



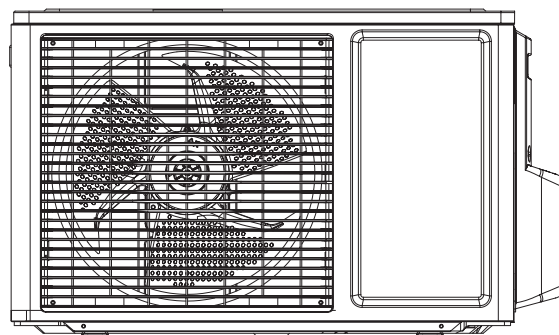
Service Manual

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Outdoor Unit:

GWH07NA-K3NNC7F/O
GWH07NA-K3NNE4E/O



Remote Controller:

YX1F



YB1F2(XFAN)



Model List:

NO.	Unit model	Unit code	Indoor unit model	Indoor unit code	Outdoor unit model	Outdoor unit code	Remove Controller
1	GWH07NA-K3NNE4E	CA403001401	GWH07NA-K3NNE4E/I	CA403N01400	GWH07NA-K3NNE4E/O	CA403W01401	YX1F
2	GWH07NA-K3NND2E	CA149000603	GWH07NA-K3NND2E/I	CA149N00601			YX1F
3	GWH07NA-K3NNB3E	CA138007301	GWH07NA-K3NNB3E/I	CA138N07300			YX1F
4	GWH07NA-K3NNA8E	CA173019301	GWH07NA-K3NNA8E/I	CA173N19300			YX1F
5	GWH07NA-K3NNA4E	CA161013002	GWH07NA-K3NNA4E/I	CA161N13002			YX1F
6	GWH07NA-K3NNA4E	CA161013001	GWH07NA-K3NNA4E/I	CA161N13000			YX1F
7	GWH07NA-K3NND1E	CA147004802	GWH07NA-K3NND1E/I	CA147N04801			YX1F
8	GWH07NA-K3NND2E	CA149000604	GWH07NA-K3NND2E/I	CA149N00602			YX1F
9	GWH07NA-K3NNB5E	CA180010101	GWH07NA-K3NNB5E/I	CA180N10100			YX1F
10	GWH07NA-K3NNA5E	CA162020601	GWH07NA-K3NNA5E/I	CA162N20600			YX1F
11	GWH07NA-K3NNE1E	CA404007301	GWH07NA-K3NNE1E/I	CA404N07300			YX1F
12	GWH07NA-K3NNC7E	CA195007501	GWH07NA-K3NNC7E/I	CA195N07500			YX1F
13	GWH07NA-K3NNC7F	CA195006202	GWH07NA-K3NNC7F/I	CA195N06200	GWH07NA-K3NNC7F/O	CA195W06200	YX1F
14	GWH07NA-K3NNB3F	CA138007501	GWH07NA-K3NNB3F/I	CA138N07500			YX1F
15	GWH07NA-K3NND1F	CA147005101	GWH07NA-K3NND1F/I	CA147N05100			YX1F
16	GWH07NA-K3NND2F	CA149000803	GWH07NA-K3NND2F/I	CA149N00800			YB1F2(XFAN)
17	GWH07NA-K3NND2F	CA149000802	GWH07NA-K3NND2F/I	CA149N00801			YB1F2(XFAN)
18	GWH07NA-K3NNC7F	CA195006203	GWH07NA-K3NNC7F/I	CA195N06201			YB1F2(XFAN)
19	GWH07NA-K3NNE1F	CA404006902	GWH07NA-K3NNE1F/I	CA404N06900			YB1F2(XFAN)
20	GWH07NA-K3NNE1F	CA404006903	GWH07NA-K3NNE1F/I	CA404N06901			YB1F2(XFAN)

2. Specifications

2.1 Specification Sheet

Model			1.GWH07NA-K3NNC7F 2.GWH07NA-K3NNB3F 3.GWH07NA-K3NND1F 4.GWH07NA-K3NND2F 5.GWH07NA-K3NNE1F	
Product Code			1.CA195006202 CA195006203 2.CA138007501 3.CA147005101 4.CA149000803 CA149000802 5.CA404006902 CA404006903	
Power Supply	Rated Voltage	V~	220-240	
	Rated Frequency	Hz	50	
	Phases		1	
Power Supply Mode			Indoor	
Cooling Capacity		W	2200	
Heating Capacity		W	2200	
Cooling Power Input		W	783	
Heating Power Input		W	650	
Cooling Power Current		A	3.47	
Heating Power Current		A	3.0	
Rated Input		W	1100	
Rated Current		A	4.9	
Air Flow Volume(SH/H/M/L/SL)		m ³ /h	400/360/320/290/-	
Dehumidifying Volume		L/h	0.6	
EER		W/W	2.81	
COP		W/W	3.38	
SEER		W/W	/	
HSPF		W/W	/	
Application Area		m ²	10-16	
Indoor Unit	Model of Indoor Unit		1.GWH07NA-K3NNC7F/I 2.GWH07NA-K3NNB3F/I 3.GWH07NA-K3NND1F/I 4.GWH07NA-K3NND2F/I 5.GWH07NA-K3NNE1F/I	
	Product Code of Indoor Unit		1.CA195N06200 CA195N06201 2. CA138N07500 3.CA147N05100 4. CA149N00800 CA149N00801 5.CA404N06900 CA404N06901	
	Fan Type		Cross-flow	
	Diameter Length(DXL)		mm	Φ85X532
	Fan Motor Cooling Speed(SH/H/M/L/SL)		r/min	1390/1280/1180/1080/-
	Fan Motor Heating Speed(SH/H/M/L/SL)		r/min	1350/1250/1140/1040/-
	Output of Fan Motor		W	10
	Fan Motor RLA		A	0.15
	Fan Motor Capacitor		μF	1
	Input of Heater		W	/
	Evaporator Form			Aluminum Fin-copper Tube
	Pipe Diameter		mm	Φ7
	Row-fin Gap		mm	2-1.5
	Coil Length (LXDXW)		mm	526X25.4X228.6
	Swing Motor Model			MP24AA
	Output of Swing Motor		W	1.5
	Fuse		A	3.15
	Sound Pressure Level (SH/H/M/L/SL)		dB (A)	37/34/31/28/-
	Sound Power Level (SH/H/M/L/SL)		dB (A)	47/44/41/38/-
	Dimension (WXHXD)		mm	730X254X170
	Dimension of Carton Box (LXWXH)		mm	784X311X236
Dimension of Package (LXWXH)		mm	787X314X251	
Net Weight		kg	8	
Gross Weight		kg	9.5	

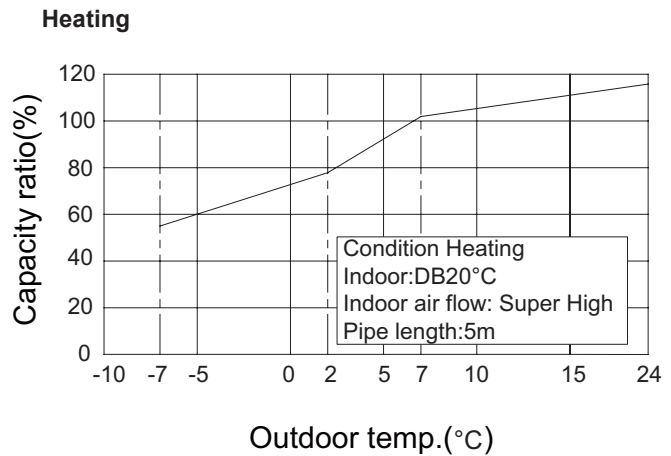
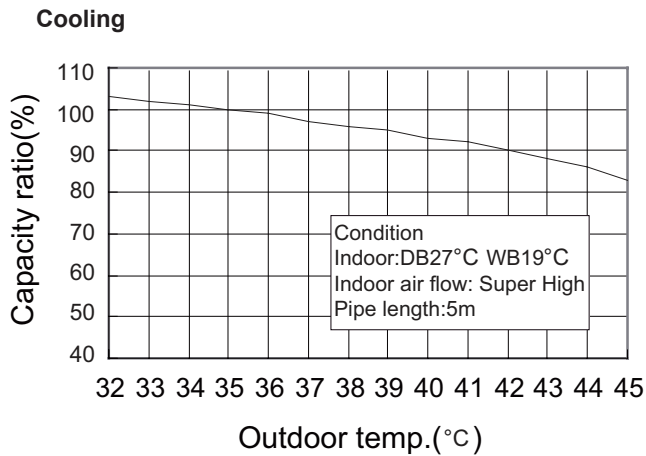
Outdoor Unit	Model of Outdoor Unit		GWH07NA-K3NNC7F/O	
	Product Code of Outdoor Unit		CA195W06201	
	Compressor Manufacturer/Trademark		ZHUHAI LANDA COMPRESSOR CO. LTD.	
	Compressor Model		QXA-A081A130	
	Compressor Oil		RB68EP	
	Compressor Type		Rotary	
	L.R.A.	A		15
	Compressor RLA	A		3.3
	Compressor Power Input	W		685
	Overload Protector			Internal
	Throttling Method			Capillary
	Operation Temp	°C		16~30
	Ambient Temp (Cooling)	°C		18~43
	Ambient Temp (Heating)	°C		-10~24
	Condenser Form			Aluminum Fin-copper Tube
	Pipe Diameter	mm		Φ7
	Rows-fin Gap	mm		1-1.4
	Coil Length (LXDXW)	mm		474X12.7X400
	Fan Motor Speed	rpm		950
	Output of Fan Motor	W		20
	Fan Motor RLA	A		0.25
	Fan Motor Capacitor	μF		1.5
	Air Flow Volume of Outdoor Unit	m ³ /h		1200
	Fan Type			Axial-flow
	Fan Diameter	mm		Φ320
	Defrosting Method			Automatic Defrosting
	Climate Type			T1
	Isolation			I
	Moisture Protection			IPX4
	Permissible Excessive Operating Pressure for the Discharge Side	MPa		4.3
	Permissible Excessive Operating Pressure for the Suction Side	MPa		2.5
	Sound Pressure Level (H/M/L)	dB (A)		50/-/-
Sound Power Level (H/M/L)	dB (A)		60/-/-	
Dimension (WXHXD)	mm		720X428X310	
Dimension of Carton Box (LXWXH)	mm		765X350X475	
Dimension of Package (LXWXH)	mm		768X353X490	
Net Weight	kg		22	
Gross Weight	kg		24	
Refrigerant			R410A	
Refrigerant Charge	kg		0.5	
Connection Pipe	Length	m	5	
	Gas Additional Charge	g/m	20	
	Outer Diameter Liquid Pipe	mm	Φ6	
	Outer Diameter Gas Pipe	mm	Φ9.52	
	Max Distance Height	m	10	
	Max Distance Length	m	15	
Note: The connection pipe applies metric diameter.				

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

Outdoor Unit	Model of Outdoor Unit		GWH07NA-K3NNE4E/O
	Product Code of Outdoor Unit		CA403W01401
	Compressor Manufacturer/Trademark		ZHUHAI LANDA COMPRESSOR CO. LTD.
	Compressor Model		QXA-A081A130
	Compressor Oil		RB68EP
	Compressor Type		Rotary
	L.R.A.	A	15
	Compressor RLA	A	3.30
	Compressor Power Input	W	685
	Overload Protector		Internal
	Throttling Method		Capillary
	Operation Temp	°C	16~30
	Ambient Temp (Cooling)	°C	18~43
	Ambient Temp (Heating)	°C	-10~24
	Condenser Form		Aluminum Fin-copper Tube
	Pipe Diameter	mm	Φ7
	Rows-fin Gap	mm	1-1.4
	Coil Length (LXDXW)	mm	658.3X19.05X396
	Fan Motor Speed	rpm	950
	Output of Fan Motor	W	20
	Fan Motor RLA	A	0.25
	Fan Motor Capacitor	μF	1.5
	Air Flow Volume of Outdoor Unit	m ³ /h	1200
	Fan Type		Axial-flow
	Fan Diameter	mm	Φ320
	Defrosting Method		Automatic Defrosting
	Climate Type		T1
	Isolation		I
	Moisture Protection		IPX4
	Permissible Excessive Operating Pressure for the Discharge Side	MPa	4.3
Permissible Excessive Operating Pressure for the Suction Side	MPa	2.5	
Sound Pressure Level (H/M/L)	dB (A)	48/-/-	
Sound Power Level (H/M/L)	dB (A)	58/-/-	
Dimension (WXHXD)	mm	720X428X310	
Dimension of Carton Box (LXWXH)	mm	765X350X475	
Dimension of Package (LXWXH)	mm	768X353X490	
Net Weight	kg	22.5	
Gross Weight	kg	24.5	
Refrigerant		R410A	
Refrigerant Charge	kg	0.6	
Connection Pipe	Length	m	5
	Gas Additional Charge	g/m	20
	Outer Diameter Liquid Pipe	mm	Φ6
	Outer Diameter Gas Pipe	mm	Φ9.52
	Max Distance Height	m	10
	Max Distance Length	m	15
Note: The connection pipe applies metric diameter.			

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

2.2 Capacity Curve in Different Outdoor Temperature



2.3 Cooling and Heating Data Sheet in Rated Frequency

Cooling

Rated cooling condition(°C) (DB/WB)		Model	Pressure of gas pipe connecting indoor and outdoor unit	Inlet and outlet pipe temperature of heat exchanger		Fan speed of indoor unit	Fan speed of outdoor unit
Indoor	Outdoor			T1 (°C)	T2 (°C)		
27/19	35/24	07K	P (MPa) 0.85~1.0	in:8~11 out:11~14	in:75~85 out:37~43	Super High	High

Heating

Rated heating condition(°C) (DB/WB)		Model	Pressure of gas pipe connecting indoor and outdoor unit	Inlet and outlet pipe temperature of heat exchanger		Fan speed of indoor unit	Fan speed of outdoor unit
Indoor	Outdoor			T1 (°C)	T2 (°C)		
20/-	7/6	07K	P (MPa) 3.5~3.8	in:75~85 out:37~43	in:1~3 out:2~5	Super High	High

Instruction:

T1: Inlet and outlet pipe temperature of evaporator

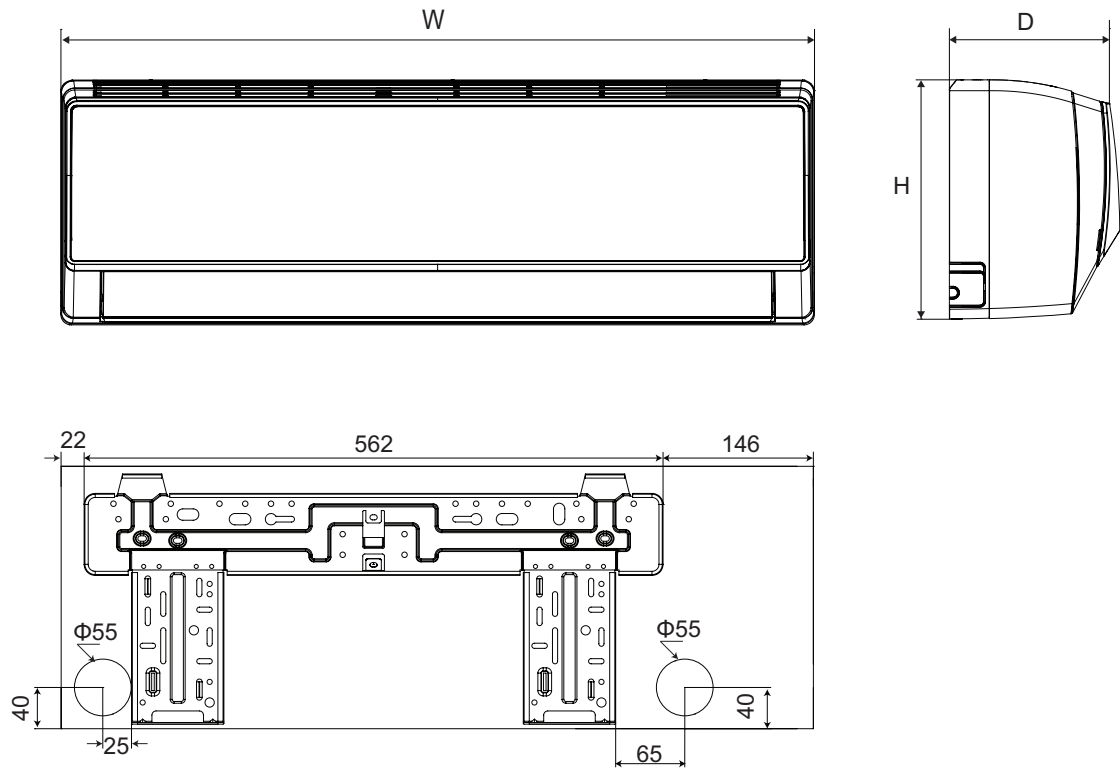
T2: Inlet and outlet pipe temperature of condenser

P: Pressure at the side of big valve

Connection pipe length: 5 m.

