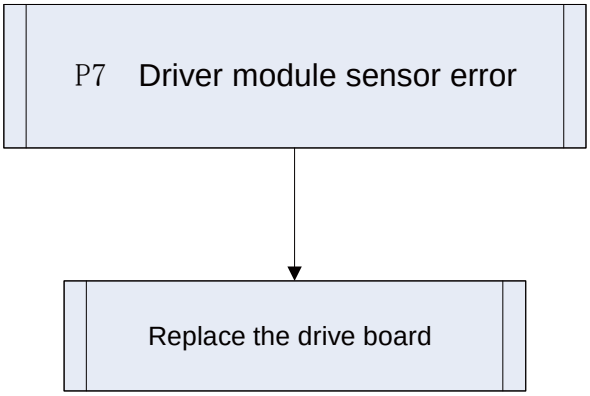
If IPM or PFC module temperature is lower than the set protection value, then it can be judged that driver module sensor error occurs and system will shut down for protection.

Possible reason:

■Module temperature sensor is short-circuited or broken-circuited.

■Drive board current sampling circuit element is damaged or drive chip current sampling AD terminal is abnormal.

Troubleshooting：



3.4.30 “P8” Driver Module High Temperature Protection

Error display: ODU mainboard, IDU wired control and IDU receiver light board will display

Error judgment condition and method:

If IPM module temperature or PFC module temperature exceeds the set protection value, then it can be judged that driver module temperature is too high and system will shut down for protection.

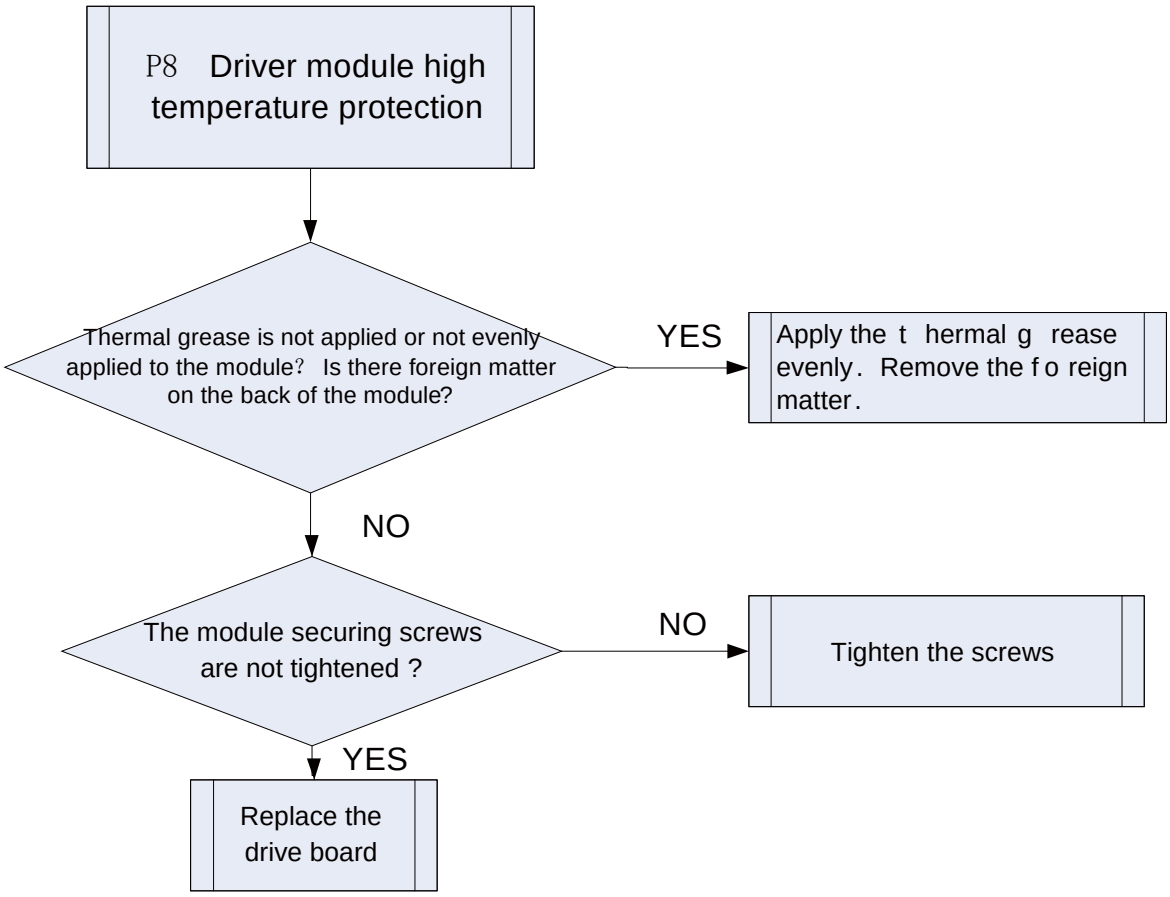
Possible reason:

■Thermal grease is not applied or not evenly applied to the module, or there is other substance on the back of the module.

■The module securing screws are not tightened up.

■Drive board temperature sampling circuit element is damaged or drive chip temperature sampling AD terminal is abnormal.

Troubleshooting：



3.4.31 “PA” AC Current Protection

Error display: ODU mainboard, IDU wired control and IDU receiver light board will display

Error judgment condition and method:

If input current value exceeds the set protection value, then it can be judged that AC current protection occurs and system will shut down for protection.

Possible reason:

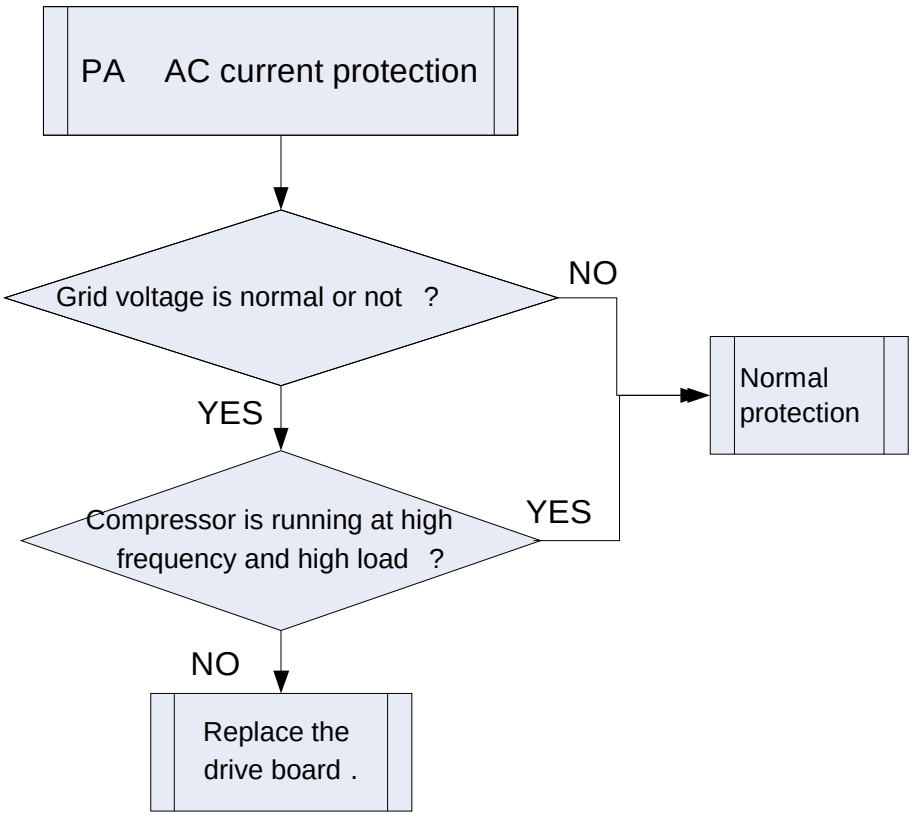
■System is heavy-loaded and compressor current is too large.

■Grid voltage is abnormal.

■PFC module is damaged.

■Drive board PFC current sampling circuit element is damaged or drive chip PFC current sampling AD terminal is abnormal.

Troubleshooting：



3.4.32 “Pc” Driver Current Error

Error display: ODU mainboard, IDU wired control and IDU receiver light board will display

Error judgment condition and method:

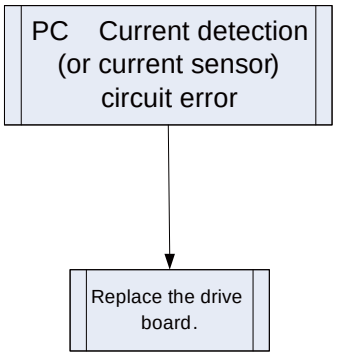
After power charging, if offset voltage average is detected to exceed 12.5% of 1.65V in 1s, then it can be judged that current detection (or current sensor) circuit is faulted. System will shut down for protection.

Possible reason:

■Current detection (or current sensor) sampling circuit element is abnormal.

■Drive chip compressor current sampling AD terminal is badly welded or short-circuited.

Troubleshooting：



3.4.33 “Pd” Sensor Connection Protection

Error display: ODU mainboard, IDU wired controller and IDU receive light board will display

Error judgment condition and method:

Sample the AD value of sensor through 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.

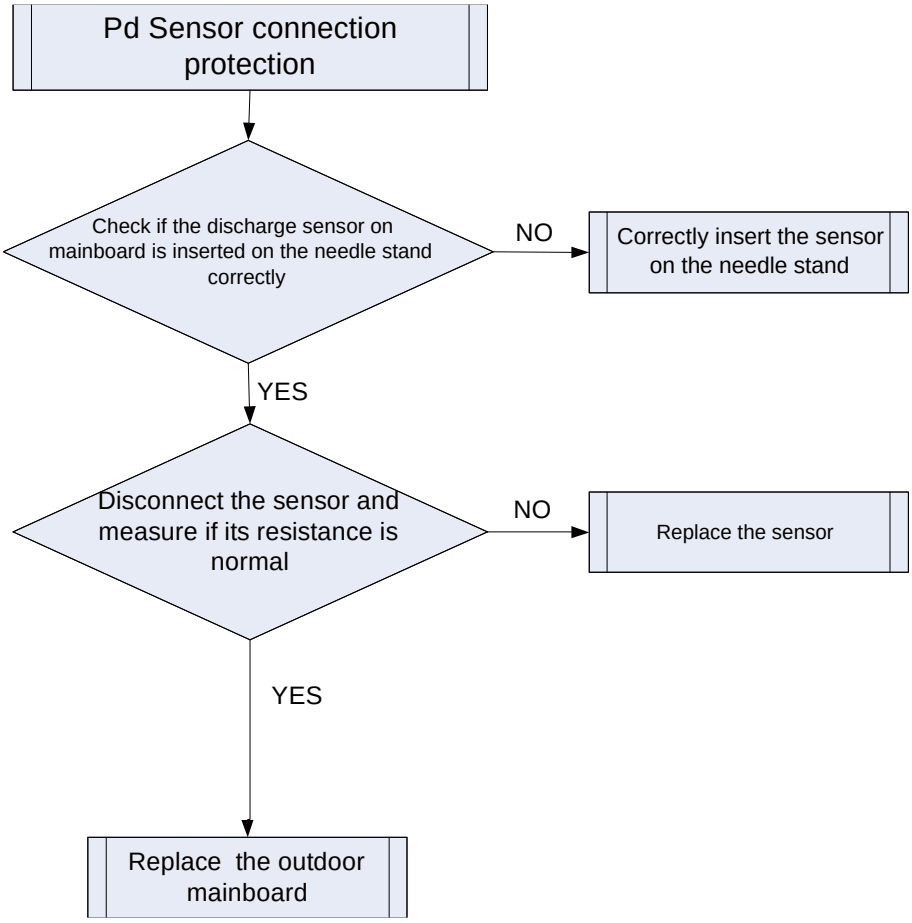
Possible reason:

■Poor contact between sensor and terminal in mainboard interface

■sensor is abnormal

■Detecting circuit is abnormal

Troubleshooting：



3.4.34 “PL” Bus Low-Voltage Protection

Error display: ODU mainboard, IDU wired control and IDU receiver light board will display

Error judgment condition and method:

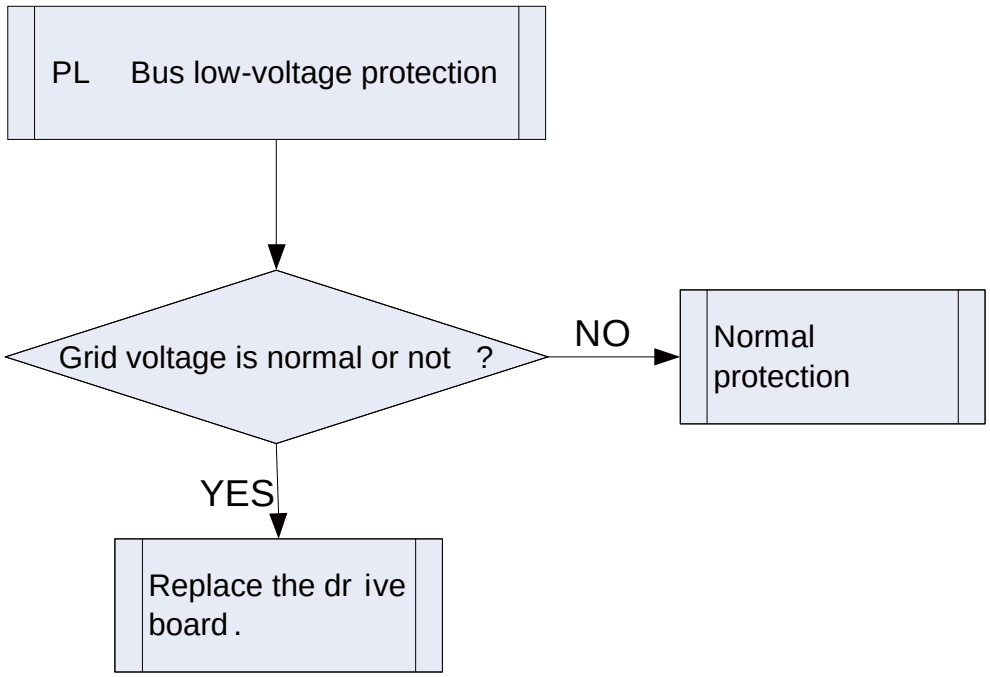
When compressor is running and there is no other malfunction, if busbar voltage is lower than the set value for low voltage protection, then it can be judged that bus low-voltage protection occurs. System will shut down for protection.

Possible reason:

■Voltage of power grid is abnormal.

■Drive board busbar voltage sampling circuit element is damaged or drive board busbar voltage sampling AD terminal is abnormal.

Troubleshooting：



3.4.35 “PH” Bus High-Voltage Protection

Error display: ODU mainboard, IDU wired control and IDU receiver light board will display

Error judgment condition and method:

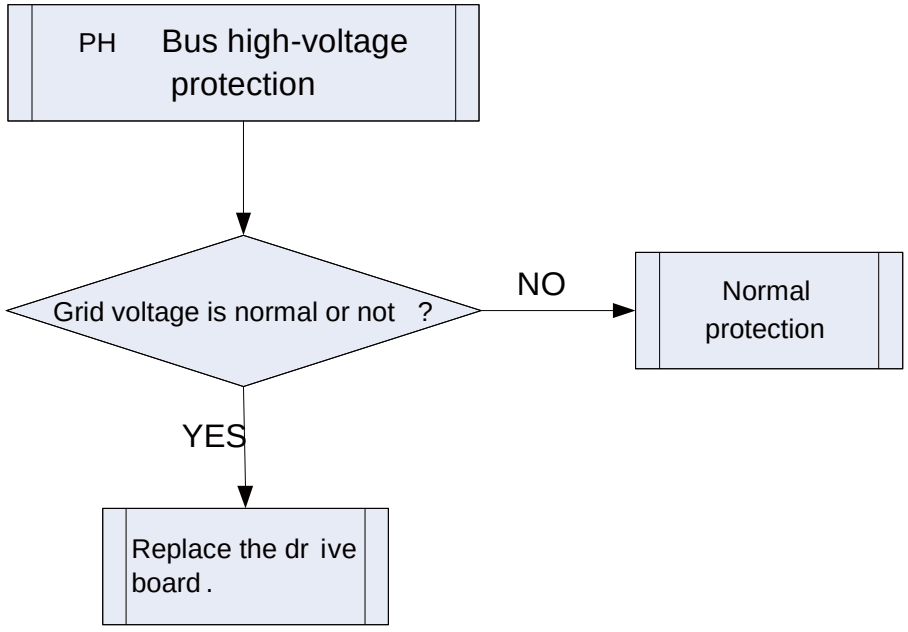
If there is no other malfunction and the busbar voltage is higher than the set value for high voltage protection, then it can be judged that bus high-voltage protection occurs. System will shut down for protection.

Possible reason:

■Voltage of power grid is abnormal.

■Drive board busbar voltage sampling circuit element is damaged or drive board busbar voltage sampling AD terminal is abnormal.

Troubleshooting：



3.4.36 “PU” Charge Loop Error

Error display: ODU mainboard, IDU wired control and IDU receiver light board will display

Error judgment condition and method:

When the charge loop starts to get charged and the busbar voltage cannot reach the set value in a certain period of time, then it can be judged that charge loop error exists. System will shut down for protection.

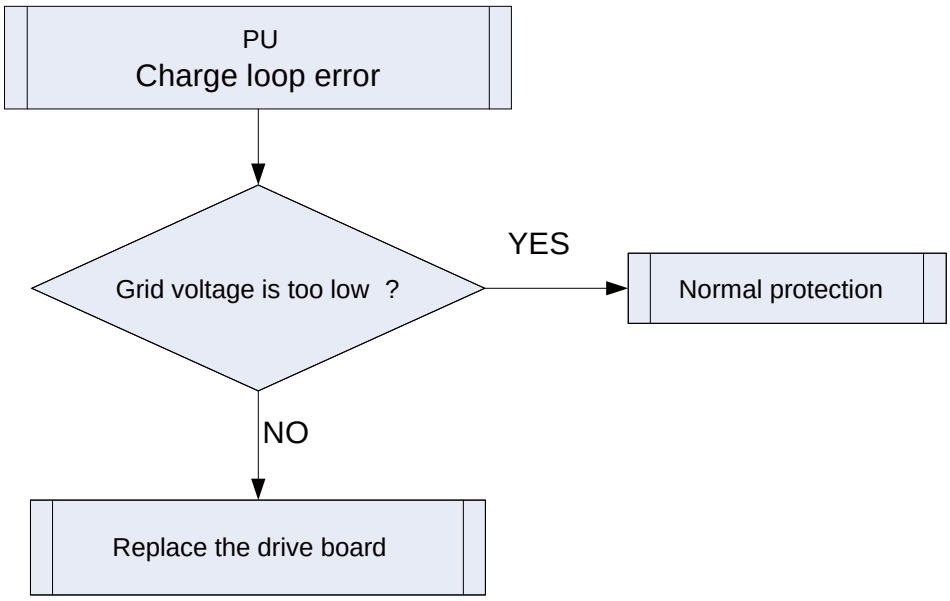
Possible reason:

■Voltage of power grid is abnormal. Voltage is too low.

■Drive board charge loop element is abnormal.

■Drive board busbar voltage sampling circuit element is damaged or drive chip busbar voltage sampling AD terminal is abnormal.

Troubleshooting：



3.4.37 “ee” Drive Memory Chip Error

Error display: ODU mainboard, IDU wired control and IDU receiver light board will display

Error judgment condition and method:

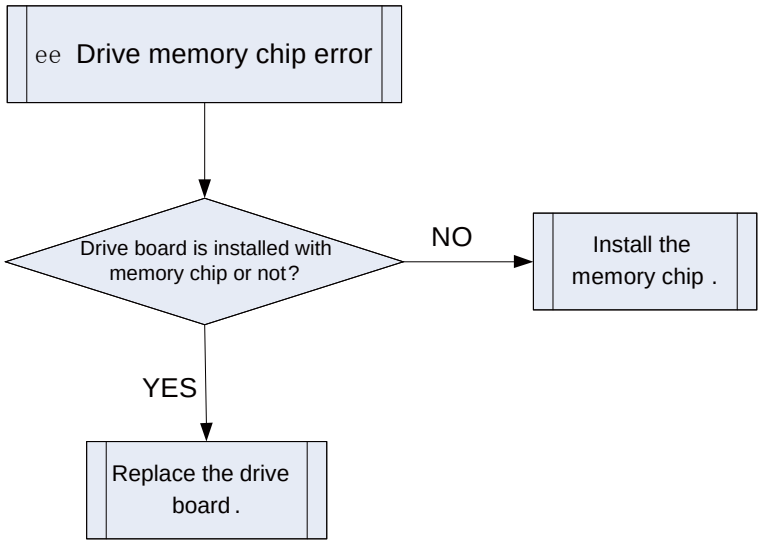
If power is connected but the drive board with memory chip cannot detect the memory chip or read the memory chip data correctly, then it can be judged that drive memory chip error exists.

Possible reason:

■The drive board that needs memory chip is not installed with the memory chip.

■The lead or connector of memory chip is badly welded or short-circuited.

