



# Service Manual

**GREE ELECTRIC APPLIANCES, INC. OF ZHUHAI**



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# 2. Specifications

## 2.1 Specification Sheet

Model			GJC07AJ-D6DRNC2A	GJC09AJ-D6DRNC2A
Product Code			CC053044000	CC053043900
Power Supply	Rated Voltage	V~	230	230
	Rated Frequency	Hz	60	60
	Phases	--	1	1
Cooling Capacity		W	2472(722~2722)	2889(2600~11440)
Heating Capacity		W	/	/
Cooling Power Input		W	725(220~900)	900(220~1100)
Heating Power Input		W	/	/
Cooling Power Current		A	3.4	4.15
Heating Power Current		A	/	/
Electric Heating Power Input		W	/	/
Electric Heating Power Current		A	/	/
Rated Input		W	1000	1200
Rated Current		A	4.8	5.5
Air Flow Volume(H/M/L)		m <sup>3</sup> /h	300/275/200	320/275/210
Dehumidifying Volume		L/h	0.96	1.21
EER		W/W	3.4	3.21
COP		W/W	/	/
SEER			4.4	4.3
Application Area		m <sup>2</sup>	10-16	12-18
Climate Type			T1	T1
Isolation			I	I
Moisture Protection(Outdoor)			IPX4	IPX4
Permissible Excessive Operating Pressure for the Discharge Side		MPa	4.3	4.3
Permissible Excessive Operating Pressure for the Suction Side		MPa	2.5	2.5
Dimension (WXHXD)		mm	450X350X640	450X350X640
Dimension of Carton Box (LXWXH)		mm	740X513X359	740X513X359
Dimension of Package (LXWXH)		mm	743X516X374	743X516X374
Net Weight		kg	28	28
Gross Weight		kg	30.5	30.5
Indoor Side	Refrigerant		R32	R32
	Refrigerant Charge	kg	0.34	0.34
	Fan Type		Centrifugal	Centrifugal
	Fan Diameter Length	mm	Φ187.7X80.9	Φ187.7X80.9
	Fan Motor Speed	r/min	1030/900/700	1030/900/700
	Fan Motor Power Output	W	45	45
	Fan Motor RLA	A	0.5	0.5
	Fan Motor Capacitor	μF	/	/
	Evaporator Form		Aluminum Fin-copper Tube	Aluminum Fin-copper Tube
	Evaporator Pipe Diameter	mm	Φ7	Φ7
	Evaporator Row-fin Gap	mm	3-1.4	3-1.4
	Evaporator Coil Length (LXDXW)	mm	265X38.1X304.8	265X38.1X304.8
	Swing Motor Model		MP24VA	MP24VA
	Swing Motor Power Output	W	2	2
	Fuse Current	A	15	15
	Sound Pressure Level (H/M/L)	dB (A)	50/46/42	51/46/43
	Sound Power Level (H/M/L)	dB (A)	60/56/52	61/56/53

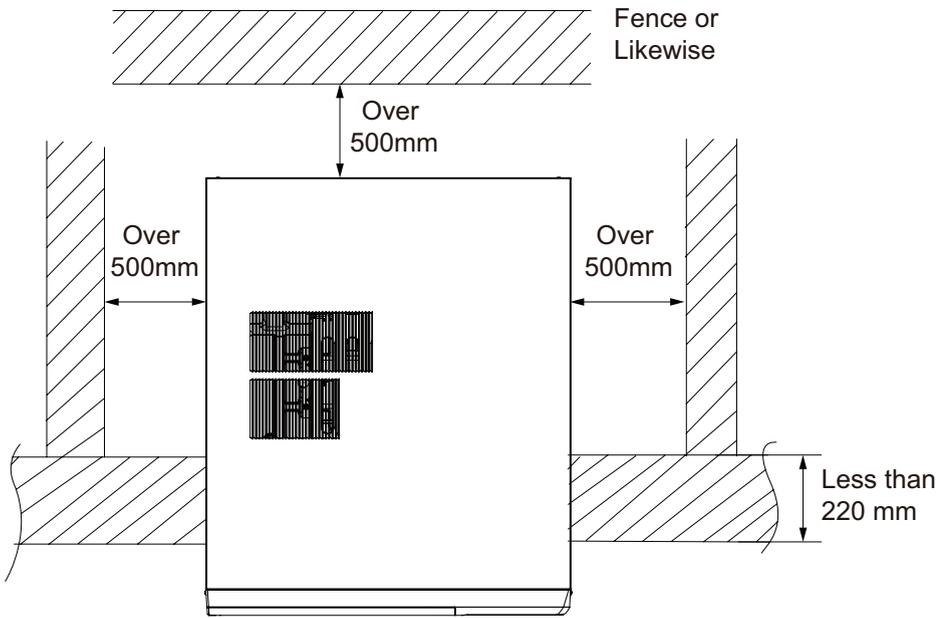
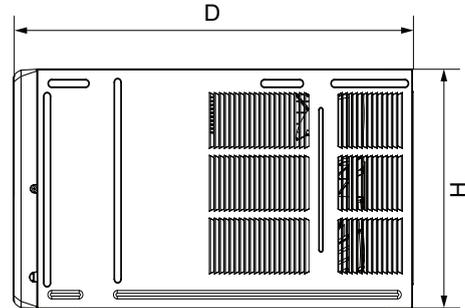
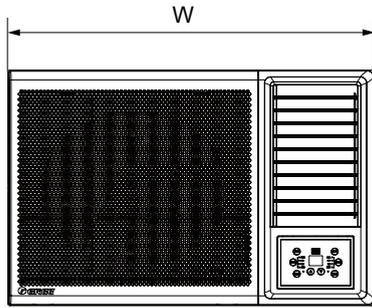
## 2. Specifications

Outdoor Side	Compressor Manufacturer/Trademark		ZHUHAI LANDA COMPRESSOR CO.,LTD	ZHUHAI LANDA COMPRESSOR CO.,LTD
	Compressor Model		QXF-A082zT190A	QXF-A082zT190A
	Compressor Oil		ZE-GLES RB68GX or equivalent	ZE-GLES RB68GX or equivalent
	Compressor Type		Rotary	Rotary
	L.R.A.	A	/	/
	Compressor RLA	A	3.68±10%	3.68±10%
	Compressor Power Input	W	745.3	745.3
	Overload Protector		/	/
	Throttling Method		Capillary	Capillary
	Operation Temp	°C	16~30	16~30
	Ambient Temp (Cooling)	°C	18~43	18~43
	Ambient Temp (Heating)	°C	/	/
	Condenser Form		Aluminum Fin-copper Tube	Aluminum Fin-copper Tube
	Pipe Diameter	mm	Φ5	Φ5
	Rows-fin Gap	mm	2-1.4	2-1.4
	Coil Length (LXDXW)	mm	594X22.8X323.85	594X22.8X323.85
	Fan Motor Speed	rpm	1000/900/700	1050/900/800
	Output of Fan Motor	W	45	45
	Fan Motor RLA	A	0.5	0.5
	Fan Motor Capacitor	μF	/	/
	Air Flow Volume of Outdoor Side	m3/h	750	800
	Fan Type		Axial-flow	Axial-flow
	Fan Diameter	mm	Φ287	Φ287
	Sound Pressure Level (H/M/L)	dB (A)	55/51/48	56/51/49
	Sound Power Level (H/M/L)	dB (A)	65/61/58	66/61/59
Defrosting Method		/	/	

The above data is subject to change without notice; please refer to the nameplate of the unit.

# 3. Outline Dimension Diagram

Note: Panel outlook picture, just for reference, please take the real unit as standard.



Note: There must be no barriers within 1m in front of it.

Unit:mm

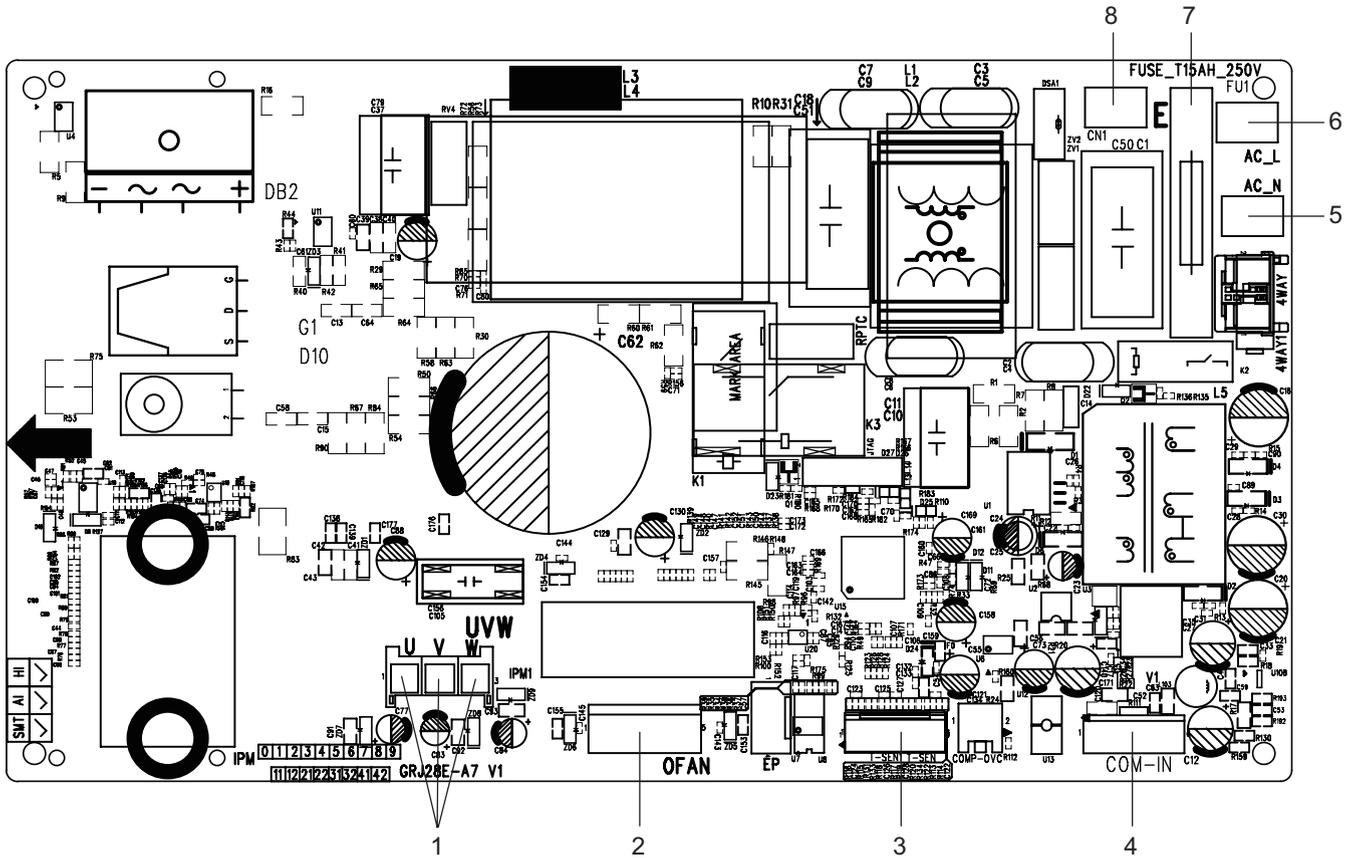
Model	W	H	D
07/09K(AJ)	450	350	640



# 5. Electrical Part

## 5.2 PCB Printed Diagram

### 5.2.1 Silk screen on main board



No.	Name
1	U,V,W terminal of compressor
2	Outdoor fan terminal
3	Wiring terminal of temperature sensor
4	Communication interface