3. Outline Dimension Diagram

3.1 Indoor Unit

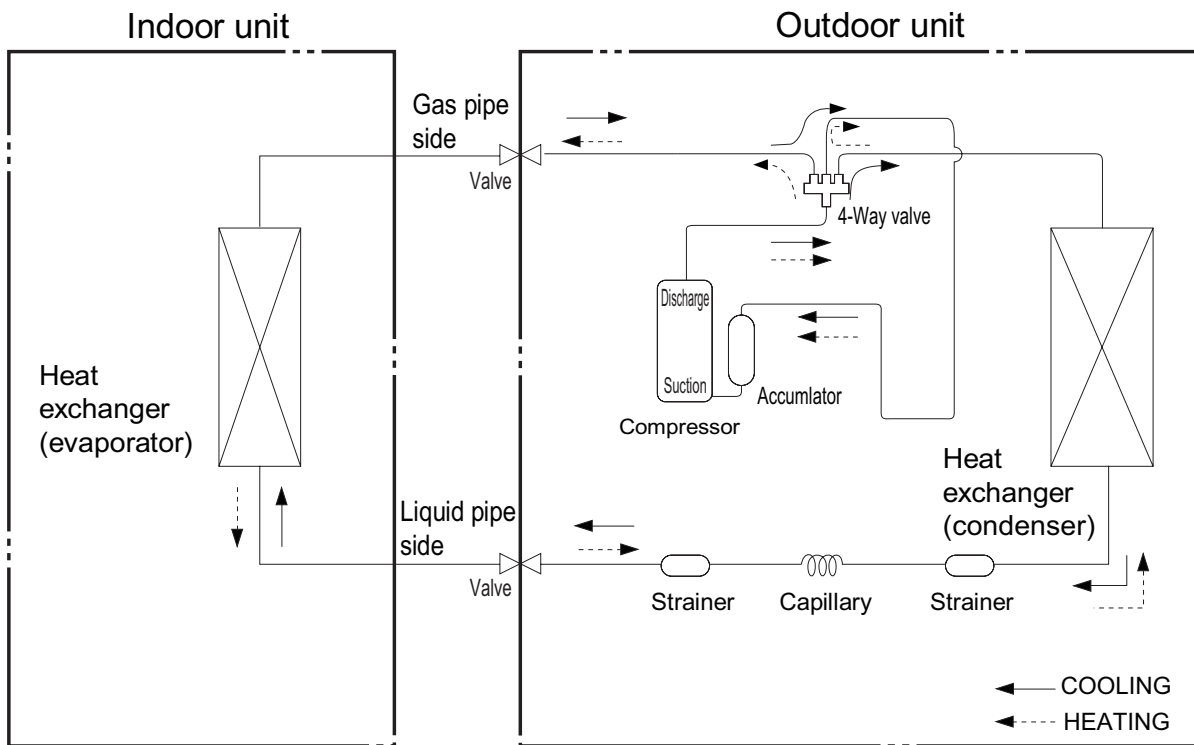


Unit:mm

Model	W	H	D
07K	730	255	170

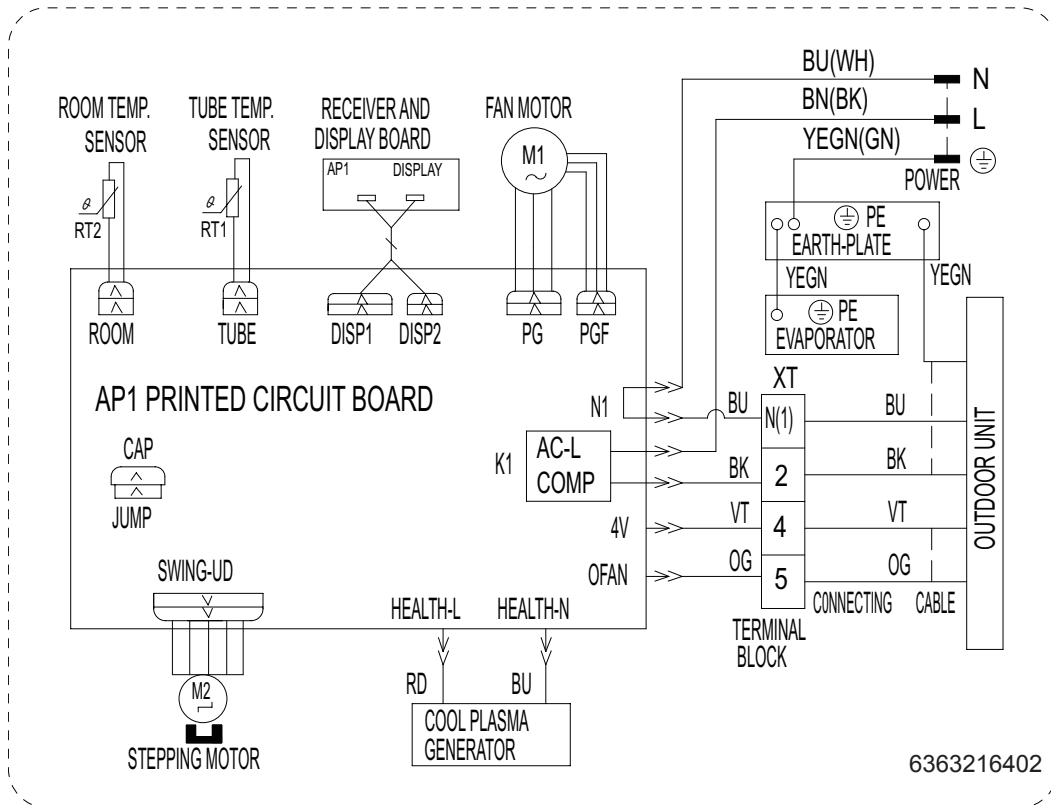
4. Refrigerant System Diagram

Cooling and heating model



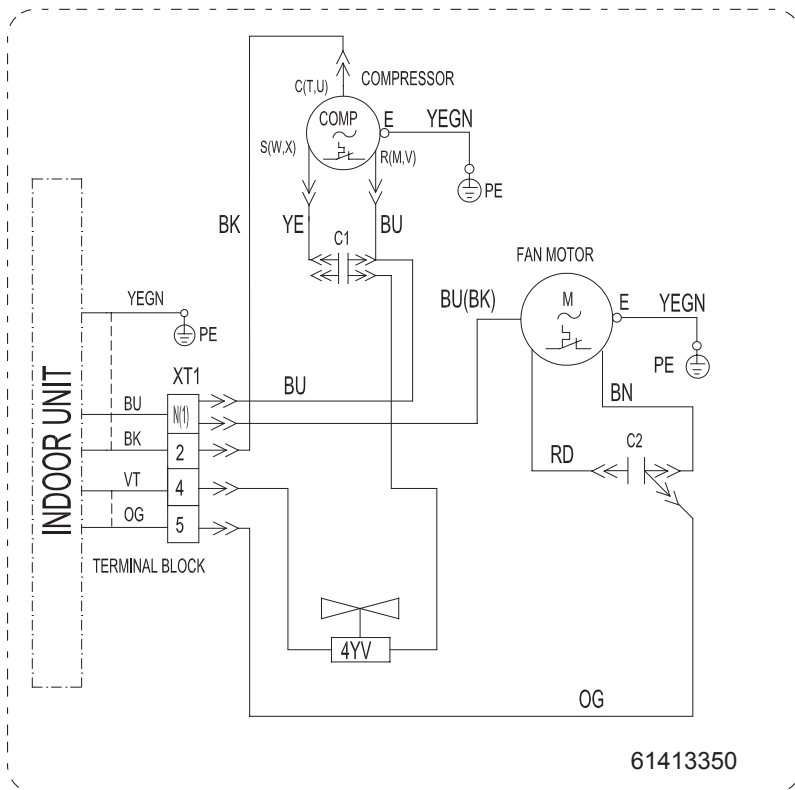
Connection pipe specification:
 Liquid pipe: 1/4" (6mm)
 Gas pipe: 3/8" (9.52mm)

GWH07NA-K3NND2F/I(CA149N00801) GWH07NA-K3NNC7F/I(CA195N06201) GWH07NA-K3NNE1F/I(CA404N06900)
 (CA404N06901) GWH07NA-K3NND1E/I GWH07NA-K3NND2E/I GWH07NA-K3NNB5E/I GWH07NA-K3NNA5E/I
 GWH07NA-K3NNA4E/I(CA161N13000)



• Outdoor Unit

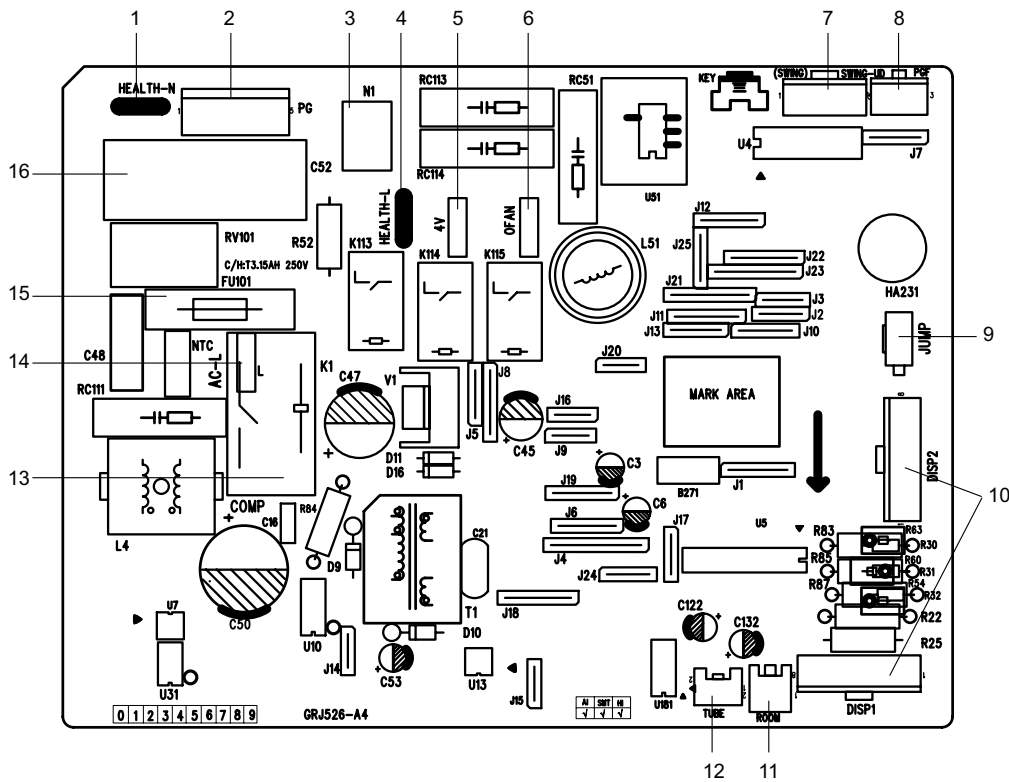
GWH09NA-K3NNC7F/O GWH07NA-K3NNE4E/O



These wiring diagrams are subject to change without notice; please refer to the one supplied with the unit.

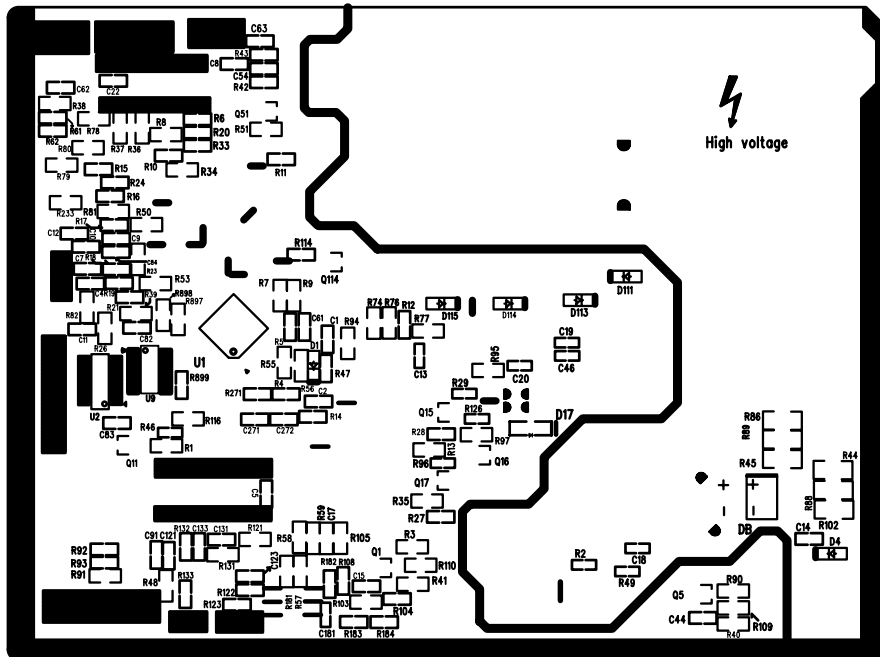
5.2 PCB Printed Diagram

• Top view



No.	Name
1	Neutral wire of cold plasma
2	Terminal of PG Motor
3	Neutral wire
4	Live wire of cold plasma
5	4-way valve terminal
6	Terminal of outdoor fan
7	Interface of up&down swing motor
8	Feedback interface for PG motor
9	Jumper cap
10	Display interface
11	Interface of ambient temperature sensor
12	Interface of pipe temperature sensor
13	Compressor control terminal
14	Live wire
15	Fuse
16	Capacitor for indoor fan

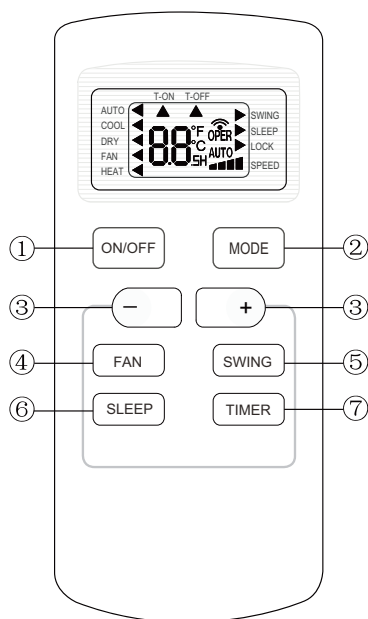
• Bottom view



6. Function and Control

6.1 Remote Controller Introduction of YX1F

Buttons on Remote Controller



①: ON/OFF button

②: MODE button

③: +/- button

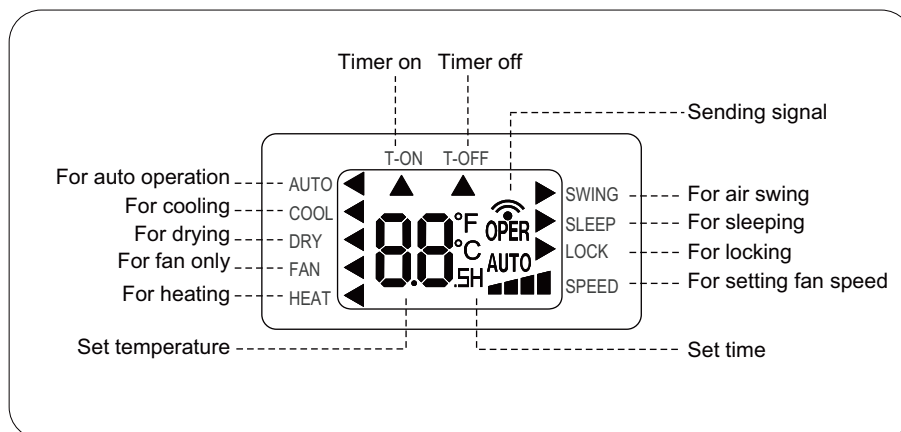
④: FAN button

⑤: SWING button

⑥: SLEEP button

⑦: TIMER button

Icon Display on Remote Controller



Operation introduction of remote controller

Note:

- This is a general use remote controller, it could be used for the air conditioners with multifunction; For some function, which the model doesn't have, if press the corresponding button on the remote controller that the unit will keep the original running status.
- When power is connected (stand by condition), you can operate the air conditioner through the remote controller.
- When unit is on, each time you press the button on remote controller, the sending signal icon "📶" on the display of remote controller will blink once. If the air conditioner gives out a beep sound, it means the signal has been sent.
- When unit is off, set temperature will be displayed on the remote controller (If the light of indoor unit display is turned on, the corresponding icon will be displayed); When unit is on, it will display the icon of the on-going function.

1. ON/OFF Button

Press this button to turn unit on/off.

2. MODE Button

Pressing this button once can select your required mode circularly as below (the corresponding icon ► will be lit up after the mode is selected):



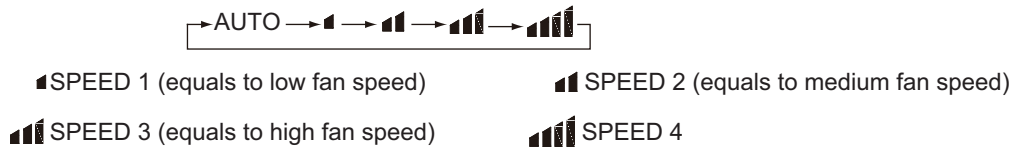
- ◆ When selecting auto mode, air conditioner will operate automatically according to ex-factory setting. Set temperature can't be adjusted and won't be displayed either. Press FAN button to adjust fan speed. (This function is not available in this air conditioner.)
- ◆ When selecting cool mode, air conditioner will operate under cool mode. Then press + or -- button to adjust set temperature. Press FAN button to adjust fan speed.
- ◆ When selecting dry mode, air conditioner will operate at low fan speed under dry mode. In dry mode, fan speed can't be adjusted.
- ◆ When selecting fan mode, air conditioner will operate in fan mode only. Then press FAN button to adjust fan speed.
- ◆ When selecting heat mode, air conditioner will operate under heat mode. Then press + or -- button to adjust set temperature. Press FAN button to adjust fan speed.

3. +/- 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.
- ◆ When setting Timer On, Timer Off or Clock, press + or -- button to adjust the time (See TIMER Button for setting details).

4. FAN Button

Pressing this button can select fan speed circularly as: AUTO, SPEED 1(▲), SPEED 2(▲▲), SPEED 3(▲▲▲), SPEED 4(▲▲▲▲) (unavailable in this air conditioner. Speed 4 is the same with speed 3).



Note:

- ◆ Under Auto mode, air conditioner will select proper fan speed automatically according to ex-factory setting.
- ◆ Fan speed can't be adjusted under Dry mode.

5. SWING Button

Press this button to turn on up&down air swing.

6. SLEEP Button

Under Cool, Heat, Dry mode, press this button to turn on Sleep function. Press this button to cancel Sleep function. Under Fan and Auto mode, this function is unavailable.

7. TIMER Button

- ◆ When unit is on, press this button to set Timer Off. T-OFF and H icon will be blinking. Within 5s, press + or - button to adjust the time for Timer Off. Pressing + or - button once will increase or decrease the time by 0.5h. Hold + or - button for 2s, time will change quickly. Release the button after your required set time is reached. Then press TIMER button to confirm it. T-OFF and H icon will stop blinking.
- ◆ When unit is off, press this button to set Timer On. T-ON and H icon will be blinking. Within 5s, press + or - button to adjust the time for Timer On. Pressing + or - button once will increase or decrease the time by 0.5h. Hold + or - button for 2s, time will change quickly. Release the button after your required set time is reached. Then press TIMER button to confirm it. T-ON and H icon will stop blinking.
- ◆ Cancel Timer On/Off: If Timer function is set up, press TIMER button once to review the remaining time. Within 5s, press TIMER button again to cancel this function.


Note:

- ◆ Range of time setting is: 0.5~24h.
- ◆ The interval between two motions can't exceed 5s, otherwise the remote controller will exit setting status.

