



ELEVATOR AIR CONDITIONERS SERVICE MANUAL

**T1/R410A/50Hz
(GC201211-I)**

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PRODUCT

PRODUCT

1 MODELS LIST

1.1 Outdoor Unit

Model	Product Code	Cooling Capacity (kW)	Power Supply	Refrigerant	Appearance
GDT25	LU03000011	2.0	220V ~ 50Hz	R410A	
GDT35	LU03000021	3.0			

2 Nomenclature

The product model consists of letters and numerals.

G	DT	25
1	2	3

No	Description	Options
1	Company code	G—Gree
2	Product code	DT-elevator air conditioner
3	Rated cooling capacity	Cooling capacity at the rated condition (unit: kW)

Taking GDT25 for example, it indicates the Gree elevator air conditioner with 2000W cooling capacity at 220V 50Hz.

3 Features

3.1 General

Gree elevator air conditioners are especially designed for temperature conditioning in elevators located in office buildings, hotels, residences etc., and are featured with compact structure, powerful function, reliable performance, and elegant appearance. It is always a right choice for different customers with various requirements.

3.2 Features

Energy-saving operation

During the rush hour, the air conditioner will operate with full load to ensure the required temperature and the humidity in the car. When the temperature sensor at the return air inlet detects that the temperature approaches the set point, the air conditioner will operate with half-load or just keep air ventilation. When the air conditioner gets to know through the signal from the elevator that there is no passenger in the car or the elevator does not run, the air conditioner will operate with minimal load or stand by.

Environmentally friendly materials

The system uses the environmentally friendly refrigerant R410A whose ODP is zero, as well as the lead-free and other environmentally friendly refrigerant recovery materials.

Reliable operation

The rotary compressor, the centrifugal evaporator fan, the axial condenser fan, the throttling capillary, and connection pipes build up an enclosed system. When there is a communication fault between the air conditioner and the elevator, this fault will be given to the elevator so that the user will be helped to know clearly how to eliminate this fault.

Easy service

Scientific structure, reasonable internal arrangement, detachable filter screen, and easily washable heat exchangers make the service much easy.

Convenient installation

Either the seat-type or the suspension-type installation is available for this kind of air conditioner.

High cleanliness

The fresh air outlet will offer at times outside fresh air into the car to improve the cleanliness of air inside the car.

Dual motor design

The dual motor design enables the control to the indoor fan unit through the elevator, which is a kind of better control mode and will enhance the comfort of the elevator.

Wide range of operating temperature

The elevator air conditioner operates normally among 16-43℃ .

Long-distant air supply

The applied outer rotor motor is so powerful to realize the long-distance air supply via the air duct.

Flexible operation

The smart wireless control enables the air conditioner fully under your control.

4 Product Technical Data

4.1 Technical Data

Elevator Air Conditioners					
Model			GDT25	GDT35	
Product Code			LU03000011	LU03000021	
Cooling Capacity	Rated Conditions (35℃ /24℃ ,27℃ /19℃)		W	2000	3000
			Btu/h	6829.2	10245.6
Electric Data	Power Supply		V-Hz-Ph	220-50-1	220-50-1
	Input Power	Rated Conditions (35℃ /24℃ ,27℃ /19℃)	kW	1000	1200
	Input Current	Rated Conditions (35℃ /24℃ ,27℃ /19℃)	A	4.6	5.7
	Max. Compressor Current		A	18	29
	Voltage		V	198 ~ 242	198 ~ 242
	Power Cable		mm ² ×pcs	1.0×3	1.0×3
Refrigerant	Type		-	R410A	R410A
	Charge		kg	0.55	0.85
	Throttling Device		-	Capillary	Capillary
Air Rate	Outdoors		m ³ /h	360	450
Compression	Manufacturer		-	Linda	Linda
	Model		-	QXA-B106C130A	QXA-C139B030A
	Type		-	Rotary	Rotary
	Quantity		-	1	1
	Input Power		W	875	1165
	Rated Current (RLA)		A	4.1	5.5
	Locked Rotor Amperes (L.R.A)		A	17	26
	Limit Temperature		℃	150	145
	Oil	Type	-	POE(Ze-GLES RB 68EP)	RB 68EP
		Charge	L	0.32	0.4

Evaporator Motor	Type	-	AW38	AW38
	Rotating Speed	rpm	1360	1360
	Input Power	W	250	250
	Insulation Level	-	F	F
Condenser Motor	Type	-	FW15A	FW40A
	Rotating Speed	rpm	1240±20	1220±20
	Output Power	W	15	35
	Insulation Level	-	B	B
Evaporator Fan Blade	Type	-	Centrifugal	Centrifugal
	Quantity	-	1	1
	Diameter-Height	mm	180	180
Condenser Fan Blade	Type	-	Axial Flow	Axial Flow
	Quantity	-	1	1
	Diameter-Height	mm	274	299
Evaporator	Material	-	Copper	Copper
	Coil Diameter	mm	φ7	φ7
	Coil Rows	-	4	4
	Tube spacing(a)×Row Pitch(b)	mm	19.05×12.7	19.05×12.7
	Fin Types	-	Slotted, Hydrophobic	Slotted, Hydrophobic
	L×H×W	mm	268×248×50.8	374×305×50.8
Condenser	Material	-	Copper	Copper
	Coil Diameter	mm	φ7	φ7
	Coil Rows	-	3	3
	Tube spacing(a)×Row Pitch(b)	mm	19.05×12.7	19.05×12.7
	Fin Type	-	Slotted, Hydrophobic	Slotted, Hydrophobic
	(L)×(H)×(W)	mm	272×381×38	388×438×38
Ambient Temperature		℃	16-43	16-43
Insulation		-	I	I
Protection Level		-	IP24	IP24
Overload Protection		-	Temperature, Current	Temperature, Current
Dimensions	Outline Dimensions(L×W×H)	mm	600×350×400	700×450×450
	Packaging Dimensions(L×W×H)	mm	780×480×480	890×572×542
Weight	Net Weight	kg	50	59

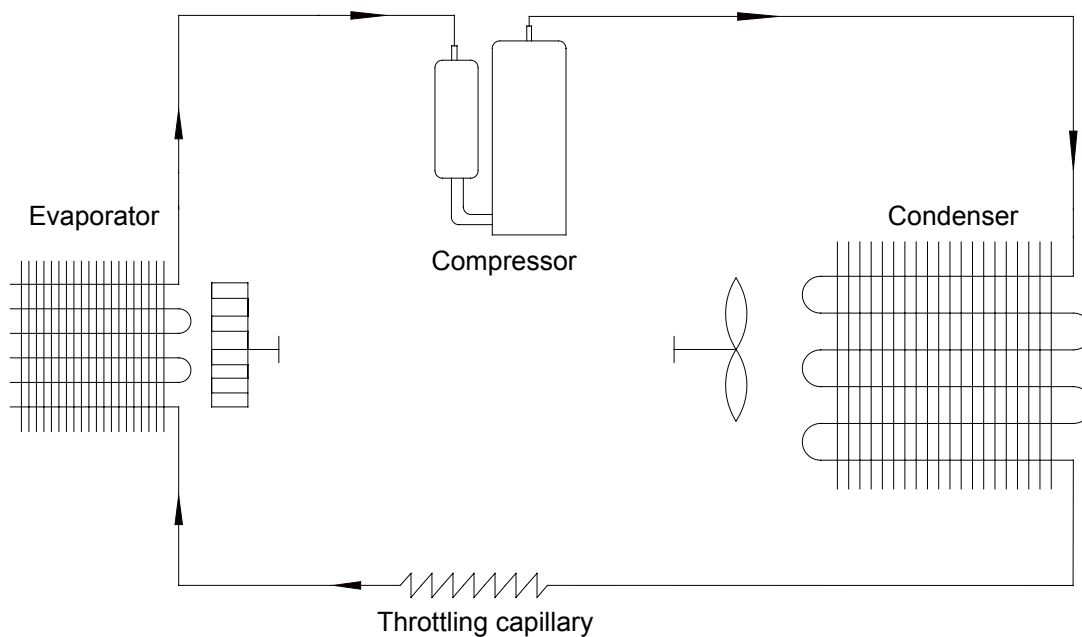
Notes:

- Parameters listed in the table above are determined under the nominal working conditions.
- Nominal outdoor temperature: 35℃ /24℃ ; nominal indoor temperature: 27℃ /19℃ .
- Product parameters are subject to change without further notice and the nameplate always prevails.
- This product complies with the standard Q/GD 20.00.044

4.2 Working Conditions

The working temperature ranges from 16℃ to 43℃ . The allowable minimal set point is 22℃ .