No.	Name
5	Neutral wire
6	Live wire
7	Fuse
8	Earthing wire

# 6. Function and Control

## 6.1 Introduction of Remote Controller

### Buttons on remote controller



### Introduction for icons on display screen

	I feel	
	Set fan speed	
	Turbo mode	
	Send signal	
Operation mode		Auto mode
		Cool mode
		Dry mode
		Fan mode
		Heat mode
	Sleep mode	
	8°C heating function	
	Health mode	
	Scavenging function	
	X-FAN function	
Temp. display type		Set temp.
		Indoor ambient temp.
		Outdoor ambient temp.
	Set temperature	
	WiFi function	
	Set time	
	TIMER ON / TIMER OFF	
	Light	
	Up & down swing	
	Child lock	

### Notice :

- This is a general use remote controller. It could be used for the air conditioner with multifunction. For the functions which the model doesn't have, if press the corresponding button on the remote controller, the unit will keep the original running status.
- After putting through the power, the air conditioner will give out a sound. Power indicator "⏻" is ON. After that, you can operate the air conditioner by using remote controller.
- Under on status, pressing the button on the remote controller, the signal icon "📶" on the display of remote controller will blink once and the air conditioner will give out a "di" sound, which means the signal has been sent to the air conditioner.

### On/Off button

Press this button to turn on the unit. Press this button again to turn off the unit.

### Mode button

Press this button can your required operation mode in turn. Corresponding indicator will be on.



- Auto: Under this mode, the unit will operate automatically according to ex-factory setting. In this case, set temperature cannot be adjusted.
- Cool: Under this mode, air conditioner operates under cooling mode. Cooling indicator will be on. Press "Fan Speed" button can adjust the fan speed.
- Fan Only: Under this mode, air conditioner will not cool or heat, only blow wind. Fan indicator will be on. Press "Fan Speed" button can adjust the fan speed.
- Dry: Under this mode, the unit runs in low fan speed for dehumidification and the corresponding indicator is on; under dry mode, the fan speed cannot be adjusted.
- Heat: Under this mode, air conditioner operates under heating mode. Press "Fan Speed" button can adjust the fan speed. (Cooling only unit won't receive heating mode signal. If setting heat mode with remote controller, press ON/OFF button can't start up the unit).

### +/- button

- Pressing "+" or "-" button once will increase or decrease set temperature by 1°F(°C). Hold "+" or "-" button for 2s, set temperature on remote controller will change quickly. Release the button after your required set temperature is reached.
- Under timer setting status, after each pressing of "+" or "-" button, time will increase or decrease 0.5h. Hold "+" or "-" button, 2s later, time displayed on dual-8 nixie tube will change quickly. Loosen the button until the time is reached to your set time.

# 6. Function and Control

## Swing button

Press this button to turn "ON" & "OFF" swing.

## Fan button

This button is used for setting Fan Speed in the sequence that goes from AUTO, , , to , then back to Auto.



 Speed 1  Speed 2  Speed 3

NOTE: There are 3 speeds for the Fan Speed of this model.

## Sleep button

Press this button to go into the Sleep operation mode. Press it again to cancel this function. This function is available in COOL, HEAT (Only for models with heating function) mode to maintain the most comfortable temperature for you.

## Timer button

Under ON status, press this button to set timer OFF; Under OFF status, press this button to set timer ON.

Press this button once and the characters of HOUR ON (OFF) will flash to be displayed. Meanwhile, press "+" button or "-" button to adjust timer setting (time will change quickly if holding "+" or "-" button). Time setting range is 0.5~24hours.

Press this button again to confirm timer setting and the characters of HOUR ON (OFF) will stop flashing.

If the characters are flashing but you haven't press timer button, timer setting status will be quit after 5s. If timer is confirmed, press this button again to cancel timer.

## Health button

Press this button to turn on or turn off the health and scavenging functions in operation status. Press this button for the first time to start scavenging function LCD displays "🏠". Press the button for the second time to start health and scavenging functions simultaneously; LCD displays "🏠" and "🌳". Press this button for the third time to quit health and scavenging functions simultaneously.

Press the button for the fourth time to start health function; LCD display "🌳".

Press this button again to repeat the operation above

## WiFi button

When WiFi function is turned on, "WiFi" icon will be displayed on the remote controller; when WiFi function is turned off, "WiFi" icon will disappear.

How to turn on WiFi: Press "WiFi" button to turn on WiFi function.

How to turn off WiFi: Hold "WiFi" button for 5s to turn off WiFi function.

Under off status, press "MODE" and "WiFi" buttons simultaneously for 1s, WiFi module will restore factory settings.

• This function is only available for some models.

## Function introduction for combination buttons

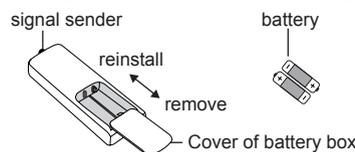
### Temperature display switchover function

Under OFF status, press "-" and "Mode" buttons simultaneously to switch temperature display between °C and °F.

### Light function

Under switch-on or switch-off state, you may hold "+" and "FAN" buttons simultaneously to set the lamp on or off and send the code. After being energized the lamp is defaulted on.

## Replacement of batteries in remote controller



1. Press the back side of remote controller marked with "OPEN", as shown in the fig, and then push out the cover of battery box along the arrow direction.

2. Replace two 7# (AAA 1.5V) dry batteries, and make sure the position of "+" polar and "-" polar are correct.

3. Reinstall the cover of battery box.

### Notice:

- The distance between signal sender and receiving window should be no more than 8m, and there should be no obstacles between them.
- As the signal will be interfered in the room with electronic fluorescent lamp, conversion fluorescent lamp or wireless phone, please get closer to the air conditioner when using the remote controller.
- Replace new batteries of the same model when replacement is required.
- When you don't use remote controller for a long time, please take out the batteries.



# 6. Function and Control

## I Basic functions:

### 1. Cooling mode

#### 1.1 Working condition and process for cooling:

- When Tinner amb.  $\geq T_{\text{preset}}$ , the unit operates under cooling mode. Meanwhile, the fan and the compressor operate, and the fan operates at set fan speed;
- When Tinner amb.  $\leq T_{\text{preset}} - 2^{\circ}\text{C}$ , the compressor stops operation, and the fan operates at set fan speed;
- When  $T_{\text{preset}} - 2^{\circ}\text{C} < \text{Tinner amb.} < T_{\text{preset}}$ , the unit keeps previous operation status.
- When turning off the unit, the compressor stops operation. The fan will stop operation after operating at low fan speed for another 30s.

1.2 Under cooling mode, the temperature setting range is  $16^{\circ}\text{C} \sim 30^{\circ}\text{C}$ . When compressor stops operation due to malfunction, the fan and the swing fan operate at original status.

### 2. Drying mode

#### 1.1 Working condition and process for drying:

- When Tinner amb.  $> T_{\text{preset}}$ , the unit operates at drying mode. Meanwhile, the fan and the compressor operate, and the fan is defaulted to operate at low fan speed;
- When  $T_{\text{preset}} - 2^{\circ}\text{C} \leq \text{Tinner amb.} \leq T_{\text{preset}}$ , the unit keeps the original operation status;
- When Tinner amb.  $< T_{\text{preset}} - 2^{\circ}\text{C}$ , compressor stops operation, and the fan is defaulted to operate at low fan speed.
- When turning off the unit, the compressor stops operation. The fan will stop operation after operating at low fan speed for another 30s.

1.2 In this mode, the temperature setting range is  $16^{\circ}\text{C} \sim 30^{\circ}\text{C}$ .

### 3. Auto mode

Working condition and process for auto operation

- When Tinner amb.  $\geq 26^{\circ}\text{C}$ , the unit operates at cooling mode and  $T_{\text{preset}} = 25^{\circ}\text{C}$ ;
- When T inner amb.  $\leq 22^{\circ}\text{C}$ , the unit operate at fan mode and  $T_{\text{preset}} = 20^{\circ}\text{C}$ ;
- When  $22^{\circ}\text{C} < \text{Tinner amb.} < 26^{\circ}\text{C}$ , the unit keeps the original operation status;

### 4. Fan mode

Under the fan mode, compressor stops operation and the fan operates at set fan speed. Temperature can't be set by buttons on the control panel, while it can be set by remote controller.

## II Buttons function

### 1. ON/OFF:

It used to turn on or turn off the unit.

### 2. Mode:

It used to switch among cooling mode, drying mode and fan mode.

### 3. Fan speed:

It used to set high, medium, low or auto fan speed. The corresponding LED indicator is on (under drying mode, this button can't be adjusted. The fan speed is the low speed).

### 4. +/- button:

4.1 The temperature setting range is 0~24 hours. The timer can be set in 0.5 hour increments between 1 and 10 hours; or in 1 hour increments for 10 hours above.

4.2 Under temperature setting range, each push on +/- button will increase or decrease  $1^{\circ}\text{C}$ .

### 5. Swing:

Press this button to turn on swing function; press this button again to cancel swing function.

## 6. Timer function

6.1 Timer ON: Timer ON can be set under OFF status, and then Timer ON setting range is 0.5 ~ 24 hours. When the set time is reached, the system will operate at the preset mode.

6.2 Timer OFF: Timer OFF can be set under ON status, and then Timer OFF setting range is 0.5 ~ 24 hours. When the set time is reached, the system will stop operation.

7. The dual-8 nixie tube is defaulted to display  $^{\circ}\text{C}$ . The displays can switch among  $^{\circ}\text{C}$  and  $^{\circ}\text{F}$ . Press "+" and "-" buttons simultaneously for 3s to switch them.

## 8. FILTER

When the fan has operated for 250hour in all, the filter indicator will be on to remind user to clean the filter. When the filter indicator is on, press filter button to clear the accumulated operation time and the filter indicator will be off.

## 9. Sleeping mode:

9.1 When the initial temperature is set at  $16 \sim 23^{\circ}\text{C}$ , after turning on the sleeping function, the temperature will increase by  $1^{\circ}\text{C}$  every two hours. When the temperature is increased by  $3^{\circ}\text{C}$ , the temperature will not change any more. When the unit has operated for 7 hours, the temperature will decreased by  $1^{\circ}\text{C}$ . After that, the unit will operate at this time all the time.