Simple operation first

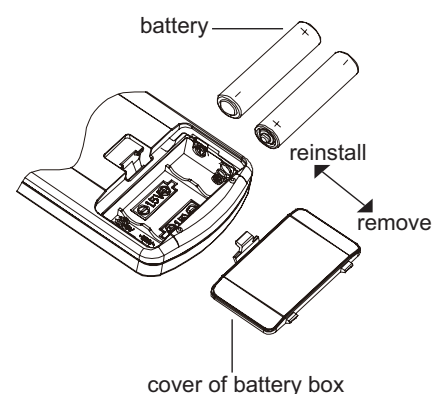
1. After putting through power "ON/OFF" button on remote controller to turn on the air conditioner.
2. Press "MODE" button to select your required operation mode: AUTO, COOL, DRY, FAN.
3. Press "+" or "-" button to set your required temperature. (temperature can't adjusted under AUTO mode)
4. Press "FAN" button to select your required fan speed: auto, first notch, second notch, third notch, fourth notch (fourth notch is same as third notch for this air conditioner.)

Replacement of Batteries in Remote Controller

1. Press the back side of remote controller on the spot marked with , and then push out the cover of battery box along the arrow direction.
2. Replace two No.7 (AAA 1.5V) dry batteries and make sure the positions of + and -- polar are correct.
3. Reinstall the cover of battery box.

Note:

- ◆ During operation, point the signal sender of the remote controller at the receiving window of the indoor unit;
- ◆ The distance between signal sender and receiving window should be within 8m. There should be no obstacle between them.
- ◆ Signal may be interfered easily in the room where there is fluorescent lamp or wireless telephone; Remote controller should be close to indoor unit during operation.
- ◆ Replace new batteries of the same model when replacement is required.
- ◆ If you don't use remote controller for a long time, please take out the batteries.
- ◆ If the display on remote controller is fuzzy or if there's no display, please replace batteries.



1.ON/OFF button

Press this button can turn on or turn off the air conditioner. After turning on the unit,operation indicator "U" on indoor unit is ON (green indicator. Color may be differ-ent for different models)and indoor unit gives out a sound.

2.MODE button

Press this button can select your required operation mode.



- After selecting auto mode, air conditioner will operate automatically according to ambient temperature. Set temperature cant be adjusted and also cant be displayed. Press "FAN" button can adjust fan speed. Press "↗" button can adjust swing angle.
- After selecting cool mode, air conditioner operates under cool mode. Cool indicator "❄" on indoor unit is ON. You can press "+" or "-" button to adjust set temperature. Press "FAN" button can adjust fan speed. Press "↗" button can adjust swing angle.
- After selecting dry mode, air conditioner operates under dry mode at low speed. Dry indicator "💧" on indoor unit is ON. Under dry mode, fan speed cant be adjusted. Press "↗" button to adjust swing angle.
- After selecting fan mode, air conditioner operates only under fan mode, All mode indicators on indoor unit is OFF. Operation indicator is ON. Press "FAN" button can adjust fan speed. Press "↗" button to adjust swing angle.
- After selecting heat mode, air conditioner operates under heat mode. Heat indicator "☀" on indoor unit is ON. You can press "+" or "-" button to adjust set temperature. Press "FAN" button to adjust fan speed. Press "↗" button to adjust swing angle. (Cooling only unit cant receive the signal for heating mode.)

Note:

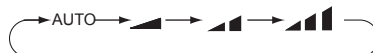
For preventing cold wind, after starting up heating mode, indoor fan will blow fan afterdelaying 1-5min. (Details time is decided by indoor ambient temperature) Temperature setting range on remote controller: 16°C~30°C(61°F~86°F) . Fan speed setting range: auto, low speed, medium speed and high speed.

3."+" or "-" button

- After each pressing of "+" or "-" button, it can increase or decrease set temperature 1°C(1°F~2°F) . Hold "+" or "-" button, 2s later, set temperature on remote controller will change quickly. After reaching to your required time, loosen the button. Temperature indicator on indoor unit will also change accordingly. (Temperature cant be adjusted under auto mode)
- Under TIMER ON, TIMER OFF or Clock setting, you can press "+"or "-" button to adjust time. (Refer to TIMER button for details)

4.FAN button

Pressing this button can set fan speed circularly as: auto (AUTO), low(📶), medium(📶📶), high(📶📶📶).

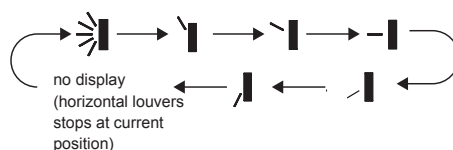


Note:

- Under AUTO Speed, IDU fan motor will adjust the fan speed (high, medium or low speed) according to ambient temperature.
- Fan speed under dry mode is low speed.

5.↗ button

- Press this button to start or stop up & down swing function.The remote controller defaults to simple swing condition.
- Press "+" button and "↗" button at the same time at unit OFF to switch between simple swing and static swing; "↗" blinks for 2 seconds.
- In static swing condition, pressing "↗" button, the swing angle of up & down louver changes as below:



- If the unit is turned off during swing operation,the louver will stop at present position.

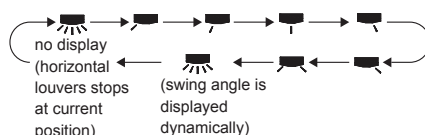
Note:

When selecting "↗" with remote controller, its auto swing. Horizontal louver of air conditioner will swing up&down automatically at the maximum angle.

When selecting "↖", "↗", "↘", "↙" with remote controller, it is the fixed position swing. Horizontal louver of air conditioner will stop at that position as shown by the icon to swing.

6.📶 button

- Press this button to start or stop left & right swing function. The remote controller defaults to simple swing condition.
- Press "+" button and "📶" button at the same time at unit OFF to switch between simple swing and static swing; blinks for 2 seconds.
- In static swing condition, pressing "📶" button, the swing angle of left & right louver changes as below:



- If the unit is turned off during swing operation, the louver will stop at present position.
- When selecting " " with remote controller, it is the fixed position swing. Horizontal louver of air conditioner will stop at that position as shown by the icon to swing.
- When selecting " " its the circulating swing. Horizontal louver of air conditioner will swing circularly according to the angle as shown by the icon.

Note:

There is no this function for the units. If press this key, the main unit will click, but it also runs under original status.

7.HEALTH/SAVE button

- After pressing HEALTH button, remote controller will switch circularly as below: "HEALTH"→"AIR"→"AIR HEALTH"→"no display"
- When selecting "HEALTH" by remote controller, HEALTH function will be started up.
- When selecting "AIR" by remote controller, AIR function will be started up.
- When selecting "AIT HEALTH", AIR and HEALTH function will be started up.
- When theres no display on remote controller, AIR and HEALTH function will be turned off.
- AIR function is applicable for some models.

SAVE function:

- Under cool mode, press SAVE button and the unit will operate under SAVE mode. Dual-8nixie tube on remote controller displays "SE". Air conditioner will operate at auto speed. Set temperature cant be adjusted. Press SAVE button again to exit SAVE mode. Air conditioner turn back to original set speed and set temperature.
- This function is applicable to partial of models.

8.X-FAN button

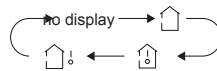
After pressing this button under cooling or dry mode, remote controller displays the character of "X-FAN" and X-FAN function is started up. Press this button again to cancel X-FAN function. The character of "X-FAN" will disappear.

Note:

- After starting up X-FAN function, when turning off the unit, indoor fan will continue to operate for a while at low speed to dry the residual water inside the indoor unit.
- When the unit operates under X-FAN mode, press "X-FAN" button can turn off X-FAN function. Indoor fan stops operation immediately.

9.TEMP button

Press this button can see indoor set temperature, indoor ambient temperature or outdoor ambient temperature on indoor units display. Temperature is set circularly by remote controller as below:



- When selecting " " by remote controller or no display, temperature indicator on indoor unit displays set temperature.
- When selecting " " by remote controller, temperature indicator on indoor unit displays indoor ambient temperature.
- When selecting " " by remote controller, temperature indicator on indoor unit displays outdoor ambient temperature.

Note:

- Outdoor ambient temperature display may cant be selected for some models. When indoor unit receives " " signal, it displays indoor set temperature.
- Only for the model whose indoor unit has dual-8 display.

10.TIMER button

At ON status, press this button once can set TIMER OFF. The character of HOUR and OFF will flash. Press "+" or "-" button within 5s can adjust the time of TEMER ON. After each pressing of "+" or "-" button, time will increase or decrease half an hour. When holding "+" or "-" button, 2s later, the time will change quickly until to reach to your required time. After that, press "TIMER" button to confirm it. The character of HOUR and OFF wont flash again.

Cancel TIMER OFF: Press "TIMER" button again under TIMER OFF status.

At OFF status, press this button once can set TIMER ON. Please refer to TIMER off for detailed operation.

Cancel TIMER ON: Press "TIMER" button again under TIMER ON status.

Note:

- Time setting range: 0.5-24 hours.
- Time interval between two operations cant exceed 5s. Otherwise, remote controller will exit the setting status automatically.

11.TURBO button

When pressing this button under cooling or heating mode, air conditioner will enter into quick cooling or quick heating mode. The character of "TURBO" is displayed on remote controller. Press this button again to exit turbo function and the character of "TURBO" will be disappeared on remote controller.

12.SLEEP button

Press this button under cooling, heating mode can start up sleep function. " " icon will be displayed on remote controller. Press this button again to cancel sleep function. " " icon on remote controller will be displayed.

13.LIGHT button

Press this button can turn off the light for indoor units display. " " icon on remote controller will disappear. Press this button again to turn on the light for indoor units display. " " icon on remote controller will be displayed.

Function introduction for combination buttons

Child lock function

Press "+" and "-" buttons simultaneously can turn on or turn off child lock function. When child lock function is started up, "🔒" icon will be displayed on remote controller. If operate remote controller "🔒" icon will flash three times, while remote controller wont send signal.

Switchover function for temperature display

After turning off the unit by remote controller, press "-" button and "MODE" button simultaneously to switch between °C and °F.

Operation guide

1. After putting through the power, press "ON/OFF" button on remote controller to turn on the air conditioner.
2. Press "MODE" button to select your required mode: AUTO, COOL, DRY, FAN, HEAT.
3. Press "+" or "-" button to set your required temperature. (Temperature cant be adjusted under auto mode).
4. Press "FAN" button to set your required fan speed: auto, low, medium and high speed.
5. Press "🌀" button to select fan blowing angle.

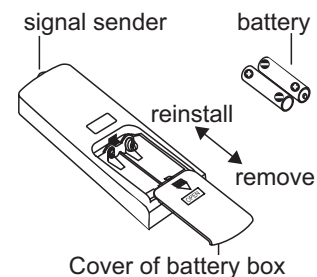
Replacement of batteries in remote controller

1. Press the back side of remote controller marked with "🔋", 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

- During operation, point the remote control signal sender at the receiving window on indoor unit.
- The distance between signal sender and receiving window should be no more than 8m, and there should be no obstacles between them.
- Signal may be interfered easily in the room where there is fluorescent lamp or wireless telephone; remote controller should be close to indoor unit during operation.
- Replace new batteries of the same model when replacement is required.
- When you dont use remote controller for a long time, please take out the batteries.

If the display on remote controller is fuzzy or theres no display, please replace batteries.



6.3 Brief Description of Modes and Functions

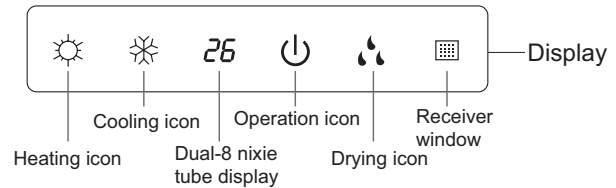
1. Summary

(1) Buzzer

When the controller is energized or receives signal from button (emergency operation switch on air conditioner) or remote controller, the buzzer will give out a beep.

(2) Display

After energization, all icons will be displayed once. Operation icon is in red under standby status. After turning on the unit by remote controller, operation icon is bright and corresponding set operation mode icon will be displayed (Mode icon include: cooling, heating, drying).



(Display content or position may be different from above graphics, please refer to actual products)

(3) Temperature parameter

- ◆ Indoor set temperature (T_{preset})
- ◆ Indoor ambient temperature ($T_{\text{amb.}}$)
- ◆ Inner tube temperature of indoor evaporator (T_{tube})

2. Introduction of Basic Mode Function

- ◆ Once the compressor is energized, there should be a minimum interval of 3 mins between two start-ups.
 - ◆ If the unit is with memory function and is off before power failure, the compressor can be restarted without an interval of 3 mins; if the unit is on before power failure, the compressor will be restarted with an interval of 3 mins.
- Once compressor is started, it won't stop within 6 mins according to the change of room temp.

(1) Auto mode

① Operation condition and process for auto mode

Under auto mode, the system will automatically select operation mode (cooling, heating, and fan) according to indoor ambient temperature. There will be 30s delayed for protection between mode switchover.

- ◆ When $T_{\text{amb.}} \geq 26^\circ\text{C}$, the system operates under cooling mode; Ex-factory set temperature is 25°C .
- ◆ Heat pump unit: when $T_{\text{amb.}} \leq 22^\circ\text{C}$, the system operates under heating mode; Ex-factory set temperature is 20°C .
- ◆ Cooling unit: when $T_{\text{amb.}} \leq 22^\circ\text{C}$, the system operates under fan mode; Ex-factory set temperature is 25°C .
- ◆ $22^\circ\text{C} < T_{\text{amb.}} < 26^\circ\text{C}$: The system operates under fan mode if turn on the unit to enter into auto mode for the first time; If switch to auto mode from cooling, heating or fan mode, the system keeps previous operation mode; If switch to auto mode from drying mode, the system operates under fan mode.

② Display: Operation icon, actual operation mode icon, set temperature (that's the display content of dual-8 nixie tube)

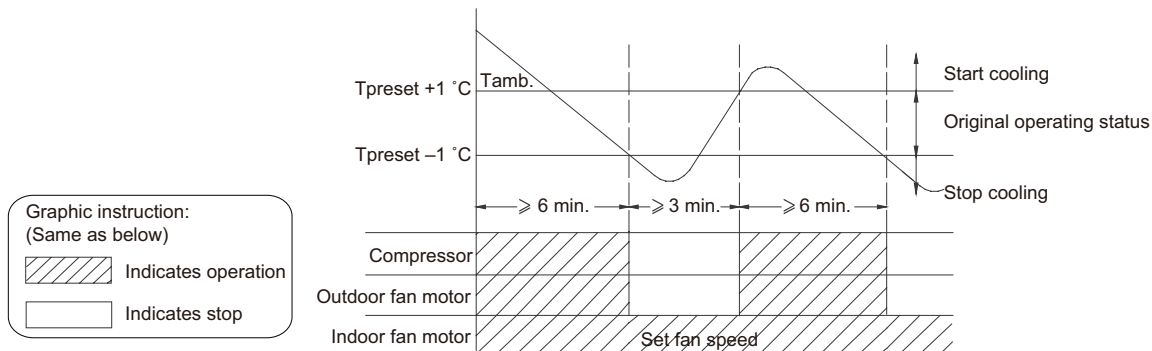
③ Protection function is same as that under each mode.

(2) Cooling mode

① Operation condition and process for cooling mode

- ◆ When $T_{\text{amb.}} \geq T_{\text{set}} + 1^\circ\text{C}$, the system operates under cooling mode. In this case, the compressor, the ODU fan motor and the IDU fan motor operates at set speed.
- ◆ When $T_{\text{amb.}} \leq T_{\text{set}} - 1^\circ\text{C}$, the compressor and the ODU fan motor stop, while the IDU fan motor operates at set speed.
- ◆ When $T_{\text{set}} - 1^\circ\text{C} < T_{\text{amb.}} < T_{\text{set}} + 1^\circ\text{C}$, the system will maintain its previous operation status.

In cooling mode, the 4-way valve is de-energized (4-way valve is not available for cooling only unit). Temperature setting range is



16~30°C .

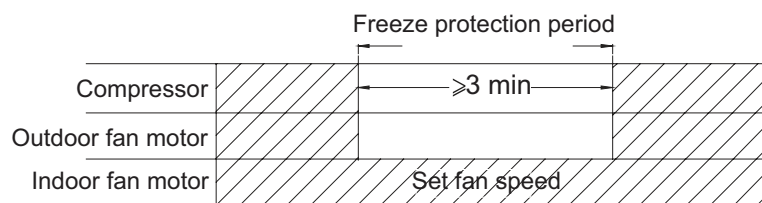
② Display: Operation icon, cooling icon, set temperature.

③ Protection function

- ◆ Freeze protection

During operation, when controller detected that $T_{\text{tube}} \leq 0^\circ\text{C}$ for a consecutive period of time, the system enters into freeze protection. In

that case, the compressor and the ODU fan stop operation, while the IDU operates at set fan speed. If freeze protection is released and the compressor has been out of operation for 3 mins, the unit will resume its previous operation status.



◆ Overcurrent protection (this protection function is not available for those models whose cooling capacity $\leq 12000\text{Btu/h}$)

During operation process, if controller detected that system current exceeds the limit value for 3s consecutively (overcurrent), only the fan operates. About 3 mins later, if overcurrent is released, the system will resume original operation.

If overcurrent protection occurs for 6 times consecutively, and resume operation time wont exceed 6min every time, overcurrent protection information will be displayed. After turning off the unit, display wont be displayed.

If turn on the unit again, the system will be restated up again. Overcurrent protection information will be eliminated.

Please refer to maintenance part for display information and disposal method for details.

◆ Locked protection to IDU fan motor

During operation of IDU fan motor, if controller detected that the rotation speed of IDU fan motor less than 300/min or stop rotation, the motor operates abnormally. In order to prevent damage to motor, controller will protect automatically, the system stops operation and blocked information of IDU fan motor will be displayed. After turning off the unit, display wont be displayed.

If turn on the unit again, the system will be restated up again. Blocked information of IDU fan motor will be eliminated. (For some models, they can only be restated up after re-energized)

Please refer to maintenance part for display information and disposal method for details.