5 Working Principle



As shown in the figure above, it is an enclosed system mainly consisting of a compressor, a condenser, capillaries, and an evaporator. The refrigerant in the evaporator will exchange heat with air in the elevator and evaporate. Then, the low pressure refrigerant vapor will be drawn into the compressor where it will turn to be high temperature and high pressure vapor and discharged out. The discharged refrigerant vapor then will be cooled in the condenser and turn to high pressure refrigerant liquid which via capillaries will become the low temperature and low pressure wet vapor and enter the evaporator again. This cycle will repeat again and again.

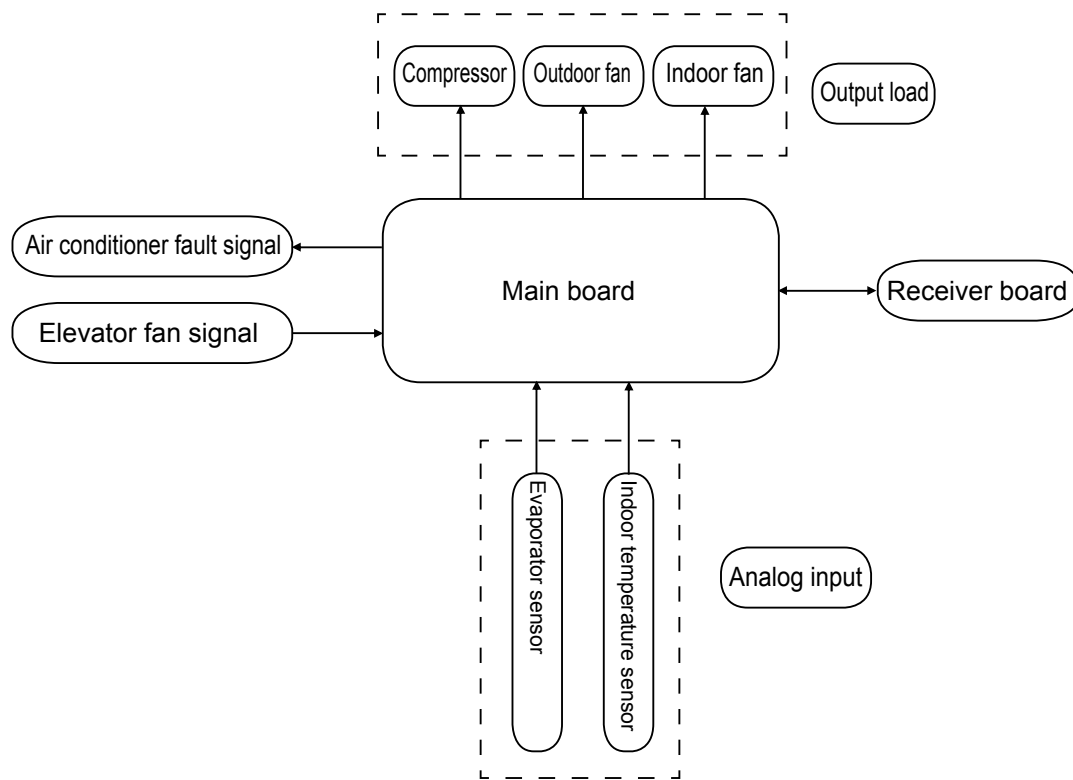


CONTROL

UNIT CONTROL

1 Unit Control

1.1 Control Principle



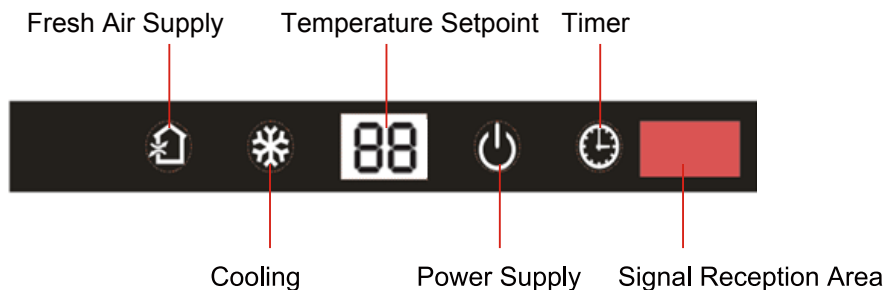
The air conditioner is under the control of the main board and the display panel. The display panel is intended to receive commands from the remote control and the main board is intended to collect the analog input and signals from the elevator fan so as to control the output load. The display panel also can tell the current operating status and fault signals of the air conditioner which then will be output to the control of the elevator.

The air conditioner is powered by the 220VAC, single-phase, 50Hz power supply. The control system performs control tasks with the help of one evaporator temperature sensor and one indoor temperature sensor.

When the control system of the air conditioner is energized, the air conditioner will be prepared to perform cooling. Then, once signals of the elevator fan are on, air in the car will be conditioned to be kept at the set point; once signals of the elevator fan are off, the air conditioner will be shut off.

2 Control Unit

2.1 Display Panel



Note: Be sure the display panel is installed where it will receive signals from the remote control.

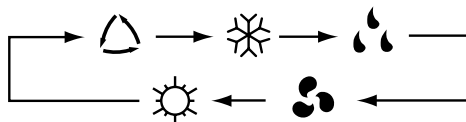
2.2 Remote Control

① ON/OFF Button

It is intended to turn on or off the unit. Meanwhile, the TIMER and SLEEP settings will be canceled.

② MODE Button

It is intended to shift the operation mode options among AUTO, COOL, DRY, FAN, and HEAT, as shown in the figure below:



△ AUTO; ❄ COOL; 💧 DRY; ● FAN; ☀ HEAT.

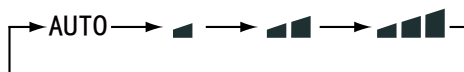
③ +/- Button

It is intended to decrease/increase the temperature set point 1 °C by each press or decrease /increase gradually by pressing and holding the button.

The temperature range is 16-30°C .

④ FAN Button

It is intended to shift the fan options among AUTO, Low, Medium and High speeds, as shown in the figure below.



▮ Low speed; ▮▮ Medium speed; ▮▮▮ High speed

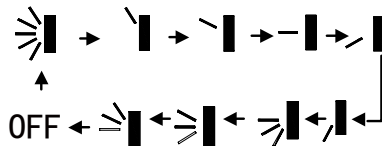
At the DRY mode, the fan will keep running at the low speed and the speed adjustment is unavailable.

⑤ TEMP Button

It is intended to select which temperature will be displayed, the preset temperature or the actual indoor ambient temperature. The former is the default upon startup. Three icons will be displayed when pressing this button: ☒ presents the preset temperature; ☒ presents the indoor ambient temperature; and ☒ means keeping the current temperature option.

⑥ ➊ Button

This button is intended to shift the status of the air guide louver among five directions as shown below.



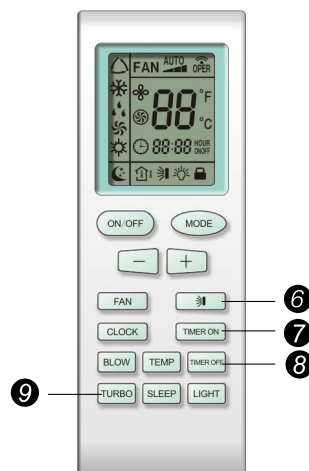
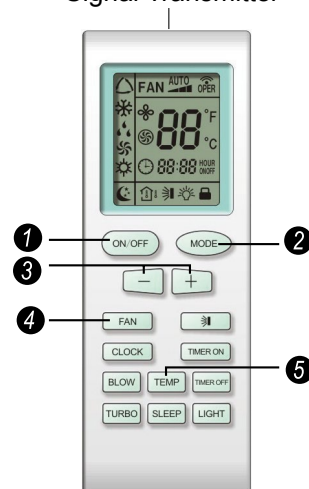
If the function is deactivated, the guide louver will keep at the current direction.

The symbol ➊ indicates the air guide louver will swing up and down along five directions circularly. Symbols ➋, ➌ and ➍ work the same as ➊

⑦ TIMER ON Button

It is intended to set the TIMER ON. Once accessing to the setting status by pressing the TIMER ON button , the icon ON will flash and the icon ⌚ will disappear, and then within 5 seconds it is allowed to adjust the timer by pressing the - or + button. Each press will make the timer increase or decrease by one minutes, or the timer will increase or decrease with an increment of 10 minutes by pressing and holding the - or + button for more than 2 second. After that, press the TIMER ON to finish the TIMER ON setting which then can be canceled by pressing the TIMER ON again. Prior to the TIMER setting, the clock shall show the actual time.