9.2 When the initial temperature is set at  $24 \sim 27^{\circ}\text{C}$ , after turning on the sleeping function, the temperature will increase by  $1^{\circ}\text{C}$  every two hours. When the temperature is increased by  $2^{\circ}\text{C}$ , the temperature will not change any more. When the unit has operated for 7 hours, the temperature will decreased by  $1^{\circ}\text{C}$ . After that, the unit will operate at this time all the time.

9.3 When the initial temperature is set at  $28 \sim 29^{\circ}\text{C}$ , after turning on the sleeping function, the temperature will increase by  $1^{\circ}\text{C}$  every two hours. When the temperature is increased by  $1^{\circ}\text{C}$ , the temperature will not change any more. When the unit has operated for 7 hours, the temperature will decreased by  $1^{\circ}\text{C}$ . After that, the unit will operate at this time all the time.

9.4 When the initial temperature is set at  $30^{\circ}\text{C}$ , after turning on the sleeping function, the unit will operate at this temperature. When the unit has operated for 7 hours, the temperature will decreased by  $1^{\circ}\text{C}$ . After that, the unit will operate at this time all the time.

## 10. Fan

The fan can operate at high, medium, low or auto fan speed. The auto fan speed will automatically adjust the current operation status of the fan.

### a. Auto fan speed under cooling mode:

Tinner amb.  $\geq T_{\text{preset}} + 2^{\circ}\text{C}$  high fan speed

$T_{\text{preset}} < \text{T inner amb.} < T_{\text{preset}} + 2^{\circ}\text{C}$  medium fan speed

T inner amb.  $\leq T_{\text{preset}}$  low fan speed

b. The fan speed under fan mode is same as that for cooling mode.

c. The auto fan under auto mode is controlled by the auto fan under its actual mode;

d. Only low fan speed under drying mode. When adjusting the fan speed button, only the low fan indicator is ON and the buzzer will give out a sound.

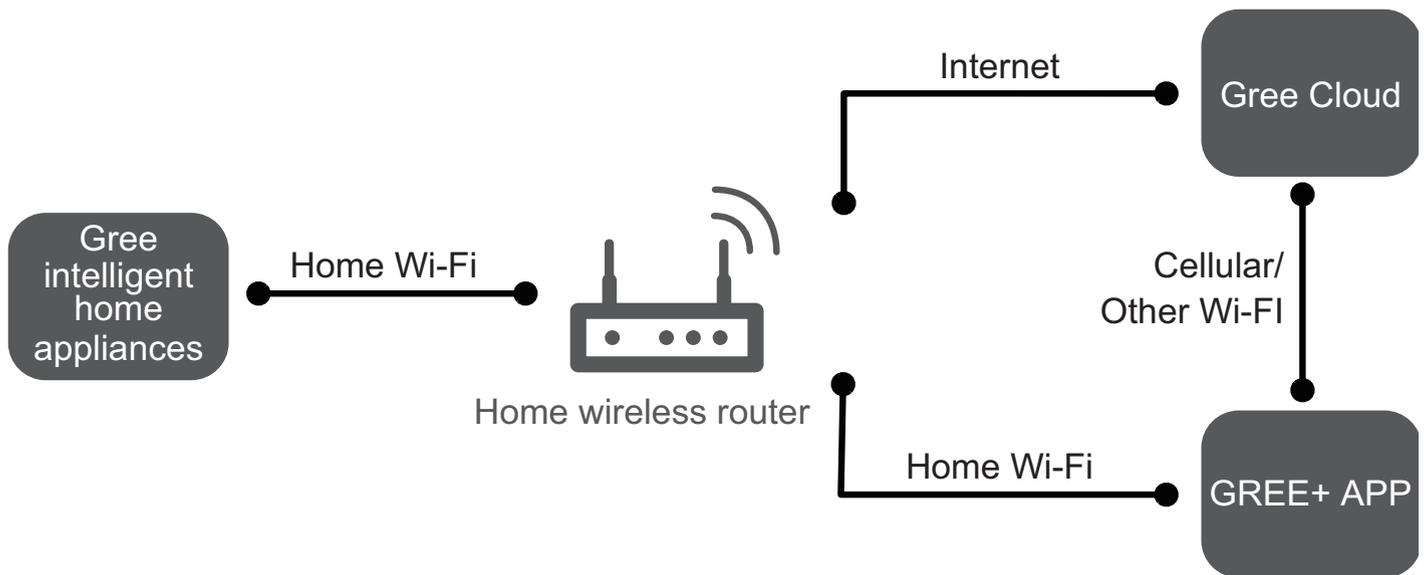
## 11. Power-off memory

The system will memorize the setting operation status (mode, set temperature, fan speed, timer) before power failure. Once power recovered, the unit will automatically operate at the set status before power failure.

# 6. Function and Control

## 6.3 GREE+ App Operation Manual

### Control Flow Chart



### Operating Systems

Requirement for User's smart phone:



iOS system  
Support iOS7.0 and  
above version



Android system  
Support Android 4.4 and  
above version

### Download and installation



GREE+ App Download Linkage

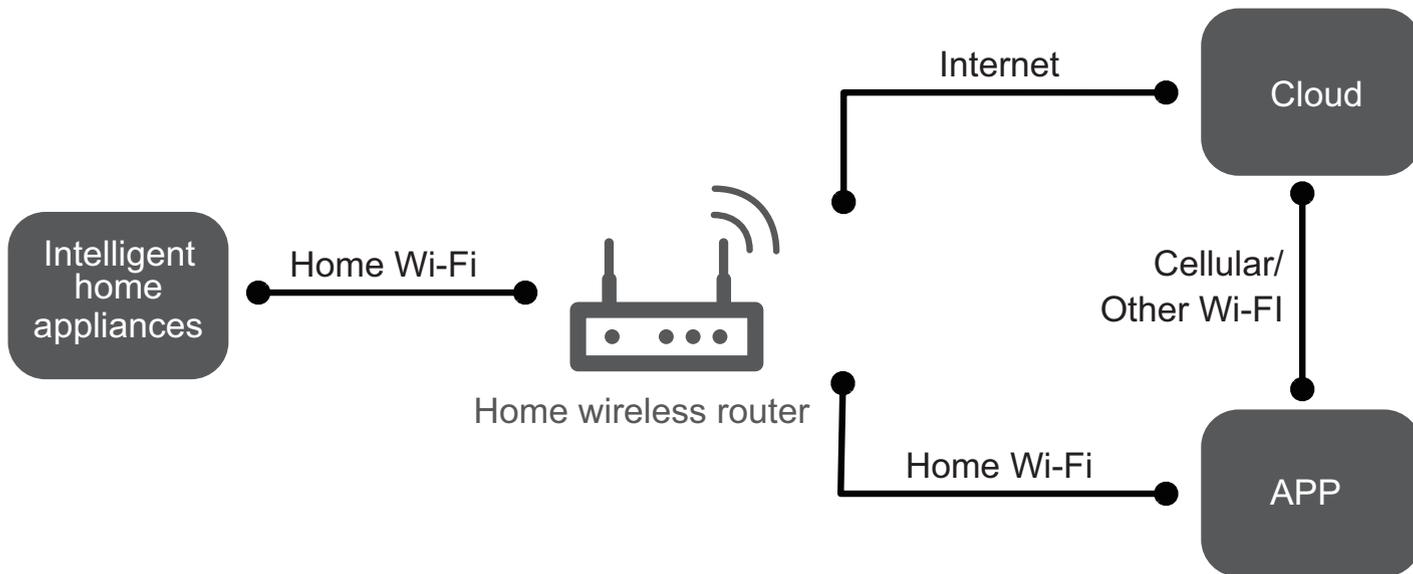
Scan the QR code or search "GREE+" in the application market to download and install it. When "GREE+" App is installed, register the account and add the device to achieve long-distance control and LAN control of Gree smart home appliances.

For more information, please refer to "Help" in App.

# 6. Function and Control

## 6.4 Ewpe Smart App Operation Manual

### Control Flow Chart



### Operating Systems

Requirement for User's smart phone:



iOS system  
Support iOS7.0 and  
above version



Android system  
Support Android 4.4 and  
above version

### Download and installation



App Download Linkage

Scan the QR code or search "Ewpe Smart" in the application market to download and install it. When "Ewpe Smart" App is installed, register the account and add the device to achieve long-distance control and LAN control of smart home appliances.

For more information, please refer to "Help" in App.



# 7. Notes for Installation and Maintenance

## Safety Precautions for Refrigerant

1. To realize the function of the air conditioner unit, a special refrigerant circulates in the system. The used refrigerant is the fluoride R32, which is specially cleaned. The refrigerant is flammable and inodorous. Furthermore, it can lead to explosion under certain conditions. But the flammability of the refrigerant is very low. It can be ignited only by fire.
2. Compared to common refrigerants, R32 is a nonpolluting refrigerant with no harm to the ozone layer. The influence upon the greenhouse effect is also lower. R32 has got very good thermodynamic features which lead to a really high energy efficiency. The units therefore need a less filling.

### WARNING:

1. Do not use means to accelerate the defrosting process or to clean, other than those recommended by the manufacturer. Should repair be necessary, contact your nearest authorized Service Centre. Any repairs carried out by unqualified personnel may be dangerous. The appliance shall be stored in a room without continuously operating ignition sources. (for example: open flames, an operating gas appliance or an operating electric heater.)
2. Do not pierce or burn.
3. Appliance shall be installed, operated and stored in a room with a floor area larger than  $Xm^2$ . (Please refer to table "a" in section of "Safety operation of flammable refrigerant" for Space X.)
4. Appliance filled with flammable gas R32. For repairs, strictly follow manufacturer's instructions only. Be aware that refrigerants not contain odour.
5. Read specialist's manual.



Appliance filled with flammable gas R32.



Before use the appliance, read the owner's manual first.



Before install the appliance, read the installation manual first.



Before repair the appliance, read the service manual first.

## Safety Operation of Flammable Refrigerant

### Qualification requirement for installation and maintenance man

1. All the work men who are engaging in the refrigeration system should bear the valid certification awarded by the authoritative organization and the qualification for dealing with the refrigeration system recognized by this industry. If it needs other technician to maintain and repair the appliance, they should be supervised by the person who bears the qualification for using the flammable refrigerant.
2. It can only be repaired by the method suggested by the equipment's manufacturer.

### Installation notes

1. The air conditioner is not allowed to use in a room that has running fire (such as fire source, working coal gas ware, operating heater).
2. The air conditioner must be installed in a room that is larger than the minimum room area. The minimum room area is shown on the nameplate or following table.
3. Leak test is a must after installation.