(3) Drying mode

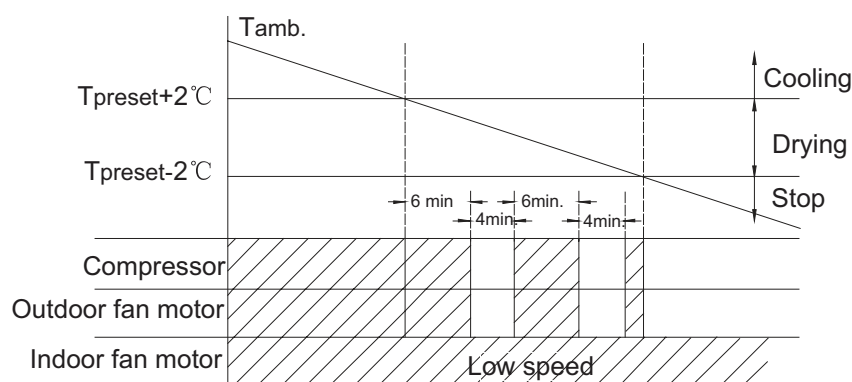
① Operation condition and process for drying mode

◆ When $T_{amb.} > T_{set} + 2^{\circ}\text{C}$, the system starts drying and cooling. In this case, the compressor and the ODU fan motor operate, and the IDU fan motor operates at low speed.

◆ When $T_{set} - 2^{\circ}\text{C} \leq T_{amb.} \leq T_{set} + 2^{\circ}\text{C}$, the system will start drying. In this case, the IDU fan motor operates at low speed; the compressor and the ODU fan motor operate for 6 minutes and stop for 4 minutes in cycle.

◆ When $T_{amb.} < T_{set} - 2^{\circ}\text{C}$, the compressor and the ODU fan motor stop, while the IDU fan motor runs at low speed.

In drying mode, the 4-way valve is de-energized (4-way valve is not available for cooling only unit); Temperature setting range is $16\sim 30^{\circ}\text{C}$. Fan speed cant be adjusted.



② Display: Operation icon, drying icon, set temperature.

③ Protection function

◆ Freeze protection

During drying and cooling operation, when the controller detected that $T_{tube} \leq 0^{\circ}\text{C}$ for a period of time consecutively, the system will enter into freeze protection. In that case, the compressor and the ODU fan motor stops operation, while the IDU fan motor operates at low speed. When freeze protection is release and the compressor has stopped for 3min, the system will resume original operation.

During drying operation, when the controller detected that $T_{tube} \leq 0^{\circ}\text{C}$ for a period of time consecutively, the system enters into freeze protection. In that case, the compressor, the ODU fan motor stops operation, while the IDU fan motor operates at low speed. When freeze protection is release and the compressor has stopped for 4min, the system will resume original operation.

◆ Other protection is same as that under cooling mode.

(4) Fan mode

① Operation condition and process for fan mode

In fan mode, the IDU fan motor operates at set speed, while the compressor and the ODU fan motor stop. 4-way valve is de-energized (4-way valve is not available for cooling only unit). Temperature setting range is 16~30°C .

② Display: Operation icon, set temperature.

③ Protection function

In fan mode, there are overcurrent protection and blocked protection of IDU fan motor. Please refer to corresponding protection function under cooling mode for details.

(5) Heating mode(no heating mode is not available for cooling only unit)

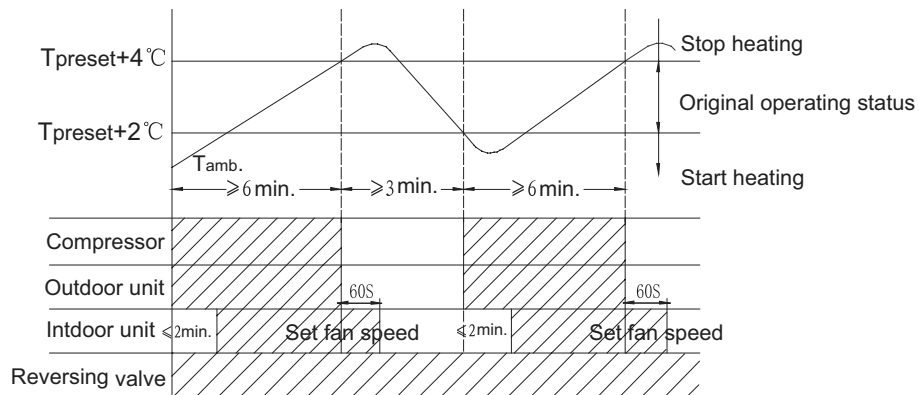
① Operation conditioner and process for heating mode

◆ When $T_{amb.} \leq T_{set} + 2^{\circ}\text{C}$, the system starts heating operation. In this case, the 4-way valve is energized. The compressor and the ODU fan motor operates simultaneously; The IDU fan motor will be started up after delayed for a period of time to make sure the air conditioner wont blow out cold wind.

◆ When $T_{amb.} \geq T_{preset} + 4^{\circ}\text{C}$, the compressor and the ODU motor stop. The 4-way valve is energized all the time. The IDU fan motor will blow residual heat after operating at set speed for a period of time consecutively to make sure the inner temperature of air conditioner wont be too high.

◆ When $T_{preset} < T_{amb.} < T_{preset} + 4^{\circ}\text{C}$, the system will maintain its previous operation status.

In heating mode, 4-way valve is energized. Temperature setting range is 16~30°C .



② Display: Operation icon, heating icon, set temperature.

③ Defrosting condition and process

For ensuring heating effect, air conditioner will defrost automatically according to defrosting status on outdoor unit. Dual-8 nixie tube displays H1 during defrosting. (Heating icon is bright for a period time and then OFF for some models)

④ Protection function

◆ Overheating prevention protection

During operation, when controller is detected that $T_{tube} > 58^{\circ}\text{C}$, the ODU fan motor stops operation; When T_{tube} is resumed normally, the ODU fan motor resumes operation.

◆ Noise silencing protection

When turning off the unit or during mode switchover, the 4-way valve is closed. In order to decrease noise, the 4-way valve will delay 2mins to be closed.

◆ Overcurrent protection (this protection function is not available for those models whose cooling capacity $\leq 12000\text{Btu/h}$)

During operation process, if controller detected that system current exceeds the limit value for 3s consecutively(overcurrent), the system stops operation. About 3mins later, if overcurrent is released, the system will resume original operation. If overcurrent protection occurs for 6 times consecutively, and resume operation time wont exceed 6min every time, overcurrent protection information will be displayed. After turning off the unit, display wont be displayed.

If turn on the unit again, the system will be restated up again. Overcurrent protection information will be eliminated.

Please refer to maintenance part for display information and disposal method for details.

◆ Locked protection to IDU fan motor

During operation of IDU fan motor, if controller detected that the rotation speed of IDU fan motor less than 300/min or stop rotation, the motor operates abnormally. In order to prevent damage to motor, controller will protect automatically, the system stops operation and blocked information of IDU fan motor will be displayed. After turning off the unit, display wont be displayed.

If turn on the unit again, the system will be restated up again. Blocked information of IDU fan motor will be eliminated. (For some models, they can only be restated up after re-energized)

Please refer to maintenance part for display information and disposal method for details.

3. Other Control Function Introduction

(1) Timer function

Controller has general timer function and clock timer function. When you select the remote controller with general timer function, only the general timer function of controller can be activated; when you select the remote controller with clock timer, only the clock timer function of controller can be activated.

① General timer: The precision of general timer is 0.5hour. 24hours circulated timer cant be set.

◆ Timer ON: Timer ON can be set at unit OFF. If selected ON time is reached, the unit will start to operate according to previous setting status. Time setting range is 0.5~24hr in 30-minute increments.

◆ Timer OFF: Timer OFF can be set at unit ON. If selected OFF time is reached, the unit will stop. Time setting range is 0.5~24hour in 30-minute increments.

② Clock timer: The precision of clock timer is 1 minute. 24hours circulated timer can be set.

◆ Timer ON: If timer ON is set during operation of the unit, the unit will continue to operate. If timer ON is set at unit OFF, upon ON time reaches, the unit will start to run according to previous setting status.

◆ Timer OFF: If timer OFF is set at unit OFF, the system will keep standby status. If timer OFF is set at unit ON, upon OFF time reaches, the unit will stop operation.

◆ Timer change:

Although timer has been set, the unit still can be turned on/off by pressing ON/OFF button on the remote controller. You can also reset the timer.

If timer ON and timer OFF are set at the same time during operation of the unit, the unit will keep running at current status till OFF time reaches. Upon ON time reached, the system will be turned on automatically. The unit will operate circularly like that ever 24hours.

If timer ON and timer OFF are set at unit OFF status, the system keep OFF status till ON time reaches. Upon OFF time reaches, the system will be turned OFF automatically. The unit will operate circularly like that every 24hours.

(2) Emergency operation switch

After pressing this button, the system will operate according under auto mode and the IDU fan motor operates at auto speed. Swing motor operates when the IDU fan motor operates. Press this button again to turn off the unit.



(3) Sleep function

In this mode, the system will select proper sleep curve to operate according to different set temperature.

① If start up sleep function under cooling or drying mode, the system will increase set temperature automatically within a certain range to operate.

② If start up sleep function under heating mode, the system will decrease set temperature automatically within a certain range to operate.

(4) Turbo function

Turbo function can be set under cooling and heating modes. During operation of turbo function, the system operates at the maximum fan speed.

(5) Dry function

Dry function can be set under cooling and drying modes. During operation of drying function, the fan will stop operation after operating for a period of time when turning off the unit.

(6) Auto fan speed control

Auto fan speed control can be set under cooling, heating and fan mode. During operation of auto fan speed control, the IDU fan motor will adjust the fan speed (high, medium or low speed) according to ambient temperature.

(7) Up&down swing control

① After energization, up & down swing motor will firstly have the horizontal louver rotate anticlockwise to position O to close air outlet. If swing function has not been set after start-up of the unit, horizontal louver will turn clockwise to position D in heating mode, or turn clockwise to level position L in other modes.

② If swing function is set when turning on the unit, the horizontal louver will swing between L and D.

Horizontal louver has 7 swing statuses:

◆ Stay at position L: control by remote controller:

◆ Stay at position A: control by remote controller:

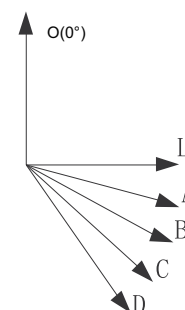
◆ Stay at position B: control by remote controller:

◆ Stay at position C: control by remote controller:

◆ Stay at position D: control by remote controller:

◆ Swing between L and D: control by remote controller:

◆ Stop at any position between L and D (angles between L and D are equiangular) and no display on remote controller.



- ③ When turning off the unit, horizontal louver will close at position O.
- ④ Swing action is valid only when set swing command and the IDU fan motor is operating.

(8) Dual-8 nixie tube display

- ◆ When the air conditioner is turned on for the first time, dual-8 nixie tube defaulted to display current set temperature.
- ◆ When controller receives signal of display set temperature, dual-8 nixie tube displays set temperature. When received remote control signal is switched to indoor ambient temperature display status signal from other display status, dual-8 nixie tube will display indoor ambient temperature for 3-5s, and then turn back to display set temperature. If remote control to set other status, the display keeps the same.
- ◆ When air conditioner has a malfunction, dual-8 nixie tube will show relevant error code.

F1	Indoor ambient temperature sensor is open/short-circuited
F2	Indoor evaporator temperature sensor is open/short-circuited
H6	Blocked protection of IDU fan motor
C5	Malfunction protection of jumper cap
U8	Zero-crossing inspection circuit malfunction of the IDU fan motor
E8	Overload protection

- ◆ When air conditioner defrosts automatically, dual-8 nixie tube displays “H1”. (Heating icon is bright for a period time and then OFF for some models)
- ◆ If turn off light button, all display will be turned off.

(9) Memory function

- ① Power failure when turning on the unit
 - ◆ Memory content: ON status, mode, up&down swing, light, set temperature, set fan speed, general timer, Fahrenheit/ Celsius
 - ◆ General timer can be memorized. Time of timer is calculated again from energization.
 - ◆ Clock timer cant be memorized.
- ② Power failure when turning off the unit
 - ◆ Memory content: OFF status, mode, up&down swing, light, set temperature, set fan speed, general timer, Fahrenheit/ Celsius
 - ◆ General timer can be memorized. Time of timer is calculated again from energization.
 - ◆ Clock timer cant be memorized.

4. Special Function

(1) Health function (for the model with health function)

During operation of the IDU fan motor, press health button on the remote controller to start health function (If there is not health button on the remote controller, the unit defaults health function ON).

(2) I Feel function (for all models, but it needs the remote controller which can set this function)

When I FEEL command is received, the controller will operate according to the ambient temperature sent by the remote controller (For defrosting and cold air prevention, the unit operates according to the ambient temperature sensed by the air conditioner). The remote controller will regularly send ambient temperature data to the controller. When the data has not been received for a long time, the unit will operate according to the temperature sensed by the air conditioner. If I FEEL function is not set, the ambient temperature will be that sensed by the air conditioner.

Part II : Installation and Maintenance

7. Notes for Installation and Maintenance

Safety Precautions: Important!

Please read the safety precautions carefully before installation and maintenance.

The following contents are very important for installation and maintenance.

Please follow the instructions below.

- The installation or maintenance must accord with the instructions.
- Comply with all national electrical codes and local electrical codes.
- Pay attention to the warnings and cautions in this manual.
- All installation and maintenance shall be performed by distributor or qualified person.
- All electric work must be performed by a licensed technician according to local regulations and the instructions given in this manual.
- Be caution during installation and maintenance. Prohibit incorrect operation to prevent electric shock, casualty and other accidents.



Warnings

Electrical Safety Precautions:

1. Cut off the power supply of air conditioner before checking and maintenance.
2. The air condition must apply specialized circuit and prohibit share the same circuit with other appliances.
3. The air conditioner should be installed in suitable location and ensure the power plug is touchable.
4. Make sure each wiring terminal is connected firmly during installation and maintenance.
5. Have the unit adequately grounded. The grounding wire cant be used for other purposes.
6. Must apply protective accessories such as protective boards, cable-cross loop and wire clip.
7. The live wire, neutral wire and grounding wire of power supply must be corresponding to the live wire, neutral wire and grounding wire of the air conditioner.
8. The power cord and power connection wires cant be pressed by hard objects.
9. If power cord or connection wire is broken, it must be replaced by a qualified person.

10. If the power cord or connection wire is not long enough, please get the specialized power cord or connection wire from the manufacture or distributor. Prohibit prolong the wire by yourself.

11. For the air conditioner without plug, an air switch must be installed in the circuit. The air switch should be all-pole parting and the contact parting distance should be more than 3mm.

12. Make sure all wires and pipes are connected properly and the valves are opened before energizing.

13. Check if there is electric leakage on the unit body. If yes, please eliminate the electric leakage.

14. Replace the fuse with a new one of the same specification if it is burnt down; dont replace it with a cooper wire or conducting wire.

15. If the unit is to be installed in a humid place, the circuit breaker must be installed.

Installation Safety Precautions:

1. Select the installation location according to the requirement of this manual.(See the requirements in installation part)
2. Handle unit transportation with care; the unit should not be carried by only one person if it is more than 20kg.
3. When installing the indoor unit and outdoor unit, a sufficient fixing bolt must be installed; make sure the installation support is firm.
4. Ware safety belt if the height of working is above 2m.
5. Use equipped components or appointed components during installation.
6. Make sure no foreign objects are left in the unit after finishing installation.

Refrigerant Safety Precautions:

1. Avoid contact between refrigerant and fire as it generates poisonous gas; Prohibit prolong the connection pipe by welding.
2. Apply specified refrigerant only. Never have it mixed with any other refrigerant. Never have air remain in the refrigerant line as it may lead to rupture or other hazards.
3. Make sure no refrigerant gas is leaking out when installation is completed.
4. If there is refrigerant leakage, please take sufficient measure to minimize the density of refrigerant.
5. Never touch the refrigerant piping or compressor without wearing glove to avoid scald or frostbite.

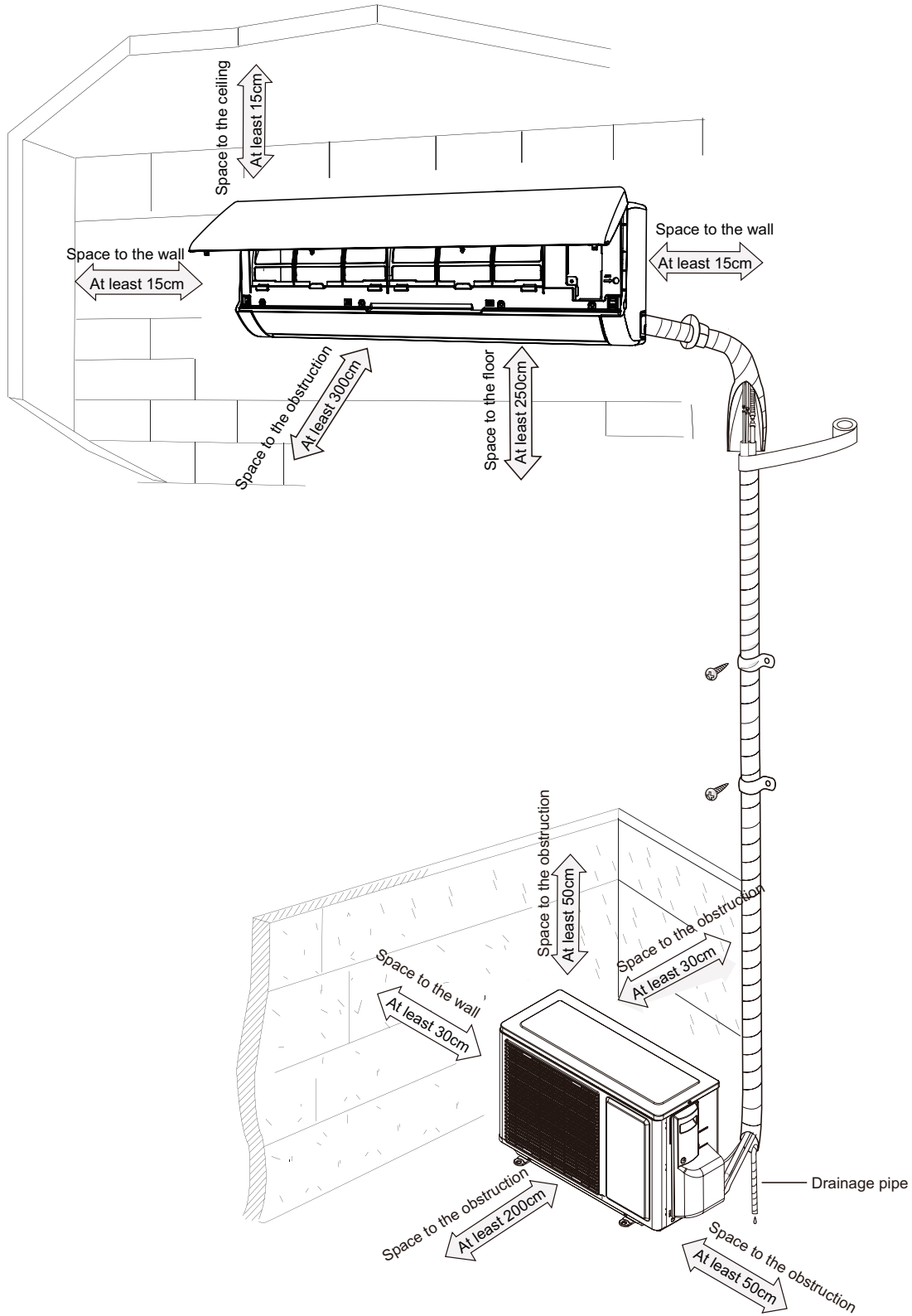
Improper installation may lead to fire hazard, explosion, electric shock or injury.