Signal Transmitter




⑧ TIMER OFF Button

It is intended to set the TIMER OFF in the similar way with TIMER ON stated above.


⑨ TURBO Button

It is intended to activate or deactivate the TURBO function with the icon  appearing or disappearing at the COOL or HEAT mode. This function is defaulted to be OFF and is available at the AUTO, DRY and FAN modes.


⑩ LIGHT Button

It is intended to turn on or off the light located on the display panel of the air conditioner with the icon  appearing or disappearing.






⑪ BLOW Button

It is intended to activate or deactivate the BLOW function with the icon  appearing or disappearing at the COOL and DRY modes. BLOW Off is the default. This function is available at the AUTO, FAN and HEAT modes.

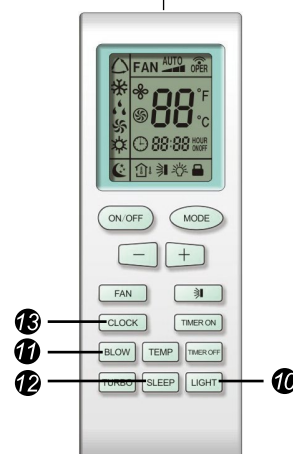
⑫ SLEEP Button

It is intended to activate or deactivate the SLEEP function with the icon  appearing or disappearing. The Sleep Off is the default. This function is unavailable at the FAN and AUTO modes.

⑬ CLOCK Button


It is intended to set the system clock. Once accessing to the setting status by pressing the CLOCK button with the icon  flashing, it is allowed to set the clock within 5 seconds by pressing the  or  button. The clock will increase or decrease for 10 minutes every 2.5 seconds by pressing and holding the  or  button for more than 2 seconds. After that, press the CLOCK button again to finish this setting. 12:00 is the default.

Signal Transmitter



3.2.3 Replacement of Batteries

Please follow the steps below to replace the worn batteries.

Step 1: Press downwards the place marked with the symbol  and then push the back cover along the arrow direction.

Step 2: Take out the worn batteries and insert two new AAA 1.5V dry cell batteries. Meanwhile, please pay much attention to their polarity.

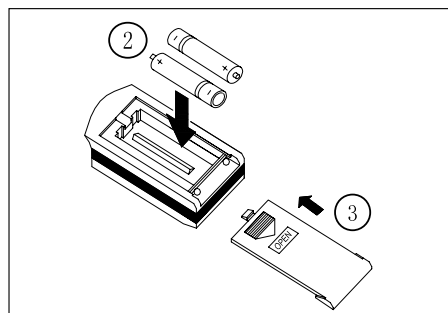
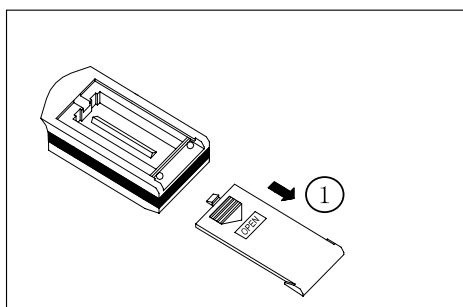
Step 3: Reattach the back cover.

Notes:

a. Button operation 1, 2, 3, 5, 7, 8, and 13 are available for the elevator air conditioners.

b. As for the MODE button operation, only the cooling mode is available for the elevator air conditioners.

The TIMER function set for the control which has been not used for one week should be reset, otherwise the TIMER function would work improperly. When the TIMER ON and TIMER OFF is set the same, neither of them will work.





INSTALLATION

Installation

The installation shall be only performed by the Gree appointed construction organization.

1 Installation Location

1.1 Supply Air Outlet

- 1) It would be best to take the fan vent as the supply air outlet.
- 2) Cool supply air will be sent the car freely, and the loss of cool air should be kept as less as possible.
- 3) The supply air outlet should be kept away from the car wall as far as possible to avoid generation of condensate.

1.2 Return Air Inlet

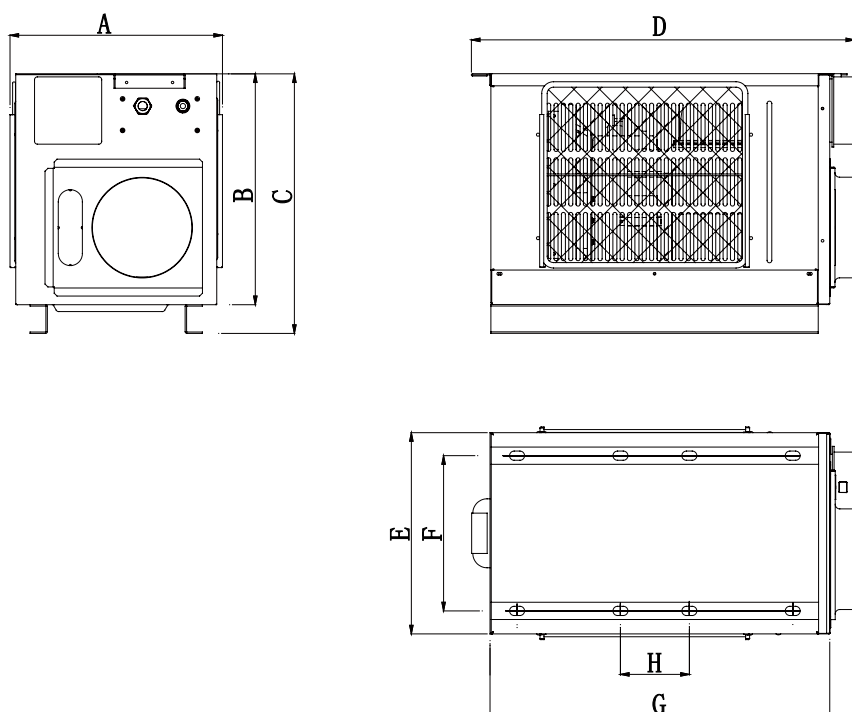
- 1) The return air inlet shall be close enough to the supply air outlet so as to minimize the occupied area at the car top.
- 2) Be sure air inside the car can be easily drawn back into the air conditioner.
- 3) The return air inlet and the supply air outlet should be separated properly to prevent the cool air from being drawn back into the air conditioner.

1.3 Main Body

This air conditioner can be either ceiling or floor installed. During installation, make sure:

- 1) It is installed through the beam so as to reduce vibration and noise.
- 2) It is installed horizontally so that condensate will not flow out.
- 3) It is installed in the way that the supply air outlet and return air inlet are free of obstacles.
- 4) It is installed in the way that there is enough space for ventilation.

2 Installation Dimensions



Unit:mm

Model	A	B	C	D	E	F	G	H
GDT25	370	400	450	630	350	276	600	120
GDT35	470	450	500	730	450	276	700	300