Table- Minimum room area ( $m^2$ )

Minimum room area ( $m^2$ )	Charge amount (kg)	≤1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2	2.1	2.2	2.3	2.4	2.5
	floor location	4	14.5	16.8	19.3	22	24.8	27.8	31	34.3	37.8	41.5	45.4	49.4	53.6
window mounted	4	5.2	6.1	7	7.9	8.9	10	11.2	12.4	13.6	15	16.3	17.8	19.3	
wall mounted	4	1.6	1.9	2.1	2.4	2.8	3.1	3.4	3.8	4.2	4.6	5	5.5	6	
ceiling mounted	4	1.1	1.3	1.4	1.6	1.8	2.1	2.3	2.6	2.8	3.1	3.4	3.7	4	

# 7. Notes for Installation and Maintenance

## Maintenance notes

1. Check whether the maintenance area or the room area meet the requirement of the nameplate.  
It's only allowed to be operated in the rooms that meet the requirement of the nameplate.
2. Check whether the maintenance area is well-ventilated.  
The continuous ventilation status should be kept during the operation process.
3. Check whether there is fire source or potential fire source in the maintenance area.  
The naked flame is prohibited in the maintenance area; and the "no smoking" warning board should be hanged.
4. Check whether the appliance mark is in good condition.  
Replace the vague or damaged warning mark.

## Welding

1. If you should cut or weld the refrigerant system pipes in the process of maintaining, please follow the steps as below:
  - a. Shut down the unit and cut power supply
  - b. Eliminate the refrigerant
  - c. Vacuuming
  - d. Clean it with N<sub>2</sub> gas
  - e. Cutting or welding
  - f. Carry back to the service spot for welding
2. Make sure that there isn't any naked flame near the outlet of the vacuum pump and it's well-ventilated.
3. The refrigerant should be recycled into the specialized storage tank.

## Filling the refrigerant

1. Use the refrigerant filling appliances specialized for R32. Make sure that different kinds of refrigerant won't contaminate with each other.
2. The refrigerant tank should be kept upright at the time of filling refrigerant.
3. Stick the label on the system after filling is finished (or haven't finished).
4. Don't overfilling.
5. After filling is finished, please do the leakage detection before test running; another time of leak detection should be done when it's removed.

## Safety instructions for transportation and storage

1. Please use the flammable gas detector to check before unload and open the container.
2. No fire source and smoking.
3. According to the local rules and laws.

# 8. Installation

## 8.1 Installation Precaution

Window type conditioner is so valuable and the improper installation of it will cause a lot of damage! Please associate the professional technician to install the unit and dont install it by yourself. Otherwise, we are not responsible for the damage like this.

## 8.2 Location

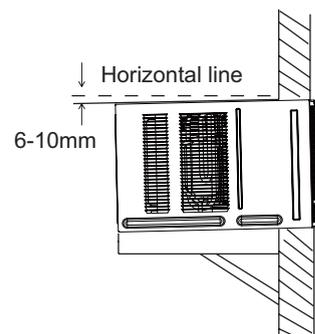
- The condensation water must be drained away conveniently.
- Install air conditioner unit far away from TV set or radioetc. to avoid disturbing video or voice.
- In salt and coastal area or place where is near thermal springs and polluted by sulphurous gas, or other special areas, please contact the seller before use.
- Avoid a place where is possible for inflammable gas to leak out.
- Avoid other heat sources or direct sun light.
- Avoid a place where is easy for children to touch.
- Dont use the unit in the immediate surroundings of a laundry,a bath,a shower or a swimming pool.
- For window type air conditioner with remote control, install in a location where is strong electromagnetic disturbance, you should contact the seller in advance to avoid the malfunction in use.

## 8.3 How to Install

- Choose a location where there are no any obstacle surrounding the unit, and the plug is accessible.
- Prepare the installation hole slightly bigger than unit size.
- Choose the installation space according to outline dimension diagram.(Please refer to the chapter 3)

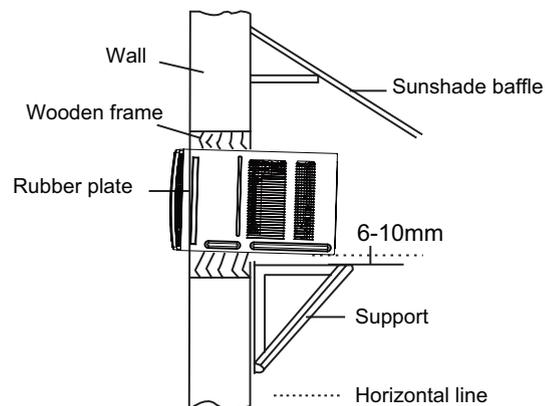
## 8.4 Installation Procedure

- 1) Remove the sticker from the front panel.
- 2) Put the unit into the installation hole.
  - When installing, make sure the unit is slanted downward to the back to minimize the noise and vibration of operation. (Slant by 6-10mm.) (See the right figure)
  - Make sure the installation place is strong enough to minimize the noise and vibration of operation.
- 3) Fill the gaps in the cabinet with sponge or foam.



## 8.5 Installation Assistance

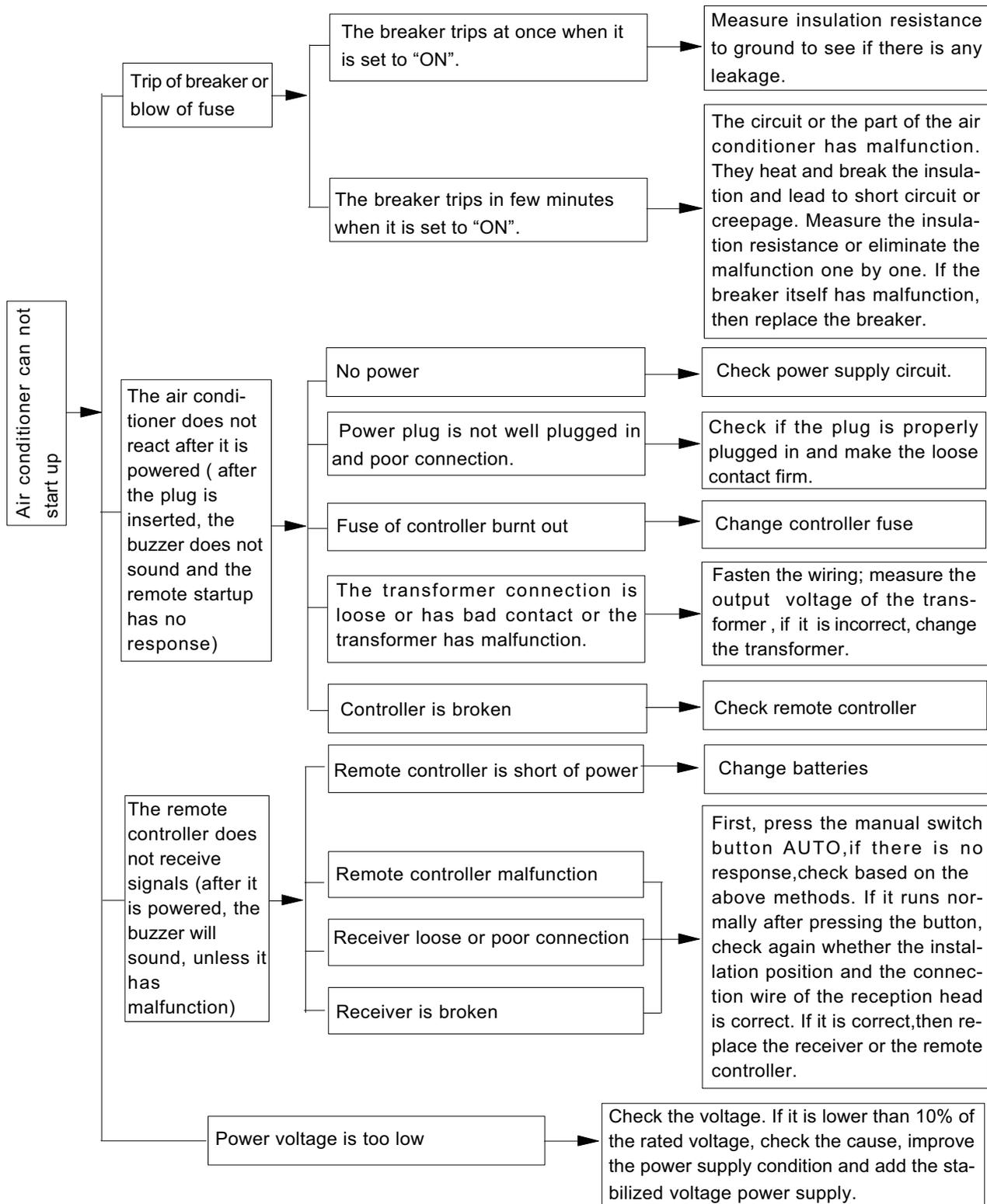
- 1) Use iron support  
The installation hole should be strong enough to support the air conditioner. If it cannot, iron support has to be used outdoors. Iron support should be fixed on the building (Shown at right figure.)
- 2) Use sunshade board  
Air conditioner should avoid anything to be dropped into it and avoid direct sunshine. If there is no cover on it, you should contact the seller for installing the sunshade board. When installing the sunshade board, dont let it block the air inlet at the side grille.