Troubleshooting



3.4.38 “c4” ODU Jumper Cap Error

Error display: ODU mainboard, IDU wired control and IDU receiver light board will display

Error judgment condition and method:

If jumper cap model doesn‘t match with mainboard, report the error

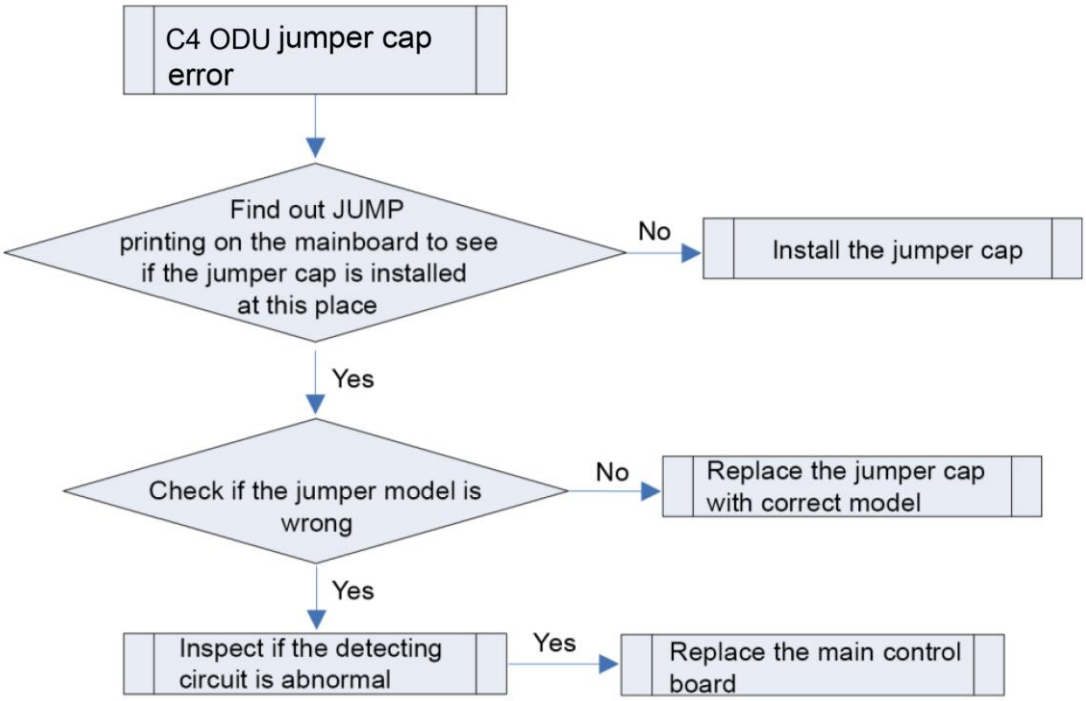
Possible reason:

■Jumper cap is not installed

■Jumper cap model is wrong

■Detecting circuit is abnormal

Troubleshooting:



3.4.39 “EL” Emergency Stop (Fire Alarm)

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

3.5 Failures Not Caused by Errors

(1) If your air conditioner fails to function normally, please first check the following items before maintenance:

Problem	Cause	Corrective measure
The air conditioner can't run.	If you turn off the unit and then immediately turn it on, in order to protect the compressor and avoid system overload, compressor will delay running for 3min.	Please wait for a while.
	Wire connection is wrong.	Connect wires according to the wiring diagram.
	Fuse or circuit breaker is broken.	Replace the fuse or switch on the circuit breaker.
	Power failure	Restart after power is resumed.
	Power plug is loose	Re-insert the power plug.
	Remote control has low battery.	Replace the batteries.
Bad cooling or heating effect.	Air inlet and outlet of indoor or outdoor units have been blocked.	Clear the obstacles and keep the room for indoor and outdoor units well ventilated.
	Improper temperature setting	Reset a proper temperature.
	Fan speed is too low.	Reset a proper fan speed.
	Air flow direction is not right.	Change the direction of air louvers.
	Doors or windows are open.	Close them.
	Exposed under direct sunshine	Put on curtains or louvers in front of the windows.
	Too many heat sources in the room.	Remove unnecessary heat sources.
	Filter is blocked or dirty.	Send for a professional to clean the filter.
	Air inlets or outlets of the units are blocked.	Clear away obstacles that are blocking the air inlets and outlets of indoor and outdoor units.

(2) The following situations are not operation failures.

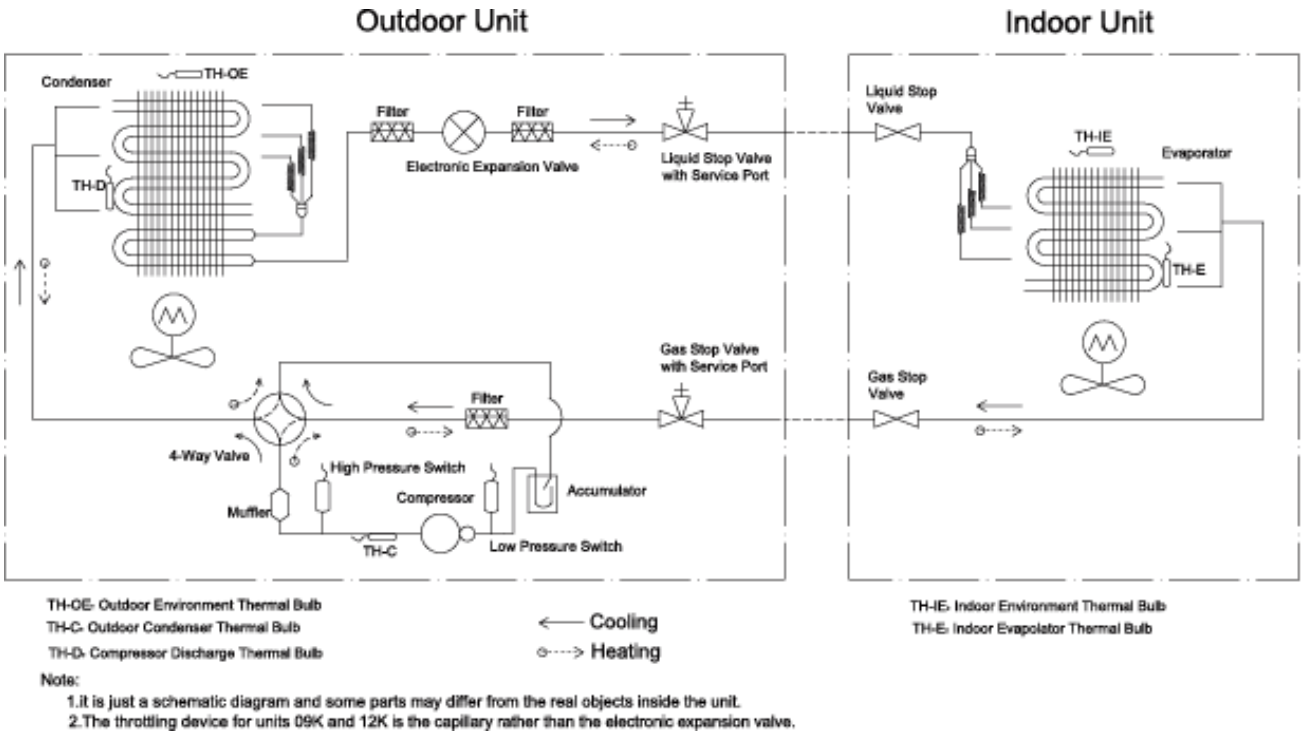
Phenomenon	Time of occurrence	Cause
Mist comes from the air conditioner.	During operation	If the unit is running under high humidity, the wet air in the room will be quickly cooled down.
The air conditioner generates some noise.	System switches to heating mode after defrosting.	Defrosting process will generate some water, which will turn to water vapor.
	The air conditioner is buzzing at the beginning of operation.	Temperature control will be buzzing when it starts working. The noise will become weak 1min later.
Dust comes from the air conditioner.	When the unit is turned on, it purrs.	When the system is just started, the refrigerant is not stable. About 30s later, the purr of the unit becomes low.
	About 20s after the unit first enables the heating mode or there is refrigerant brushing sound when defrosting under heating.	It's the sound of 4-way valve switching direction. The sound will disappear after the valve changes its direction.
	There is hissing sound when the unit is started or stopped and a slight hissing sound during and after operation.	It's the sound of gaseous refrigerant that stops flowing and the sound of drainage system.
	There is a sound of crunching during and after operation.	Because of temperature change, front panel and other components may be swelled up and cause abrasion sound.
	There is a hissing sound when the unit is turned on or suddenly stopped during operation or after defrosting.	Because refrigerant suddenly stops flowing or changes the flow direction.
	The unit starts operation after being unused for a long time.	Dust inside the indoor unit comes out together with the air.
The air conditioner generates some smell.	During operation	The room smell or the smell of cigarette comes out through the indoor unit.

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.

(4) 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.

(5) The evacuation duration depends on the unit's capacity, generally.

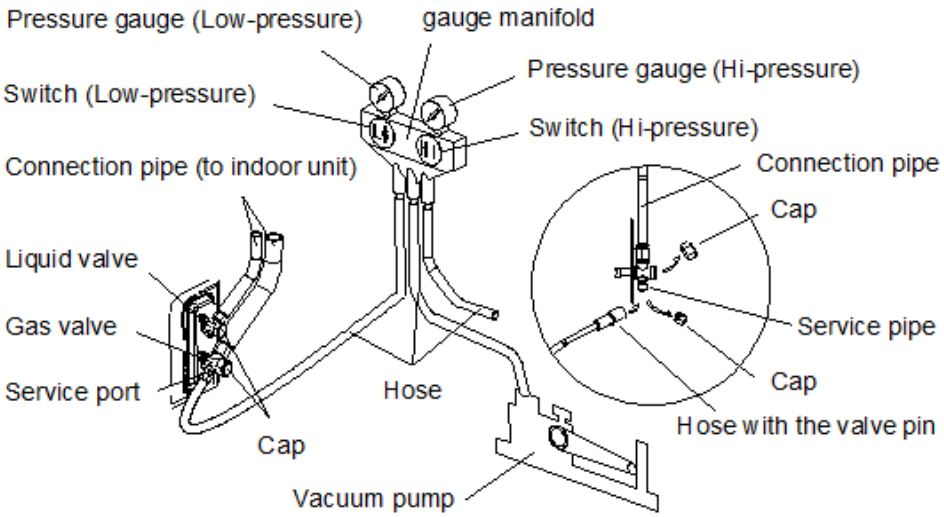
Model	Time(min)
GUD35W/NhA-T	15
GUD50W/NhA-T	20
GUD71W/NhA-T, GUD85W/NhA-T, GUD100W/NhA-T, GUD100W/NhA-X	30
GUD125W/NhA-T, GUD140W/NhA-T, GUD125W/NhA-X, GUD140W/NhA-X, GUD160W/NhA-X	45

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.

(6) 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 can not be larger than 0.005Mp (0.38cmHg).

(7) 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. Notice that the gas and liquid valve can be opened fully only after the manifold valve assembly is removed.

(8) 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.

Refrigerant should be reclaimed into the appropriate storage tank. System should use oxygen-free nitrogen purging to ensure safety. This process may need to repeat several times. Do not use compressed air or oxygen in this process.

4.3 Refrigerant Charging

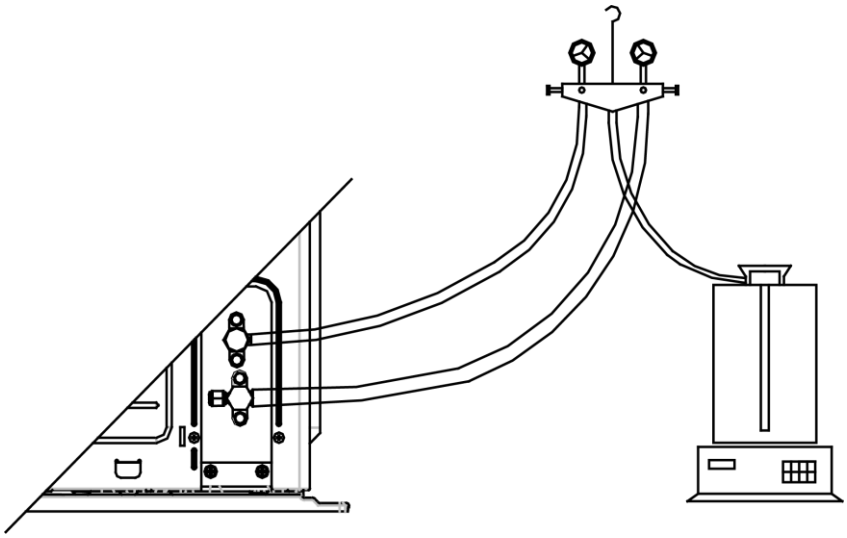
Pre-charging

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 m1.



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 m2.

Step 6: m1-m2=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=m1-m2

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.

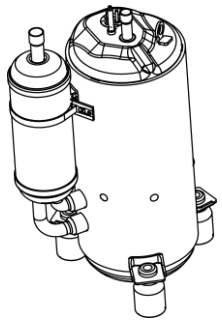
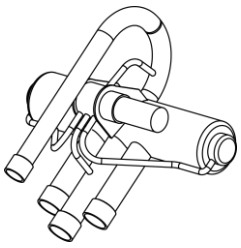
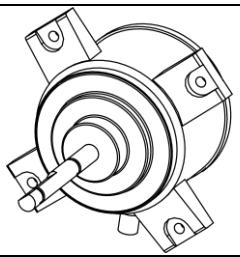
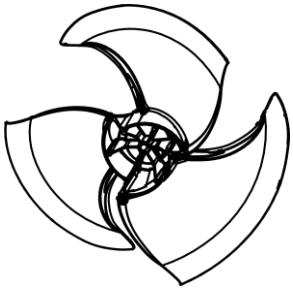
4）When charging is completed (or not yet completed), stick a label on the system.

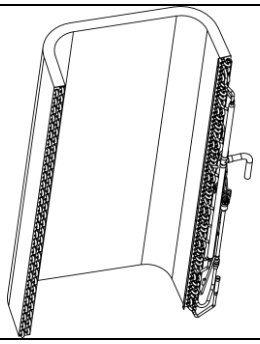
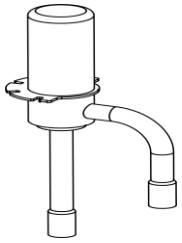
5）Before re-charging refrigerant into the system, use oxygen-free nitrogen to perform pressure test. When charging is completed, perform leak test before trial running. Before leaving the workplace, perform a leak test again.

4.4 Maintenance of Major Components

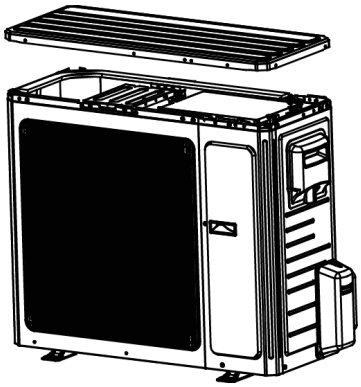
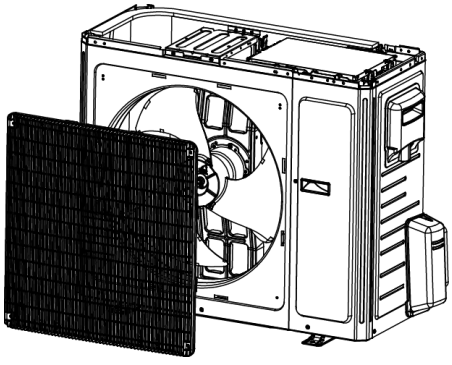
4.5 Removal of Major Components

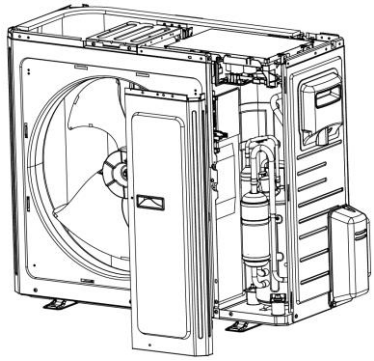
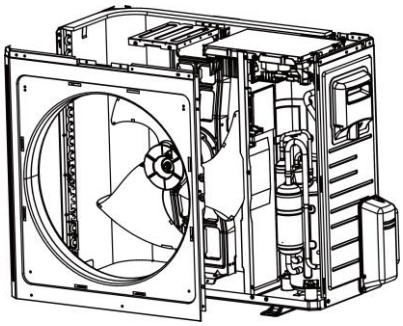
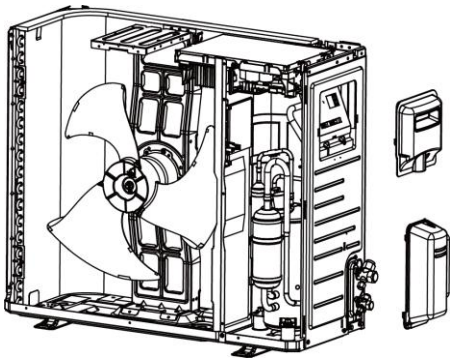
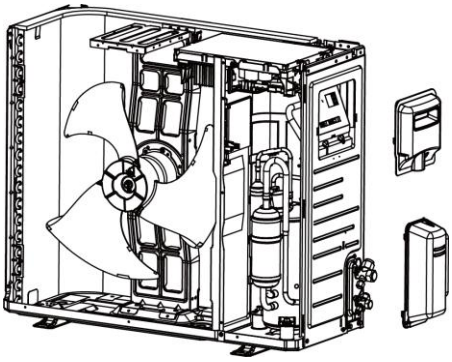
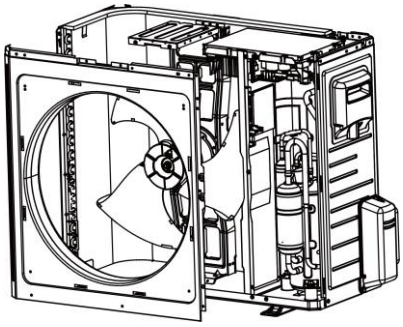
4.5.1 Removal of ODU Major Components

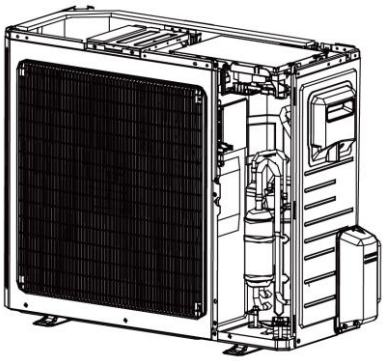
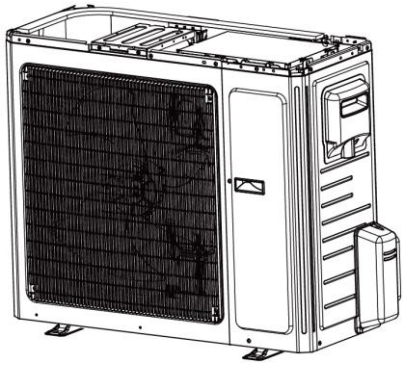
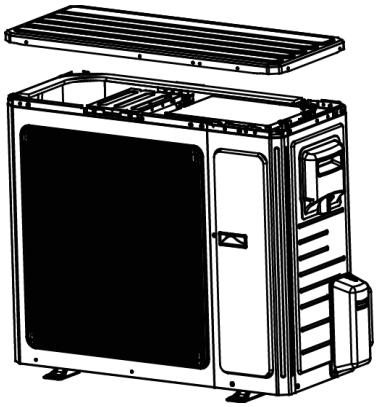
Picture	Name	Function
	Compressor	Through compression, the low pressure refrigerant occupies a less space. As its pressure and temperature both rise, it becomes high pressure and high temperature refrigerant. It is the power drive of the system.
	4-way valve	It is used to change directions, the flow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

Picture	Name	Function
	Gas liquid separator	Installed at the suction side of compressor, it can separate the liquefied refrigerant from the gaseous refrigerant to make sure that only gaseous refrigerant will be sucked into the compressor. If liquefied refrigerant gets inside the compressor, ineffective compressor or slugging phenomenon will occur.
	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.