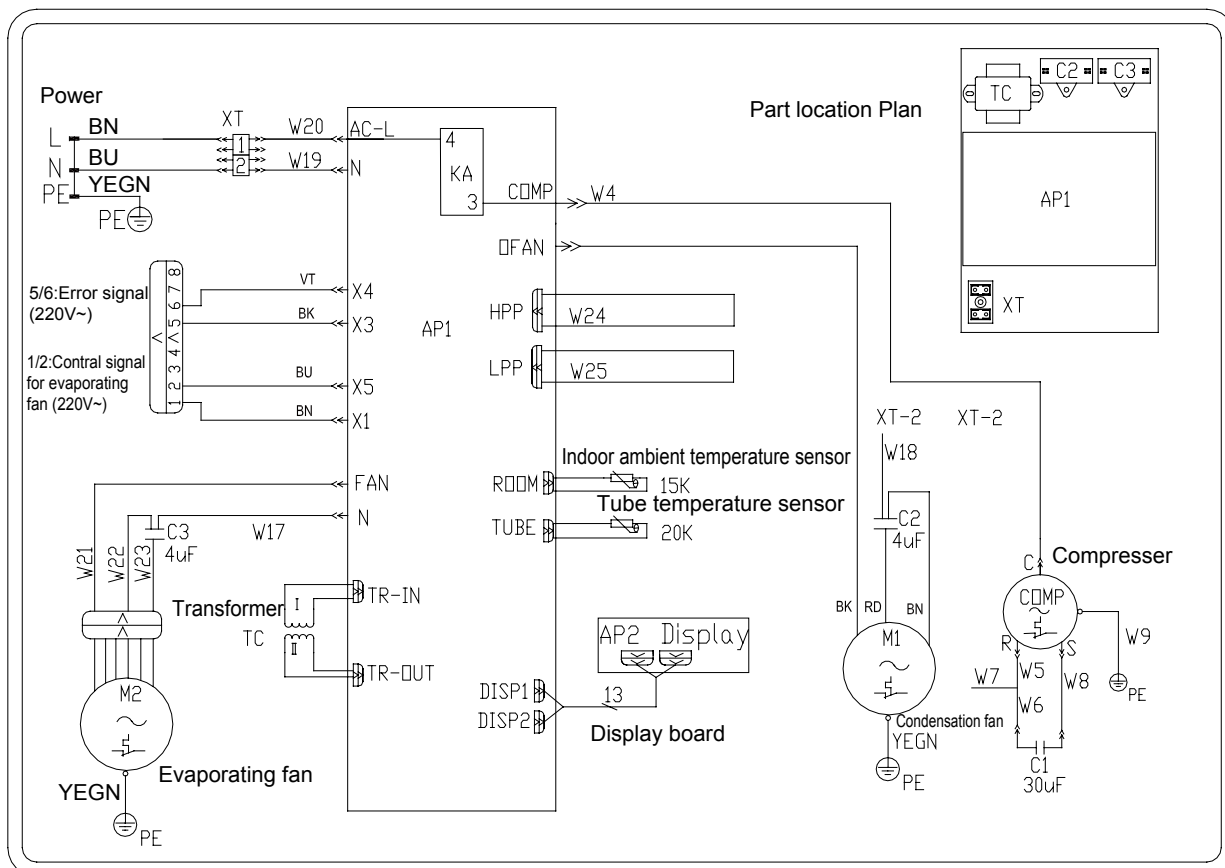
- a. Keep the air conditioner upright when handling it.
- b. Keep the shorter flanged edge (5mm) of the air vent upwards.
- c. Draw much attention to the use of the rubber pad.

3 Electric Wiring

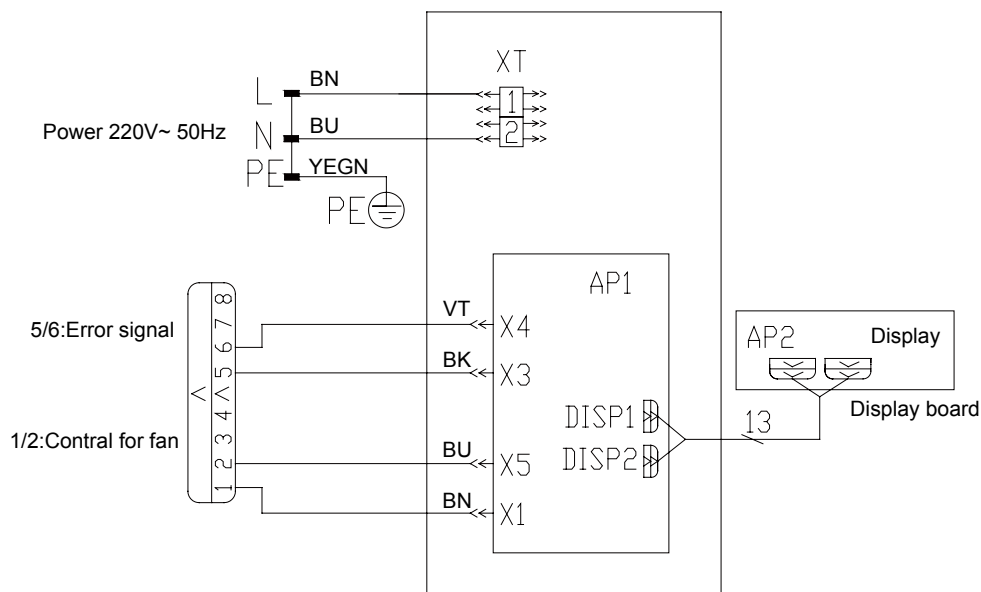
WARNING:

- 1) Be sure there is no electricity prior to any electric wiring.
- 2) The electric elements to be used shall comply with the national and local standards and keep each connection secure.
- 3) The air conditioner shall be grounded reliably through the allowable ground wire but never the gas line, water pipe, lightning rod or communication line.

3.1 Internal Electric Wiring



3.2 External Electric Wiring



Note: the error signal interface is reserved on the main board of the air conditioner, through which the

control will get the error information of the air conditioner. As shown in the figure above, when no error occurs to the air conditioner, Terminal 5 and Terminal 6 of the error signal interface will keep closed; when errors occur, they will be disconnected automatically. The error signal interface is not allowed directly to the input line of the control but via the current limiting resistor. The load between Terminal 5 and Terminal 6 is 3A, 250VAC.

Terminal 1(brown) is for the fan live line and Terminal 2 (blue) is for the fan neural line and they shall not be exchanged.

3.3 Sizes of Breakers

Model	Breaker Capacity (A)	Power Supply	Power Cable Min. Sectional Area (mm ²)
GDT25	10	220V 50Hz	1.0
GDT35	10	220V 50Hz	1.0

a. The table is only applicable to the copper-wire power cable less than 15m used at the environment lower than 60℃ . If the power cable is longer than 15m, its sectional area should be properly enlarged so as to avoid any accident caused by overload.

b. The specifications of the power cable listed in the table above are applied to the conduit-guarded multi-wire(2~4) cable used at 30℃ .If the working condition changes, they should be modified according to the related national standard.

c. The D type fuse should be used for the air switch.

d. The breaker is an optional part.



MAINTENANCE

Maintenance

1 Importance of Maintenance

Please clean and maintain the air conditioner periodically to keep it run reliably and extend its service life, and special attention should be drawn to the key components.

(1) Condenser

As dust accumulated on the fins of the condenser will affect the heat exchange efficiency and raise the pressure at the high side, it is necessary to check and clean them. When cleaning, the upper cover of the condenser should be removed.

(2) Evaporator

As dust accumulated on the fins of the evaporator will reduce the air flow and lower the cooling capacity, it is necessary to clean them based on the actual condition.

(3) Filter Screen

As dust accumulated on the filter screen will reduce the air flow and lower the cooling capacity, it is necessary to clean it frequently.

2 Maintenance Items

	Maintenance Items
Maintenance before Seasonal Operation	<p>Is the air inlet or outlet clogged?</p> <p>Are the supply air pipe and the return air pipe tightened securely? Is the air duct connected to the car top securely?</p> <p>Is the power cable loosened?</p> <p>Is the surface of fins accumulated with heavy dust or stains? If so, the heat exchange efficiency will be affected. Therefore, it is recommended to clean the fins by the skilled service person.</p>
Maintenance in Seasonal Operation	<p>Dust from the elevator well is likely to attach on the filter screen, which will reduce the return air flow and cooling capacity. Therefore, it is suggested to clean the filter frequently. Once every week is preferred.</p> <p>The filter screen is allowed to be cleaned by the vacuum cleaner or by rinsing. If the filter screen is quite dirty, use the lukewarm (lower than 30°C) neutral detergent and dry it in shade.</p>