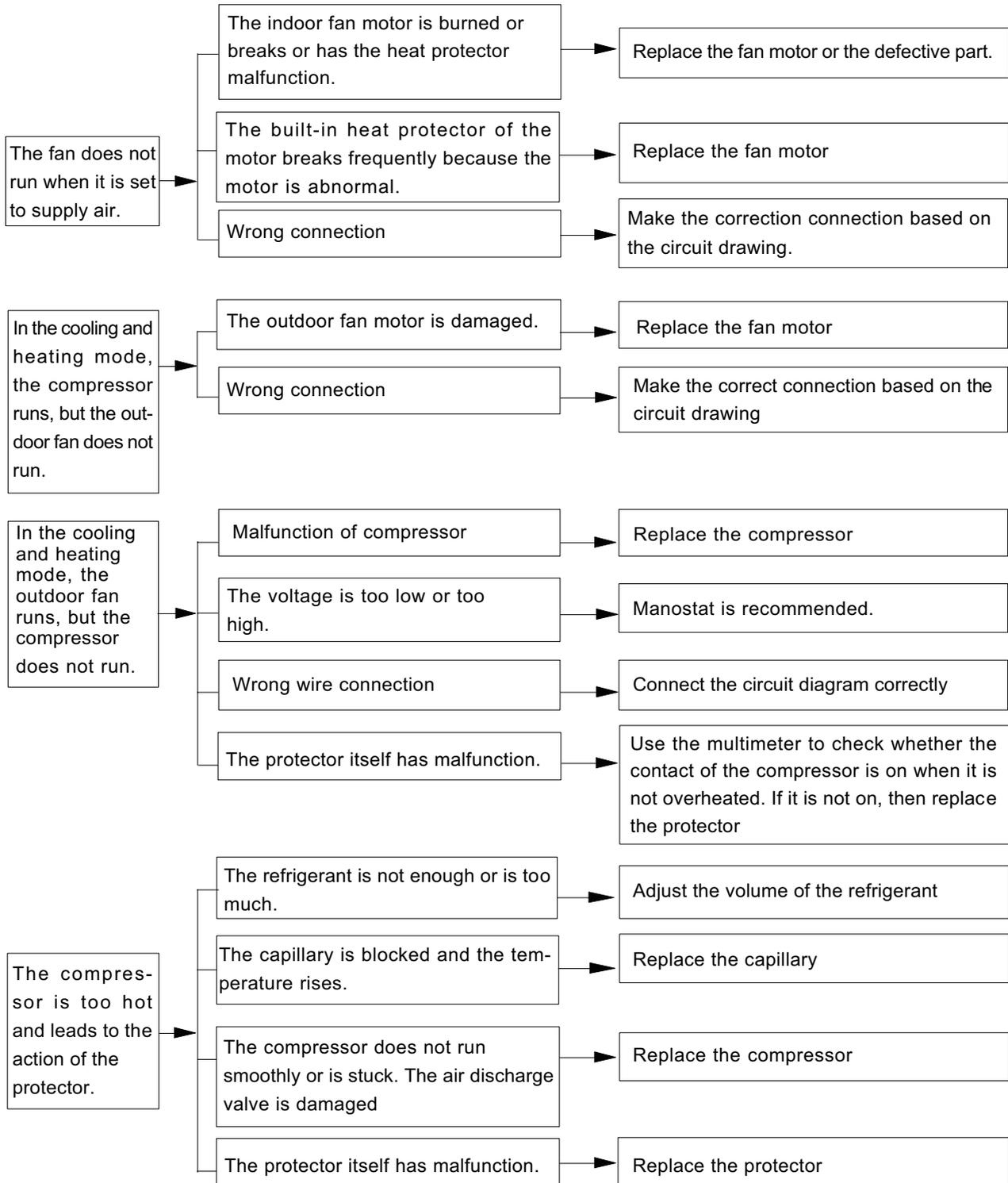
# 9. Maintenance

## 9.1 Malfunction Analysis



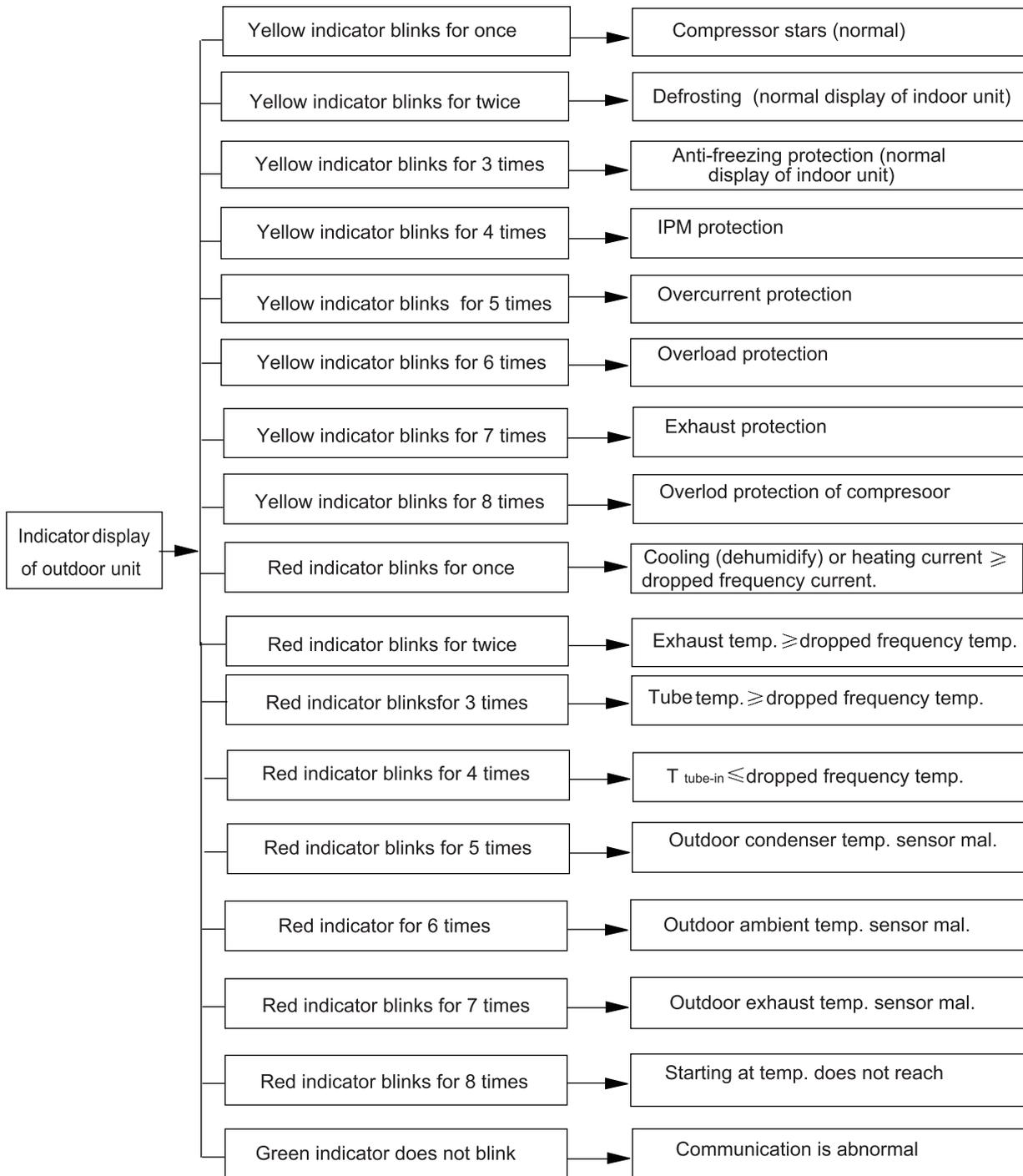


# 9. Maintenance





# 9. Maintenance



# 9. Maintenance

## 9.2 Flashing LED Primary Judgement

No.	Malfunction Name	Display Method			A/C Status	Possible Causes	
		Dual-8 Code Display	Indicator Display (during blinking, ON 0.5s and OFF 0.5s)				
			Operation Indicator	Cool Indicator			Heat Indicator
1	High pressure protection of system	E1	OFF 3s and blink once			During cooling and drying operation, except indoor fan operates, all loads stop operation. During heating operation, the complete unit stops.	Possible reasons: 1. Refrigerant was superabundant; 2. Poor heat exchange (including filth blockage of heat exchanger and bad radiating environment ); Ambient temperature is too high.
2	Anti-freezing protection for evaporator	E2	OFF 3S and blink twice			Not the error code. It's the status code for the operation.	
3	System block or refrigerant leakage	E3	OFF 3S and blink 3 times			The Dual-8 Code Display will show E3 until the low pressure switch stop operation.	1.Low-pressure protection 2.Low-pressure protection of system 3.Low-pressure protection of compressor
4	High discharge temperature protection of compressor	E4	OFF 3S and blink 4 times			During cooling and drying operation, compressor and outdoor fan stop while indoor fan operates. During heating operation, all loads stop.	Please refer to the malfunction analysis (discharge protection, overload).
5	Overcurrent protection	E5	OFF 3S and blink 5 times			During cooling and drying operation, compressor and outdoor fan stop while indoor fan operates. During heating operation, all loads stop.	1. Supply voltage is unstable; 2. Supply voltage is too low and load is too high; 3. Evaporator is dirty.
6	Communication Malfunction	E6	OFF 3S and blink 6 times			During cooling operation,compressor stops while indoor fan motor operates.During heating operation, the complete unit stops.	Refer to the corresponding malfunction analysis.
7	High temperature resistant protection	E8	OFF 3S and blink 8 times			During cooling operation: compressor will stop while indoor fan will operate.During heating operation, the complete unit stops.	Refer to the malfunction analysis (overload, high temperature resistant).
8	EEPROM malfunction	EE			OFF 3S and blink 15 times	During cooling and drying operation, compressor will stop while indoor fan will operate;During heating operation, the complete unit will stop	Replace outdoor control panel AP1
9	Limit/ decrease frequency due to high temperature of module	EU		OFF 3S and blink 6 times	OFF 3S and blink 6 times	All loads operate normally,while operation frequency for compressor is decreased	Discharging after the complete unit is de-energized for 20mins, check whether the thermal grease on IPM Module of outdoor control panel AP1 is sufficient and whether the radiator is inserted tightly. If its no use, please replace control panel AP1.

# 9. Maintenance

No.	Malfunction Name	Display Method			A/C Status	Possible Causes	
		Dual-8 Code Display	Indicator Display (during blinking, ON 0.5s and OFF 0.5s)				
			Operation Indicator	Cool Indicator			Heat Indicator
10	Malfunction protection of jumper cap	C5	OFF 3S and blink 15 times			Wireless remote receiver and button are effective, but can not dispose the related command	<ol style="list-style-type: none"> <li>1. No jumper cap insert on mainboard.</li> <li>2. Incorrect insert of jumper cap.</li> <li>3. Jumper cap damaged.</li> <li>4. Abnormal detecting circuit of mainboard.</li> </ol>
11	Refrigerant recovery mode	Fo	OFF 3S and blink 1 times	OFF 3S and blink 1 times		Refrigerant recovery. The Serviceman operates it for maintenance.	
12	Indoor ambient temperature sensor is open/short circuited	F1		OFF 3S and blink once		During cooling and drying operation, indoor unit operates while other loads will stop; during heating operation, the complete unit will stop operation.	<ol style="list-style-type: none"> <li>1. Loosening or bad contact of indoor ambient temp. sensor and mainboard terminal.</li> <li>2. Components in mainboard fell down leads short circuit.</li> <li>3. Indoor ambient temp. sensor damaged.(check with sensor resistance value chart)</li> <li>4. Mainboard damaged.</li> </ol>
13	Indoor evaporator temperature sensor is open/short circuited	F2		OFF 3S and blink twice		AC stops operation once reaches the setting temperature. Cooling, drying: internal fan motor stops operation while other loads stop operation; heating: AC stop operation	<ol style="list-style-type: none"> <li>1. Loosening or bad contact of Indoor evaporator temp. sensor and mainboard terminal.</li> <li>2. Components on the mainboard fall down leads short circuit.</li> <li>3. Indoor evaporator temp. sensor damaged.(check temp. sensor value chart for testing)</li> <li>4. Mainboard damaged.</li> </ol>
14	Outdoor ambient temperature sensor is open/short circuited	F3		OFF 3S and blink 3 times		During cooling and drying operating, compressor stops while indoor fan operates; During heating operation, the complete unit will stop operation	Outdoor temperature sensor hasnt been connected well or is damaged. Please check it by referring to the resistance table for temperature sensor)
15	Outdoor condenser temperature sensor is open/short circuited	F4		OFF 3S and blink 4 times		During cooling and drying operation, compressor stops while indoor fan will operate;During heating operation, the complete unit will stop operation.	Outdoor temperature sensor hasnt been connected well or is damaged. Please check it by referring to the resistance table for temperature sensor)