Main Tools for Installation and Maintenance

<p>1. Level meter, measuring tape</p> 	<p>2. Screw driver</p> 	<p>3. Impact drill, drill head, electric drill</p> 
<p>4. Electroprobe</p> 	<p>5. Universal meter</p> 	<p>6. Torque wrench, open-end wrench, inner hexagon spanner</p> 
<p>7. Electronic leakage detector</p> 	<p>8. Vacuum pump</p> 	<p>9. Pressure meter</p> 
<p>10. Pipe pliers, pipe cutter</p> 	<p>11. Pipe expander, pipe bender</p> 	<p>12. Soldering appliance, refrigerant container</p> 

8. Installation

8.1 Installation Dimension Diagram



8.2 Installation Parts-Checking

No.	Name	No.	Name
1	Indoor unit	8	Sealing gum
2	Outdoor unit	9	Wrapping tape
3	Connection pipe	10	Support of outdoor unit
4	Drainage pipe	11	Fixing screw
5	Wall-mounting frame	12	Drainage plug(cooling and heating unit)
6	Connecting cable(power cord)	13	Owners manual, remote controller
7	Wall pipe		

⚠ Note:

- 1.Please contact the local agent for installation.
- 2.Dont use unqualified power cord.

8.3 Selection of Installation Location

1. Basic Requirement:

Installing the unit in the following places may cause malfunction. If it is unavoidable, please consult the local dealer:

- (1) The place with strong heat sources, vapors, flammable or explosive gas, or volatile objects spread in the air.
- (2) The place with high-frequency devices (such as welding machine, medical equipment).
- (3) The place near coast area.
- (4) The place with oil or fumes in the air.
- (5) The place with sulfureted gas.
- (6) Other places with special circumstances.

2. Indoor Unit:

- (1) There should be no obstruction near air inlet and air outlet.
- (2) Select a location where the condensation water can be dispersed easily and wont affect other people.
- (3) Select a location which is convenient to connect the outdoor unit and near the power socket.
- (4) Select a location which is out of reach for children.
- (5) The location should be able to withstand the weight of indoor unit and wont increase noise and vibration.
- (6) The appliance must be installed 2.5m above floor.
- (7) Dont install the indoor unit right above the electric appliance.
- 8.The appliance shall not be installed in the laundry

3. Outdoor Unit:

- (1) Select a location where the noise and outflow air emitted by the outdoor unit will not affect neighborhood.
- (2) The location should be well ventilated and dry, in which the outdoor unit wont be exposed directly to sunlight or strong wind.
- (3) The location should be able to withstand the weight of outdoor unit.
- (4) Make sure that the installation follows the requirement of installation dimension diagram.
- (5) Select a location which is out of reach for children and far away from animals or plants.If it is unavoidable, please add fence for safety purpose.

8.4 Electric Connection Requirement

1. Safety Precaution

- (1) Must follow the electric safety regulations when installing the unit.
- (2) According to the local safety regulations, use qualified power supply circuit and air switch.
- (3) Make sure the power supply matches with the requirement of air conditioner. Unstable power supply or incorrect wiring may result in electric shock,fire hazard or malfunction. Please install proper power supply cables before using the air conditioner.

Air-conditioner	Air switch capacity
07K	10A

- (4) Properly connect the live wire, neutral wire and grounding wire of power socket.
- (5) Be sure to cut off the power supply before proceeding any work related to electricity and safety.
- (6) Do not put through the power before finishing installation.
- (7) For appliances with type Y attachment,the instructions shall contain the substance of thefollowing.If the supply cord is damaged,it must be replaced by the manufacturer,its service agent or similarly qualified persons in order to avoid a hazard.
- (8) The temperature of refrigerant circuit will be high, please keep the interconnection cable away from the copper tube.

2. Grounding Requirement:

- (1) The air conditioner is first class electric appliance. It must be properly grounding with specialized grounding device by a professional. Please make sure it is always grounded effectively, otherwise it may cause electric shock.
- (2) The yellow-green wire in air conditioner is grounding wire, which cant be used for other purposes.
- (3) The grounding resistance should comply with national electric safety regulations.
- (4) The appliance must be positioned so that the plug is accessible.
- (5) An all-pole disconnection switch having a contact separation of at least 3mm in all poles should be connected in fixed wiring.
- (6) Including an air switch with suitable capacity, please note the following table. Air switch should be included magnet buckle and heating buckle function, it can protect the circuit-short and overload. (Caution: please do not use the fuse only for protect the circuit)

8.5 Installation of Indoor Unit

1. Choosing Installation location

Recommend the installation location to the client and then confirm it with the client.

2. Install Wall-mounting Frame

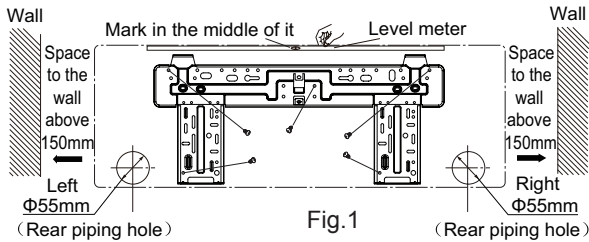
- (1) Hang the wall-mounting frame on the wall; adjust it in horizontal position with the level meter and then point out the screw fixing holes on the wall.
- (2) Drill the screw fixing holes on the wall with impact drill (the specification of drill head should be the same as the plastic expansion particle) and then fill the plastic expansion particles

in the holes.

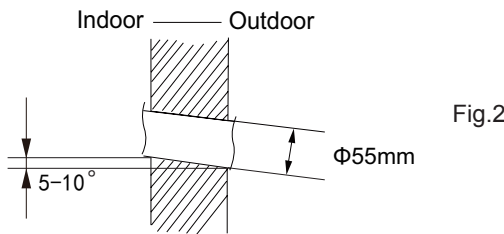
(3) Fix the wall-mounting frame on the wall with tapping screws (ST4.2X25TA) and then check if the frame is firmly installed by pulling the frame. If the plastic expansion particle is loose, please drill another fixing hole nearby.

3. Install Wall-mounting Frame

(1) Choose the position of piping hole according to the direction of outlet pipe. The position of piping hole should be a little lower than the wall-mounted frame. (As show in Fig.1)



(2) Open a piping hole with the diameter of $\Phi 55\text{mm}$ on the selected outlet pipe position. In order to drain smoothly, slant the piping hole on the wall slightly downward to the outdoor side with the gradient of $5\text{-}10^\circ$. (As show in Fig.2)



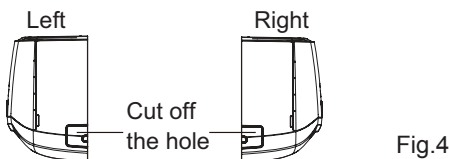
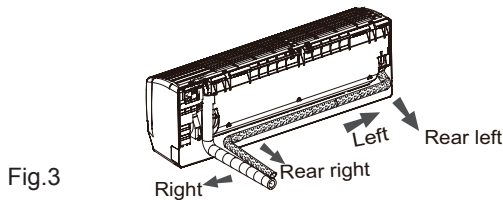
⚠ Note:

- (1) Pay attention to dust prevention and take relevant safety measures when opening the hole.
- (2) The plastic expansion particles are not provided and should be bought locally.

4. Outlet Pipe

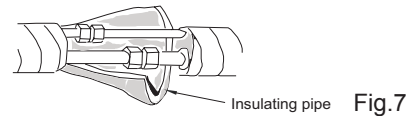
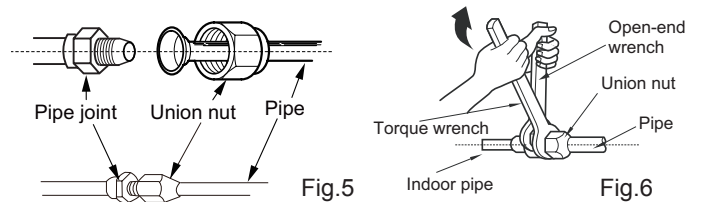
(1) The pipe can be led out in the direction of right, rear right, left or rear left. (As show in Fig.3)

(2) When selecting leading out the pipe from left or right, please cut off the corresponding hole on the bottom case. (As show in Fig.4)



5. Connect the Pipe of Indoor Unit

- (1) Aim the pipe joint at the corresponding bellmouth. (As show in Fig.5)
- (2) Pretightening the union nut with hand.
- (3) Adjust the torque force by referring to the following sheet. Place the open-end wrench on the pipe joint and place the torque wrench on the union nut. Tighten the union nut with torque wrench. (As show in Fig.6)
- (4) Wrap the indoor pipe and joint of connection pipe with insulating pipe, and then wrap it with tape. (As show in Fig.7)

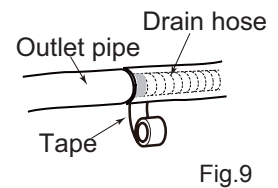
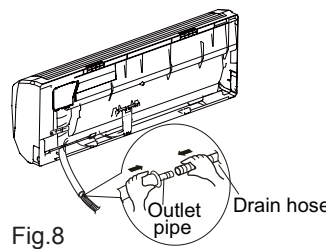


Refer to the following table for wrench moment of force:

Hex nut diameter(mm)	Tightening torque(N·m)
$\Phi 6$	15~20
$\Phi 9.52$	30~40
$\Phi 12$	45~55
$\Phi 16$	60~65
$\Phi 19$	70~75

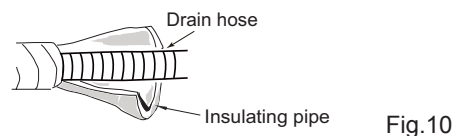
6. Install Drain Hose

- (1) Connect the drain hose to the outlet pipe of indoor unit. (As show in Fig.8)
- (2) Bind the joint with tape. (As show in Fig.9)



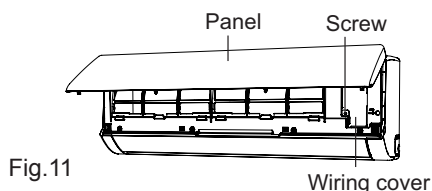
⚠ Note:

- (1) Add insulating pipe in the indoor drain hose in order to prevent condensation.
- (2) The plastic expansion particles are not provided. (As show in Fig.10)

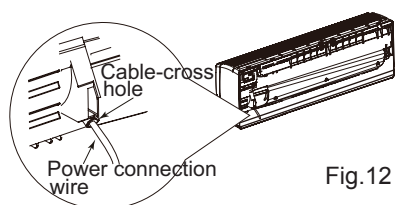


7. Connect Wire of Indoor Unit

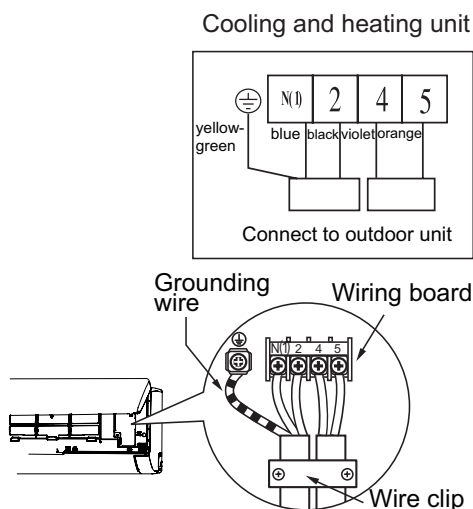
(1) Open the panel, remove the screw on the wiring cover and then take down the cover.(As show in Fig.11)



(2) Make the power connection wire go through the cable-cross hole at the back of indoor unit and then pull it out from the front side.(As show in Fig.12)



(3) Remove the wire clip; connect the power connection wire signal control wire (only for cooling and heating unit) to the wiring terminal according to the color; tighten the screw and then fix the power connection wire with wire clip.(As show in Fig.13)



Note: The wiring connect is for reference only, please refer to the actual one.

Fig.13

(4) Put wiring cover back and then tighten the screw.
 (5) Close the panel.

⚠ Note:

- (1) All wires of indoor unit and outdoor unit should be connected by a professional.
- (2) If the length of power connection wire is insufficient, please contact the supplier for a new one. Avoid extending the wire by yourself.
- (3) For the air conditioner with plug, the plug should be reachable after finishing installation.
- (4) For the air conditioner without plug, an air switch must be installed in the line. The air switch should be all-pole parting and the contact parting distance should be more than 3mm.

8. Bind up Pipe

- (1) Bind up the connection pipe, power cord and drain hose with the band.(As show in Fig.14)
- (2) Reserve a certain length of drain hose and power cord for installation when binding them. When binding to a certain degree, separate the indoor power and then separate the drain hose.(As show in Fig.15)
- (3) Bind them evenly.
- (4) The liquid pipe and gas pipe should be bound separately at the end.

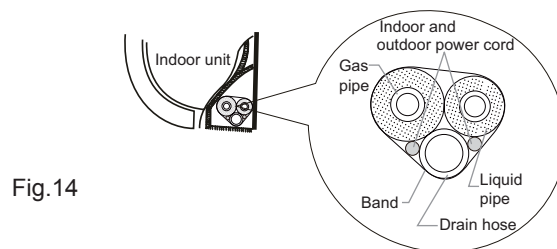


Fig.14

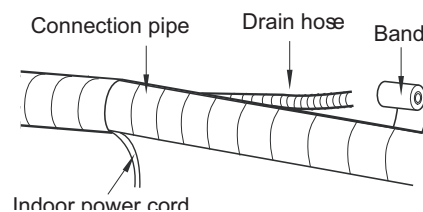


Fig.15

⚠ Note:

- (1) The power cord and control wire cant be crossed or winding.
- (2) The drain hose should be bound at the bottom.

9. Hang the Indoor Unit

- (1) Put the bound pipes in the wall pipe and then make them pass through the wall hole.
- (2) Hang the indoor unit on the wall-mounting frame.
- (3) Stuff the gap between pipes and wall hole with sealing gum.
- (4) Fix the wall pipe.(As show in Fig.16)
- (5) Check if the indoor unit is installed firmly and closed to the wall.(As show in Fig.17)

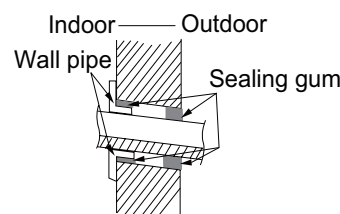


Fig.16

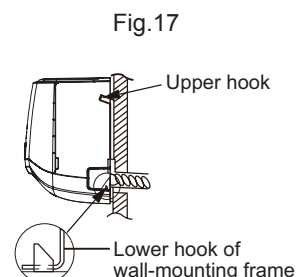


Fig.17

⚠ Note:

Do not bend the drain hose too excessively in order to prevent blocking.

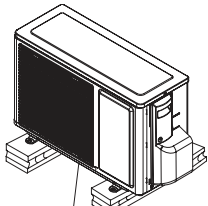
8.6 Installation of Outdoor unit

1. Fix the Support of Outdoor Unit(Select it according to the actual installation situation)

- (1) Select installation location according to the house structure.
- (2) Fix the support of outdoor unit on the selected location with expansion screws.

⚠ Note:

- (1) Take sufficient protective measures when installing the outdoor unit.
- (2) Make sure the support can withstand at least four times the unit weight.
- (3) The outdoor unit should be installed at least 3cm above the floor in order to install drain joint.(As show in Fig.18)
- (4) For the unit with cooling capacity of 2300W~5000W, 6 expansion screws are needed; for the unit with cooling capacity of 6000W~8000W, 8 expansion screws are needed; for the unit with cooling capacity of 10000W~16000W, 10 expansion screws are needed.



At least 3cm above the floor
Fig.18

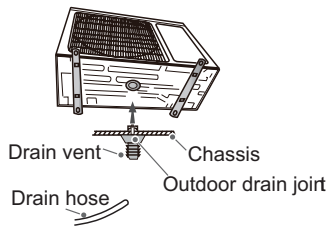


Fig.19

2. Install Drain Joint(Only for cooling and heating unit)

- (1) Connect the outdoor drain joint into the hole on the chassis.
 - (2) Connect the drain hose into the drain vent.
- (As show in Fig.19)

3. Fix Outdoor Unit

- (1) Place the outdoor unit on the support.
 - (2) Fix the foot holes of outdoor unit with bolts.
- (As show in Fig.20)

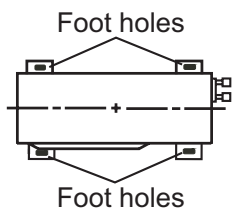


Fig.20

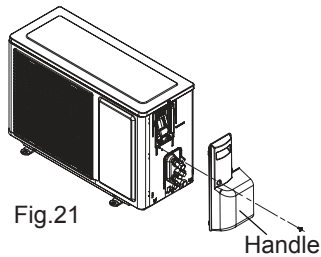


Fig.21

4. Connect Indoor and Outdoor Pipes

- (1) Remove the screw on the right handle of outdoor unit and then remove the handle.(As show in Fig.21)
- (2) Remove the screw cap of valve and aim the pipe joint at the bellmouth of pipe.(As show in Fig.22)

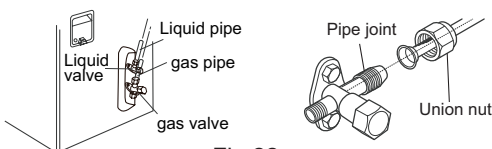


Fig.22

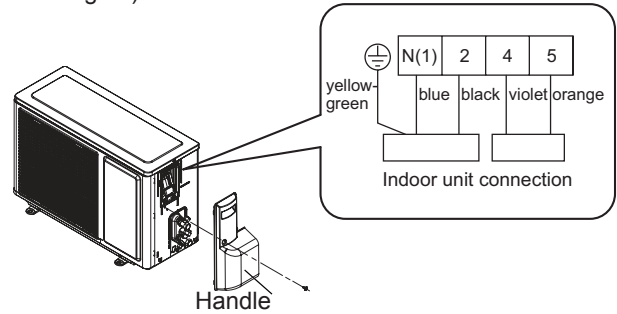
- (3) Pretightening the union nut with hand.
- (4) Tighten the union nut with torque wrench .