REPAIR

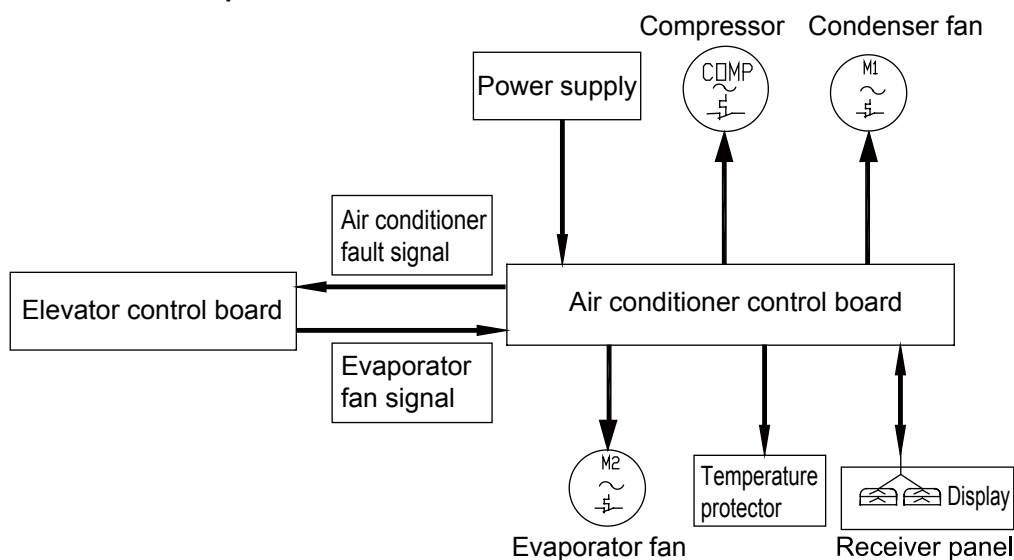
Repair

1 Error List

Symptoms	Possible Causes	Solutions
When energized, the red and green indicating LEDs do not light on and the air conditioner does not give an alerting sound.	The power supply is not normal.	Test the power supply with an electric meter.
Only the red LED lights on and the air conditioner does not run.	The air conditioner is timed off, or the air conditioner is timed incorrectly.	Time the air conditioner properly.
The cooling effect is poor, or the air conditioner repeats frequently starting and stopping.	The filter is clogged. The temperature set point is too high. The duct is clogged or damaged. The temperature sensor is placed improperly so that it is often exposed to the cool air. The air conditioner stops for the power voltage is too low.	Clean the filter. Lower the temperature set point. Check the duct. Replace the temperature sensor. Check the power voltage.
Much noise is generated	The power voltage is too low. The air conditioner is put directly on the car top	Check the power voltage. Fix the air conditioner at the beam of the car top.
There are water drips at the supply air outlet when the air conditioner is operating.	The cool air directly contacts the metallic wall and is condensed. Too dirty filter causes the low temperature supply air. The insulation of the duct is damaged.	Check the insulation at the supply outlet. Clean the filter. Check the insulation of the duct.
The air conditioner is timed on/off improperly.	The clock of the control does not agree the actual time.	Reset the clock.
When restarting the air conditioner after power failure, it fails to work.	The compressor is in system protection for three minutes	Start the air conditioner three minutes later.
The control works slowly or the display is unclear.	Batteries of the control run out.	Change the batteries.
The air conditioner leaks.	The air conditioner is installed slantwise.	Adjust it horizontally as per instructions in this manual.
The housing of the air conditioner is electrified.	The air conditioner is not grounded.	Ground the air conditioner.

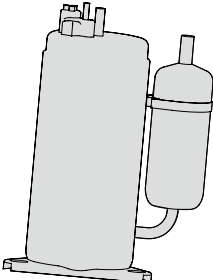
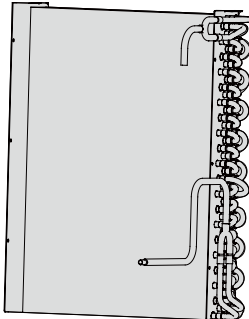
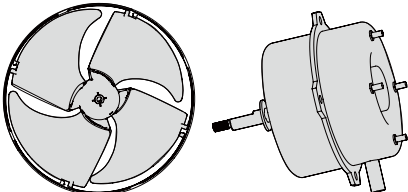
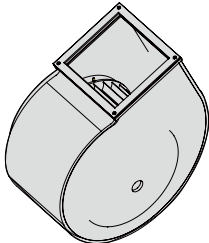
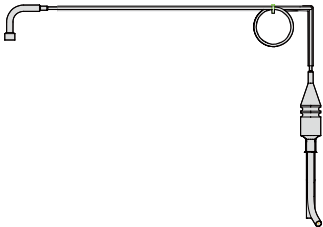
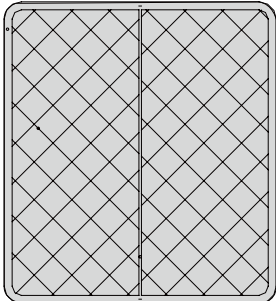
2 Power Distribution

2.1 Power Distribution Concept



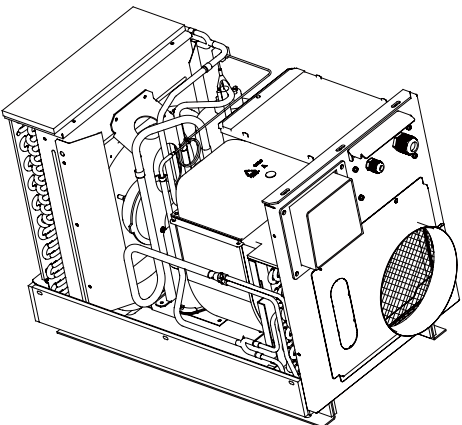
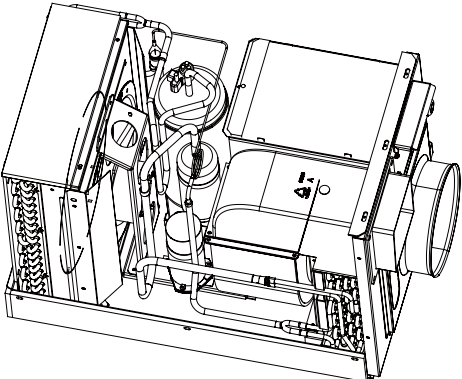
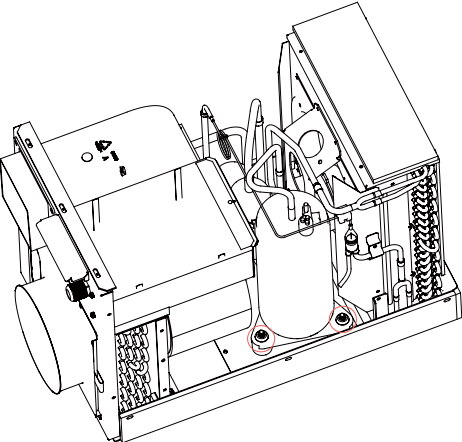
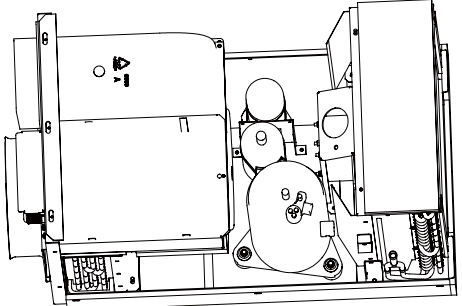
3 Disassembly

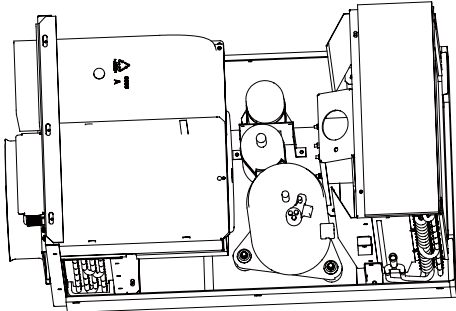
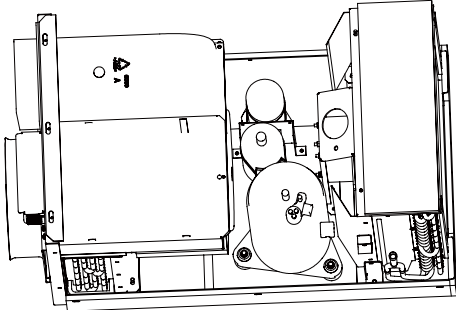
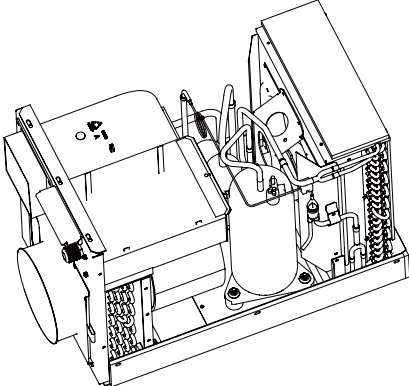
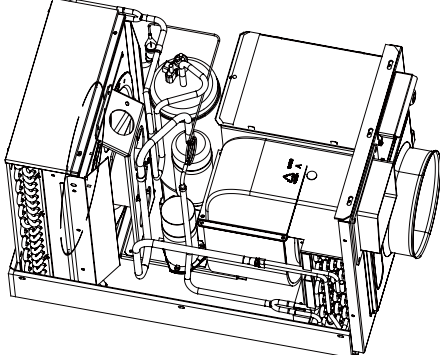
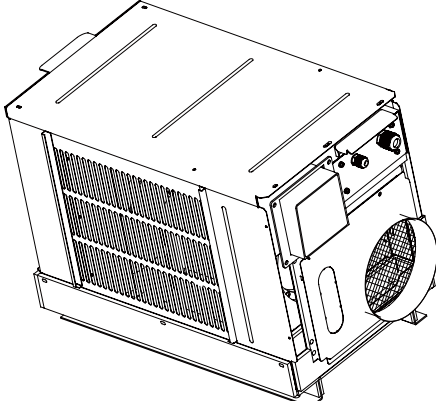
3.1 Key Parts

Name	Appearance	Function
Compressor		As the core of the air conditioner system, it is used to compress the low temperature and low pressure suction air into high temperature and high pressure air and then discharge it out.
Condenser coil		It is used to exchange heat between refrigerant and air flow.
Condenser fan		It is used to accelerate the air flow for higher heat exchanger efficiency.
Evaporator fan		It is used to accelerate the air flow for higher heat exchanger efficiency.
Throttling capillary		It is used to lower the temperature and pressure of the high temperature and high pressure liquid refrigerant.
Filter screen		It is used to separate impurities from passing air flow.