# 9. Maintenance

No.	Malfunction Name	Display Method			A/C Status	Possible Causes	
		Dual-8 Code Display	Indicator Display (during blinking, ON 0.5s and OFF 0.5s)				
			Operation Indicator	Cool Indicator			Heat Indicator
16	Outdoor discharge temperature sensor is open/short circuited	F5		OFF 3S and blink 5 times		During cooling and drying operation, compressor will stop after operating for about 3 mins, while indoor fan will operate; During heating operation, the complete unit will stop after operating for about 3 mins.	1. Outdoor temperature sensor hasn't been connected well or is damaged. Please check it by referring to the resistance table for temperature sensor) 2. The head of temperature sensor hasn't been inserted into the copper tube
17	Limit/ decrease frequency due to overload	F6		OFF 3S and blink for 6 times		All loads operate normally, while operation frequency for compressor is decreased	Refer to the malfunction analysis (overload, high temperature resistant)
18	Decrease frequency due to overcurrent	F8		OFF 3S and blink 8 times		All loads operate normally, while operation frequency for compressor is decreased	The input supply voltage is too low; System pressure is too high and overload
19	Decrease frequency due to high air discharge	F9		OFF 3S and blink 9 times		All loads operate normally, while operation frequency for compressor is decreased	Overload or temperature is too high; Refrigerant is insufficient; Malfunction of electric expansion valve (EKV)
20	Limit/ decrease frequency due to antifreezing	FH		OFF 3S and blink 2 times	OFF 3S and blink 2 times	All loads operate normally, while operation frequency for compressor is decreased	Poor air-return in indoor unit or fan speed is too low
21	Voltage for DC bus-bar is too high	PH		OFF 3S and blink 11 times		During cooling and drying operation, compressor will stop while indoor fan will operate; During heating operation, the complete unit will stop operation.	1. Measure the voltage of position L and N on wiring board (XT), if the voltage is higher than 265VAC, turn on the unit after the supply voltage is increased to the normal range. 2. If the AC input is normal, measure the voltage of electrolytic capacitor C on control panel (AP1), if it's normal, there's malfunction for the circuit, please replace the control panel (AP1)

# 9. Maintenance

No.	Malfunction Name	Display Method			A/C Status	Possible Causes	
		Dual-8 Code Display	Indicator Display (during blinking, ON 0.5s and OFF 0.5s)				
			Operation Indicator	Cool Indicator			Heat Indicator
22	Voltage of DC bus-bar is too low	PL			OFF 3S and blink 21 times	During cooling and drying operation, compressor will stop while indoor fan will operate; During heating operation, the complete unit will stop	1. Measure the voltage of position L and N on wiring board (XT), if the voltage is higher than 150VAC, turn on the unit after the supply voltage is increased to the normal range. 2. If the AC input is normal, measure the voltage of electrolytic capacitor C on control panel (AP1), if its normal, there's malfunction for the circuit, please replace the control panel (AP1)
23	Compressor Min frequency in test state	P0		(during blinking, ON 0.25s and OFF 0.25s)	(during blinking, ON 0.25s and OFF 0.25s)		Showing during min. cooling or min. heating test
24	Compressor rated frequency in test state	P1		(during blinking, ON 0.25s and OFF 0.25s)	(during blinking, ON 0.25s and OFF 0.25s)		Showing during nominal cooling or nominal heating test
25	Compressor maximum frequency in test state	P2		(during blinking, ON 0.25s and OFF 0.25s)	(during blinking, ON 0.25s and OFF 0.25s)		Showing during max. cooling or max. heating test
26	Compressor intermediate frequency in test state	P3		(during blinking, ON 0.25s and OFF 0.25s)	(during blinking, ON 0.25s and OFF 0.25s)		Showing during middle cooling or middle heating test
27	Overcurrent protection of phase current for compressor	P5		OFF 3S and blink 15 times		During cooling and drying operation, compressor will stop while indoor fan will operate; During heating operation, the complete unit will stop operation.	Refer to the malfunction analysis (IPM protection, loss of synchronism protection and overcurrent protection of phase current for compressor.

# 9. Maintenance

No.	Malfunction Name	Display Method			A/C Status	Possible Causes	
		Dual-8 Code Display	Indicator Display (during blinking, ON 0.5s and OFF 0.5s)				
			Operation Indicator	Cool Indicator			Heat Indicator
28	Charging malfunction of capacitor	PU		OFF 3S and blink 17 times		During cooling and drying operation, compressor will stop while indoor fan will operate; During heating operation, the complete unit will stop	Refer to the part three—charging malfunction analysis of capacitor
29	Malfunction of module temperature sensor circuit	P7			OFF 3S and blink 18 times	During cooling and drying operation, compressor will stop while indoor fan will operate; During heating operation, the complete unit will stop	Replace outdoor control panel AP1
30	Module high temperature protection	P8			OFF 3S and blink 19 times	During cooling operation, compressor will stop while indoor fan will operate; During heating operation, the complete unit will stop	After the complete unit is deenergized for 20mins, check whether the thermal grease on IPM Module of outdoor control panel AP1 is sufficient and whether the radiator is inserted tightly. If its no use, please replace control panel AP1.
31	Decrease frequency due to high temperature resistant during heating operation	HO			OFF 3S and blink 10 times	All loads operate normally, while operation frequency for compressor is decreased	Refer to the malfunction analysis (overload, high temperature resistant)
32	Overload protection for compressor	H3			OFF 3S and blink 3 times	During cooling and drying operation, compressor will stop while indoor fan will operate; During heating operation, the complete unit will stop operation.	1. Wiring terminal OVC-COMP is loosened. In normal state, the resistance for this terminal should be less than 1ohm. 2. Refer to the malfunction analysis ( discharge protection, overload)
33	System is abnormal	H4			OFF 3S and blink 4 times	During cooling and drying operation, compressor will stop while indoor fan will operate; During heating operation, the complete unit will stop operation	Refer to the malfunction analysis (overload, high temperature resistant)
34	Malfunction of detecting plate(WIFI )	JF				Loads operate normally, while the unit can't be normally controlled by APP.	1. Main board is damaged; 2. Detection board is damaged; 3. The connection between indoor unit and detection board is not good;

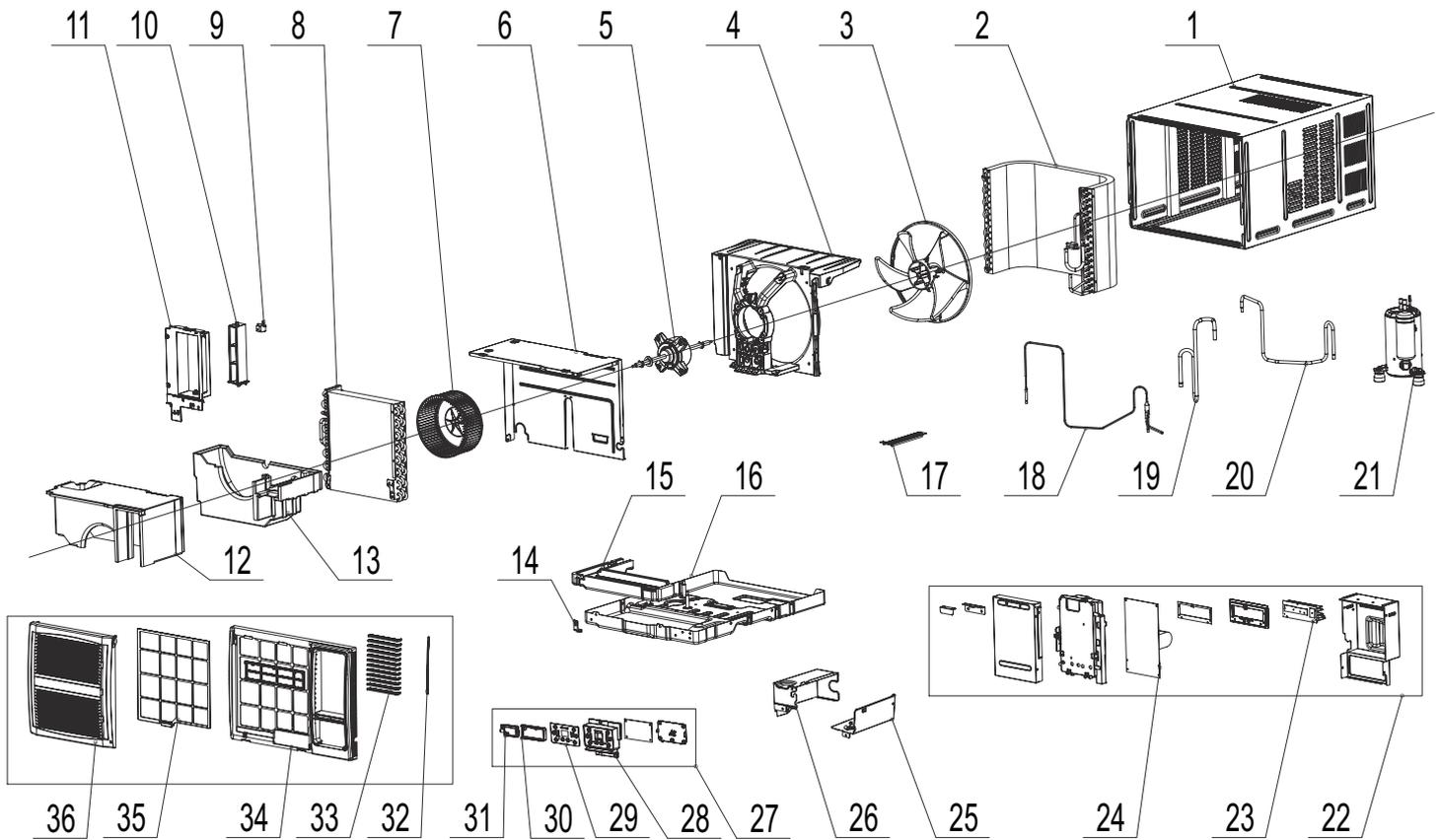
# 9. Maintenance

No.	Malfunction Name	Display Method				A/C Status	Possible Causes
		Dual-8 Code Display	Indicator Display (during blinking, ON 0.5s and OFF 0.5s)				
			Operation Indicator	Cool Indicator	Heat Indicator		
35	IPM protection	H5			OFF 3S and blink 5 times	During cooling and drying operation, compressor will stop while indoor fan will operate; During heating operation, the complete unit will stop operation.	Refer to the malfunction analysis (IPM protection, loss of synchronism protection and overcurrent protection of phase current for compressor.
36	Internal motor (fan motor) do not operate	H6	OFF 3S and blink 11 times			Internal fan motor, external fan motor, compressor and electricheater stop operation,guide louver stops at present location.	<ol style="list-style-type: none"> <li>1. Bad contact of DC motor feedback terminal.</li> <li>2. Bad contact of DC motor control end.</li> <li>3. Fan motor is stalling.</li> <li>4. Motor malfunction.</li> <li>5. Malfunction of mainboard rev detecting circuit.</li> </ol>
37	Desynchronizing of compressor	H7			OFF 3S and blink 7 times	During cooling and drying operation, compressor will stop while indoor fan will operate;During heating operation, the complete unit will stop operation.	Refer to the malfunction analysis (IPM protection, loss of synchronism protection and overcurrent protection of phase current for compressor.
38	PFC protection	HC			OFF 3S and blink 6 times	During cooling and drying operation, compressor will stop while indoor fan will operate;During heating operation, the complete unit will stop operation.	Refer to the malfunction analysis
39	Outdoor DC fan motor malfunction	L3	OFF 3S and blink 23 times			Outdoor DC fan motor malfunction lead to compressor stop operation,	DC fan motor malfunction or system blocked or the connector loosed
40	power protection	L9	OFF 3S and blink 20 times			compressor stop operation and Outdoor fan motor will stop 30s latter , 3 minutes latter fan motor and compressor will restart	To protect the electrical components when detect high power
41	Indoor unit and outdoor unit doesn't match	LP	OFF 3S and blink 19 times			compressor and Outdoor fan motor can't work	Indoor unit and outdoor unit doesn't match
42	Failure startup	LC			OFF 3S and blink 11 times	During cooling and drying operation, compressor will stop while indoor fan will operate; During heating operation, the complete unit will stop operation.	Refer to the malfunction analysis