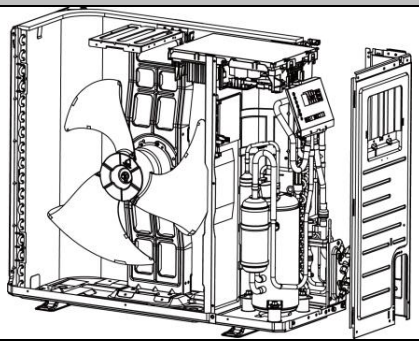
Model: GUD35W/NhA-T, GUD50W/NhA-T, GUD71W/NhA-T, GUD85W/NhA-T

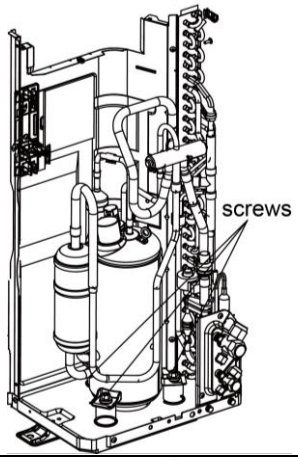
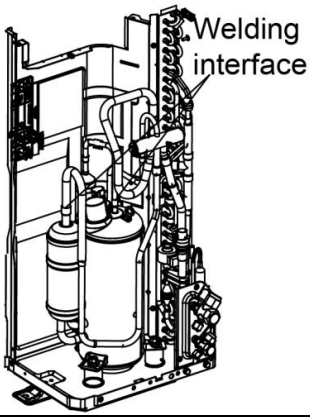
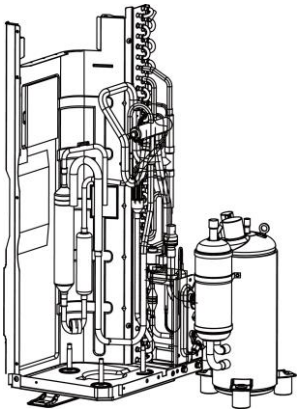
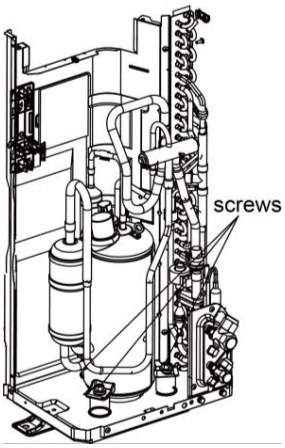
Removal of front panel		
Note: Before removing the front panel, make sure power is cut off.		
Step	Picture	Work instruction
1.Remove the upper cover plate.		●Unscrew the screws of the upper cover plate with a screwdriver.
2. Remove the front grill.		●Unscrew the screws of the front grill with a screwdriver.

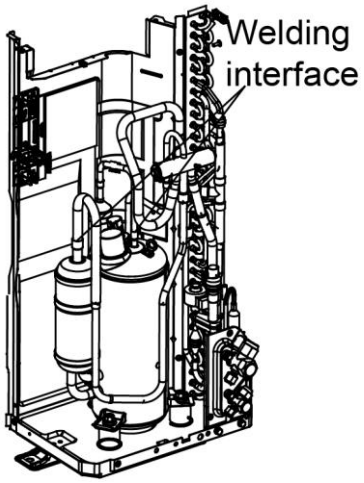
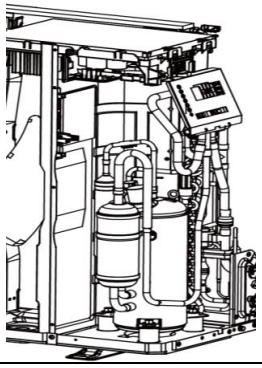
Removal of front panel		
Note: Before removing the front panel, make sure power is cut off.		
Step	Picture	Work instruction
3. Remove the front side plate.		●Unscrew the screws of the front side plate with a screwdriver.
4. Remove the front panel.		●Unscrew the screws that connect the front panel to 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.
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.

Removal of front panel		
Note: Before removing the front panel, make sure power is cut off.		
Step	Picture	Work instruction
8. Install the grill.		●Attach the grill back in place and tighten up the screws.
9. Install the front side plate.		●Tighten up the screws around the front side plate.
10. Install the upper cover plate.		●Tighten up the screws around the upper cover plate.

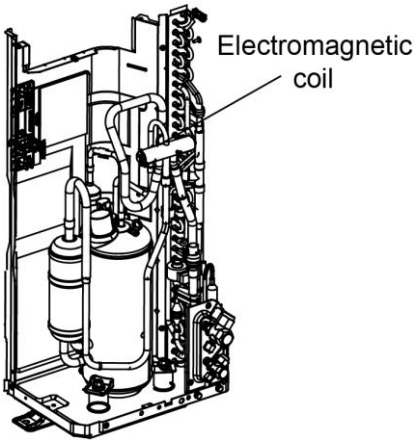
Model: GUD35W/NhA-T, GUD50W/NhA-T, GUD71W/NhA-T, GUD85W/NhA-T

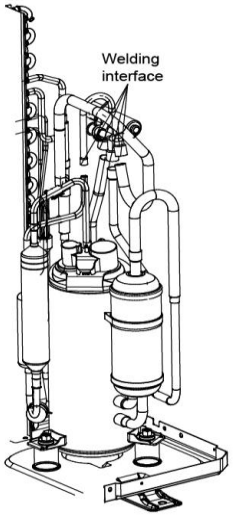
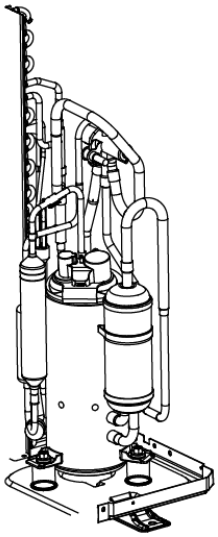
Removal of compressor		
Note: Before removing the compressor, make sure there is no refrigerant in the pipeline and power is cut off.		
Step	Picture	Work instruction
1. Remove wires.		●Loosen the securing screws of the wires with a screwdriver. ●Remove the wires. Note: When removing the wires, mark the wire terminals corresponding to their color so as to avoid misconnection.

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
2. Loosen the securing screws at the foot of compressor.		●Use a wrench to twist off the screws at the foot of compressor.
3． 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.
4. Remove the compressor from the chassis.		●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.		●After replacing the compressor, tighten up the screws at the foot of compressor.

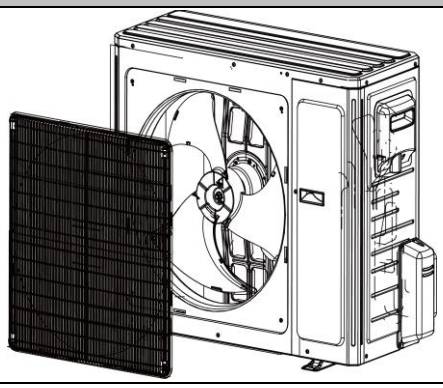
Removal of compressor		
Note: Before removing the compressor, make sure there is no refrigerant in the pipeline and power is cut off.		
Step	Picture	Work instruction
6. Connect the compressor suction port and exhause port with the pipes.		●Weld the compressor connection pipes and connect them to the compressor. Note: When replacing the compressor, avoid touching the nearby pipeline and components.
7. Connect the compressor wires.		●Connect the compressor wires to the wire terminals on the top of compressor. Note: When connecting the wires, be sure to match the colors with the corresponding wire terminals.

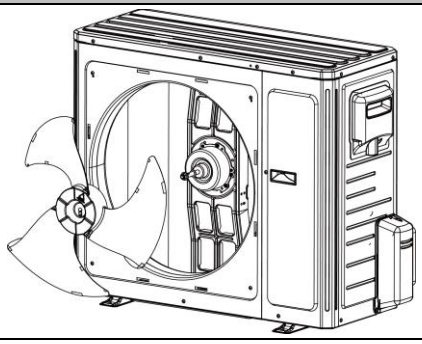
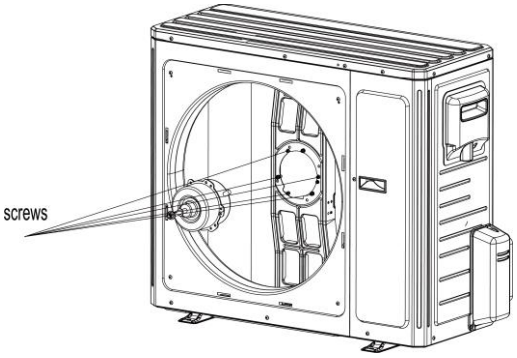
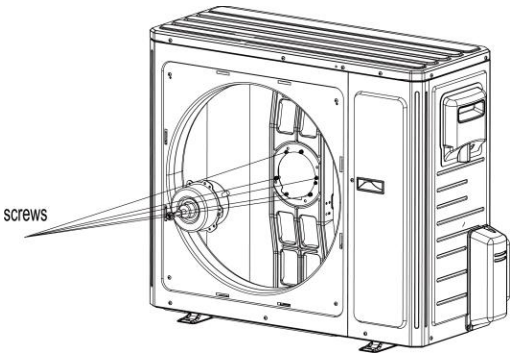
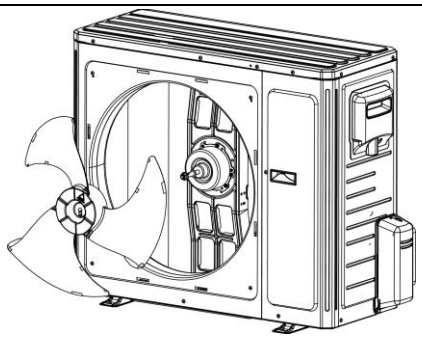
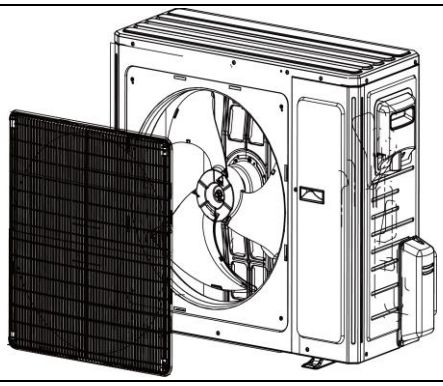
Model: GUD35W/NhA-T, GUD50W/NhA-T, GUD71W/NhA-T, GUD85W/NhA-T

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.		●Carefully unscrew the screws of electromagnetic coil with a screwdriver.

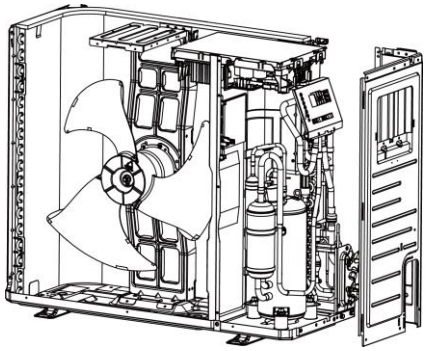
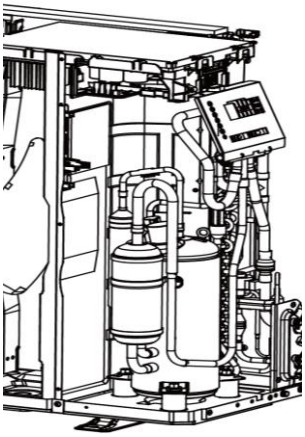
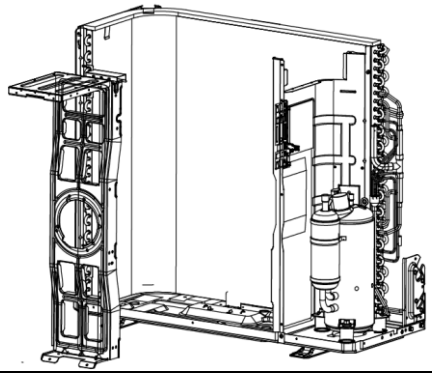
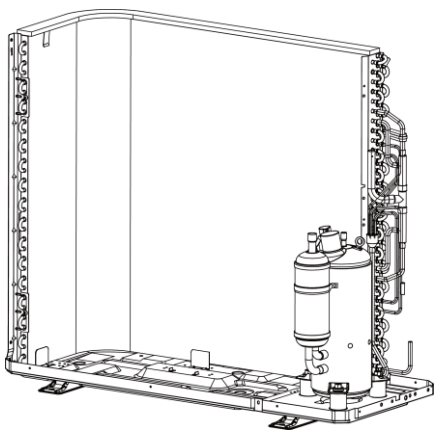
Removal of 4-way valve		
Note: Before removing the 4-way valve, make sure refrigerant is fully discharged from the unit and power is cut off.		
Step	Picture	Work instruction
2. Break off the connection pipes from the 4-way valve.		●Use a soldering gun to loosen the 4 joints on the 4-way valve and then remove the connection pipes. 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.
3. Replace the 4-way valve and connect it to the connection pipes.		●Replace the 4-way valve and then use a soldering gun to weld the 4 joints of the 4-way valve. ●Tighten up the screws of electromagnetic coil with a screwdriver. 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.

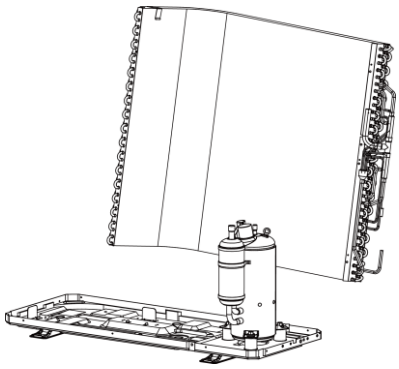
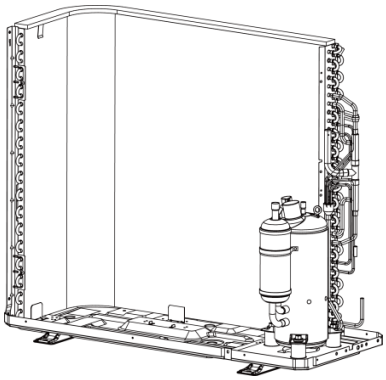
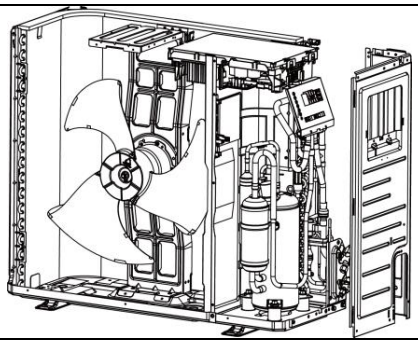
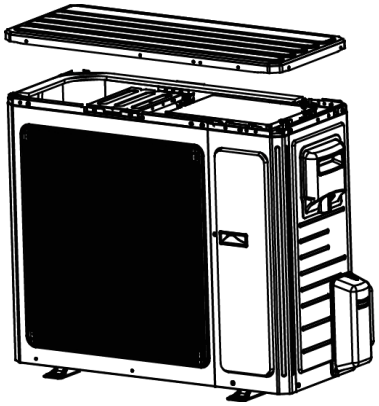
Model: GUD35W/NhA-T, GUD50W/NhA-T, GUD71W/NhA-T, GUD85W/NhA-T

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.

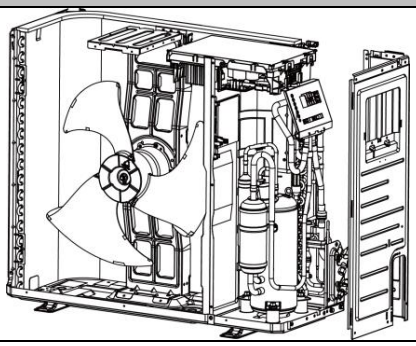
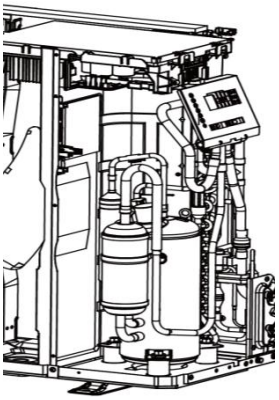
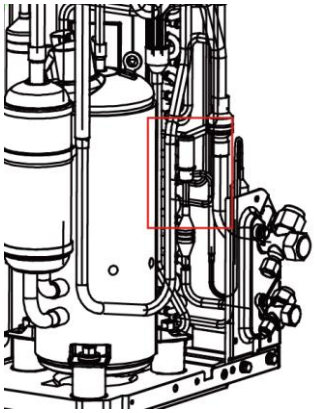
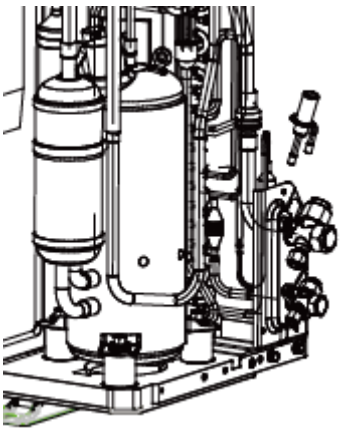
Removal of fan and motor		
Note: Before removing the fan, make sure power is cut off.		
Step	Picture	Work instruction
2. Remove the fan.		●Use a wrench to remove the specialized nut and gasket of the fan. Note: Please keep the nut and gasket safe after removing them from the fan.
3. Remove motor.		●Use a screwdriver to unscrew the bolt of motor. Note: Motor wire should be first removed from the electric box.
4. Install 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.		●After replacing the motor, use a screwdriver to tighten up the screw bolt that secures the motor.

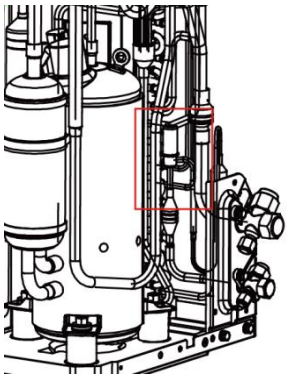
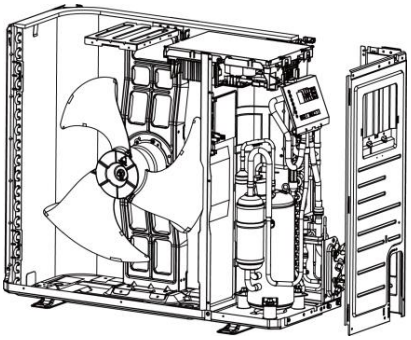
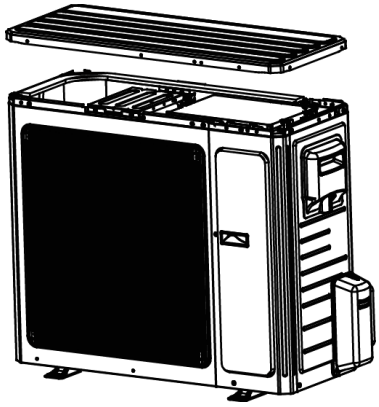
Model: GUD35W/NhA-T, GUD50W/NhA-T, GUD71W/NhA-T, GUD85W/NhA-T

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.
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. 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.

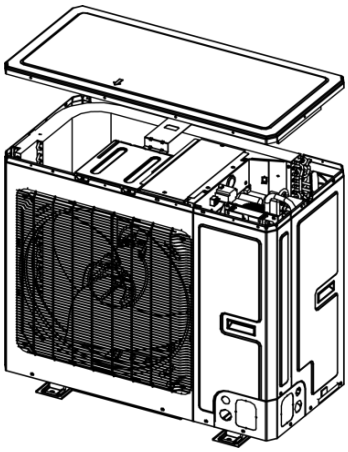
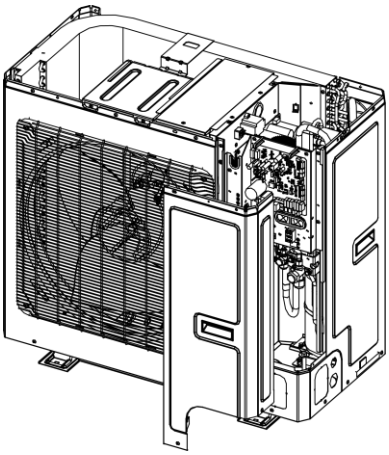
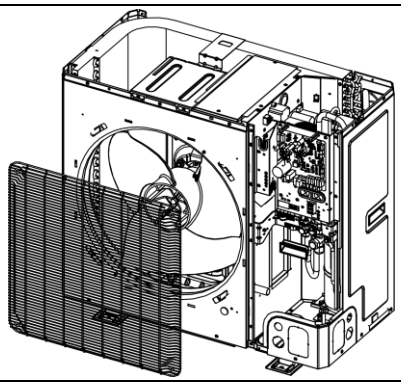
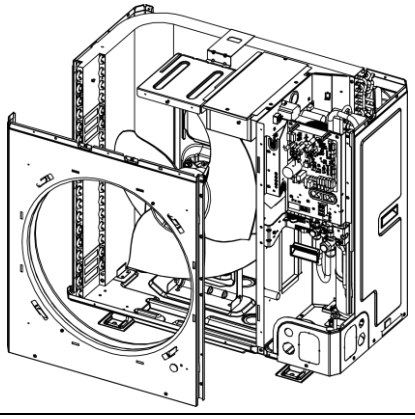
Removal of condenser		
Note: Before removing the condenser, make sure there is no refrigerant in the pipeline and power is cut off.		
Step	Picture	Work instruction
5. Take out the condenser.		●Loosen the securing screws of condenser support. Take off the plate type heat exchanger and the support as a whole.
6. 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±0.1kgf/ c ㎡ (relative pressure). Note: When welding the pipes, do not let the flame burn the other components.
7. 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.
8. 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.