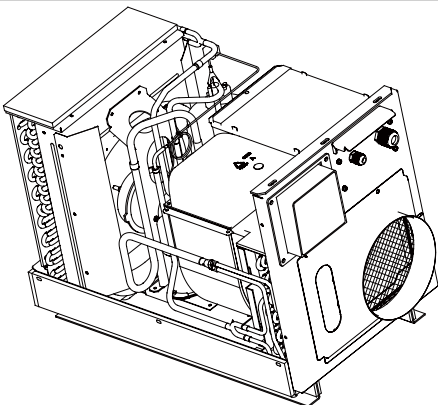
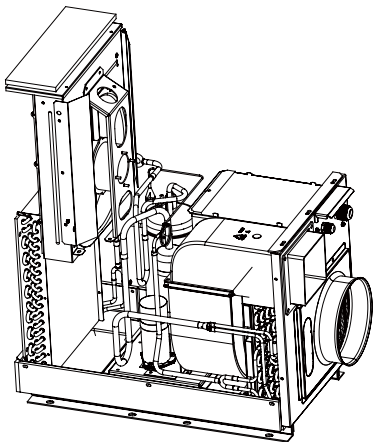
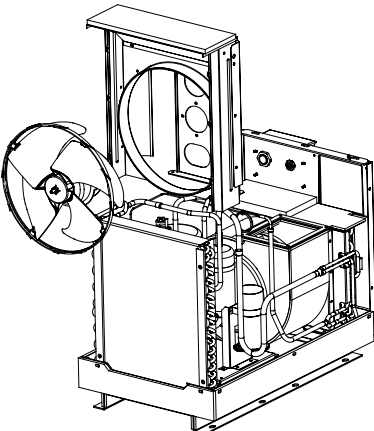
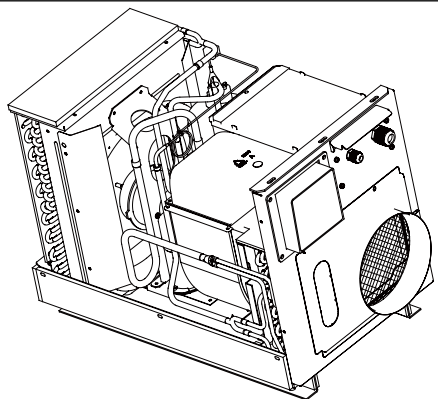
3.2 Disassemble Procedures

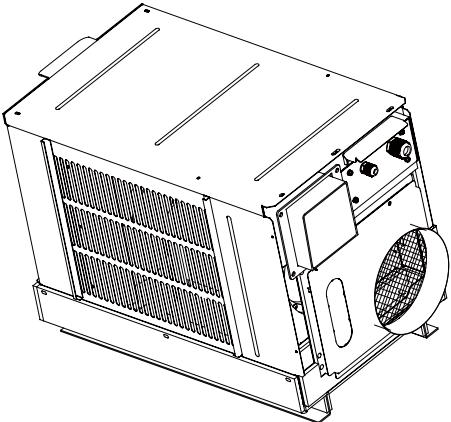
3.2.1 Compressor

How to Disassemble the Compressor		
Be sure there is no refrigerant inside the system and the power supply is disconnected.		
Steps	Graphic Representation	Instructions
1. Remove the upper front panel and the left and right side panels		Loosen four screws on the upper front panel with a screwdriver, lift it upwards and then take it out. Loosen 14 screws on the side panels with a screwdriver and then take them out.
2. Draw out the power lines of the compressor		Loosen the screw terminals with a screwdriver and then draw out the power lines.
3. Loosen the fixing screws on the base of the compressor		Loosen nuts on the base with a spanner and keep them together in case of loss.
4. Disconnect pipes to the compressor		Unsolder the suction and discharge pipes. 0.5+0.1kgf/cm ² nitrogen is required for protection. Note that the surrounded elements are not allowed to be burnt out due to the high temperature.

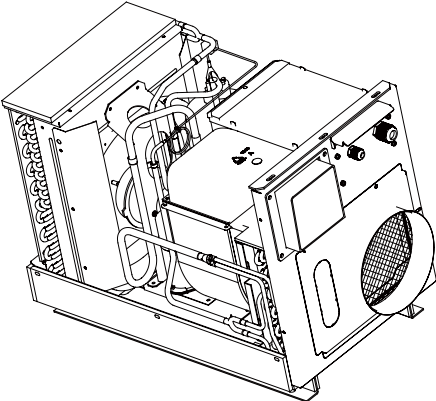
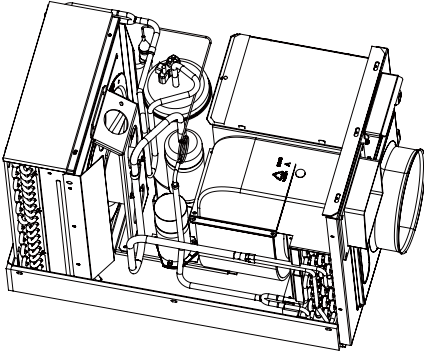
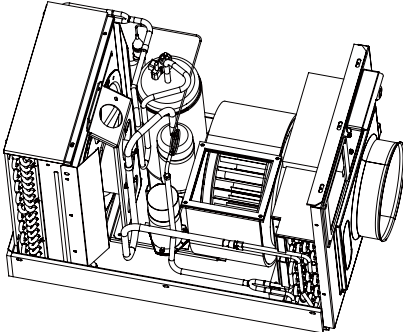
<p>5. Remove the compressor from the base</p>		<p>The lifting hook is recommended to hoist the compressor and put it down slowly.</p>
<p>6. Fix the new compressor to the base.</p>		<p>The lifting hook is recommended to hoist the compressor and put it down slowly. Tighten nuts on the base. Never put the compressor upside down.</p>
<p>7. Connect the suction and discharge pipes</p>		<p>Resolder the suction and discharge pipes. 0.5+0.1kgf/cm² nitrogen is required for protection. Note that the surrounded elements is not allowed to be burnt out due to the high temperature.</p>
<p>8. Connect the power lines.</p>		<p>Connect the power lines to the screws and tighten them with a screwdriver.</p>
<p>9. Reattach the upper front panel and the left and right side panels</p>		<p>Check if each element is connected correctly and securely. Then, reattach the left and right side panels and then the upper front panel.</p>

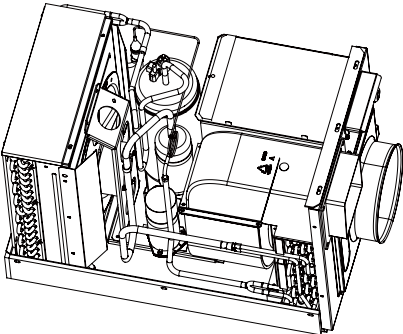
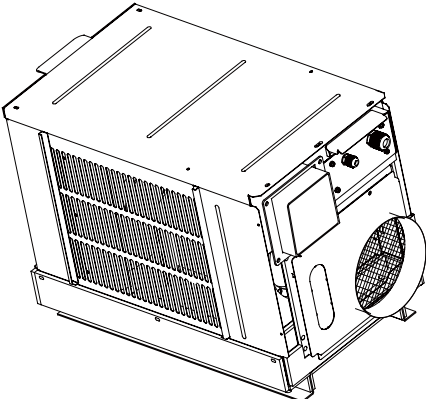
3.2.2 Condenser Fan

How to Disassemble the Condenser Fan		
Be sure the power supply is disconnected.		
Steps	Graphic Representation	Instructions
1. Remove the upper front panel and the left and right side panels		Loosen four screws on the upper front panel with a screwdriver, lift it upwards and then take it out. Loosen 14 screws on the side panels with a screwdriver and then take them out
2. Move out the condenser fan.		Loosen six screws at left and right sides of the condenser, and then loosen two screws fixing the motor support and the base. After that, lift the condenser fan and move it out.
3. Get out the motor and the axial fan blades.		Loosen screws on the motor support and the rear clapboard and then get the motor out. Loosen screws on the fan blades, and then get them out.
4. Reinstall the motor and the axial fan blades.		Put the fan blades back and fix it with screws. Put the motor and motor support back and fix them with screws. Put the rear clapboard and support back and fix them with screws. Put the fan assembly at the base and then fix with screws.