# 9. Maintenance

No.	Malfunction Name	Display Method				A/C Status	Possible Causes
		Dual-8 Code Display	Indicator Display (during blinking, ON 0.5s and OFF 0.5s)				
			Operation Indicator	Cool Indicator	Heat Indicator		
43	Malfunction of phase current detection circuit for compressor	U1			OFF 3S and blink 13 times	During cooling and drying operation, compressor will stop while indoor fan will operate; During heating operation, the complete unit will stop	Replace outdoor control panel AP1
44	Malfunction of voltage dropping for DC bus-bar	U3			OFF 3S and blink 20 times	During cooling and drying operation, compressor will stop while indoor fan will operate; During heating operation, the complete unit will stop	Supply voltage is unstable
45	Malfunction of complete units current detection	U5		OFF 3S and blink 13 times		During cooling and drying operation, the compressor will stop while indoor fan will operate; During heating operation, the complete unit will stop operation.	There's circuit malfunction on outdoor units control panel AP1, please replace the outdoor units control panel AP1.
46	The four-way valve is abnormal	U7	OFF 3S and blink 20 times			If this malfunction occurs during heating operation, the complete unit will stop operation.	1. Supply voltage is lower than AC175V; 2. Wiring terminal 4V is loosened or broken; 3. 4V is damaged, please replace 4V.
47	Zerocrossing malfunction of outdoor unit	U9	OFF 3S and blink 18 times			During cooling operation, compressor will stop while indoor fan will operate; during heating, the complete unit will stop operation.	Replace outdoor control panel AP1
48	Cold air prevention protection	E9				Not the error code. It's the status code for the operation	
49	Undefined outdoor unit error	oE				Cool: compressor and outdoor fan stops operation, while indoor fan operates; Heat: compressor, outdoor fan and indoor fan stop operation.	1. Outdoor ambient temperature exceeds the operation range of unit (eg: less than -20°C or more than 60°C for cooling; more than 30°C for heating); 2. Failure startup of compressor? 3. Are wires of compressor not connected tightly? 4. Is compressor damaged? 5. Is main board damaged?
50	Defrosting				off for 0.5s and then blinks for 10s	Not the error code. It's the status code for the operation	

# 10. Exploded View and Parts List



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

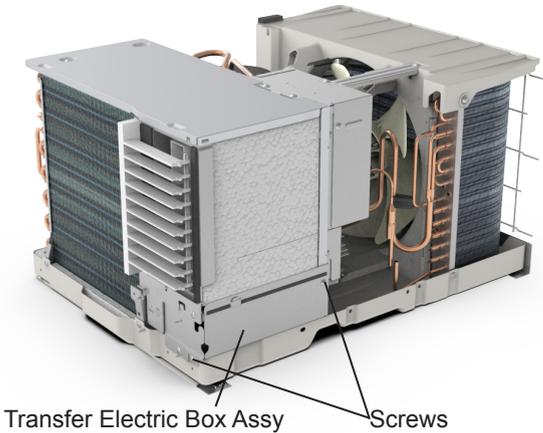
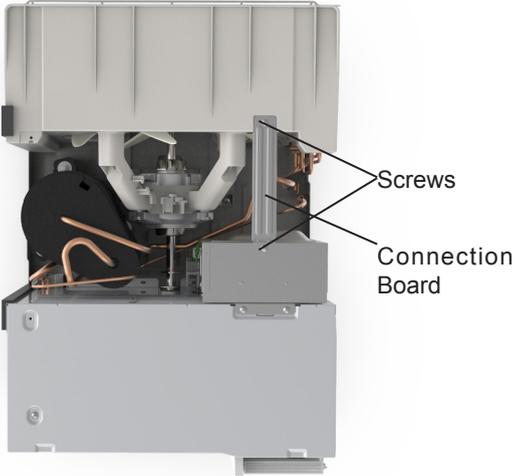
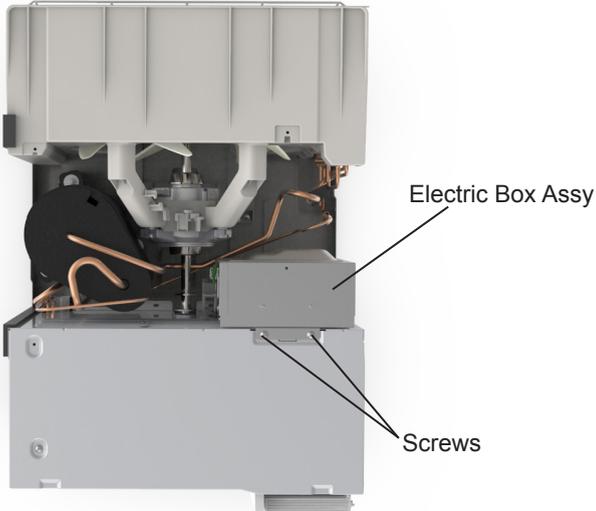
NO.	Description	Qty
1	Cabinet Assy	1
2	Condenser Assy	1
3	Axial Flow Fan	1
4	Rear Clapboard	1
5	Fan Motor	1
6	Middle Clapboard	1
7	Centrifugal Fan	1
8	Evaporator Assy	1
9	SteppingMotor	1
10	Air Louver	1
11	Air door support	1
12	Propeller Housing(lower)	1
13	Propeller Housing (upper)	1
14	Chassis Clamp	1
15	Foam(Water Tray)	1
16	Chassis Sub-assy	1
17	Connected Board	1
18	Capillary Sub-assy	1
19	Inhalation Tube Sub-assy	1
20	Discharge Tube	1
21	Compressor and Fittings	1
22	Electric Box Assy	1
23	Radiator	1
24	Main Board	1
25	Electric Box 2	1
26	Electric Box 1	1

27	Control Panel Assy	1
28	Control Panel	1
29	Membrane	1
30	WIFI	1
31	WIFI Support	1
32	Guide Blade Lever	1
33	Guide Blade	12
34	Front Case	1
35	Filter Sub-Assy	1
36	Front Panel	1

Above data is subject to change without notice.

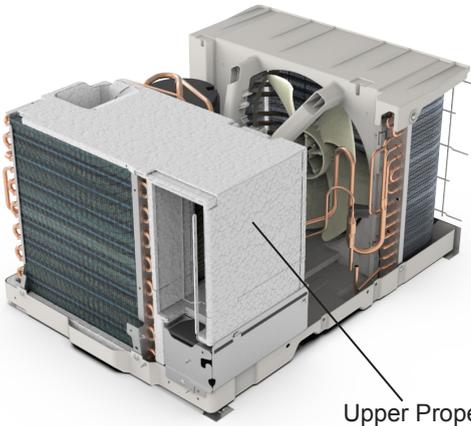
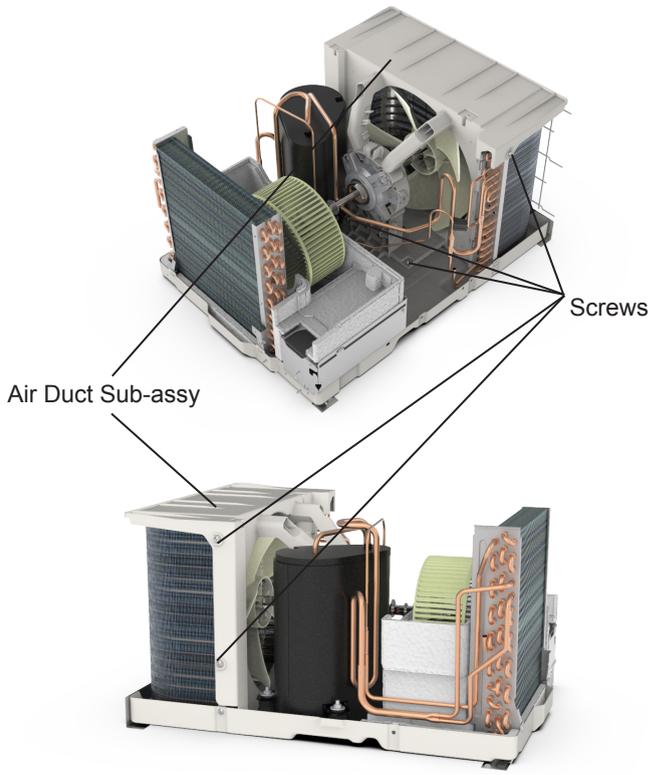
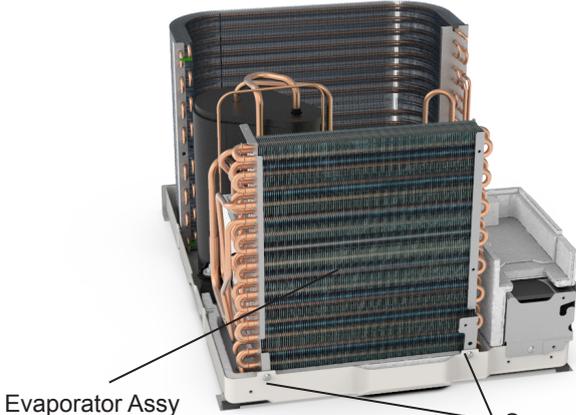


# 11. Removal Procedure

Step	Procedure
<b>3. Remove Transfer Electric Box Assy</b>	<p>Remove electrical box assy (transfer electrical box) 2 fixed screws, remove the transfer electrical box assy.</p>  <p>Transfer Electric Box Assy      Screws</p>
<b>4. Remove connection Board</b>	<p>Remove the connection Board 2 fixing screw , remove the connection Board.</p>  <p>Screws      Connection Board</p>
<b>5. Remove Electric Box Assy</b>	<p>Remove the 2 fixing screws of the Electric Box Assy, and remove the Electric Box Assy.</p>  <p>Electric Box Assy      Screws</p>