Refer to the following table for wrench moment of force:

Hex nut diameter(mm)	Tightening torque(N·m)
Φ6	15~20
Φ9.52	30~40
Φ12	45~55
Φ16	60~65
Φ19	70~75

5. Connect Outdoor Electric Wire

- (1) Remove the wire clip; connect the power connection wire and signal control wire (only for cooling and heating unit) to the wiring terminal according to the color; fix them with screws.(As show in Fig.23)



Note: The wiring connect is for reference only, please refer to the actual one

Fig.23

- (2) Fix the power connection wire and signal control wire with wire clip (only for cooling and heating unit).

⚠ Note:

- (1) After tightening the screw, pull the power cord slightly to check if it is firm.
- (2) Never cut the power connection wire to prolong or shorten the distance.

6. Neaten the Pipes

- (1) The pipes should be placed along the wall, bent reasonably and hidden possibly. Min. semidiameter of bending the pipe is 10cm.
- (2) If the outdoor unit is higher than the wall hole, you must set a U-shaped curve in the pipe before pipe goes into the room, in order to prevent rain from getting into the room.(As show in Fig.24)

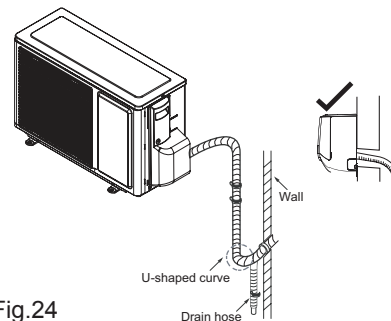


Fig.24

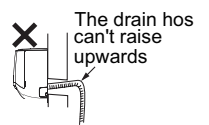
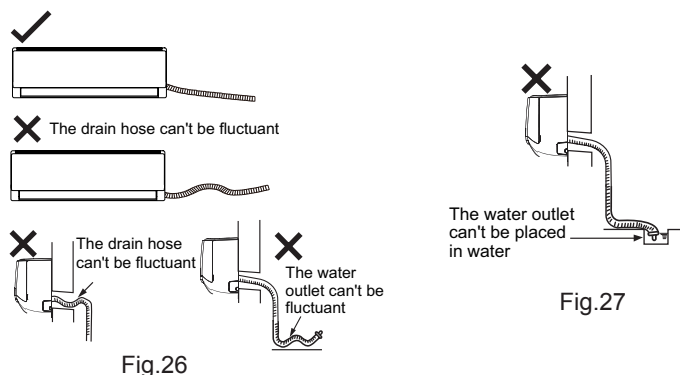


Fig.25

⚠ Note:

- (1) The through-wall height of drain hose shouldnt be higher than the outlet pipe hole of indoor unit.(As show in Fig.25)
- (2) Slant the drain hose slightly downwards. The drain hose cant be curved, raised and fluctuant, etc.(As show in Fig.26)

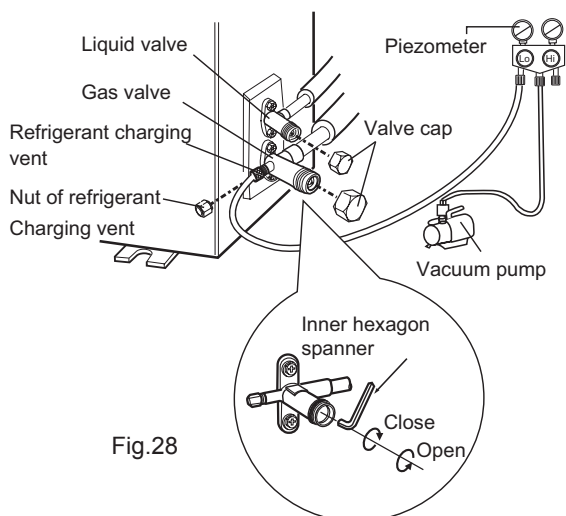
(3) The water outlet can't be placed in water in order to drain smoothly.(As show in Fig.27)



8.7 Vacuum Pumping and Leak Detection

1. Use Vacuum Pump

- (1) Remove the valve caps on the liquid valve and gas valve and the nut of refrigerant charging vent.
- (2) Connect the charging hose of piezometer to the refrigerant charging vent of gas valve and then connect the other charging hose to the vacuum pump.
- (3) Open the piezometer completely and operate for 10-15min to check if the pressure of piezometer remains in -0.1MPa .
- (4) Close the vacuum pump and maintain this status for 1-2min to check if the pressure of piezometer remains in -0.1MPa . If the pressure decreases, there may be leakage.
- (5) Remove the piezometer, open the valve core of liquid valve and gas valve completely with inner hexagon spanner.
- (6) Tighten the screw caps of valves and refrigerant charging vent.(As show in Fig.28)



2. Leakage Detection

- (1) With leakage detector:
Check if there is leakage with leakage detector.
- (2) With soap water:
If leakage detector is not available, please use soap water for leakage detection. Apply soap water at the suspected position and keep the soap water for more than 3min. If there are air bubbles coming out of this position, there's a leakage.

8.8 Check after Installation and Test operation

1. Check after Installation

Check according to the following requirement after finishing installation.

NO.	Items to be checked	Possible malfunction
1	Has the unit been installed firmly?	The unit may drop, shake or emit noise.
2	Have you done the refrigerant leakage test?	It may cause insufficient cooling (heating) capacity.
3	Is heat insulation of pipeline sufficient?	It may cause condensation and water dripping.
4	Is water drained well?	It may cause condensation and water dripping.
5	Is the voltage of power supply according to the voltage marked on the nameplate?	It may cause malfunction or damage the parts.
6	Is electric wiring and pipeline installed correctly?	It may cause malfunction or damage the parts.
7	Is the unit grounded securely?	It may cause electric leakage.
8	Does the power cord follow the specification?	It may cause malfunction or damage the parts.
9	Is there any obstruction in air inlet and air outlet?	It may cause insufficient cooling (heating).
10	The dust and sundries caused during installation are removed?	It may cause malfunction or damaging the parts.
11	The gas valve and liquid valve of connection pipe are open completely?	It may cause insufficient cooling (heating) capacity.

2. Test Operation

- (1) Preparation of test operation
 - The client approves the air conditioner installation.
 - Specify the important notes for air conditioner to the client.
- (2) Method of test operation
 - Put through the power, press ON/OFF button on the remote controller to start operation.
 - Press MODE button to select AUTO, COOL, DRY, FAN and HEAT to check whether the operation is normal or not.
 - If the ambient temperature is lower than 16°C , the air conditioner can't start cooling.

9. Maintenance

9.1 Error code

No.	Malfunction Name	Display Method of Indoor Unit			A/C Status	Possible Causes(For specific maintenance method, please refer to the following procedure of troubleshooting)
		Error Code	Indicator lamp (Only for the unit with indicator; during blinking, ON for 0.5S and OFF for 0.5S)			
			Operation Lamp	COOL Lamp	HEAT Lamp	
1	Indoor ambient temperature sensor is open/short-circuited	F1		Blinks once every 3s		<p>The unit will stop operation as it reaches the temperature point. During cooling and drying operation, except IDU fan motor operates, other loads stop operation; During heating operation, the system stops operation.</p> <ol style="list-style-type: none"> 1. The wiring terminal between indoor ambient temperature sensor and main board is loosened or poorly contacted; 2. There's short circuit due to trip-over of the parts on controller; 3. Indoor ambient temperature sensor is damaged (Please check it by referring to the resistance table for temperature sensor) 4. Main board is broken.
2	Indoor evaporator temperature sensor is open/short-circuited	F2		Blinks twice every 3s		<p>The unit will stop operation as it reaches the temperature point. During cooling and drying operation, except IDU fan operates, other loads stop operation; During heating operation, the complete unit stops operation.</p> <ol style="list-style-type: none"> 1. The wiring terminal between indoor evaporator temperature sensor and main board is loosened or poorly contacted; 2. There's short circuit due to the trip-over of the parts on controller; 3. Indoor evaporator temperature sensor is damaged (Please check it by referring to the resistance table for temperature sensor) 4. Main board is broken.
3	Blocked protection of IDU fan motor	H6	Blinks 11 times every 3s			<p>IDU fan, ODU fan, compressor and electric heat tube stop operation. Horizontal louver stops at the current position.</p> <ol style="list-style-type: none"> 1. The feedback terminal of PG motor is not connected tightly. 2. The control terminal of PG motor is not connected tightly. 3. Fan blade rotates unsmoothly. 4. Malfunction of motor 5. Main board is broken.
4	Malfunction protection of jumper cap	C5	Blinks 15 times every 3s			<p>Operation of remote controller or control panel is available, but the unit won't act.</p> <ol style="list-style-type: none"> 1. There's not jumper cap on the main board. 2. Jumper cap is not inserted properly and tightly. 3. Jumper cap is damaged. 4. Controller is damaged.
5	Zero-crossing inspection circuit malfunction of the IDU fan motor	U8	Blinks 17 times every 3s			<p>Operation of remote controller or control panel is available, but the unit won't act.</p> <ol style="list-style-type: none"> 1. Quick de-energization and energization. Wrong judgement by the controller because the electric-discharging of capacitor is slow. 2. Zero-crossing inspection circuit of main board for controller is abnormal.
6	Overload malfunction	E8				<p>The entire unit stops.</p> <ol style="list-style-type: none"> 1. Indoor and outdoor heat exchanger is too dirty? Or air inlet/outlet is blocked? 2. Fan motor is not working. Abnormal fan speed; fanspeed is too low or the fan doesn't run. 3. Compressor operates normally or not? Is there any abnormal noise or oil leak? Casing is too hot? 4. System is blocked inside? (Dirt blockage? Ice blockage? Oil blockage? Y-valve is not fully open?) 5. Main board temperature sensor detects wrongly.

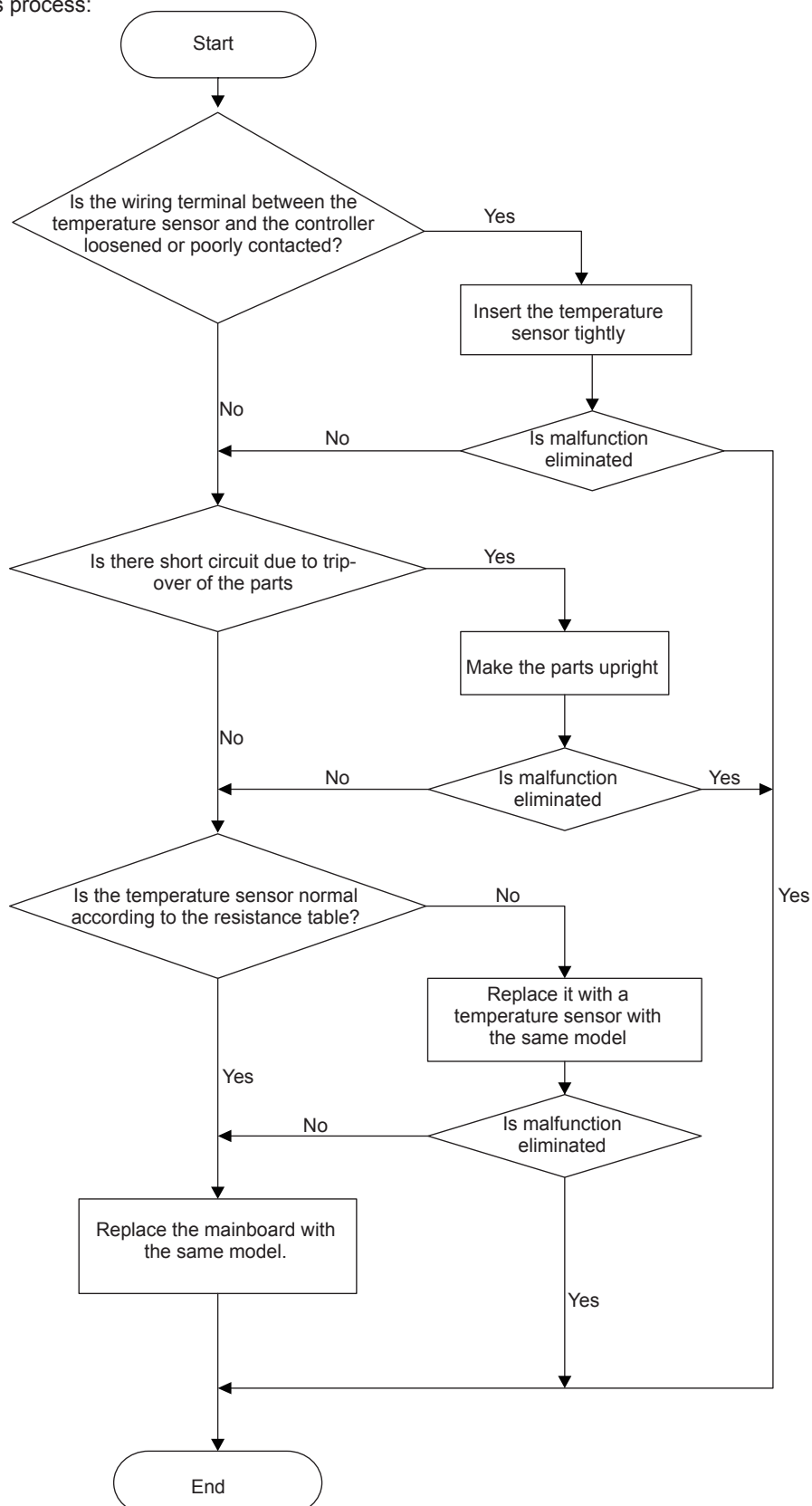
9.2 Procedure of Troubleshooting

1. Malfunction of Temperature Sensor F1, F2

Main detection points:

- Is the wiring terminal between the temperature sensor and the controller loosened or poorly contacted?
- Is there short circuit due to trip-over of the parts?
- Is the temperature sensor broken?
- Is mainboard broken?

Malfunction diagnosis process:

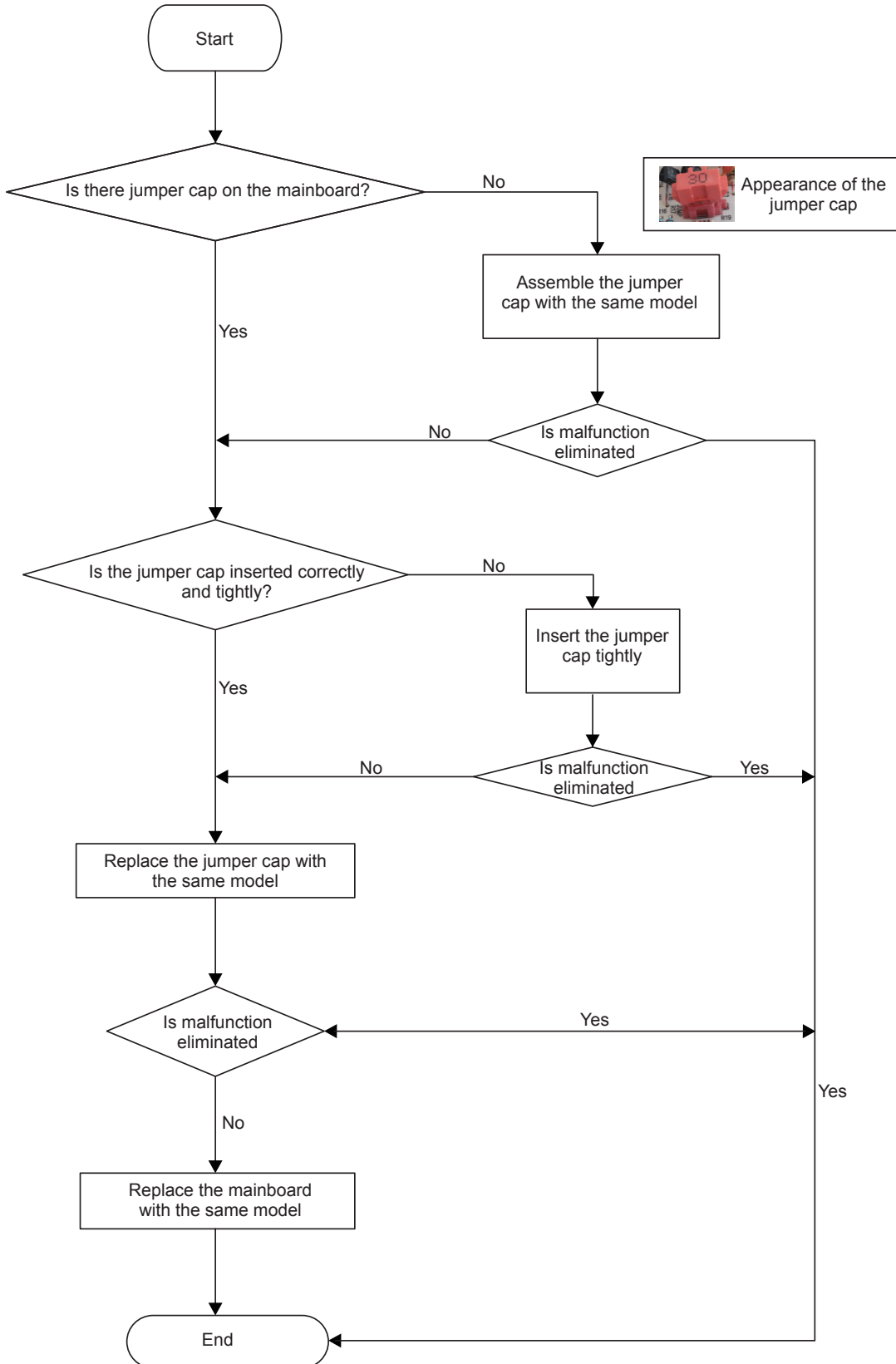


3. Malfunction of Protection of Jumper Cap C5

Main detection points:

- Is there jumper cap on the mainboard?
- Is the jumper cap inserted correctly and tightly?
- The jumper is broken?
- The motor is broken?
- Detection circuit of the mainboard is defined abnormal?