5. Reattach the upper front panel and the left and right side panels		Check if each element is connected correctly and securely. Then, reattach the left and right side panels and then the upper front panel.
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3.2.3 Centrifugal Fan

How to Disassemble the Centrifugal Fan		
Be sure the power supply is disconnected.		
Steps	Graphic Representation	Instructions
1. Remove the upper front panel and the left side panel.		Loosen four screws on the upper front panel with a screwdriver, lift it upwards and then take it out. Loosen seven screws on the side panel with a screwdriver and then take it out.
2. Take out the electric box and the supply air duct.		Loosen four screws fixing the electric box and then take it out Loosen four bolts on the supply air duct and then take it out.
3. Get out the centrifugal fan.		Loosen six fixing bolts on the centrifugal fan and then get the centrifugal fan out.

4. Reinstall the centrifugal fan and do the wiring.		Take a trial run after the wiring to make sure the wiring is correct.
5. Reattach the electric box, the supply air duct, the upper front panel and the left side panel.		Note that do not touch the suction pipe when attaching the side panel.

4 Repair Procedures

4.1 Leakage Test

Refrigerant leakage will not only directly affect the normal operation of the air conditioner but also do harm to the environment. When in contact with open fire, the refrigerant will give off toxic gas which will endanger surrounding creatures.

Once it is certain leakage exists, shut off the air conditioner immediately and then take a leakage test as the steps stated below.

- 1) Charge 20.0 kgf/cm² nitrogen into the pipe system.
- 2) Apply soup water to the connections, and remember to mark where leakage is found out.
- 3) After the leakage test, recharge 20.0 kgf/cm² nitrogen into the pipe system for repair welding.
- 4) After the repair welding, charge 20.0 kgf/cm² nitrogen into the pipe system another time. 48 hours later, check the reading of each gauge. According to the formula below, the pressure drop should not be higher than 1% of the test pressure, otherwise it is necessary to repeat the steps above until the pressure drop is satisfactory.

$$\Delta P = P_1 - P_2(273 + P_1) / (273 + T_2)$$

Wherein, ΔP indicates the pressure drop; P_1 and P_2 indicate the nitrogen pressure before and after the test respectively; T_1 and T_2 indicate the nitrogen temperature before and after the leakage test respectively.

- 5) If possible, it would be best to use the halogen leak detector to find where leakage is when it is certain that leakage exists.

4.2 Cleaning

The way how to clean the straight pipe: wrap clean poplin around a steal wire until its diameter is approximately larger that of the copper tube, impregnate it with trichloroethylene, and then insert it form one end of the copper tube and pull it out from the other. It should be cleaned with trichloroethylene after it is pulled out and prepared for use again. The cleaning is finished until there is no dust and other impurities inside the pipe.

The way how to clean the coiled pipe: charge nitrogen into pipes to remove dust and other impurities.

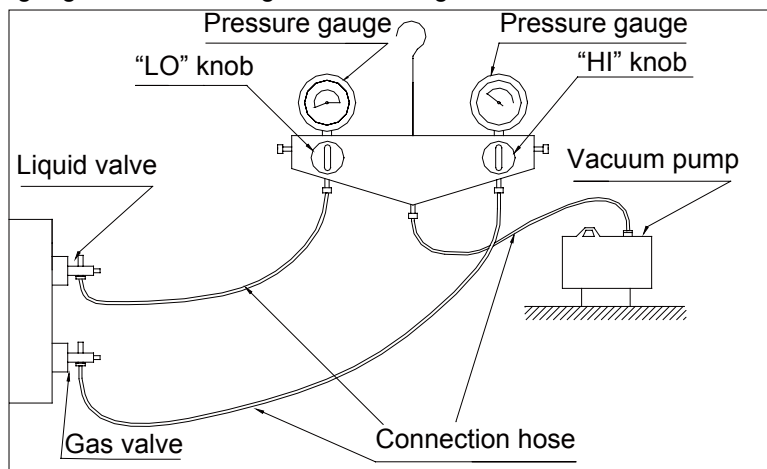
After cleaning is finished, both ends of the pipes should be covered or tape sealed.

4.3 Vacuuming

The degree of vacuum of the pipe system has direct influence on the normal operation of the air conditioner. The poor vacuum degree will lead to unusual high pressure at the high side, consume more energy or even damage the compressor. Therefore, the system should be vacuumed after the leakage tested as described in 5.4.1.

The vacuuming steps are listed as below.

- 1) Discharge the high pressure nitrogen used for leakage test.
- 2) As shown in the figure below, connect the pressure gauges to the gas and liquid valves. One gauge must be the low pressure gauge, as the reading of it is the degree of vacuum.



- 3) Open the vacuum pump as well as the "LO" and "HI" knobs.
- 4) When the reading of the low pressure gauge is -1.0kgf/cm^2 , continue vacuuming for another 0.5-1.0 hours. Then, close the "LO" and "HI" knobs and stop the vacuum pump.
- 5) Connect the connection hose to the refrigerant tank, drive the air inside the connection hose out, open the "LO" knob, and then charge refrigerant into the system. When the pressure approaches 0kgf/cm^2 , close the "LO" knob.
- 6) Connect the connection hose to the vacuum pump and open the vacuum pump and the "HI". 30 minutes later, open the "LO" knob until the vacuum degree reaches -1.0kgf/cm^2 , which means a satisfactory vacuum degree of the system.

Note: periodical maintenance and service to the air conditioner should be performed by the skilled service people so as to guarantee it operates normally and sudden faults will be eliminated as soon as possible.