# 11. Removal Procedure

Step	Procedure
<b>8. Remove Upper Propeller</b>	<p>Remove the Upper Propeller.</p>  <p>Upper Propeller</p>
<b>9. Remove Air Duct Sub-assy</b>	<p>Remove the 5 fixing screws of the Air Duct Sub-assy, and remove the Air Duct Sub-assy.</p>  <p>Air Duct Sub-assy</p> <p>Screws</p>
<b>10. Remove Evaporator Assy</b>	<p>Remove the 2 fixing screws of the Evaporator Assy, and remove the Evaporator Assy.</p>  <p>Evaporator Assy</p> <p>Screws</p>



# Appendix:

## Appendix 1: Reference Sheet of Celsius and Fahrenheit

Conversion formula for Fahrenheit degree and Celsius degree:  $T_f = T_c \times 1.8 + 32$

### Set temperature

Fahrenheit display temperature (°F)	Fahrenheit (°F)	Celsius (°C)	Fahrenheit display temperature (°F)	Fahrenheit (°F)	Celsius (°C)	Fahrenheit display temperature (°F)	Fahrenheit (°F)	Celsius (°C)
61	60.8	16	69/70	69.8	21	78/79	78.8	26
62/63	62.6	17	71/72	71.6	22	80/81	80.6	27
64/65	64.4	18	73/74	73.4	23	82/83	82.4	28
66/67	66.2	19	75/76	75.2	24	84/85	84.2	29
68	68	20	77	77	25	86	86	30

### Ambient temperature

Fahrenheit display temperature (°F)	Fahrenheit (°F)	Celsius (°C)	Fahrenheit display temperature (°F)	Fahrenheit (°F)	Celsius (°C)	Fahrenheit display temperature (°F)	Fahrenheit (°F)	Celsius (°C)
32/33	32	0	55/56	55.4	13	79/80	78.8	26
34/35	33.8	1	57/58	57.2	14	81	80.6	27
36	35.6	2	59/60	59	15	82/83	82.4	28
37/38	37.4	3	61/62	60.8	16	84/85	84.2	29
39/40	39.2	4	63	62.6	17	86/87	86	30
41/42	41	5	64/65	64.4	18	88/89	87.8	31
43/44	42.8	6	66/67	66.2	19	90	89.6	32
45	44.6	7	68/69	68	20	91/92	91.4	33
46/47	46.4	8	70/71	69.8	21	93/94	93.2	34
48/49	48.2	9	72	71.6	22	95/96	95	35
50/51	50	10	73/74	73.4	23	97/98	96.8	36
52/53	51.8	11	75/76	75.2	24	99	98.6	37
54	53.6	12	77/78	77	25			

# Appendix:

## Appendix 2: List of Resistance for Temperature Sensor

Resistance Table of Ambient Temperature Sensor (15K)

Temp(°C)	Resistance(kΩ)	Temp(°C)	Resistance(kΩ)	Temp(°C)	Resistance(kΩ)	Temp(°C)	Resistance(kΩ)
-19	138.1	20	18.75	59	3.848	98	1.071
-18	128.6	21	17.93	60	3.711	99	1.039
-17	121.6	22	17.14	61	3.579	100	1.009
-16	115	23	16.39	62	3.454	101	0.98
-15	108.7	24	15.68	63	3.333	102	0.952
-14	102.9	25	15	64	3.217	103	0.925
-13	97.4	26	14.36	65	3.105	104	0.898
-12	92.22	27	13.74	66	2.998	105	0.873
-11	87.35	28	13.16	67	2.896	106	0.848
-10	82.75	29	12.6	68	2.797	107	0.825
-9	78.43	30	12.07	69	2.702	108	0.802
-8	74.35	31	11.57	70	2.611	109	0.779
-7	70.5	32	11.09	71	2.523	110	0.758
-6	66.88	33	10.63	72	2.439	111	0.737
-5	63.46	34	10.2	73	2.358	112	0.717
-4	60.23	35	9.779	74	2.28	113	0.697
-3	57.18	36	9.382	75	2.206	114	0.678
-2	54.31	37	9.003	76	2.133	115	0.66
-1	51.59	38	8.642	77	2.064	116	0.642
0	49.02	39	8.297	78	1.997	117	0.625
1	46.6	40	7.967	79	1.933	118	0.608
2	44.31	41	7.653	80	1.871	119	0.592
3	42.14	42	7.352	81	1.811	120	0.577
4	40.09	43	7.065	82	1.754	121	0.561
5	38.15	44	6.791	83	1.699	122	0.547
6	36.32	45	6.529	84	1.645	123	0.532
7	34.58	46	6.278	85	1.594	124	0.519
8	32.94	47	6.038	86	1.544	125	0.505
9	31.38	48	5.809	87	1.497	126	0.492
10	29.9	49	5.589	88	1.451	127	0.48
11	28.51	50	5.379	89	1.408	128	0.467
12	27.18	51	5.197	90	1.363	129	0.456
13	25.92	52	4.986	91	1.322	130	0.444
14	24.73	53	4.802	92	1.282	131	0.433
15	23.6	54	4.625	93	1.244	132	0.422
16	22.53	55	4.456	94	1.207	133	0.412
17	21.51	56	4.294	95	1.171	134	0.401
18	20.54	57	4.139	96	1.136	135	0.391
19	19.63	58	3.99	97	1.103	136	0.382

# Appendix:

Resistance Table of Ambient Temperature Sensor (20K)

Temp(°C)	Resistance(kΩ)	Temp(°C)	Resistance(kΩ)	Temp(°C)	Resistance(kΩ)	Temp(°C)	Resistance(kΩ)
-19	181.4	20	25.01	59	5.13	98	1.427
-18	171.4	21	23.9	60	4.948	99	1.386
-17	162.1	22	22.85	61	4.773	100	1.346
-16	153.3	23	21.85	62	4.605	101	1.307
-15	145	24	20.9	63	4.443	102	1.269
-14	137.2	25	20	64	4.289	103	1.233
-13	129.9	26	19.14	65	4.14	104	1.198
-12	123	27	18.13	66	3.998	105	1.164
-11	116.5	28	17.55	67	3.861	106	1.131
-10	110.3	29	16.8	68	3.729	107	1.099
-9	104.6	30	16.1	69	3.603	108	1.069
-8	99.13	31	15.43	70	3.481	109	1.039
-7	94	32	14.79	71	3.364	110	1.01
-6	89.17	33	14.18	72	3.252	111	0.983
-5	84.61	34	13.59	73	3.144	112	0.956
-4	80.31	35	13.04	74	3.04	113	0.93
-3	76.24	36	12.51	75	2.94	114	0.904
-2	72.41	37	12	76	2.844	115	0.88
-1	68.79	38	11.52	77	2.752	116	0.856
0	65.37	39	11.06	78	2.663	117	0.833
1	62.13	40	10.62	79	2.577	118	0.811
2	59.08	41	10.2	80	2.495	119	0.77
3	56.19	42	9.803	81	2.415	120	0.769
4	53.46	43	9.42	82	2.339	121	0.746
5	50.87	44	9.054	83	2.265	122	0.729
6	48.42	45	8.705	84	2.194	123	0.71
7	46.11	46	8.37	85	2.125	124	0.692
8	43.92	47	8.051	86	2.059	125	0.674
9	41.84	48	7.745	87	1.996	126	0.658
10	39.87	49	7.453	88	1.934	127	0.64
11	38.01	50	7.173	89	1.875	128	0.623
12	36.24	51	6.905	90	1.818	129	0.607
13	34.57	52	6.648	91	1.736	130	0.592
14	32.98	53	6.403	92	1.71	131	0.577
15	31.47	54	6.167	93	1.658	132	0.563
16	30.04	55	5.942	94	1.609	133	0.549
17	28.68	56	5.726	95	1.561	134	0.535
18	27.39	57	5.519	96	1.515	135	0.521
19	26.17	58	5.32	97	1.47	136	0.509

# Appendix:

Resistance Table of Ambient Temperature Sensor (50K)

Temp(°C)	Resistance(kΩ)	Temp(°C)	Resistance(kΩ)	Temp(°C)	Resistance(kΩ)	Temp(°C)	Resistance(kΩ)
-29	853.5	10	98	49	18.34	88	4.75
-28	799.8	11	93.42	50	17.65	89	4.61
-27	750	12	89.07	51	16.99	90	4.47
-26	703.8	13	84.95	52	16.36	91	4.33
-25	660.8	14	81.05	53	15.75	92	4.20
-24	620.8	15	77.35	54	15.17	93	4.08
-23	580.6	16	73.83	55	14.62	94	3.96
-22	548.9	17	70.5	56	14.09	95	3.84
-21	516.6	18	67.34	57	13.58	96	3.73
-20	486.5	19	64.33	58	13.09	97	3.62
-19	458.3	20	61.48	59	12.62	98	3.51
-18	432	21	58.77	60	12.17	99	3.41
-17	407.4	22	56.19	61	11.74	100	3.32
-16	384.5	23	53.74	62	11.32	101	3.22
-15	362.9	24	51.41	63	10.93	102	3.13
-14	342.8	25	49.19	64	10.54	103	3.04
-13	323.9	26	47.08	65	10.18	104	2.96
-12	306.2	27	45.07	66	9.83	105	2.87
-11	289.6	28	43.16	67	9.49	106	2.79
-10	274	29	41.34	68	9.17	107	2.72
-9	259.3	30	39.61	69	8.85	108	2.64
-8	245.6	31	37.96	70	8.56	109	2.57
-7	232.6	32	36.38	71	8.27	110	2.50
-6	220.5	33	34.88	72	7.99	111	2.43
-5	209	34	33.45	73	7.73	112	2.37
-4	198.3	35	32.09	74	7.47	113	2.30
-3	199.1	36	30.79	75	7.22	114	2.24
-2	178.5	37	29.54	76	7.00	115	2.18
-1	169.5	38	28.36	77	6.76	116	2.12
0	161	39	27.23	78	6.54	117	2.07
1	153	40	26.15	79	6.33	118	2.02
2	145.4	41	25.11	80	6.13	119	1.96
3	138.3	42	24.13	81	5.93	120	1.91
4	131.5	43	23.19	82	5.75	121	1.86
5	125.1	44	22.29	83	5.57	122	1.82
6	119.1	45	21.43	84	5.39	123	1.77
7	113.4	46	20.6	85	5.22	124	1.73
8	108	47	19.81	86	5.06	125	1.68
9	102.8	48	19.06	87	4.90	126	1.64



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GREE ELECTRIC APPLIANCES, INC. OF ZHUHAI

Add: West Jinji Rd, Qianshan, Zhuhai, Guangdong, China, 519070

Tel: (+86-756) 8522219

Fax: (+86-756) 8669426

E-mail: [global@cn.gree.com](mailto:global@cn.gree.com) [www.gree.com](http://www.gree.com)

**For product improvement, specifications and appearance in this manual are subject to change without prior notice.**