Malfunction diagnosis process:

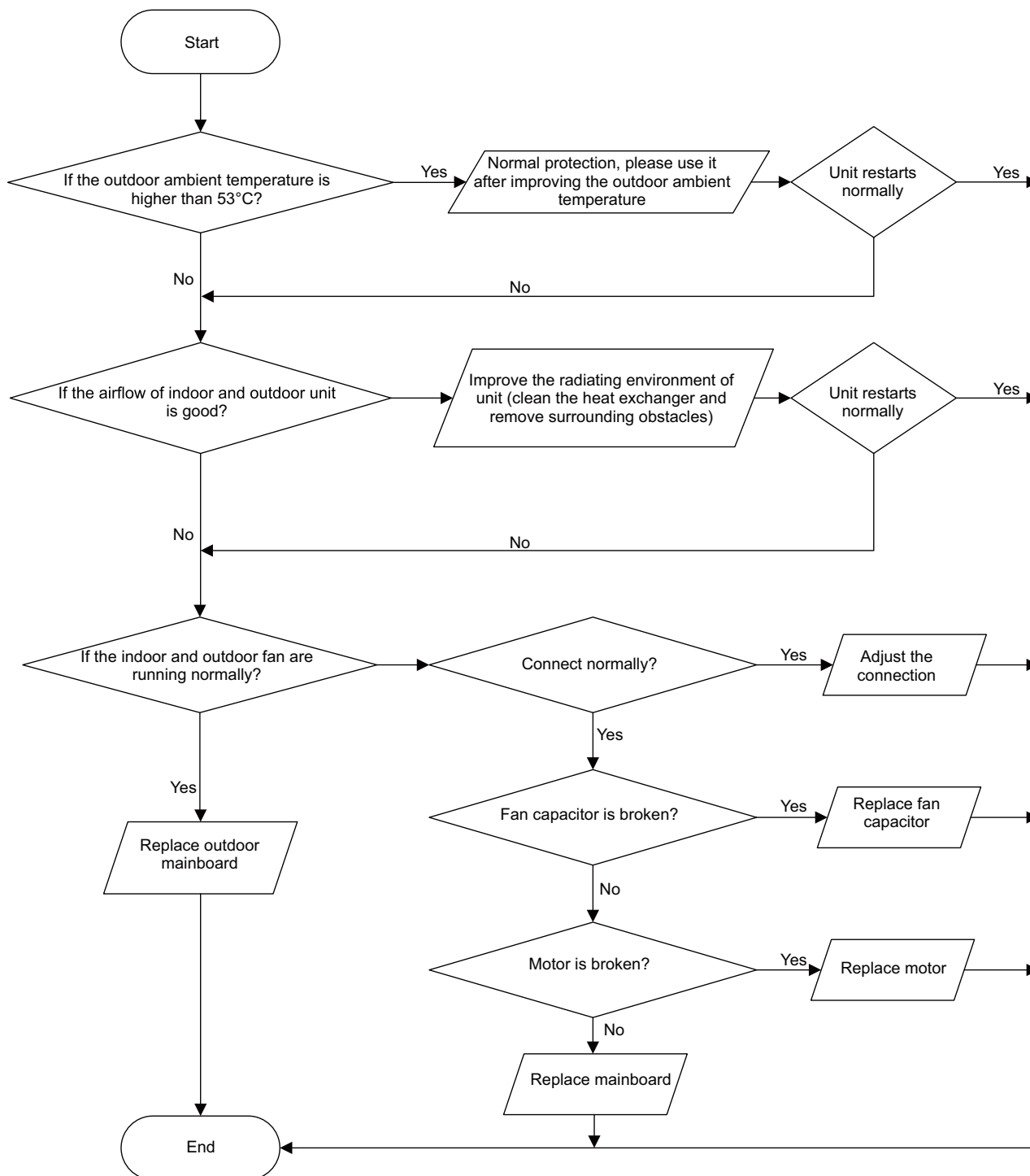


5. High temperature and overload protection (AP1 below means control board of outdoor unit) E8

Main detection points:

- If the outdoor ambient temperature is in normal range;
- If the indoor and outdoor fan are running normally
- If the radiating environment of indoor and outdoor unit is good.

Malfunction diagnosis process:



9.3 Maintenance method for normal malfunction

1. Air Conditioner Cant be Started Up

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

2. Poor Cooling (Heating) for Air Conditioner

Possible Causes	Discriminating Method (Air conditioner Status)	Troubleshooting
Set temperature is improper	Observe the set temperature on remote controller	Adjust the set temperature
Rotation speed of the IDU fan motor is set too low	Small wind blow	Set the fan speed at high or medium
Filter of indoor unit is blocked	Check the filter to see its blocked	Clean the filter
Installation position for indoor unit and outdoor unit is improper	Check whether the installation position is proper according to installation requirement for air conditioner	Adjust the installation position, and install the rainproof and sunproof for outdoor unit
Refrigerant is leaking	Discharged air temperature during cooling is higher than normal discharged wind temperature; Discharged air temperature during heating is lower than normal discharged wind temperature; Units pressure is much lower than regulated range	Find out the leakage causes and deal with it. Add refrigerant.
Malfunction of 4-way valve	Blow cold wind during heating	Replace the 4-way valve
Malfunction of capillary	Discharged air temperature during cooling is higher than normal discharged wind temperature; Discharged air temperature during heating is lower than normal discharged wind temperature; Unit pressure is much lower than regulated range. If refrigerant isnt leaking, part of capillary is blocked	Replace the capillary
Flow volume of valve is insufficient	The pressure of valves is much lower than that stated in the specification	Open the valve completely
Malfunction of horizontal louver	Horizontal louver cant swing	Refer to point 3 of maintenance method for details
Malfunction of the IDU fan motor	The IDU fan motor cant operate	Refer to troubleshooting for H6 for maintenance method in details
Malfunction of the ODU fan motor	The ODU fan motor cant operate	Refer to point 4 of maintenance method for details
Malfunction of compressor	Compressor cant operate	Refer to point 5 of maintenance method for details

3. Horizontal Louver Cant Swing

Possible Causes	Discriminating Method (Air conditioner Status)	Troubleshooting
Wrong wire connection, or poor connection	Check the wiring status according to circuit diagram	Connect wires according to wiring diagram to make sure all wiring terminals are connected firmly
Stepping motor is damaged	Stepping motor cant operate	Repair or replace stepping motor
Main board is damaged	Others are all normal, while horizontal louver cant operate	Replace the main board with the same model

4. ODU Fan Motor Cant Operate

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

5. Compressor Cant Operate

Possible causes	Discriminating method (air conditioner status)	Troubleshooting
Wrong wire connection, or poor connection	Check the wiring status according to circuit diagram	Connect wires according to wiring diagram to make sure all wiring terminals are connected firmly
Capacity of compressor is damaged	Measure the capacity of fan capacitor with an universal meter and find that the capacity is out of the deviation range indicated on the nameplate of fan capacitor.	Replace the compressor capacitor
Power voltage is a little low or high	Use universal meter to measure the power supply voltage. The voltage is a little high or low	Suggest to equip with voltage regulator
Coil of compressor is burnt out	Use universal meter to measure the resistance between compressor terminals and its 0	Repair or replace compressor
Cylinder of compressor is blocked	Compressor cant operate	Repair or replace compressor

6. Air Conditioner is Leaking

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

7. Abnormal Sound and Vibration

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

NO.	Description	Part Code		Qty
		GWH07NA-K3NNC7F/I		
		Product Code	CA195N06200	
1	Front Panel Assy	20012648	20012648	1
2	Display Board	30565106	30565106	1
3	Filter Sub-Assy	11122095	11122095	2
4	Screw Cover	24252016	24252016	3
5	Front Case	2002228601	2002228601	1
6	Axile Bush	10542036	10542036	1
7	Guide Louver	10512162	10512162	1
8	Air Louver 2	10512114	10512114	1
9	Helicoid tongue	26112202	26112202	1
10	Axile Bush	10542036	10542036	1
11	Rear Case assy	2220213501	2220213501	1
12	Cross Flow Fan	10352034	10352034	1
13	O-Gasket sub-assy of Bearing	7651205102	7651205102	1
14	Ring of Bearing	26152022	26152022	1
15	Remote Controller	30510065	305100611	1
16	Drainage hose	0523001408	0523001408	1
17	Connecting Cable	40020540	40020540	0
18	Evaporator Assy	01002752	01002752	1
19	Connecting Cable	40020536	40020536	0
20	Power Cord	4002046417	4002046417	1
21	Front Panel	20012615	20012615	1
22	Jumper	4202300114	4202300114	1
23	Electric Box Cover2	20122075	20122075	1
24	Temperature Sensor	390000453	390000453	1
25	Main Board	30135353	30135357	1
26	Ambient Temperature Sensor	390000597	390000597	1
27	Terminal Board	42010268	42010268	1
28	Electric Box	20112091	20112091	1
29	Capacitor CBB61S	33010747	33010747	1
30	Electric Box Assy	10000202117	10000204957	1
31	Air Louver 1	10512113	10512113	1
32	Stepping Motor	1521212901	1521212901	1
33	Crank	10582070	10582070	1
34	Rubber Plug (Water Tray)	76712012	76712012	1
35	Fan Motor	15012115	15012115	1
36	Motor Press Plate	26112201	26112201	1
37	Connecting pipe clamp	26112199	26112199	1
38	Wall Mounting Frame	01252231	01252231	1
39	Shield box(electricbox)	01592081	01592081	1
40	Electric Box Cover	20122114	20122114	1
41	Cold Plasma Generator	/	1114001602	1

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NO.	Description	Part Code			Qty
		GWH07NA-K3NND2F/I		GWH07NA-K3NNE4E/I	
		Product Code	CA149N00800	CA149N00801	
1	Front Panel Assy	20012799	20012799	20012999	1
2	Display Board	30565136	30565136	30565155	1
3	Filter Sub-Assy	11122095	11122095	11122095	2
4	Screw Cover	24252016	24252016	24252016	3
5	Front Case	20022286	20022286	2002228603	1
6	Axile Bush	10542036	10542036	10542036	1
7	Guide Louver	10512162	10512162	10512162	1
8	Air Louver 2	10512114	10512114	10512114	1
9	Helicoid tongue	26112202	26112202	26112202	1
10	Axile Bush	10542036	10542036	10542036	1
11	Rear Case assy	22202225	22202225	2220213501	1
12	Cross Flow Fan	10352034	10352034	10352034	1
13	O-Gasket sub-assy of Bearing	7651205102	7651205102	7651205102	1
14	Ring of Bearing	26152022	26152022	26152022	1
15	Remote Controller	30510065	305100611	30510065	1
16	Drainage hose	0523001408	0523001408	0523001408	1
17	Connecting Cable	40020540	40020540	40020540	0
18	Evaporator Assy	01002752	01002752	01002577	1
19	Connecting Cable	40020536	40020536	40020536	0
20	Power Cord	4002046417	4002046417	4002046417	1
21	Front Panel	20012733S	20012733S	20012909	1
22	Jumper	4202300114	4202300114	4202300114	1
23	Electric Box Cover2	20122075	20122075	20122075	1
24	Temperature Sensor	390000453	390000453	390000453	1
25	Main Board	30135353	30135357	30135353	1
26	Ambient Temperature Sensor	390000597	390000597	390000597	1
27	Terminal Board	42010268	42010268	42010268	1
28	Electric Box	20112091	20112091	20112091	1
29	Capacitor CBB61S	33010747	33010747	33010747	1
30	Electric Box Assy	10000202671	10000202764	10000202108	1
31	Air Louver 1	10512113	10512113	10512113	1
32	Stepping Motor	1521212901	1521212901	1521212901	1
33	Crank	10582070	10582070	10582070	1
34	Rubber Plug (Water Tray)	76712012	76712012	76712012	1
35	Fan Motor	15012115	15012115	15012115	1
36	Motor Press Plate	26112201	26112201	26112201	1
37	Connecting pipe clamp	26112199	26112199	26112199	1
38	Wall Mounting Frame	01252231	01252231	01252231	1
39	Shield box(electricbox)	01592080	01592081	01592080	1
40	Electric Box Cover	20122114	20122114	20122114	1
41	Cold Plasma Generator	/	1114001602	/	1

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NO.	Description	Part Code		Qty
		GWH07NA-K3NNB3F/I	GWH07NA-K3NND1F/I	
		Product Code		
		CA138N07500	CA147N05100	
1	Front Panel Assy	20012462	20012749	1
2	Display Board	30565088	30565122	1
3	Filter Sub-Assy	11122095	11122095	2
4	Screw Cover	24252016	24252016	3
5	Front Case	20022286	20022286	1
6	Axile Bush	10542036	10542036	1
7	Guide Louver	10512162	10512162	1
8	Air Louver 2	10512114	10512114	1
9	Helicoid tongue	26112202	26112202	1
10	Axile Bush	10542036	10542036	1
11	Rear Case assy	22202135	22202135	1
12	Cross Flow Fan	10352034	10352034	1
13	O-Gasket sub-assy of Bearing	7651205102	7651205102	1
14	Ring of Bearing	26152022	26152022	1
15	Remote Controller	30510065	30510065	1
16	Drainage hose	0523001408	0523001408	1
17	Connecting Cable	40020540	40020540	0
18	Evaporator Assy	01002752	01002752	1
19	Connecting Cable	40020536	40020536	0
20	Power Cord	4002046417	4002046417	1
21	Front Panel	20012452S	20012697C	1
22	Jumper	4202300114	4202300114	1
23	Electric Box Cover2	20122075	20122075	1
24	Temperature Sensor	390000453	390000453	1
25	Main Board	30135353	30135353	1
26	Ambient Temperature Sensor	390000597	390000597	1
27	Terminal Board	42010268	42010268	1
28	Electric Box	20112091	20112091	1
29	Capacitor CBB61S	33010747	33010747	1
30	Electric Box Assy	10000202438	10000202610	1
31	Air Louver 1	10512113	10512113	1
32	Stepping Motor	1521212901	1521212901	1
33	Crank	10582070	10582070	1
34	Rubber Plug (Water Tray)	76712012	76712012	1
35	Fan Motor	15012115	15012115	1
36	Motor Press Plate	26112201	26112201	1
37	Connecting pipe clamp	26112199	26112199	1
38	Wall Mounting Frame	01252231	01252231	1
39	Shield box(electricbox)	01592081	01592081	1
40	Electric Box Cover	20122114	20122114	1
41	Cold Plasma Generator	/	/	/

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NO.	Description	Part Code		Qty
		GWH07NA-K3NNE1F/I		
		Product Code	CA404N06900	
1	Front Panel Assy	20012964	00000300236	1
2	Display Board	30565144	30565144	1
3	Filter Sub-Assy	11122095	11122095	2
4	Screw Cover	242520172	242520172	3
5	Front Case	2002228604	2002228604	1
6	Axile Bush	10542036	10542036	1
7	Guide Louver	1051216202	1051216202	1
8	Air Louver 2	1051211401	1051211401	1
9	Helicoid tongue	2611220201	2611220201	1
10	Axile Bush	10542036	10542036	1
11	Rear Case assy	2220213502	2220213502	1
12	Cross Flow Fan	10352034	10352034	1
13	O-Gasket sub-assy of Bearing	7651205102	7651205102	1
14	Ring of Bearing	26152022	26152022	1
15	Remote Controller	305100611	305100611	1
16	Drainage hose	0523001408	0523001408	1
17	Connecting Cable	40020540	40020540	0
18	Evaporator Assy	01002752	01002752	1
19	Connecting Cable	40020536	40020536	0
20	Power Cord	4002046417	4002046417	1
21	Front Panel	20012958P	20012958	1
22	Jumper	4202300114	4202300114	1
23	Electric Box Cover2	2010249602	2010249602	1
24	Temperature Sensor	390000453	390000453	1
25	Main Board	30135357	30135357	1
26	Ambient Temperature Sensor	390000597	390000597	1
27	Terminal Board	42010268	42010268	1
28	Electric Box	20112091	20112091	1
29	Capacitor CBB61S	33010747	33010747	1
30	Electric Box Assy	10000204865	10000204865	1
31	Air Louver 1	1051211301	1051211301	1
32	Stepping Motor	1521212901	1521212901	1
33	Crank	10582070	10582070	1
34	Rubber Plug (Water Tray)	76712012	76712012	1
35	Fan Motor	15012115	15012115	1
36	Motor Press Plate	26112201	26112201	1
37	Connecting pipe clamp	2611219901	2611219901	1
38	Wall Mounting Frame	01252231	01252231	1
39	Shield box(electricbox)	01592081	01592081	1
40	Electric Box Cover	20122114	20122114	1
41	Cold Plasma Generator	1114001602	1114001602	1

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NO.	Description	Part Code		Qty
		GWH07NA-K3NND2E/I	GWH07NA-K3NNB3E/I	
		Product Code	Product Code	
		CA149N00601	CA138N07300	
1	Front Panel Assy	20012799	20012462	1
2	Display Board	30565136	30565088	1
3	Filter Sub-Assy	11122095	11122095	2
4	Screw Cover	24252016	24252016	3
5	Front Case	20022286	20022286	1
6	Axile Bush	10542036	10542036	1
7	Guide Louver	10512162	10512162	1
8	Air Louver 2	10512114	10512114	1
9	Helicoid tongue	26112202	26112202	1
10	Axile Bush	10542036	10542036	1
11	Rear Case assy	22202225	22202135	1
12	Cross Flow Fan	10352034	10352034	1
13	O-Gasket sub-assy of Bearing	7651205102	7651205102	1
14	Ring of Bearing	26152022	26152022	1
15	Remote Controller	30510065	30510065	1
16	Drainage hose	0523001408	0523001408	1
17	Connecting Cable	40020540	40020540	0
18	Evaporator Assy	01002577	01002577	1
19	Connecting Cable	40020536	40020536	0
20	Power Cord	4002046417	4002046417	1
21	Front Panel	20012733S	20012452S	1
22	Jumper	4202300114	4202300114	1
23	Electric Box Cover2	20122075	20122075	1
24	Temperature Sensor	390000453	390000453	1
25	Main Board	30135353	30135353	1
26	Ambient Temperature Sensor	390000597	390000597	1
27	Terminal Board	42010268	42010268	1
28	Electric Box	20112091	20112091	1
29	Capacitor CBB61S	33010747	33010747	1
30	Electric Box Assy	10000202717	10000202438	1
31	Air Louver 1	10512113	10512113	1
32	Stepping Motor	1521212901	1521212901	1
33	Crank	10582070	10582070	1
34	Rubber Plug (Water Tray)	76712012	76712012	1
35	Fan Motor	15012115	15012115	1
36	Motor Press Plate	26112201	26112201	1
37	Connecting pipe clamp	26112199	26112199	1
38	Wall Mounting Frame	01252231	01252231	1
39	Shield box(electricbox)	01592081	01592081	1
40	Electric Box Cover	20122114	20122114	1
41	Cold Plasma Generator	/	/	/