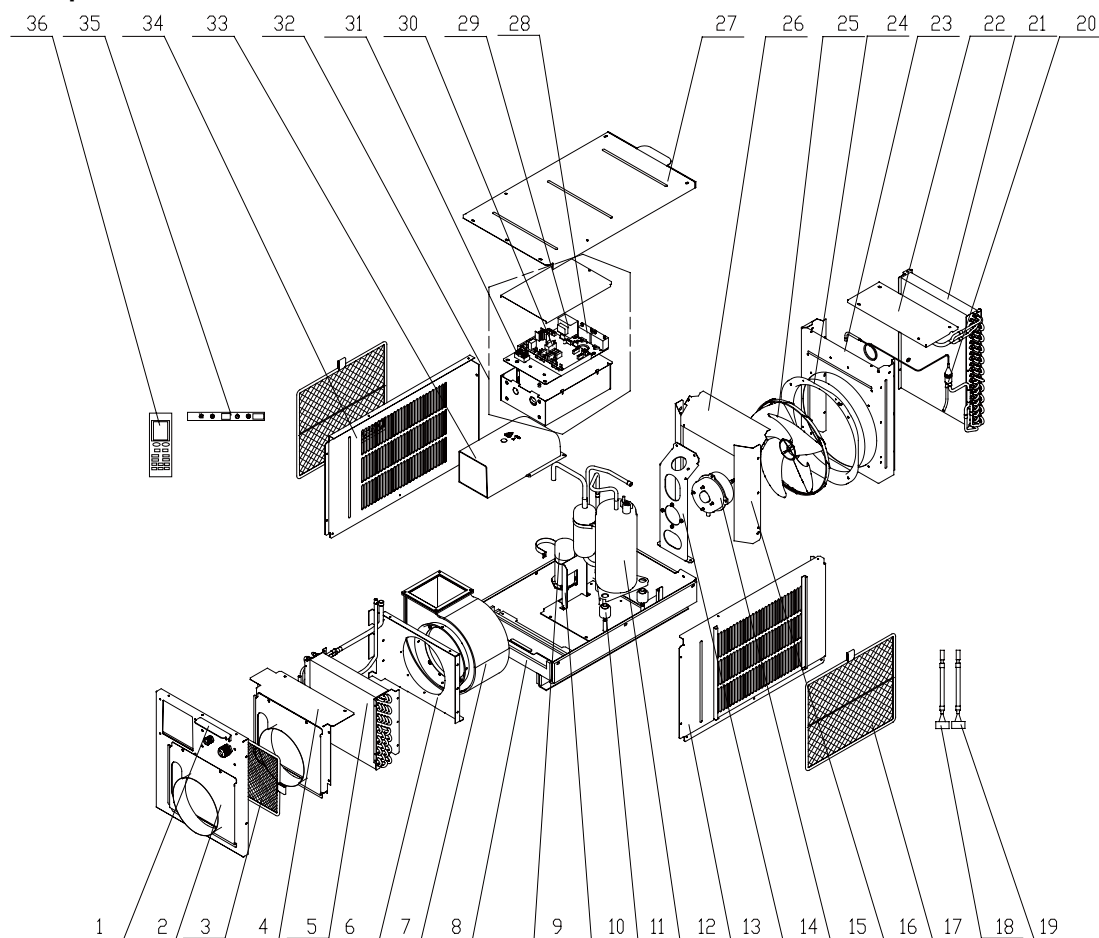
4.4 Refrigerant Charging

The amount of refrigerant in need should be calculated in accordance with the size and length of the liquid pipe. In order to guarantee only liquid refrigerant is charged in, the refrigerant tanks should be put upside down. Before charging, connect the manifold gauge and the refrigerant tank to the liquid and gas valves, and remember to drive the air inside the system out through the liquid refrigerant flow. When the refrigerant is going to be charged into the air conditioner which is kept to be shut off, open the control valve at the refrigerant tank and charge the refrigerant into the system through the liquid pipe until required amount of refrigerant is in the system, and then close the liquid valve and the control valve of the refrigerant tank one by one. Additional refrigerant is allowed to be charged when the unit is operating at the service valve of the gas pipe.

Note: never charge oxygen, acetylene or other inflammable gas into the system for leakage test and air tightness test, but only compressed air, high-pressure nitrogen or refrigerant. The air conditioner is allowed to be started only when at least 60% required amount of refrigerant has been charged.

5 Exploded Views and Parts Lists

5.1 GDT25 Exploded View

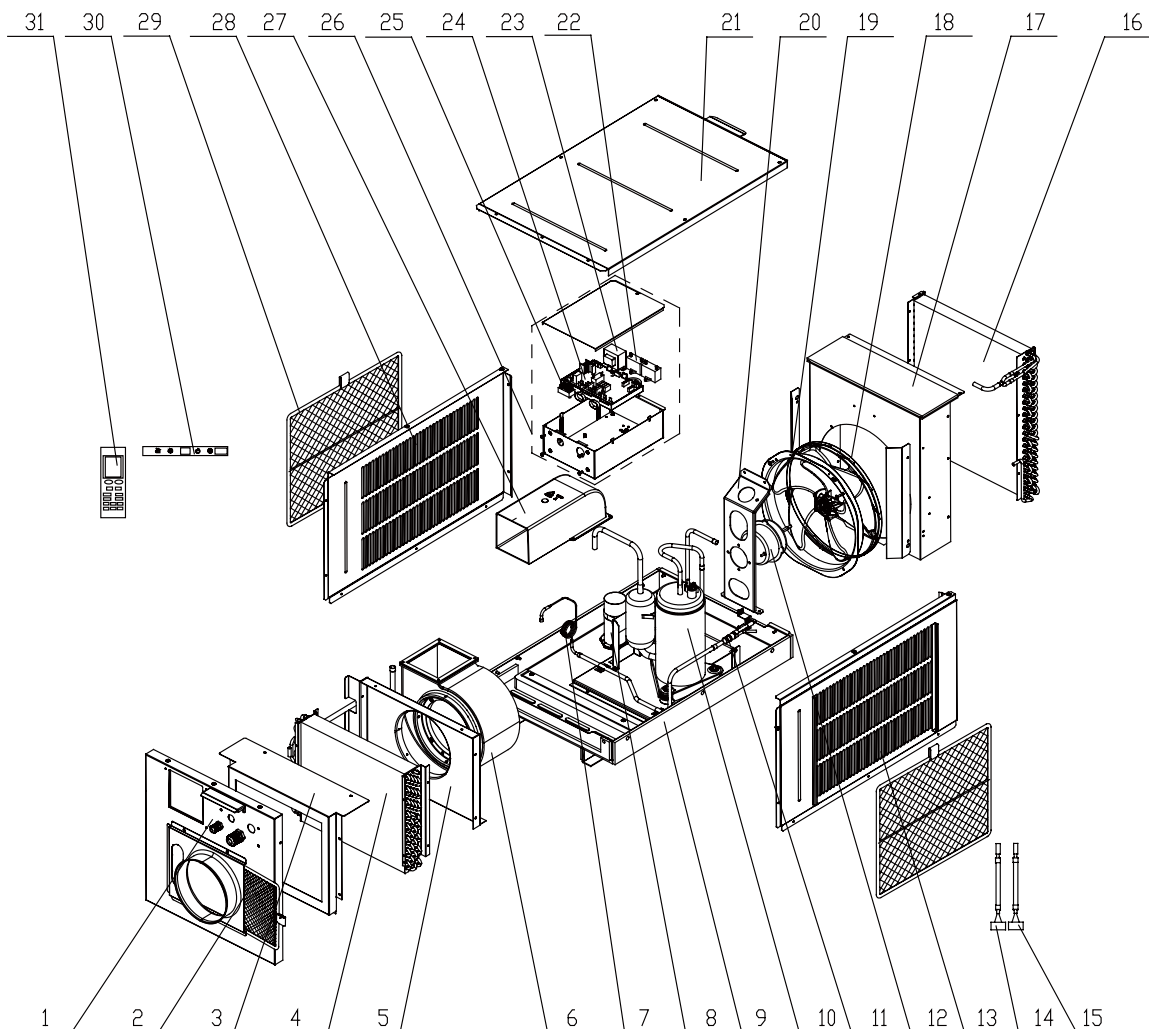


GDT25(LU03000011) Parts List

No.	Name	Code	Quantity
1	Lug	02203700002P	1
2	Front cover subassembly	01263847	1
3	Filter screen assembly	11723707	1
4	Evaporator end plate	01493769P	1
5	Evaporator subassembly	01023778	1
6	Mounting plate	01923713P	1
7	Centrifugal fan subassembly	15403913	1
8	Base subassembly	01293715	1
9	Capacitor box subassembly	20101215	1
10	Support	01823840P	1
11	Rubber pad	76711004	3
12	Compressor	00101260	1
13	Right side plate subassembly	01313838	1
14	Motor support subassembly	01823844	1
15	Motor	15703716	1
16	Baffle 2	01353782P	1
17	Filter assembly	11723705	2
18	Temperature sensor	39000286	1


19	Temperature sensor	39000208	1
20	Y-shaped filter	072111031	1
21	Condenser subassembly	01123768	1
22	Condenser cover	01263842P	1
23	Back partition board	01243800P	1
24	Guide ring	01523902P	1
25	Axial flow blade	10331006	1
26	Baffle 1	01353783P	1
27	Top cover assembly	01263700001P	1
28	Capacitor	33010013	2
29	Transformer	43110283	1
30	Main board	30222075	1
31	Terminal board	42011103	1
32	Electric box subassembly	01393894	1
33	Air duct	26903724	1
34	Left side plate subassembly	01313839	1
35	Display	30292090	1
36	Remote control	305100413	1

5.2 GDT35 Exploded View



GDT35(LU03000021) Parts List

No.	Name	Code	Quantity
1	Front cover assembly	01263700017P	1
2	Filter screen	11723707	1
3	Evaporator end plate	01493700015P	1
4	Evaporator subassembly	01023700001	1
5	Mounting plate	01323700028P	1
6	Centrifugal fan subassembly	15403913	1
7	Capillary assembly	04003700001	1
8	Capacitor box subassembly	01393700049	1
9	Base assembly	01283700012P	1
10	Compressor	00101302	1
11	Filter	07211601	1
12	Motor	15703700001	1
13	Right side plate assembly	01313700022P	1
14	Temperature sensor	39000286	1
15	Temperature sensor	3900028503	1
16	Condenser subassembly	01123700004	1
17	Rear clapboard	01243700005P	1
18	Axial fan blade	10331011	1
19	Guide ring	01523700004	1
20	Motor support	01803700069P	1
21	Top cover	01263700018P	1
22	Capacitor	33010013	2
23	Transformer	4311028302	1
24	Main board	30222075	1
25	Terminal board	42011103	1
26	Electric box	01393700154	1
27	Air duct	26903724	1
28	Left side plate assembly	01313700023P	1
29	Filter screen assembly	11723700001	2
30	Display	30292090	1
31	Remote control	305100413	1



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