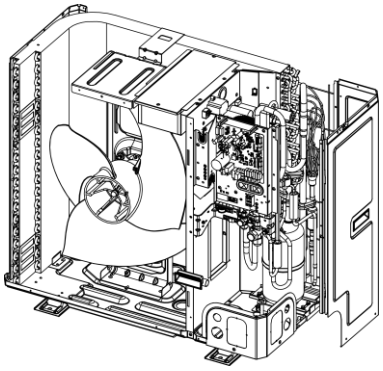
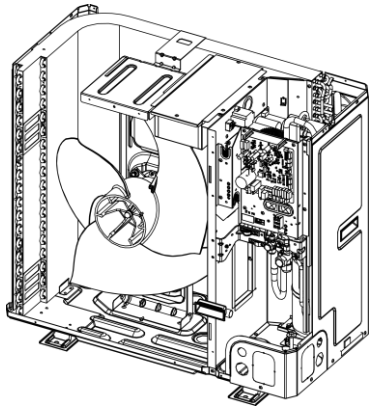
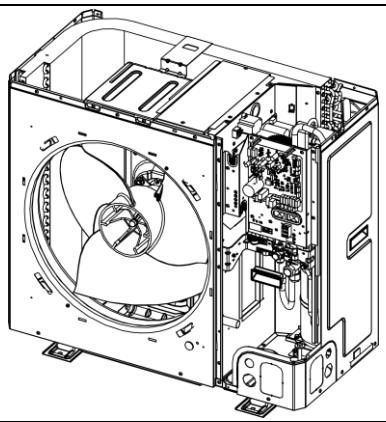
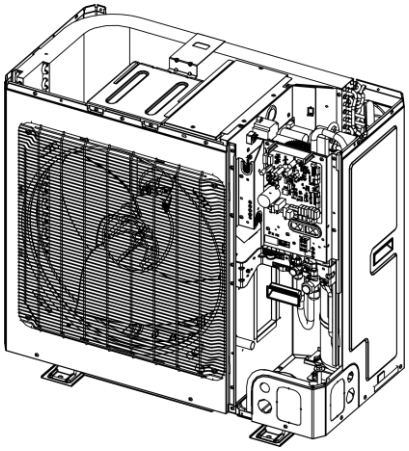
Model: GUD35W/NhA-T, GUD50W/NhA-T, GUD71W/NhA-T, GUD85W/NhA-T

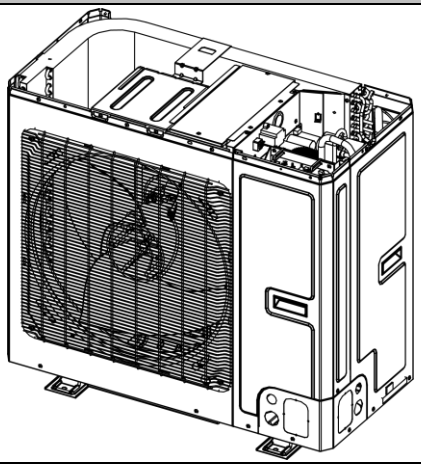
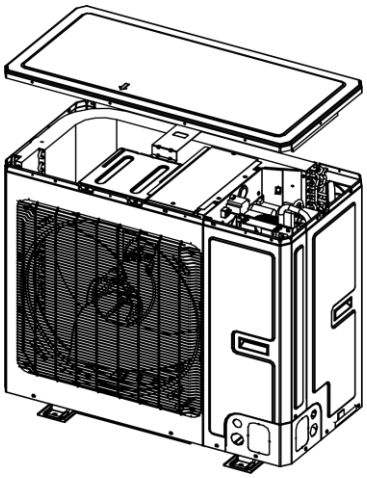
Removal of electronic expansion valve		
Note: Before removing the electronic expansion valve, make sure there is no refrigerant in the pipeline and power is cut off.		
Step	Picture	Work instruction
1. Loosen the wire clamp at the bottom of the electric box and the screws of electric box.		●Remove the 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.
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 bunt 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.		●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±0.1kgf/ c ㎡ (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.
7. Check and install the panels.		●Check whether each component and connection wire is well connected. ●If everything is OK, install the upper, left and right panels. Tighten up the screws.

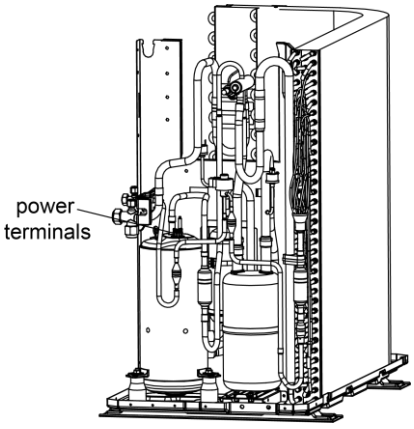
Model: GUD100W/NhA-T, GUD125W/NhA-T, GUD140W/NhA-T,
GUD100W/NhA-X, GUD125W/NhA-X, GUD140W/NhA-X

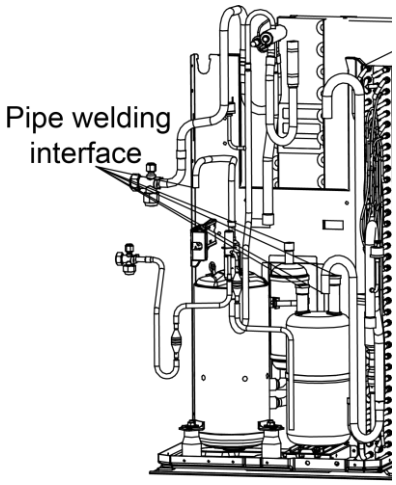
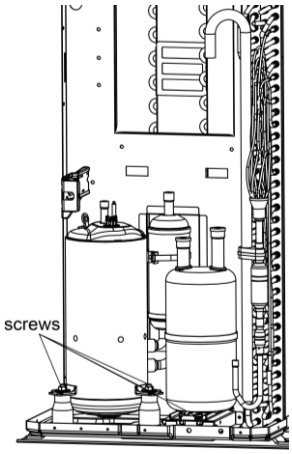
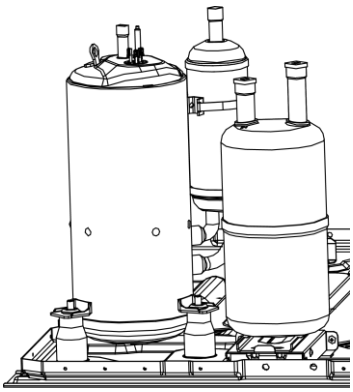
Removal of front panel		
Note: Before removing the front panel, make sure power is cut off.		
Step	Picture	Work instruction
1. Remove the upper cover plate.		●Unscrew the screws of the upper cover plate with a screwdriver.
2. Remove the front side plate.		●Unscrew the screws of the upper and front side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

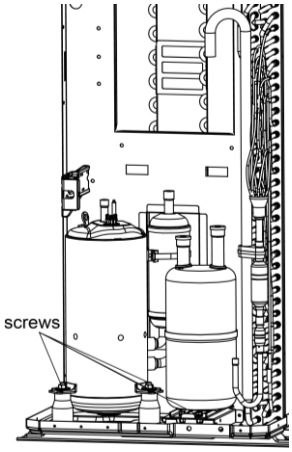
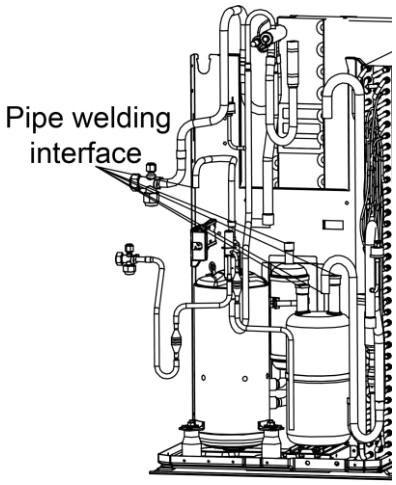
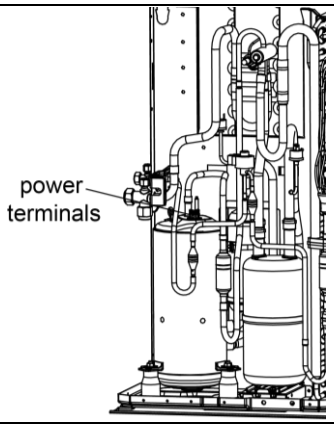
Removal of front panel		
Note: Before removing the front panel, make sure power is cut off.		
Step	Picture	Work instruction
5. Remove the right side plate.		●Unscrew the screws that connect the right side plate to the electric box and the screws around the right side plate.
6. Install the right side 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.
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.

Removal of front panel		
Note: Before removing the front panel, make sure power is cut off.		
Step	Picture	Work instruction
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.

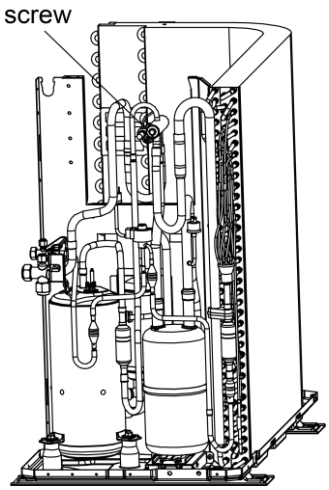
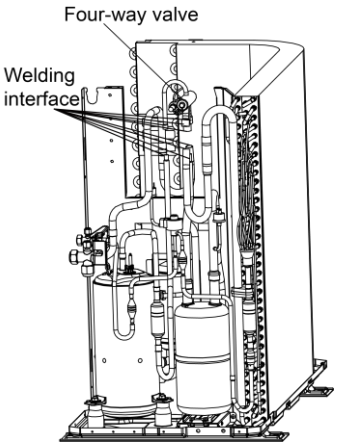
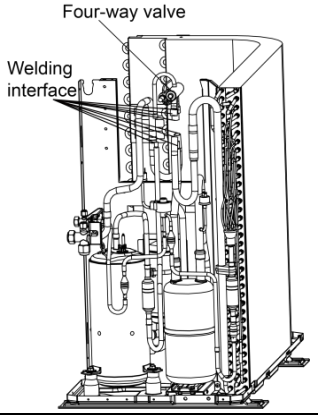
Model: GUD100W/NhA-T, GUD125W/NhA-T, GUD140W/NhA-T,
GUD100W/NhA-X, GUD125W/NhA-X, GUD140W/NhA-X

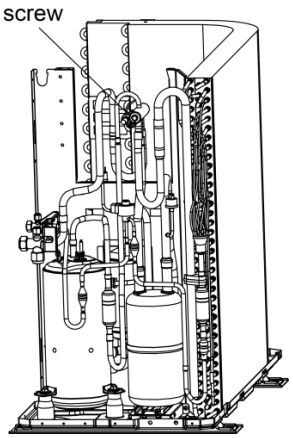
Removal of compressor/gas liquid separator		
Note: Before removing the compressor/gas liquid separator, make sure there is no refrigerant in the pipeline and power is cut off.		
Step	Picture	Work instruction
1. Remove wires.		●Loosen the securing screws of the wires with a screwdriver. ●Remove the wires. Note: When removing the wires, mark the wire terminals corresponding to their color so as to avoid misconnection.

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
2 Break off the pipes that connecting to the compressor/gas liquid separator.		●Weld the pipes that are connected to the compressor/gas liquid separator. ●Then remove the pipes. Note: When welding the pipes, do not let the flame burn the other components.
3. Loosen the compressor's base connectors / gas liquid separator's base nuts.		●Use a wrench to twist off the compressor/gas liquid separator's base nuts.
4. Remove the compressor/gas liquid separator from the chassis.		●Take away the compressor/gas liquid separator and replace with a new one. Note: When replacing the compressor/gas liquid separator, avoid touching the nearby pipeline and components.

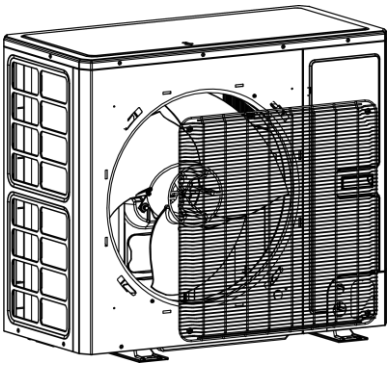
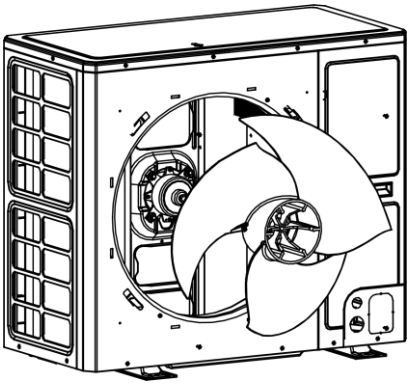
Removal of compressor/gas liquid separator		
Note: Before removing the compressor/gas liquid separator, make sure there is no refrigerant in the pipeline and power is cut off.		
Step	Picture	Work instruction
5. Install the new compressor/gas liquid separator onto the chassis.		●After replacing the compressor/gas liquid separator, tighten up the base screw nuts.
6. Connect the welding interfaces of compressor/gas liquid separator to the pipeline.		●Weld the connection pipes of compressor so as to connect them to the compressor. Note: When replacing the compressor, avoid touching the nearby pipeline and components.
7. Connect the compressor wires.		●Connect the compressor wires to the wire terminals on the top of compressor. Note: When connecting the wires, be sure to match the colors with the corresponding wire terminals.

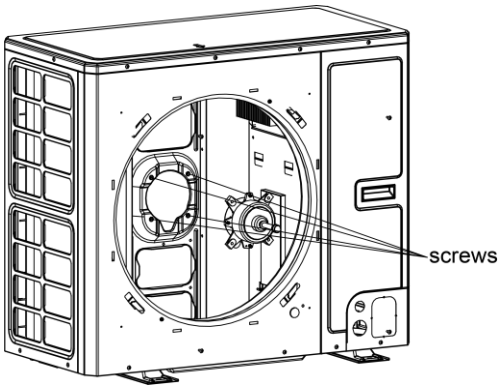
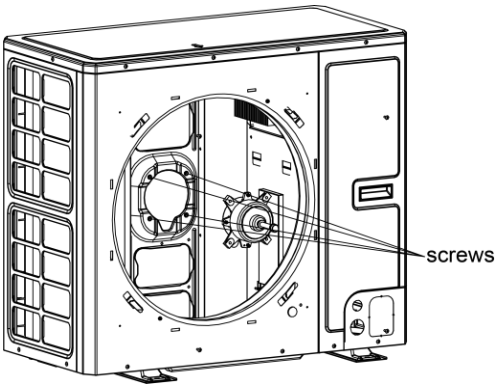
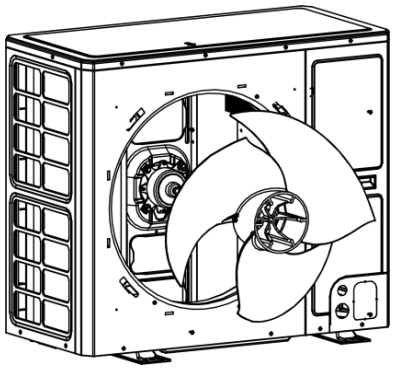
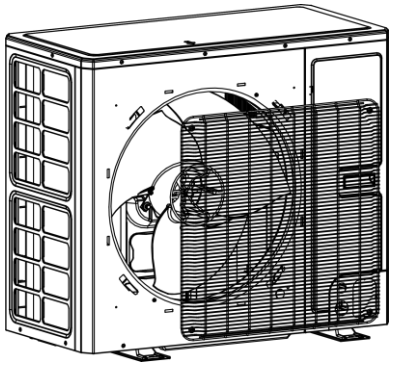
Model: GUD100W/NhA-T, GUD125W/NhA-T, GUD140W/NhA-T,
GUD100W/NhA-X, GUD125W/NhA-X, GUD140W/NhA-X

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 coil of the 4-way valve.		●Carefully unscrew the screws of electromagnetic coil with a screwdriver.
2.Break off the connection pipes from the 4-way valve.		●Use a soldering gun to loosen the 4 joints on the 4-way valve and then remove the connection pipes. 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.
3. Replace the 4-way valve and connect it to the connection pipes.		●Replace the 4-way valve and then use a soldering gun to weld the 4 joints of the 4-way valve. 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.

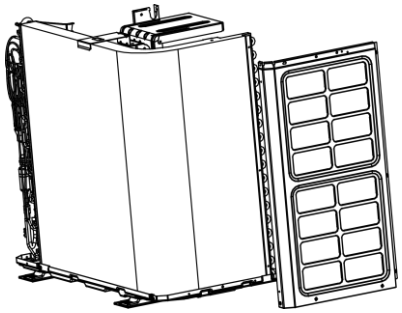
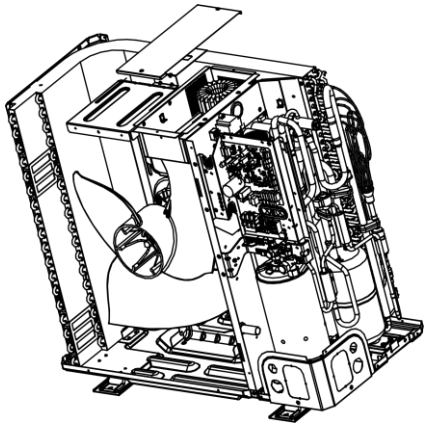
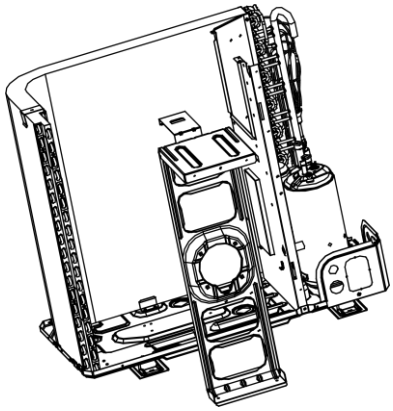
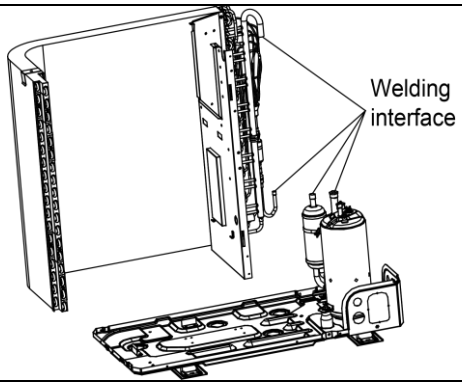
Removal of 4-way valve		
Note: Before removing the 4-way valve, make sure refrigerant is fully discharged from the unit and power is cut off.		
Step	Picture	Work instruction
4. Install the coil of 4-way valve.		●Tighten the screws of the coil of 4-way valve with a screwdriver.

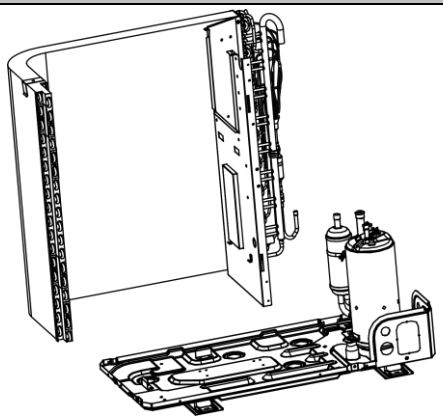
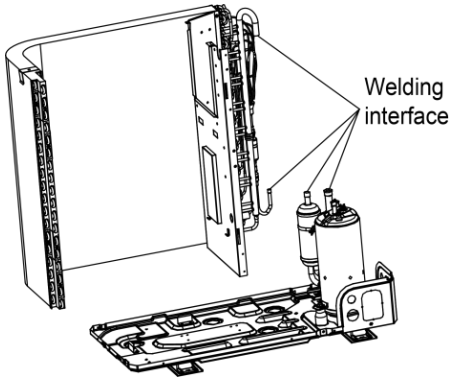
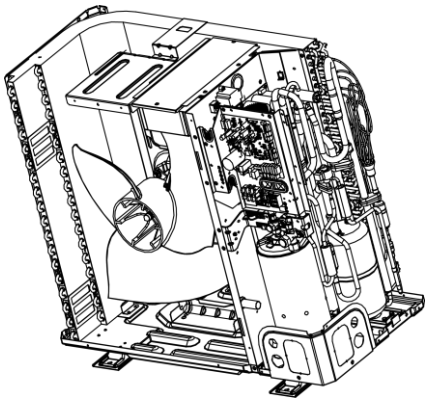
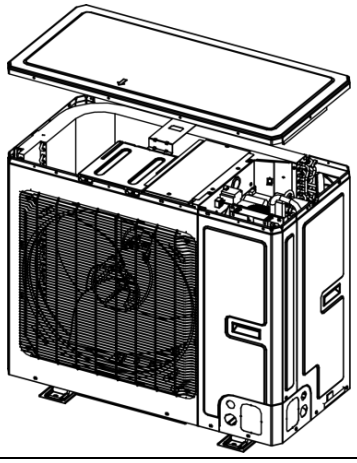
Model: GUD100W/NhA-T, GUD125W/NhA-T, GUD140W/NhA-T,
GUD100W/NhA-X, GUD125W/NhA-X, GUD140W/NhA-X

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.

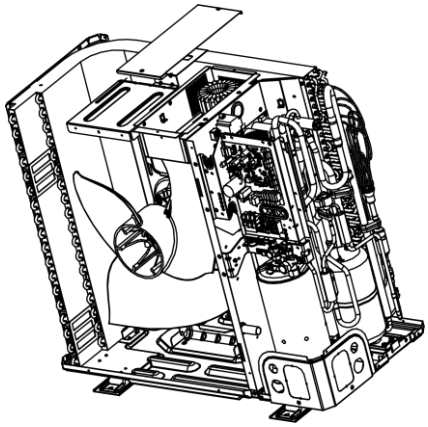
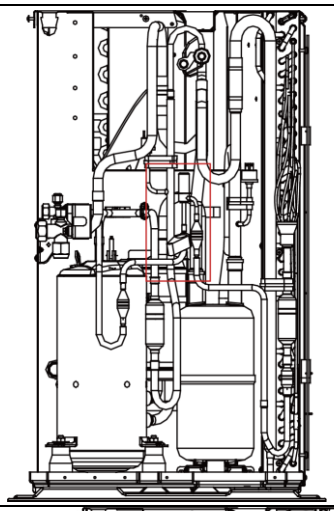
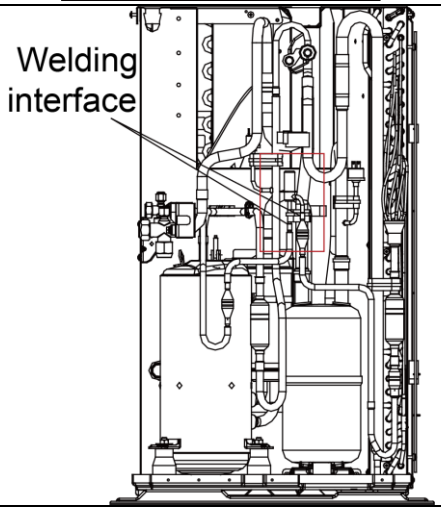
Removal of fan and motor		
Note: Before removing the fan, make sure power is cut off.		
Step	Picture	Work instruction
3. Remove motor.		●Use a screwdriver to unscrew the bolt of motor. Note: Motor wire should be first removed from the electric box.
4. Install the motor.		●Replace with a new motor. Then 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.		●After replacing the motor, use a screwdriver to tighten up the screw bolt that secures the motor. Arrange the wires according to the wiring diagram.

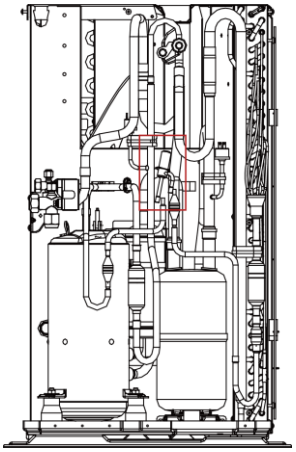
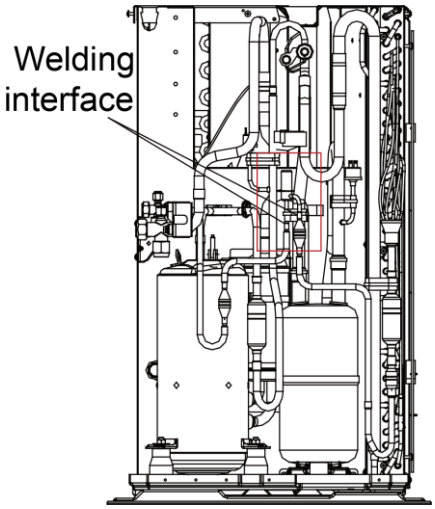
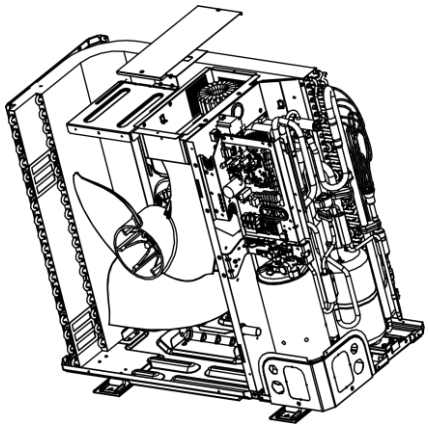
Model: GUD100W/NhA-T, GUD125W/NhA-T, GUD140W/NhA-T,
GUD100W/NhA-X, GUD125W/NhA-X, GUD140W/NhA-X

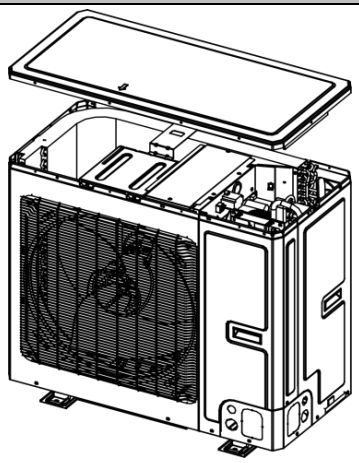
Removal of condenser		
Note: Before removing the condenser, make sure there is no refrigerant in the pipeline and power is cut off.		
Step	Picture	Work instruction
1. Remove the panels.		●Remove the upper, lower and front panels.
2. Remove the electric box.		●Loosen the wire clamp at the bottom of the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

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
5. Take out the condenser.		●Loosen the securing screws of condenser support. Take off the plate type heat exchanger and the support as a whole.
6. 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±0.1kgf/ c ㎡ (relative pressure). Note: When welding the pipes, do not let the flame burn the other components.
7. 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.
8. 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.

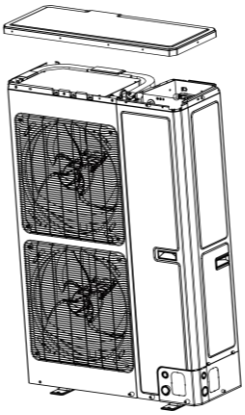
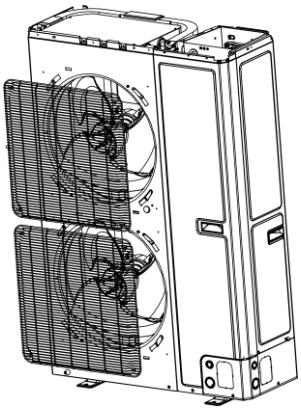
Model: GUD100W/NhA-T, GUD125W/NhA-T, GUD140W/NhA-T,
GUD100W/NhA-X, GUD125W/NhA-X, GUD140W/NhA-X

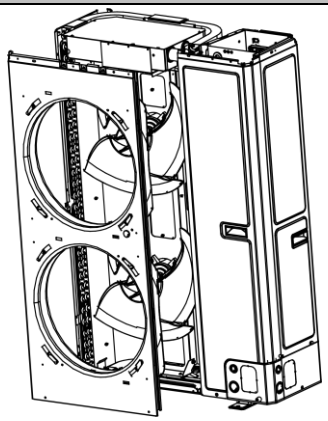
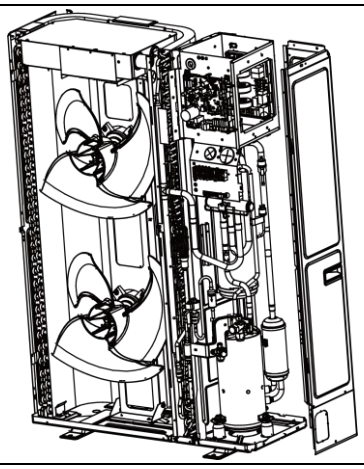
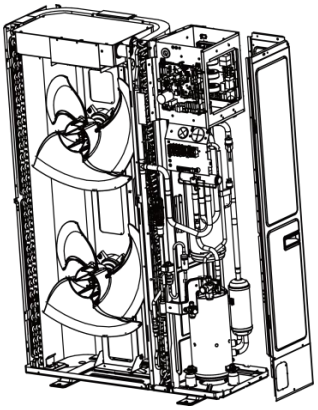
Removal of electronic expansion valve		
Note: Before removing the electronic expansion valve, make sure there is no refrigerant in the pipeline and power is cut off.		
Step	Picture	Work instruction
1. Remove the electric box.		●Remove the upper, lower and front panels. ●Loosen the wire clamp at the bottom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

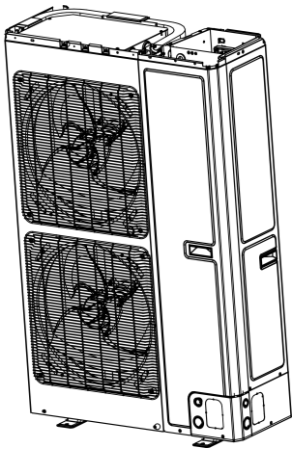
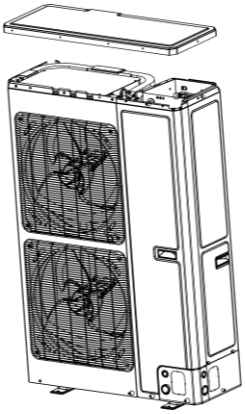
Removal of electronic expansion valve		
Note: Before removing the electronic expansion valve, make sure there is no refrigerant in the pipeline and power is cut off.		
Step	Picture	Work instruction
4. Take out the electronic expansion valve.		●Take out the electronic expansion valve.
5. Install the new 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±0.1kgf/ c ㎡ (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 open the upper and front panels.		●Check whether each component and connection wire is well connected. ●If everything is OK, install the upper, left and right panels. Tighten up the screws.

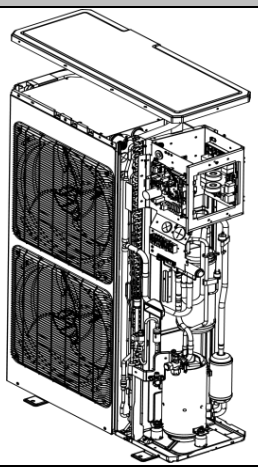
Model: GUD160W/NhA-X

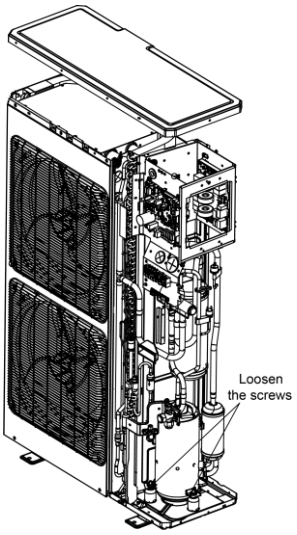
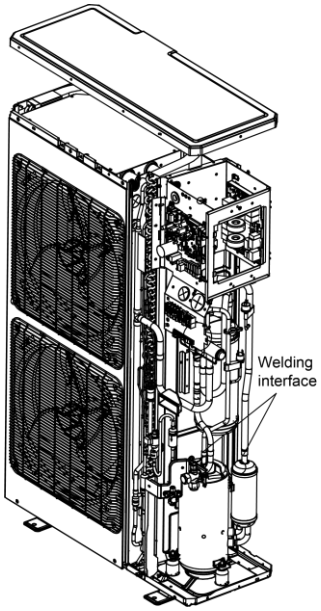
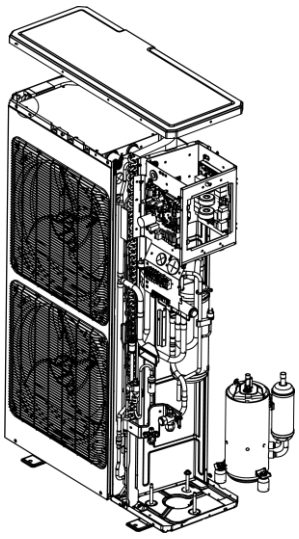
Removal of front panel		
Note: Before removing the front panel, make sure power is cut off.		
Step	Picture	Work instruction
1. Remove the upper cover plate.		●Unscrew the screws of the upper cover plate with a screwdriver.
2. Remove the front grill.		●Unscrew the screws of the front grill with a screwdriver.

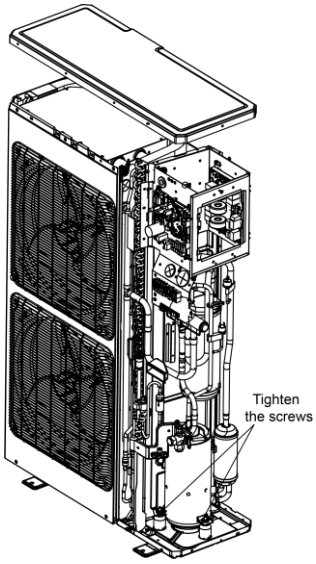
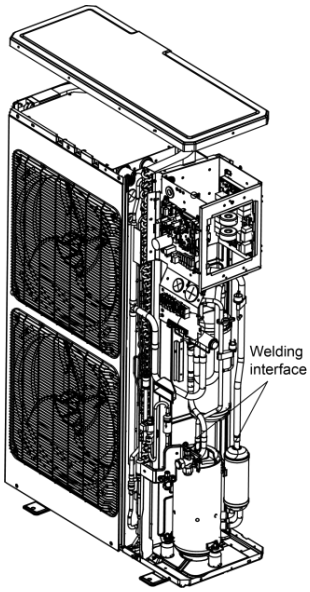
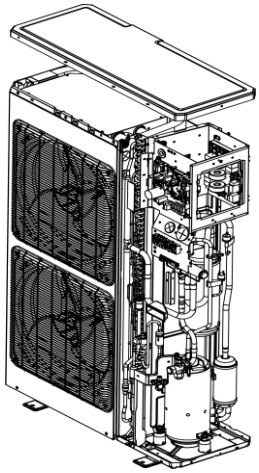
Removal of front panel		
Note: Before removing the front panel, make sure power is cut off.		
Step	Picture	Work instruction
3. Remove the front panel.		●Unscrew the screws that connect the front panel to the middle insulating board and screws around the front panel.
4. Remove the right side plate.		●Unscrew 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 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.

Removal of front panel		
Note: Before removing the front panel, make sure power is cut off.		
Step	Picture	Work instruction
7. Install the grill.		●Attach the grill back in place and tighten up the screws.
8. Install the upper cover plate.		●Tighten up the screws around the upper cover plate.

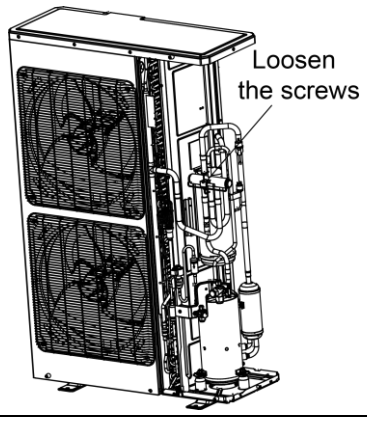
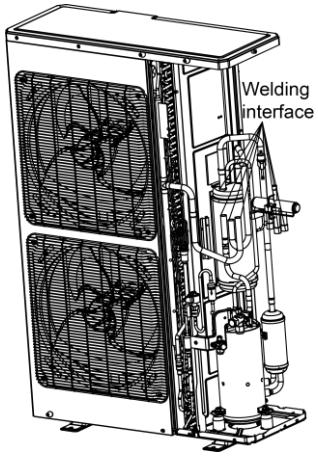
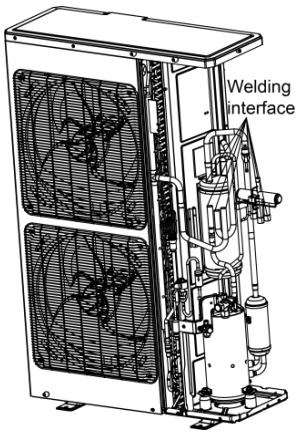
Model: GUD160W/NhA-X

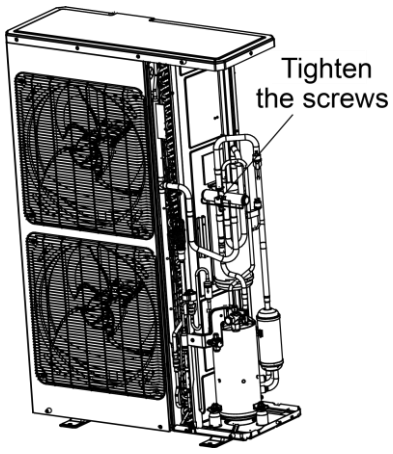
Disassembly of compressor		
Note: Before removing the compressor, make sure there is no refrigerant in the pipeline and power is cut off.		
Step	Picture	Work instruction
1. Remove wires.		●Loosen the securing screws of the wires with a screwdriver. ●Remove the wires. Note: When removing the wires, mark the wire terminals corresponding to their color so as to avoid misconnection.

Disassembly 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
2. Loosen the securing screws at the foot of compressor.		●Use a wrench to twist off the screw nuts at the foot of compressor.
3. 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.
4. Remove the compressor from the chassis.		●Take out the compressor and replace it. Note: When replacing the compressor, avoid touching the nearby pipeline and components.

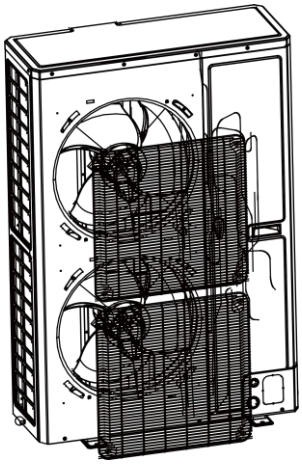
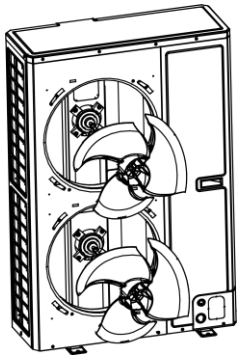
Disassembly of compressor		
Note: Before removing the compressor, make sure there is no refrigerant in the pipeline and power is cut off.		
Step	Picture	Work instruction
5. Fix the new compressor back onto the chassis.		●After replacing the compressor, tighten up the screws at the foot of compressor.
6. Connect the compressor suction port and exhause port with the pipes.		●Weld the compressor connection pipes and connect them to the compressor. Note: When replacing the compressor, avoid touching the nearby pipeline and components.
7. Connect the compressor wires.		●Connect the compressor wires to the wire terminals on the top of compressor. Note: When connecting the wires, be sure to match the colors with the corresponding wire terminals.

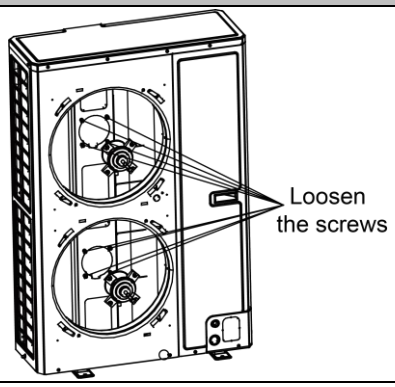
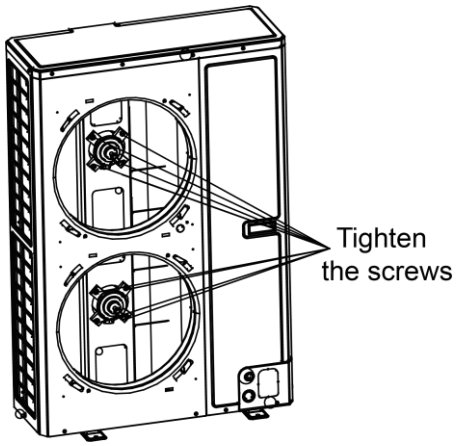
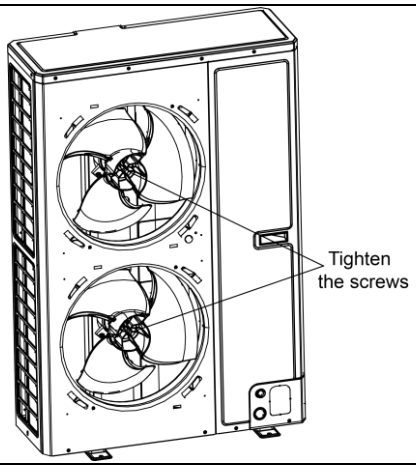
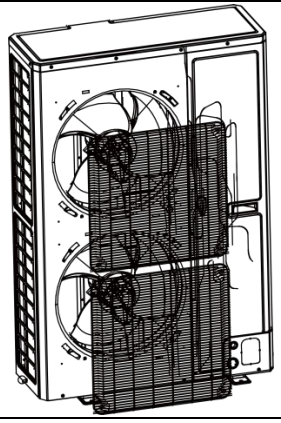
Model: GUD160W/NhA-X

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 coil of the 4-way valve.		●Carefully unscrew the screws of electromagnetic coil with a screwdriver.
2. Break off the connection pipes from the 4-way valve.		●Use a soldering gun to loosen the 4 joints on the 4-way valve and then remove the connection pipes. 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.
3. Replace the 4-way valve and connect it to the connection pipes.		●Replace the 4-way valve and then use a soldering gun to weld the 4 joints of the 4-way valve. 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.

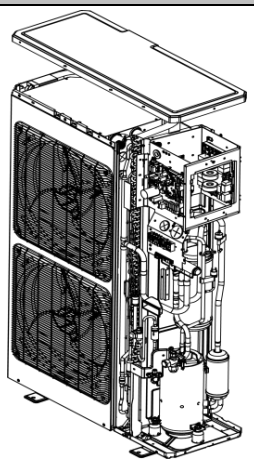
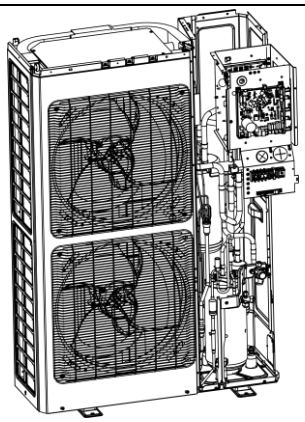
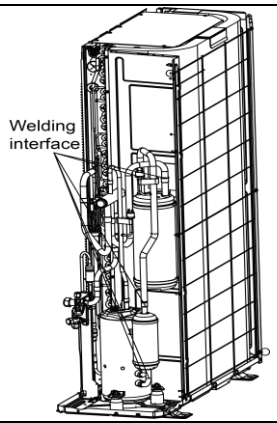
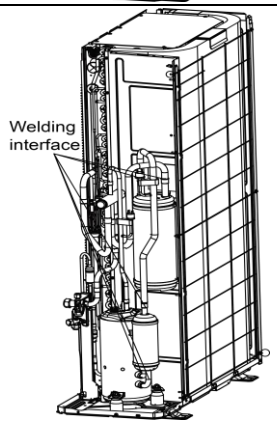
Removal of 4-way valve		
Note: Before removing the 4-way valve, make sure refrigerant is fully discharged from the unit and power is cut off.		
Step	Picture	Work instruction
4. Install the coil of 4-way valve.		●Tighten the screws of the coil of 4-way valve with a screwdriver.

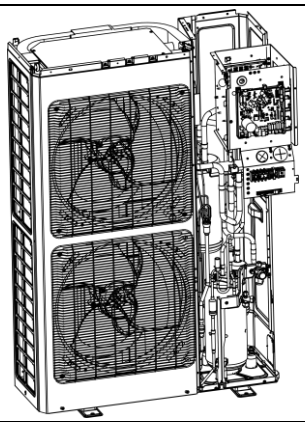
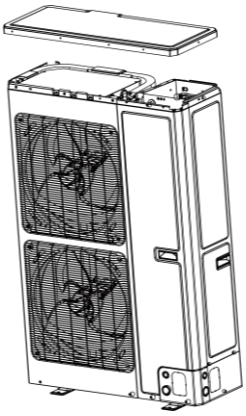
Model: GUD160W/NhA-X

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.

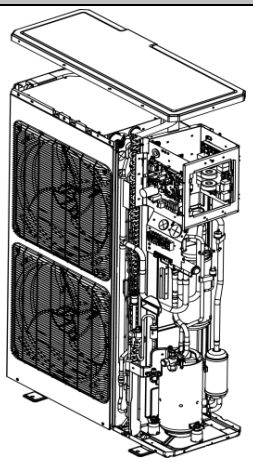
Removal of fan and motor		
Note: Before removing the fan, make sure power is cut off.		
Step	Picture	Work instruction
3. Remove motor.		●Use a screwdriver to unscrew the bolt of motor. Note: Motor wire should be first removed from the electric box.
4. Install the motor.		●Replace with a new motor. Then 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.		●After replacing the motor, use a screwdriver to tighten up the screw bolt that secures the motor.

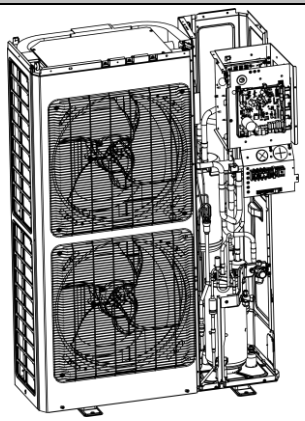
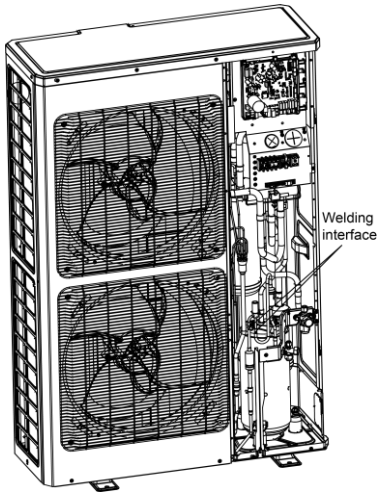
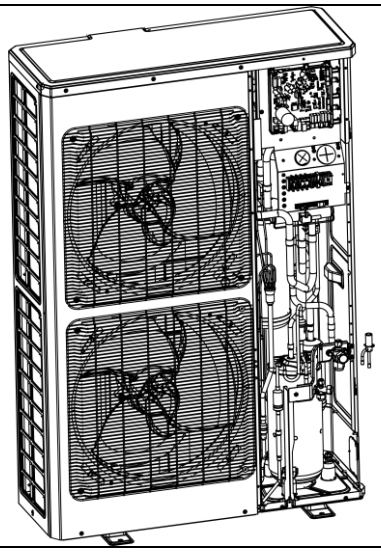
Model: GUD160W/NhA-X

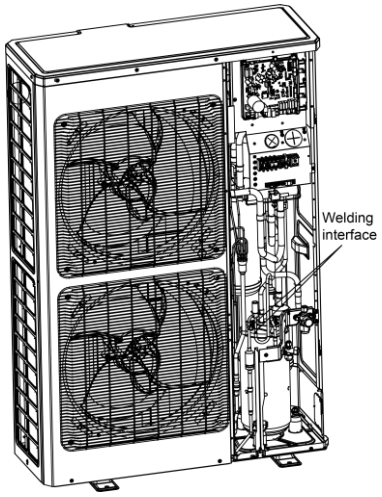
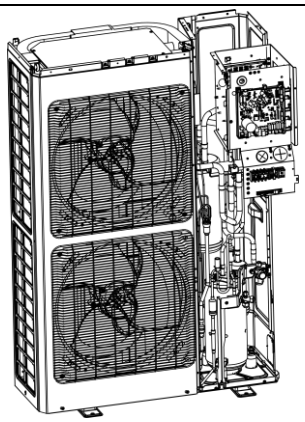
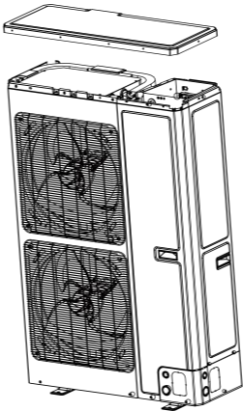
Removal of gas liquid separator		
Note: Before removing the gas liquid separator, make sure there is no refrigerant in the pipeline and power is cut off.		
Step	Picture	Work instruction
1. Loosen the wire clamp at the bottom of the electric box and the screws of electric box.		●Remove the upper, lower 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.
4. Remove the compressor/gas liquid separator from the chassis.		●Take away the compressor/gas liquid separator and replace with a new one. Note: When replacing the compressor/gas liquid separator, avoid touching the nearby pipeline and components.
4. Install the new gas liquid separator		●Install the gas liquid separator by referring to the positions of entering and leaving pipes. Weld the 2 welding interfaces. ●Nitrogen welding: the pressure of nitrogen is 0.5±0.1kgf/ c ㎡ (relative pressure). Note: When welding the pipes, do not let the flame burn the other components. ●Tighten the screws of gas liquid separator.

Removal of gas liquid separator		
Note: Before removing the gas liquid separator, make sure there is no refrigerant in the pipeline and power is cut off.		
Step	Picture	Work instruction
5. 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.
6.Check and open the upper and side panels.		●Check whether each component and connection wire is well connected. ●If everything is OK, install the upper, left and right panels. Tighten up the screws.

Model: GUD160W/NhA-X

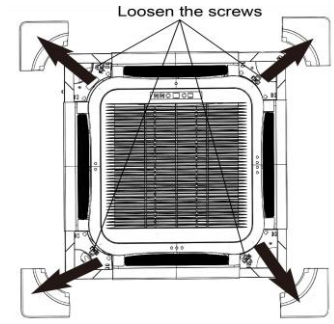
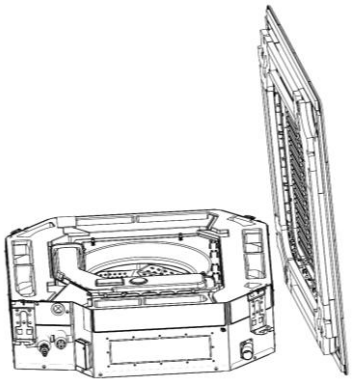
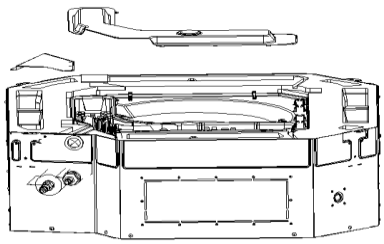
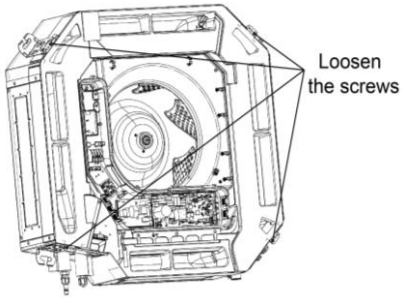
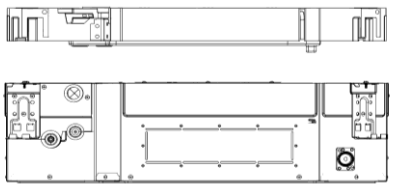
Removal of electronic expansion valve		
Note: Before removing the electronic expansion valve, make sure there is no refrigerant in the pipeline and power is cut off.		
Step	Picture	Work instruction
1. Loosen the wire clamp at the bottom of the electric box and the screws of electric box.		●Remove the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

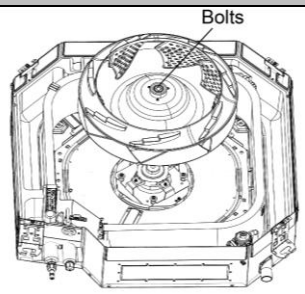
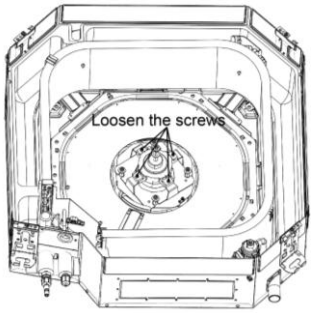
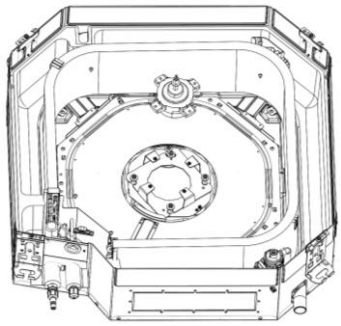
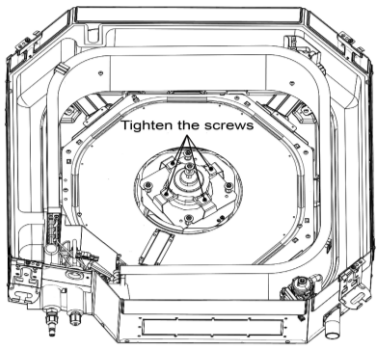
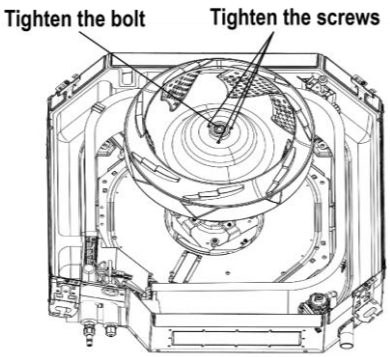
Removal of electronic expansion valve		
Note: Before removing the electronic expansion valve, make sure there is no refrigerant in the pipeline and power is cut off.		
Step	Picture	Work instruction
2. Remove the electric box.		●The connection wires inside and outside the electric box should be removed. ●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 bunt the other components.
4. Take out the electronic expansion valve.		●Take out the electronic expansion valve.

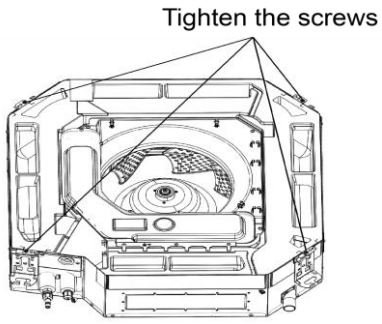
Removal of electronic expansion valve		
Note: Before removing the electronic expansion valve, make sure there is no refrigerant in the pipeline and power is cut off.		
Step	Picture	Work instruction
5. Install the new electronic expansion valve.		●Weld the connection pipe of electronic expansion valve. ●When welding the electronic expansion valve, the valve should be wrapped with wet cloth. ●Nitrogen welding: the pressure of nitrogen is 0.5±0.1kgf/ c ㎡ (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.
7. Check and open the upper and side panels.		●Check whether each component and connection wire is well connected. ●If everything is OK, install the upper, left and right panels. Tighten up the screws.

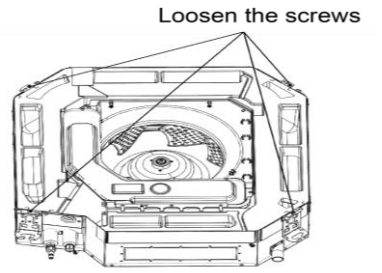
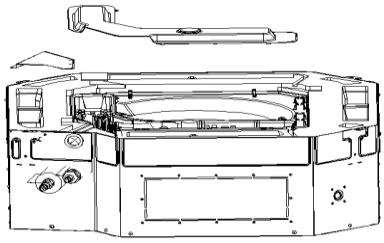
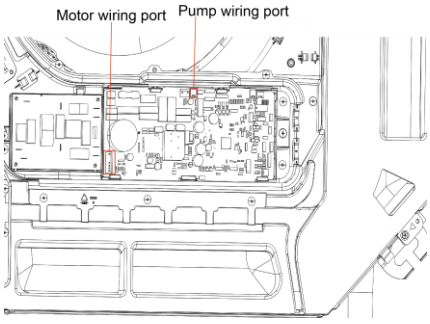
4.5.2 Removal of IDU Major Components

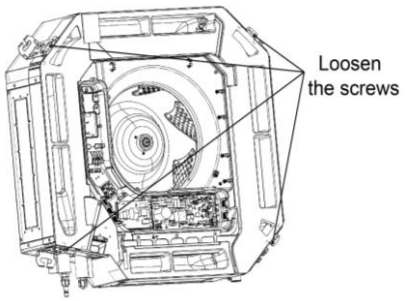
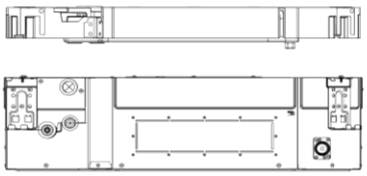
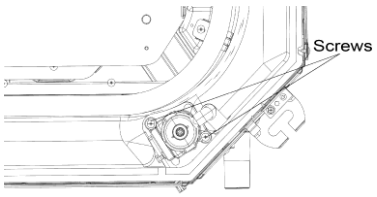
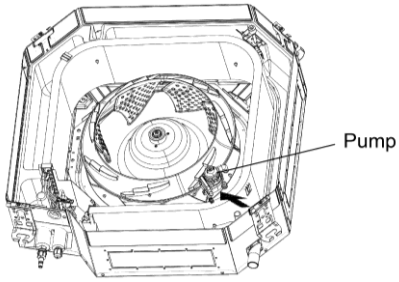
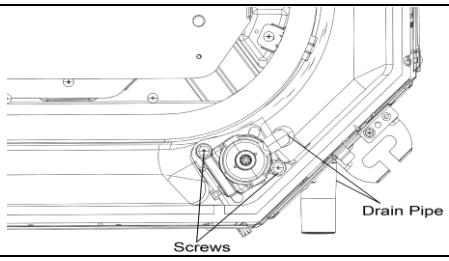
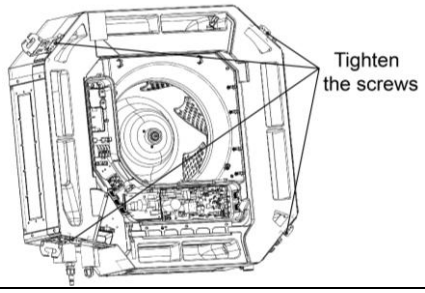
4.5.2.1 Cassette Type Unit

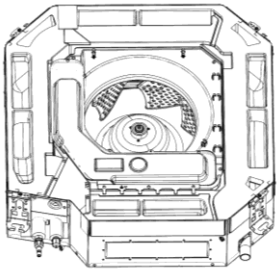
<table>
<tr><td colspan="3">Removal of fan and motor</td></tr>
<tr><td colspan="3">Note: Before removing the motor, power must be cut off.</td></tr>
<tr><td>Step</td><td>Picture</td><td>Work instruction</td></tr>
<tr><td rowspan="2">1. Remove the front panel.</td><td> 
</td><td rowspan="2">●Turn off the power supply of indoor unit.
●Push the 4 corner plates in the directions shown by the arrows.
●Loosen the screws and remove the front panel.</td></tr>
<tr><td>  </td></tr>
<tr><td>2. Remove the cover of electric box and the clamp of power cord.</td><td>  </td><td>●Remove the motor wire and water pump of the electric box.</td></tr>
<tr><td rowspan="2">4. Remove the water tray.</td><td> 
</td><td rowspan="2">●Loosen the screws in the 4 corners and then remove the water tray.</td></tr>
<tr><td>  </td></tr>
</table>

Removal of fan and motor		
Note: Before removing the motor, power must be cut off.		
Step	Picture	Work instruction
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.
7. Replace and install the motor.		●Remove the motor from motor support and then replace with a new motor. ●Tighten the 4 screws of motor with a screwdriver.
8. Install the fan.		●Direct the hole of fan to the motor shaft and then mount on the fan. ●Tighten the clamping band of motor with a wrench.

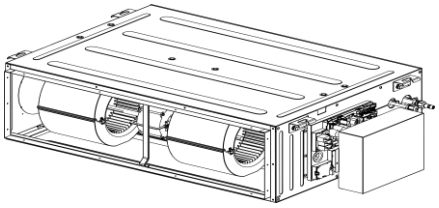
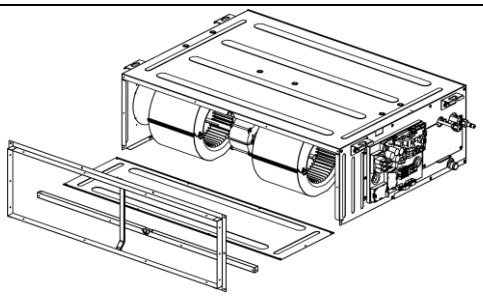
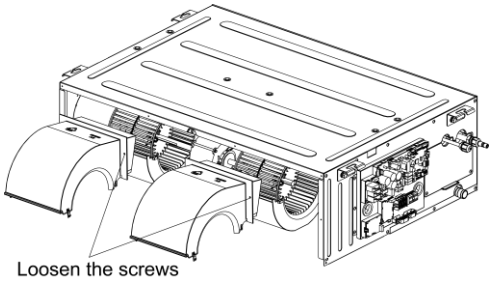
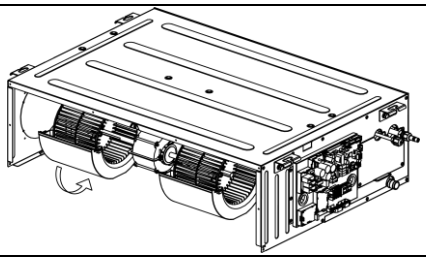
Removal of fan and motor		
Note: Before removing the motor, power must be cut off.		
Step	Picture	Work instruction
9. Install the water tray.		●Direct the 4 corners of water tray to the 4 corners of the unit and then press them. Use a screwdriver to tighten the screws in the 4 corners. ●Connect the power cord and water pump wire. ●Place back the cover of electric box and the clamp of power cord. Then tighten the screws with a screwdriver.

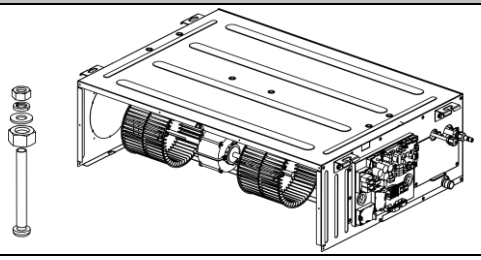
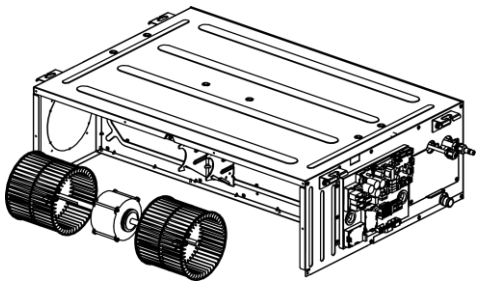
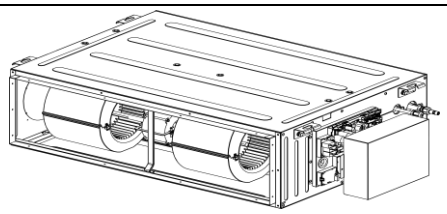
Removal and installation of drain pump		
Step	Picture	Work instruction
1. After removing the front panel as instructed above, loosen the screws of the water tray.		●Use a screwdriver to loosen the screws of water tray.
2. Remove the cover of electric box and the clamp of power cord.		●Twist off the screws 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.

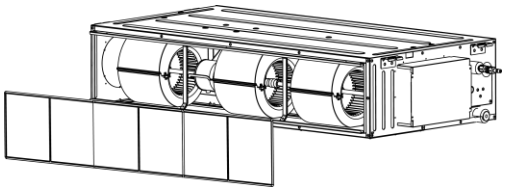
Removal and installation of drain pump		
Step	Picture	Work instruction
2. Remove the water tray.	 	●Loosen the screws in the 4 corners and then remove the water tray.
3. Remove the drain pipe and loosen the screws of water pump.		●Take out the drain pipe and use a screwdriver to loosen the screws of water pump.
4. Remove and replace the pump.		●Remove the pump and replace with a new one.
5. Connect the drain pipe and tighten the screws of water pump.		●Connect the drain pipe and tighten the screws of water pump.
6. 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.

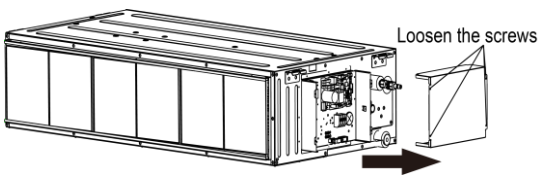
Removal and installation of drain pump		
Step	Picture	Work instruction
7. Connect the water pump wire and power cord, and then put back the cover of electric box and the clamp of power cord.		●Connect the water pump wire and motor wire according to the wiring diagram. ●Put back the cover of electric box and the clamp of power cord. Then tighten the screws.

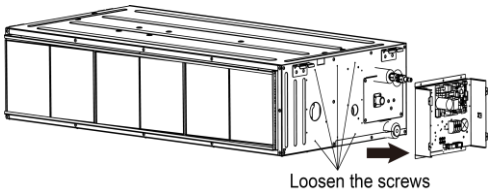
4.5.2.2 Duct Type Unit

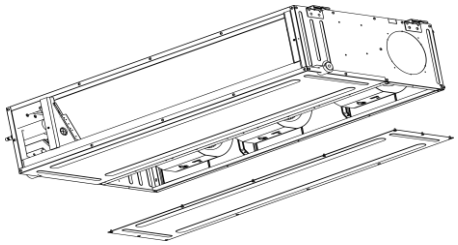
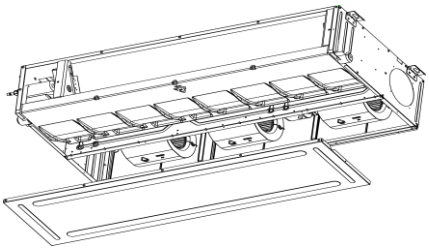
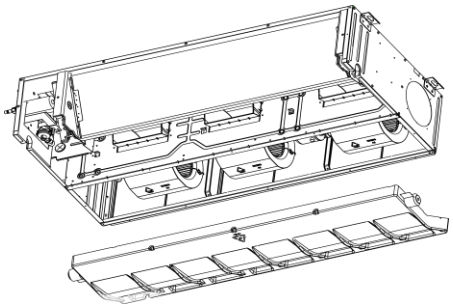
Removal of fan and motor		
Note: Before removing the motor, make sure power is cut off.		
Step	Picture	Work instruction
1. Remove the cover of electric box.		●Turn off the power supply of indoor unit. Use a screwdriver to remove the cover of electric box. Disconnect the motor wire inside the electric 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.
4. Remove the lower volute.		●Loosen the screws of lower volute and then rotate in the direction shown by the arrow.

Removal of fan and motor		
Note: Before removing the motor, make sure power is cut off.		
Step	Picture	Work instruction
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 hex wrench 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.

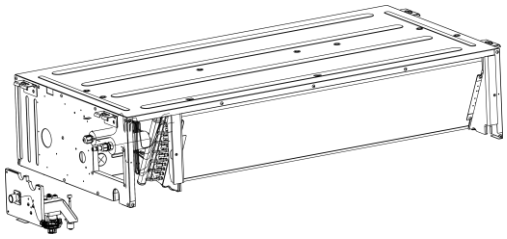
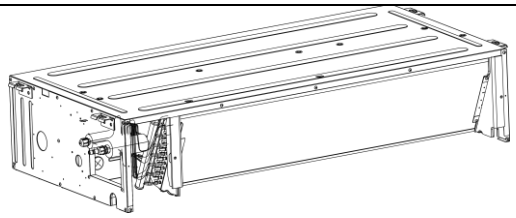
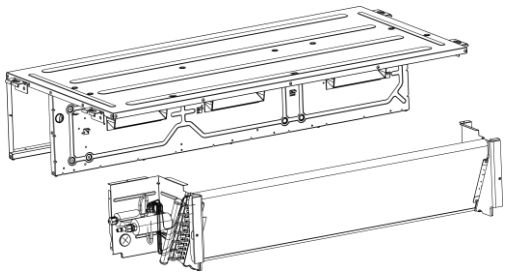
Removal of air return filter		
Note: Before removal, make sure power is cut off. During the removal procedure, take good care of all the components. Do not place the filter near any heat source.		
Step	Picture	Work instruction
Remove air return filter.		●Press the air return filters on the guide way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

Removal of the cover of electric box and the electric box		
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.		
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.

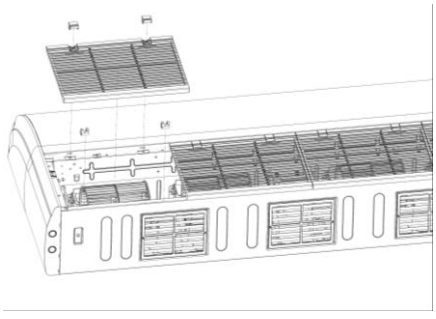
Removal of water tray		
Note: Before removal, make sure power is cut off. During the removal procedure, take good care of all the components.		
Step	Picture	Work instruction
1.Remove the cover plate.	 	●Loosen the screws of cover plate and then remove the cover plate. (As shown in the picture, the circle 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

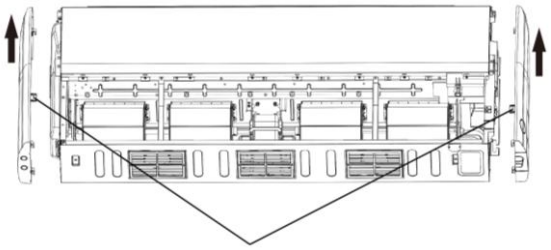
Removal of evaporator		
Note: Make sure power is cut off. Take good care of the copper pipe and aluminum fins. If the removal takes a long time, please put the copper pipe under pressure.		
Step	Picture	Work instruction
1. Remove the screws on the side plate of evaporator.		●Remove the screws of evaporator 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.

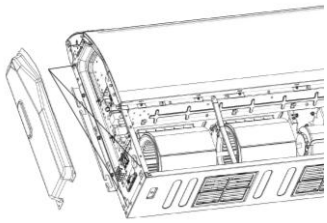
4.5.2.3 Floor Ceiling Unit

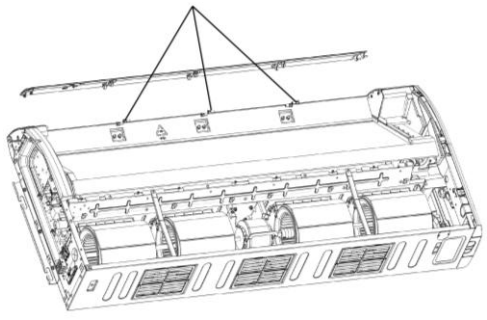
Take model GUD160ZD/A-T as an example.

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.

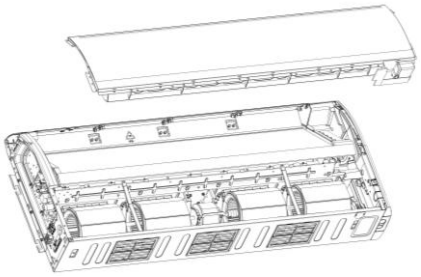
Remove the right and left decorative boards		
Note: Before removal, make sure power is cut off. During the removal procedure, take good care of all the components. Do not scratch the appearance components.		
Step	Picture	Work instruction

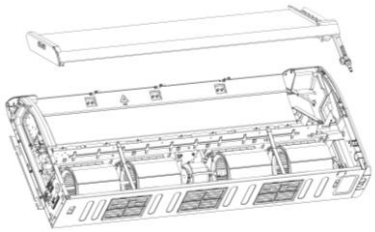
Remove the left and right panels.		●Use a screwdriver to loosen the screws, as shown in the picture. Then pull the right and left panels upward. (Lines in the picture indicate the positions of screws.)

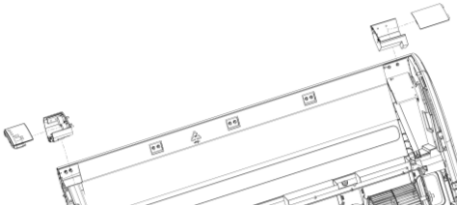
Removal of electric box assembly		
Note: Before removal, make sure power is cut off. During the removal procedure, take good care of all the components, especially the components in electric box. Protect it from water and collision.		
Step	Picture	Work instruction
Remove the electric box.		●Unscrew 34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

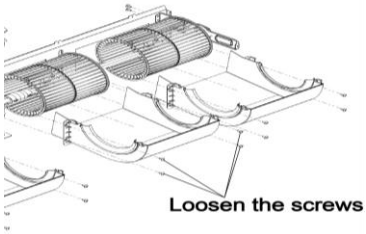
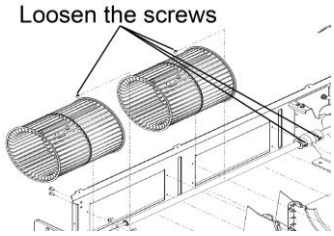
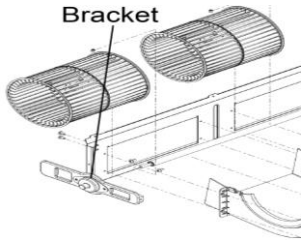
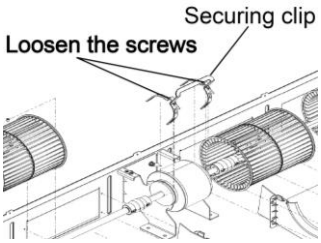
Removal of water tray		
Note: Before removal, make sure power is cut off. During the removal procedure, take good care of all the components.		
Step	Picture	Work instruction

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. .

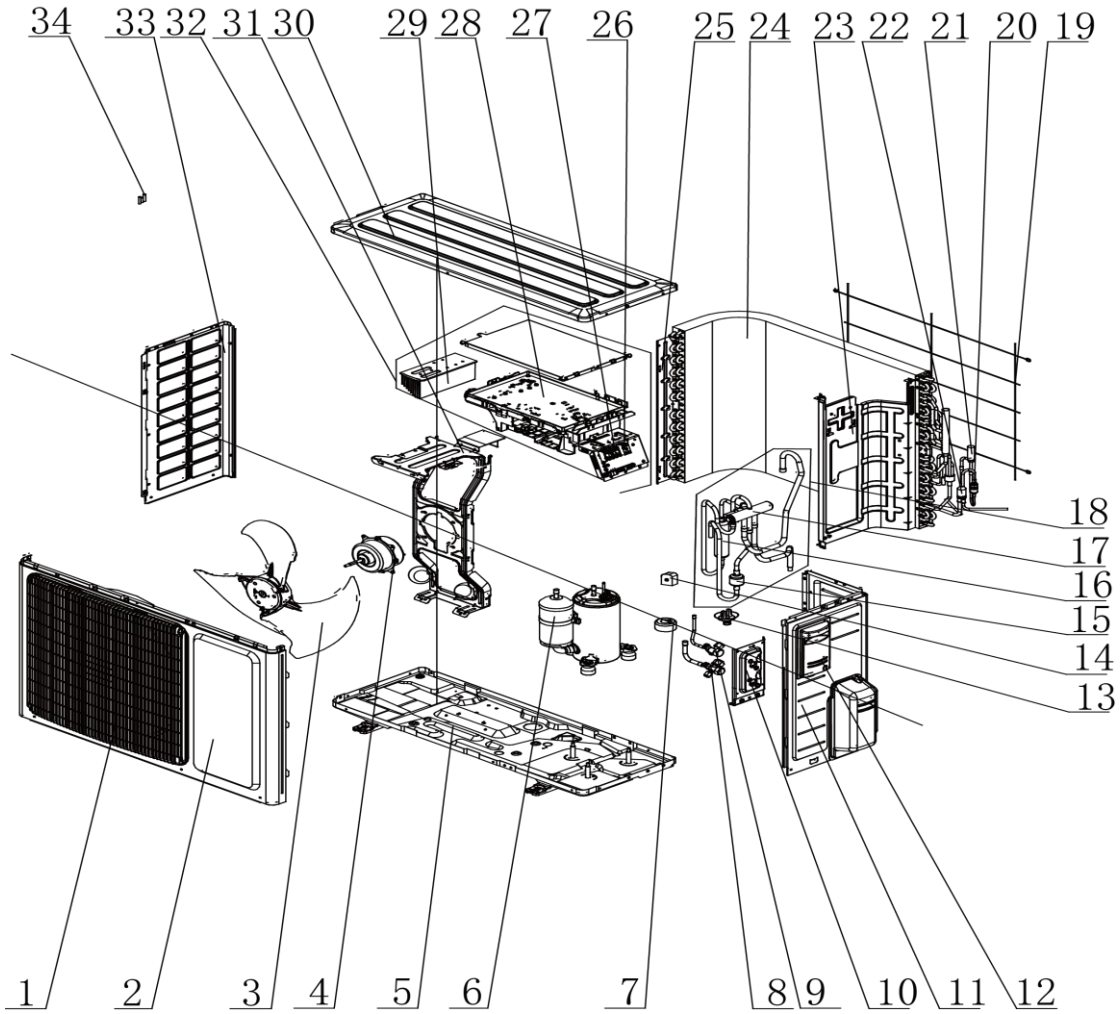
Removal of fan and motor		
Note: Before removal, make sure power is cut off. During the removal procedure, take good care of all the components, especially the screws of fan.		
Step	Picture	Work instruction

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.		●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.		●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.		●Twist off the screws and nuts of bracket. Then remove the bracket.
4. Remove the motor		●Loosen the 2 screws of the motor securing clip. Remove the motor securing clip and its assembly.

4.6 Explosive View and Lists of Parts

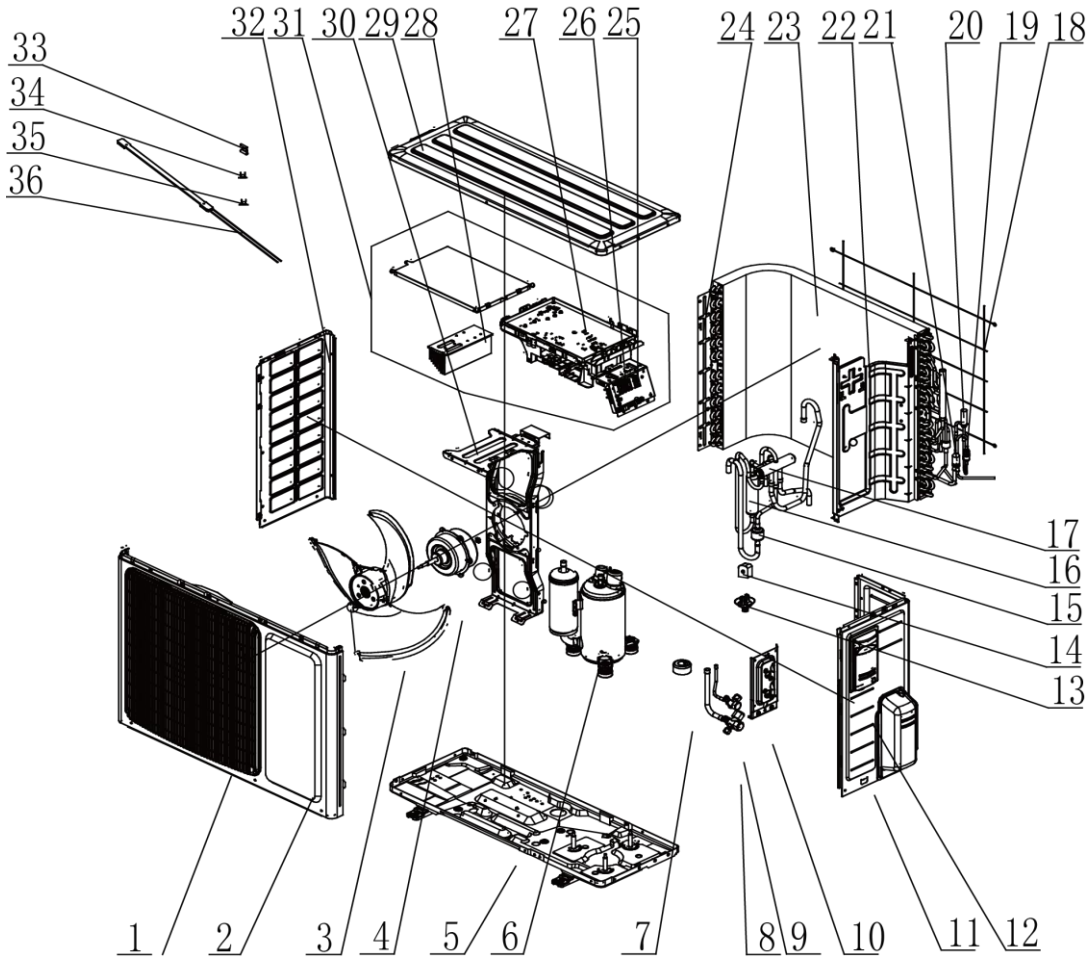
4.6.1 ODU Explosive View and Lists of Parts

GUD35W/NhA-T(Product Code:CF090W1310)



No.	Material name	Finished Product Code	Quantity
1	Front Grill	22413046	1
2	Cabinet	01433034P	1
3	Axial Flow Fan	10333011	1
4	Fan Motor	1501308511	1
5	Base Plate Sub-assay	17000060107	1
6	Compressor and Fittings	9001060093	1
7	Electric Expand Valve Fitting	4300034401	1
8	Cut off Valve	71302395	1
9	Cut off Valve	7130239	1
10	Valve Support Sub-assay	01713115P	1
11	Right Side Plate	0130324403P	1
12	Big Handle	2623343106	1
13	Drainage Joint	26113009	1
14	4 Way Valve Coil	4300040087	1
15	Silencer	7245013	1
16	Silencer 1	7243050	1
17	4-way Valve	430004032	1
18	4-way Valve Assay	30152060099	1
19	Rear Grill	1473060	1
20	Strainer	7225088	1
21	Electronic Expansion Valve	7133821	1
22	Strainer	721302608	1
23	Clapboard Sub-assay	1233168	1
24	Condenser Assay	11002060290	1
25	Condenser Support Plate	1795028	1
26	Terminal Board	42200000000701	1
27	Terminal Board	42200000002402	1
28	Main Board	300027060151	1
29	Radiator	49013060	1
30	Coping	012049000006P	1
31	Motor Support Sub-Assay	1703180	1
32	Electric Box Assay	100002061298	1
33	Left Side Plate	01303169P	1
34	Temperature Sensor	3900028020G	1

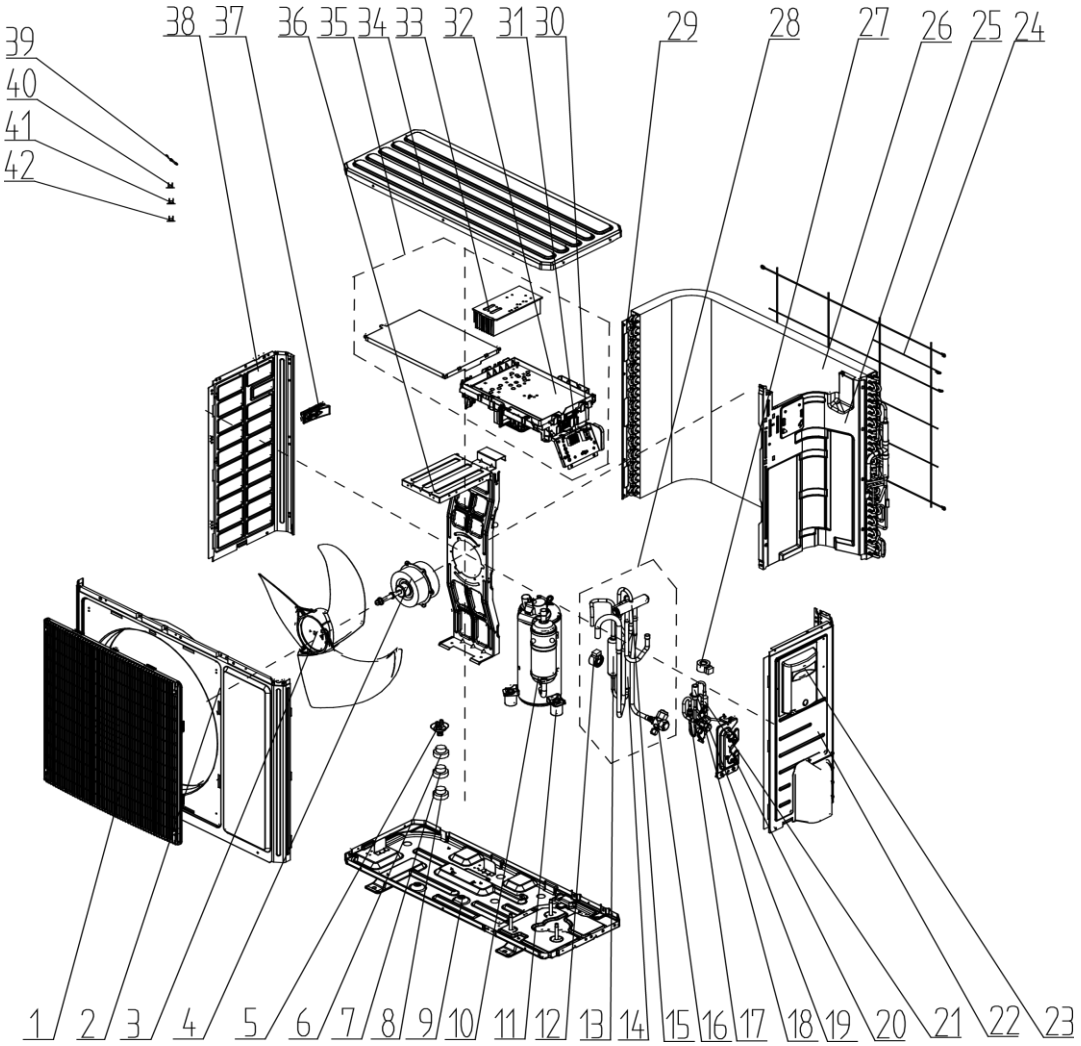
GUD50W/NhA-T(Product Code：CF090W1210)



No.	Material name	Finished Product Code	Quantity
1	Front Grill	22413046	1
2	Cabinet	01433034	1
3	Axial Flow Fan	10333014	1
4	Fan Motor	1501371701	1
5	Base Plate Sub-assay	017000060100	1
6	Compressor and Fittings	009001060006	1
7	Electric Expand Valve Fitting	4300034401	1
8	Cut off Valve	071302392	1
9	Cut off Valve	07130239	1
10	Valve Support Sub-assay	01713115	1
11	Right Side Plate	0130324403	1
12	Big Handle	2623343106	1
13	Drainage Joint	26113009	1
14	4 Way Valve Coil	4300040087	1
15	Silencer	07245013	1
16	Silencer 1	07243050	1
17	4-way Valve	430004032	1
18	Rear Grill	01473060	1
19	Strainer	07225088	1

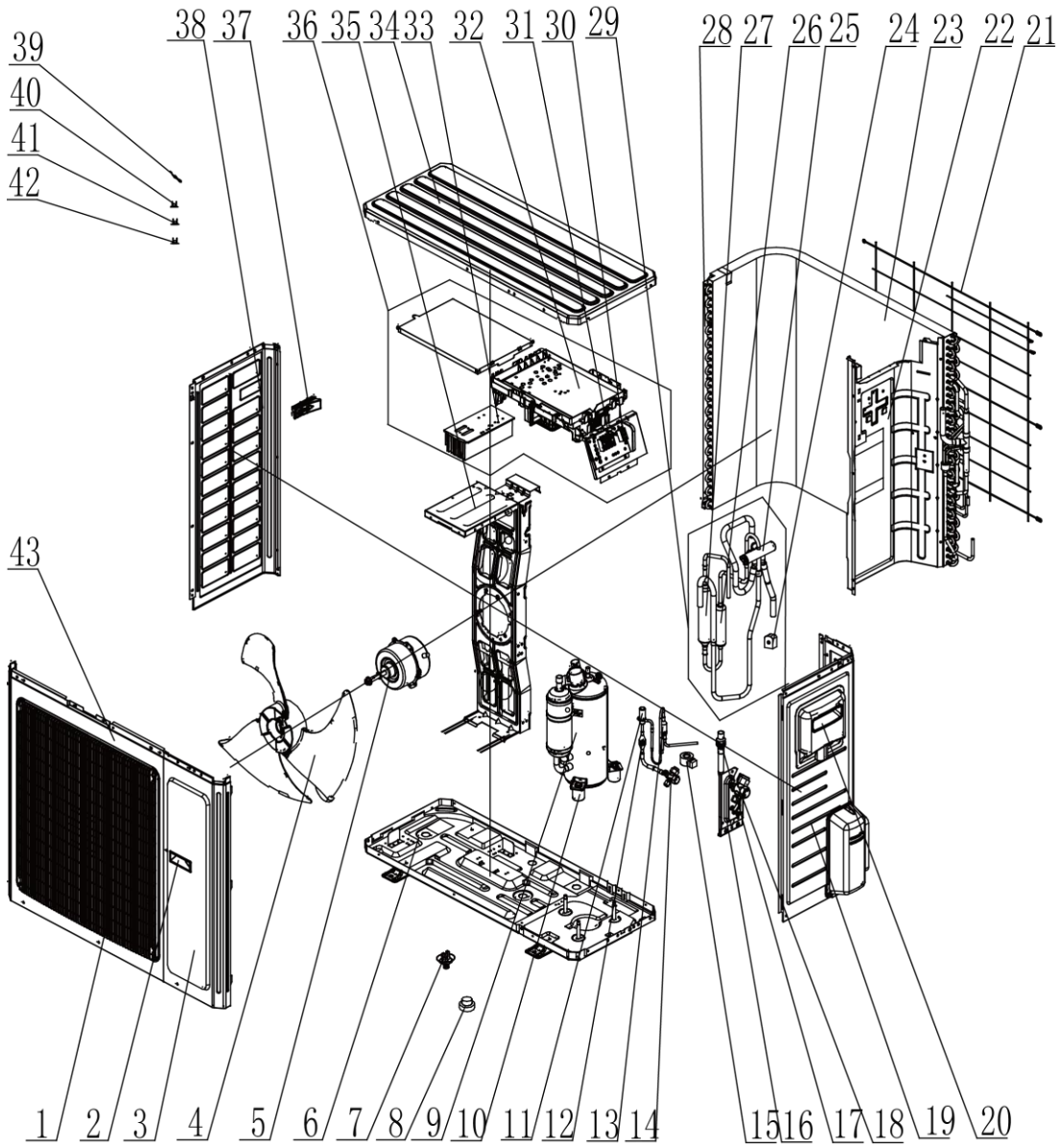
No.	Material name	Finished Product Code	Quantity
20	Electronic Expansion Valve	07133821	1
21	Strainer	0721302608	1
22	Clapboard Sub-assay	01233168	1
23	Condenser Assay	011002060290	1
24	Condenser Support Plate	01795028	1
25	Terminal Board	422000000007	1
26	Terminal Board	42200000002402	1
27	Main Board	300027060151	1
28	Radiator	49013060	1
29	Coping	012049000006	1
30	Motor Support Sub-assay	0170339802	1
31	Electric Box Assay	100002061297	1
32	Left Side Plate	01303169	1
33	Temperature Sensor	3900007201	1
34	Compressor Overload Protector(External)	00183051	1
35	Compressor Overload Protector(External)	00183032	1

GUD71W/NhA-T (Product Code：CF090W1220)



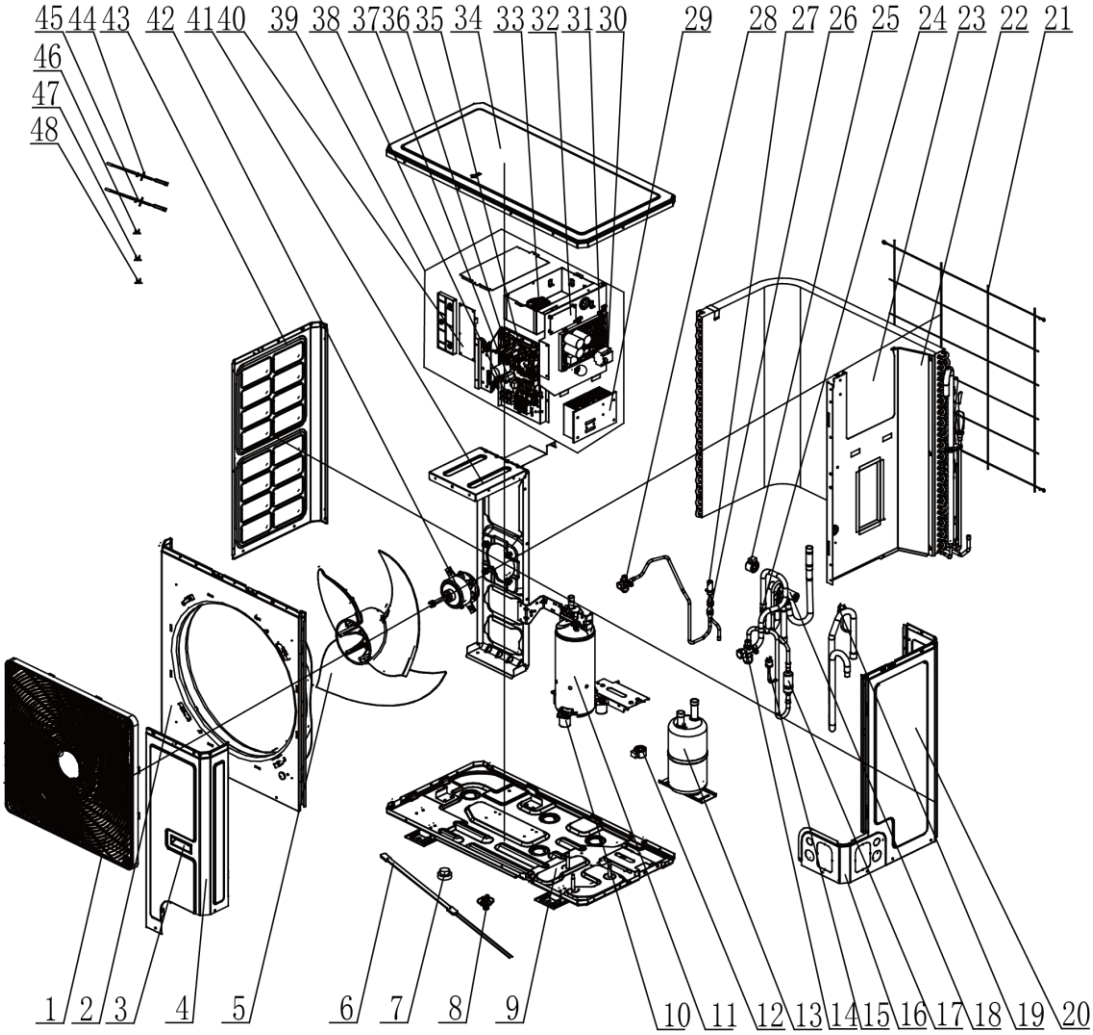
No.	Material name	Finished Product Code	Quantity
1	Front Grill	22415010	1
2	Front Panel	01535013	1
3	Axial Flow Fan	10335008	1
4	Fan Motor	1501506402	1
5	Drainage Joint	06123401	1
6	Drainage hole Cap	76713033	1
7	Drainage hole Cap	76713068	1
8	Drainage hole Cap	06813401	1
9	Base Plate Sub-assay	01205816	1
10	Compressor and Fittings	00900100019501	1
11	Compressor Gasket	009012000004	3
12	4 Way Valve Coil	4300040087	1
13	Silencer1	07243050	1
14	Silencer2	07243049	1
15	4-way Valve	430004032	1
16	Cut off Valve	07133844	1
17	Strainer	0721302608	1
18	Cut off Valve	071302391	1
19	Electronic Expansion Valve	072009000004	1
20	Valve Support Sub-assay	01705046	1
21	Strainer	07225088	1
22	Right Side Plate	0130509001	1
23	Handle	2623525404	1
24	Rear Grill	01475020	1
25	Clapboard Sub-assay	01235081	1
26	Condenser Assay	011002000177	1
27	Electric Expand Valve Fitting	43000344	1
28	4-way Valve Assay	030152060086	1
29	Condenser Support Plate	01795031	1
30	Terminal Board	422000000007	1
31	Terminal Board	42200000002402	1
32	Main Board	300027060157	1
33	Radiator	4901521502	1
34	Top Cover Sub-assay	000051000017	1
35	Electric Box Assay	100002061278	1
36	Motor Support Sub-assay	01705067	1
37	Handle	26233053	1
38	Left Side Plate	01305093	1
39	Temperature Sensor	3900007201	1
40	Compressor Overload Protector(External)	00180030	1
41	Compressor Overload Protector(External)	00183032	1
42	Compressor Overload Protector(External)	00183031	1

GUD85W/NhA-T(Product Code：CF090W1230)



No.	Material name	Finished Product Code	Quantity
1	Front Grill	22415011	1
2	Left Handle	26235401	1
3	Front Side Plate	01305086	1
4	Axial Flow Fan	10335014	1
5	Fan Motor	15010400000102	1
6	Base Plate Sub-assay	0280319601	1
7	Drainage Joint	06123401	1
8	Drainage hole Cap	06813401	3
9	Compressor and Fittings	00900100019501	1
10	Compressor Gasket	009012000004	3
11	Electronic Expansion Valve	072009000004	1
12	Strainer	07215201	1
13	Strainer	07225088	1
14	Cut off Valve	071302391	1
15	Electric Expand Valve Fitting	43000344	1
16	Valve Support Sub-assay	0171501201	1
17	Strainer	0721304401	1
18	Cut off Valve	07133157	1
19	Right Side Plate	0130504401	1
20	Big Handle	26235001	1
21	Rear Grill	01475013	1
22	Clapboard Sub-assay	01235091	1
23	Condenser Assay	01100200162	1
24	Magnet Coil	4300040045	1
25	4-way Valve	4300008201	1
26	Silencer1	07243050	1
27	Silencer	07245101	1
28	Condenser Support Plate	01175092	1
29	4-way Valve Assay	030152000329	1
30	Terminal Board	422000000007	1
31	Terminal Board	42200000002402	1
32	Main Board	300027060157	1
33	Radiator	4901521502	1
34	Coping	01255020	1
35	Electric Box Assay	100002061294	1
36	Motor Support Sub-assay	017012000017	1
37	Handle	26233053	1
38	Left Side Plate	01305043	1
39	Temperature Sensor	3900007201	1
40	Compressor Overload Protector(External)	00183031	1
41	Compressor Overload Protector(External)	00183032	1
42	Compressor Overload Protector(External)	00180030	1
43	Cabinet	01435004	1

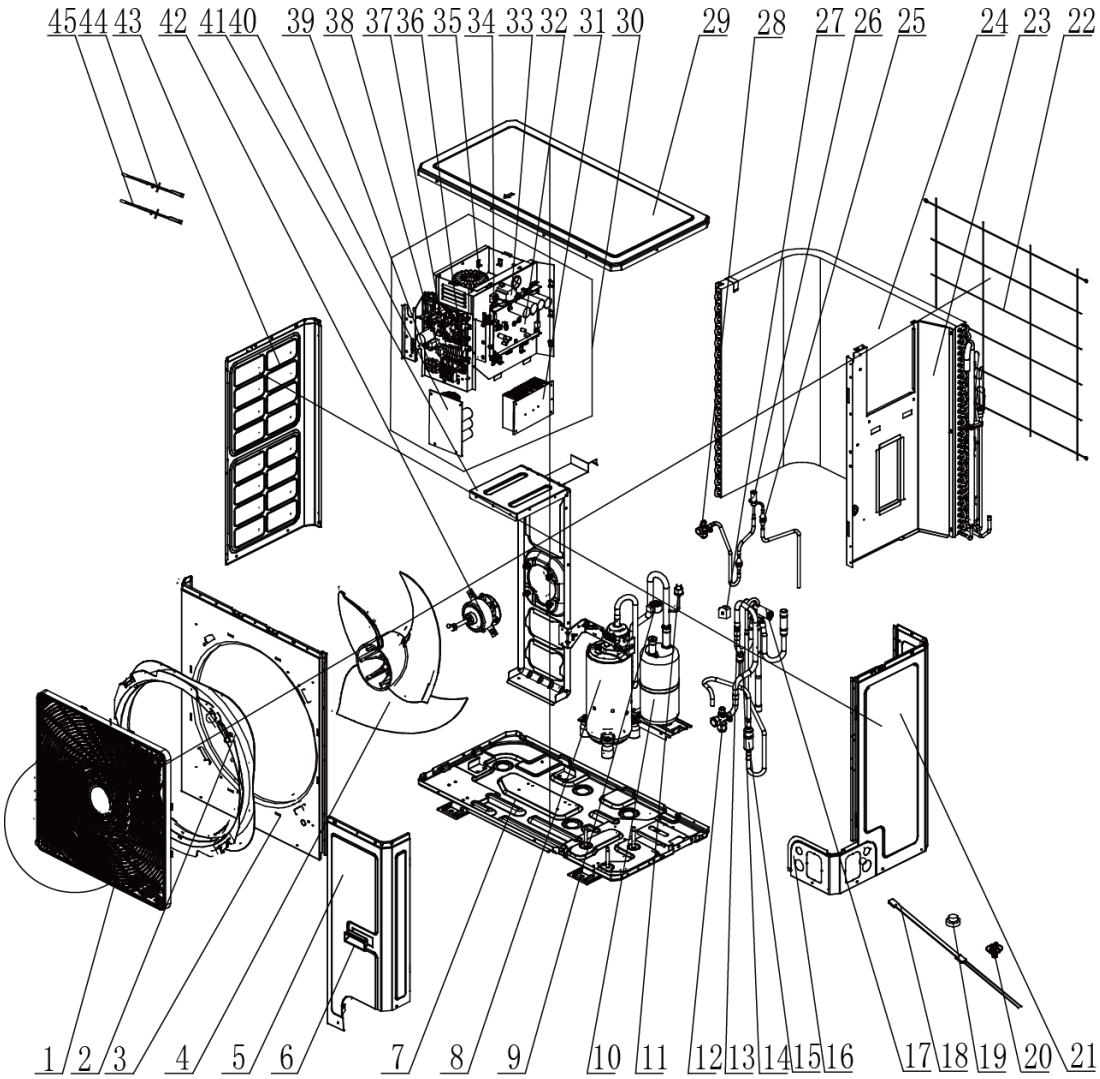
GUD100W/NhA-T(Product Code：CF090W1240)



No.	Material name	Finished Product Code	Quantity
1	Front Grill	01572800003	1
2	Cabinet	012022000003	1
3	Handle	26904100016	2
4	Front Side Plate	012050000007	1
5	Axial Flow Fan	1043410000801	1
6	Electric Heater（Compressor）	7651873215	1
7	Drainage hole Cap	76715005	3
8	Drainage Joint	26113009	1
9	Base Plate Sub-assay	017000060073	1
10	Filter Board	300020000004	1
10	Compressor and Fittings	009001000231	1
11	Compressor Gasket	009012000004	1
12	Electric Expand Valve Fitting	43000344	1
13	Gas-liquid Separator	07423902	1
14	Cut off Valve	07334100016	1
15	Pressure Protect Switch	4602000603	1
16	Connection Board	01344100070	1

No.	Material name	Finished Product Code	Quantity
17	Silencer	07245012	1
18	4-way Valve	4300008201	1
19	Pressure Protect Switch	46020007	1
20	Rear Side Plate	012076000021	1
21	Rear Grill	01574100014	1
22	Clapboard Sub-assay	017021060074	1
23	Condenser Assay	011002060190	1
24	Filter	07224803	1
25	4-way Valve Coil	4300040087	1
26	Strainer	0721304401	2
27	Electronic Expansion Valve	072009000018	1
28	Cut off Valve	071302391	1
29	Radiator	430034000048	1
30	Inductance	43128000014	1
31	Main Board	30221000024	1
32	Power Switch	300012060010	1
33	PFC Inductance	43120011	1
34	Coping	01264100052	1
35	Main Board	300027060156	1
36	Terminal Board	422000000007	1
37	Terminal Board	42000100000101	1
38	Terminal Board	42200000001501	1
39	Electric Box Assay	100002061299	1
41	Motor Support	012048000023	1
42	Fan Motor	150104060013	1
43	Left Side Plate	012055000007	1
44	Temperature Sensor	3900007201	1
45	Temperature Sensor	39008000049G	1
46	Compressor Overload Protector(External)	00183032	1
47	Compressor Overload Protector(External)	00183031	1
48	Compressor Overload Protector(External)	00180030	1

GUD125W/NhA-T(Product Code：CF090W1260)



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	01700006008901	1
8	Compressor and Fittings	009001060077	1
9	Electric Expand Valve Fitting	43000344	1
10	Gas-liquid Separator	07423902	1
11	Pressure Protect Switch	46020007	1
12	Cut off Valve	07334100016	1
13	Filter	07224803	1
14	Pressure Protect Switch	4602000603	1
15	Silencer	07245012	1
16	Connection Board	01344100070	1

No.	Material name	Finished Product Code	Quantity
17	4-way Valve	4300008201	1
18	Electric Heater（Compressor）	7651521238	1
19	Drainage hole Cap	76715005	3
20	Drainage Joint	26113009	1
21	Rear Side Plate	012076000021	1
22	Rear Grill	01574100014	1
23	Clapboard Sub-assay	017021060074	1
24	Condenser Assay	011002060190	1
25	Strainer	0721304401	2
26	Electronic Expansion Valve	43005017	1
27	Magnet Coil	4300040045	1
28	Cut off Valve	071302391	1
29	Coping	01264100052	1
30	Electric Box Assay	100002061303	1
31	Radiator	49018000013	1
32	Main Board	300027060292	1
33	Inductance	4312800001401	1
34	Terminal Board	42011147	1
35	PFC Inductance	43120122	1
36	Main Board	300027060156	1
37	Terminal Board	422000000007	1
38	Terminal Board	42000100000101	1
39	Terminal Board	42200000001501	1
40	Filter Board	300020000003	1
41	Motor Support	012048000023	1
42	Fan Motor	150104060013	1
43	Left Side Plate	012055000007	1
44	Temperature Sensor	3900007201	1
45	Temperature Sensor	39008000049G	1