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NO.	Description	Part Code		Qty
		GWH07NA-K3NNA8E/I	GWH07NA-K3NNA4E/I	
		Product Code	Product Code	
		CA173N19300	CA161N13002	
1	Front Panel Assy	20012538	20012519	1
2	Display Board	3056504301	30565012	1
3	Filter Sub-Assy	11122095	11122095	2
4	Screw Cover	24252016	24252016	3
5	Front Case	20022286	2002228601	1
6	Axile Bush	10542036	10542036	1
7	Guide Louver	10512162	10512162	1
8	Air Louver 2	10512114	10512114	1
9	Helicoid tongue	26112202	26112202	1
10	Axile Bush	10542036	10542036	1
11	Rear Case assy	22202225	2220213501	1
12	Cross Flow Fan	10352034	10352034	1
13	O-Gasket sub-assy of Bearing	7651205102	7651205102	1
14	Ring of Bearing	26152022	26152022	1
15	Remote Controller	30510065	30510065	1
16	Drainage hose	0523001408	0523001408	1
17	Connecting Cable	40020540	40020540	0
18	Evaporator Assy	01002577	01002577	1
19	Connecting Cable	40020536	40020536	0
20	Power Cord	4002046417	4002046417	1
21	Front Panel	20012507S	20012493S	1
22	Jumper	4202300114	4202300114	1
23	Electric Box Cover2	20122075	20122075	1
24	Temperature Sensor	390000453	390000453	1
25	Main Board	30135353	30135353	1
26	Ambient Temperature Sensor	390000597	390000597	1
27	Terminal Board	42010268	42010268	1
28	Electric Box	20112091	20112091	1
29	Capacitor CBB61S	33010747	33010747	1
30	Electric Box Assy	10000204605	10000205036	1
31	Air Louver 1	10512113	10512113	1
32	Stepping Motor	1521212901	1521212901	1
33	Crank	10582070	10582070	1
34	Rubber Plug (Water Tray)	76712012	76712012	1
35	Fan Motor	15012115	15012115	1
36	Motor Press Plate	26112201	26112201	1
37	Connecting pipe clamp	26112199	26112199	1
38	Wall Mounting Frame	01252231	01252231	1
39	Shield box(electricbox)	01592081	01592081	1
40	Electric Box Cover	20122114	20122114	1
41	Cold Plasma Generator	/	/	/

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NO.	Description	Part Code		Qty
		GWH07NA-K3NND1E/I	GWH07NA-K3NNB5E/I	
		Product Code	Product Code	
		CA147N04801	CA180N10100	
1	Front Panel Assy	20012749	20022025	1
2	Display Board	30565122	30565171	1
3	Filter Sub-Assy	11122095	11122095	2
4	Screw Cover	24252016	24252016	3
5	Front Case	20022286	2002228601	1
6	Axile Bush	10542036	10542036	1
7	Guide Louver	10512162	10512162	1
8	Air Louver 2	10512114	10512114	1
9	Helicoid tongue	26112202	26112202	1
10	Axile Bush	10542036	10542036	1
11	Rear Case assy	22202135	2220213501	1
12	Cross Flow Fan	10352034	10352034	1
13	O-Gasket sub-assy of Bearing	7651205102	7651205102	1
14	Ring of Bearing	26152022	26152022	1
15	Remote Controller	30510065	30510065	1
16	Drainage hose	0523001408	0523001408	1
17	Connecting Cable	40020540	40020540	0
18	Evaporator Assy	01002577	01002577	1
19	Connecting Cable	40020536	40020536	0
20	Power Cord	4002046417	4002046417	1
21	Front Panel	20012697S	20022341S	1
22	Jumper	4202300114	4202300114	1
23	Electric Box Cover2	20122075	20122075	1
24	Temperature Sensor	390000453	390000453	1
25	Main Board	30135357	30135357	1
26	Ambient Temperature Sensor	390000597	390000597	1
27	Terminal Board	42010268	42010268	1
28	Electric Box	20112091	20112091	1
29	Capacitor CBB61S	33010747	33010747	1
30	Electric Box Assy	10000204812	10000203540	1
31	Air Louver 1	10512113	10512113	1
32	Stepping Motor	1521212901	1521212901	1
33	Crank	10582070	10582070	1
34	Rubber Plug (Water Tray)	76712012	76712012	1
35	Fan Motor	15012115	15012115	1
36	Motor Press Plate	26112201	26112201	1
37	Connecting pipe clamp	26112199	26112199	1
38	Wall Mounting Frame	01252231	01252231	1
39	Shield box(electricbox)	01592081	390000597	1
40	Electric Box Cover	20122114	20122114	1
41	Cold Plasma Generator	1114001602	1114001602	1

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NO.	Description	Part Code		Qty
		GWH07NA-K3NNA5E/I	GWH07NA-K3NNA4E/I	
		Product Code	CA162N20600	
1	Front Panel Assy	20012441	20012519	1
2	Display Board	30565026	30565012	1
3	Filter Sub-Assy	11122095	11122095	2
4	Screw Cover	24252016	24252016	3
5	Front Case	2002228601	2002228601	1
6	Axile Bush	10542036	10542036	1
7	Guide Louver	10512162	10512162	1
8	Air Louver 2	10512114	10512114	1
9	Helicoid tongue	26112202	26112202	1
10	Axile Bush	10542036	10542036	1
11	Rear Case assy	2220213501	2220213501	1
12	Cross Flow Fan	10352034	10352034	1
13	O-Gasket sub-assy of Bearing	7651205102	7651205102	1
14	Ring of Bearing	26152022	26152022	1
15	Remote Controller	30510065	30510065	1
16	Drainage hose	0523001408	0523001408	1
17	Connecting Cable	40020540	40020540	0
18	Evaporator Assy	01002577	01002577	1
19	Connecting Cable	40020536	40020536	0
20	Power Cord	4002046417	4002046417	1
21	Front Panel	20012423S	20012493S	1
22	Jumper	4202300114	4202300114	1
23	Electric Box Cover2	20122075	20122075	1
24	Temperature Sensor	390000453	390000453	1
25	Main Board	30135357	30135357	1
26	Ambient Temperature Sensor	390000597	390000597	1
27	Terminal Board	42010268	42010268	1
28	Electric Box	20112091	20112091	1
29	Capacitor CBB61S	33010747	33010747	1
30	Electric Box Assy	10000204236	10000202464	1
31	Air Louver 1	10512113	10512113	1
32	Stepping Motor	1521212901	1521212901	1
33	Crank	10582070	10582070	1
34	Rubber Plug (Water Tray)	76712012	76712012	1
35	Fan Motor	15012115	15012115	1
36	Motor Press Plate	26112201	26112201	1
37	Connecting pipe clamp	26112199	26112199	1
38	Wall Mounting Frame	01252231	01252231	1
39	Shield box(electricbox)	01592080	01592081	1
40	Electric Box Cover	20122114	20122114	1
41	Cold Plasma Generator	1114001602	1114001602	1

Above data is subject to change without notice.

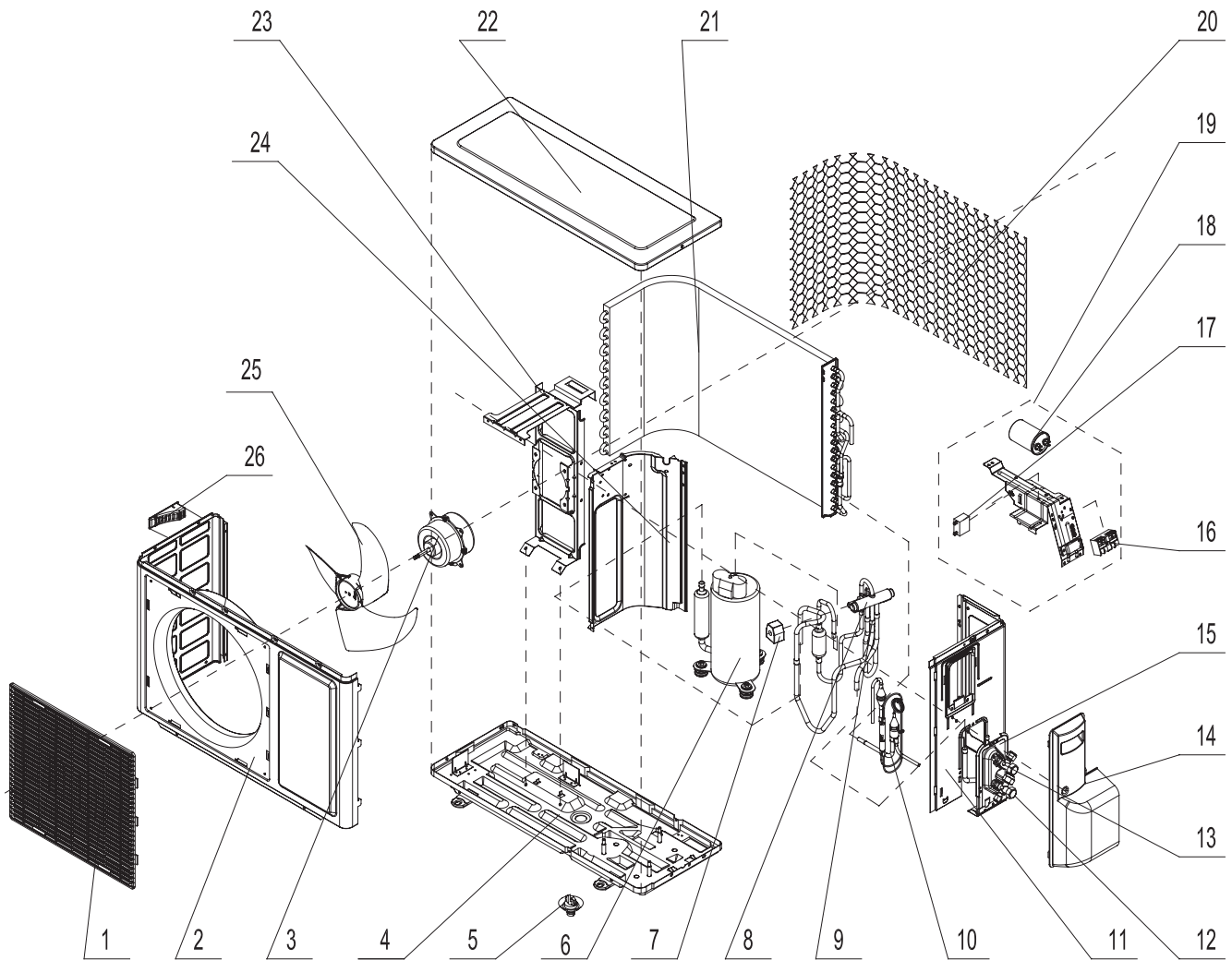
NO.	Description	Part Code		Qty
		GWH07NA-K3NND2E/I	GWH07NA-K3NNE1E/I	
		Product Code	CA149N00602	
1	Front Panel Assy	20012927	20012964	1
2	Display Board	3056506401	30565144	1
3	Filter Sub-Assy	11122095	11122095	2
4	Screw Cover	24252016	24252016	3
5	Front Case	20022286	2002228601	1
6	Axile Bush	10542036	10542036	1
7	Guide Louver	10512162	10512162	1
8	Air Louver 2	10512114	10512114	1
9	Helicoid Tongue	26112202	26112202	1
10	Axile Bush	10542036	10542036	1
11	Rear Case assy	22202135	22202135	1
12	Cross Flow Fan	10352034	10352034	1
13	O-Gasket sub-assy of Bearing	7651205102	7651205102	1
14	Ring of Bearing	26152022	26152022	1
15	Remote Controller	30510065	30510065	1
16	Drainage Hose	0523001408	0523001408	1
17	Connecting Cable	40020540	40020540	0
18	Evaporator Assy	01002577	01002577	1
19	Connecting Cable	40020536	40020536	0
20	Power Cord	4002046417	4002046417	1
21	Cold Plasma Generator	1114001602	/	1
22	Front Panel	20012885S	20012958B	1
23	Jumper	4202300114	4202300114	1
24	Electric Box Cover2	20122075	20122075	1
25	Temperature Sensor	390000453	390000453	1
26	Main Board	30135357	30135353	1
27	Temperature Sensor	390000453	390000453	1
28	Terminal Board	42010268	42010268	1
29	Electric Box	20112091	20112091	1
30	Capacitor CBB61	33010747	33010747	1
31	Electric Box Assy	10000202823	10000202823	1
32	Air Louver 1	10512113	10512113	1
33	Stepping Motor	1521212901	1521212901	1
34	Crank	10582070	10582070	1
35	Rubber Plug (Water Tray)	76712012	76712012	1
36	Fan Motor	15012115	15012115	1
37	Motor Press Plate	26112201	26112201	1
38	Connecting pipe clamp	26112199	26112199	1
39	Wall Mounting Frame	01252231	01252231	1
40	ShieldBox (Electric Box)	01592080	01592080	1
41	Electric Box Cover	20122114	20122114	1

Above data is subject to change without notice.

NO.	Description	Part Code	Qty
		GWH07NA-K3NNC7E/I	
		Product Code	
		CA195N07500	
1	Front Panel Assy	20012648	1
2	Display Board	30565106	1
3	Filter Sub-Assy	11122095	2
4	Screw Cover	24252016	3
5	Front Case	2002228601	1
6	Axile Bush	10542036	1
7	Guide Louver	10512162	1
8	Air Louver 2	10512114	1
9	Helicoid tongue	26112202	1
10	Axile Bush	10542036	1
11	Rear Case assy	2220213501	1
12	Cross Flow Fan	10352034	1
13	O-Gasket sub-assy of Bearing	7651205102	1
14	Ring of Bearing	26152022	1
15	Remote Controller	30510065	1
16	Drainage hose	0523001408	1
17	Connecting Cable	40020540	0
18	Evaporator Assy	01002577	1
19	Connecting Cable	40020536	0
20	Power Cord	4002046417	1
21	Front Panel	20012615	1
22	Jumper	4202300114	1
23	Electric Box Cover2	20122075	1
24	Temperature Sensor	390000453	1
25	Main Board	30135353	1
26	Ambient Temperature Sensor	390000597	1
27	Terminal Board	42010268	1
28	Electric Box	20112091	1
29	Capacitor CBB61S	33010747	1
30	Electric Box Assy	100002000787	1
31	Air Louver 1	10512113	1
32	Stepping Motor	1521212901	1
33	Crank	10582070	1
34	Rubber Plug (Water Tray)	76712012	1
35	Fan Motor	15012115	1
36	Motor Press Plate	26112201	1
37	Connecting pipe clamp	26112199	1
38	Wall Mounting Frame	01252231	1
39	Shield box(electricbox)	01592081	1
40	Electric Box Cover	20122114	1
41	Cold Plasma Generator	/	/

Above data is subject to change without notice.

10.2 Outdoor Unit



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

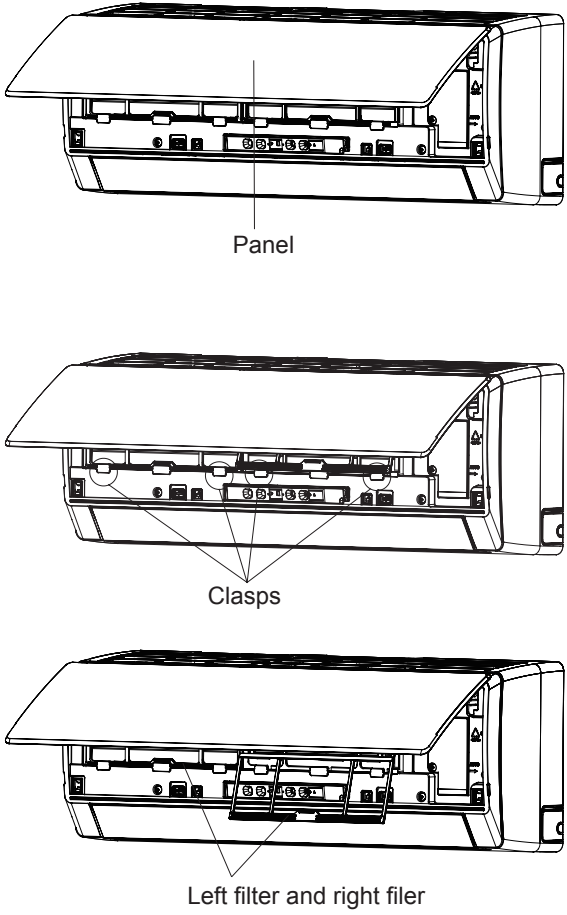
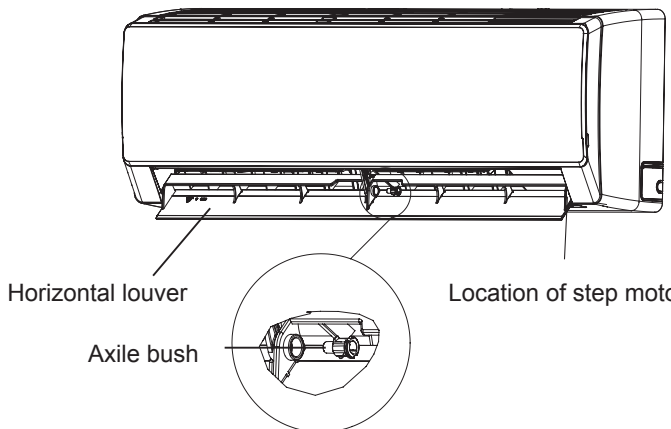
NO.	Description	Part Code		Qty
		GWH07NA-K3NNC7F/O	GWH07NA-K3NNE4E/O	
	Product Code	CA195W06201	CA403W01401	
1	Front Grill	22263002	22263002	1
2	Cabinet	01433035P	01433035P	1
3	Fan Motor	1501315604	1501315604	1
4	Chassis Sub-assy	02803229P	02803229P	1
5	Drainage Connector	06123401	06123401	1
6	Compressor and Fittings	009001000012	009001000012	1
7	Magnet Coil	4300040047	4300040047	1
8	4-Way Valve	430004022	430004022	1
9	4-Way Valve Assy	030152000170	030152000174	1
10	Capillary Sub-assy	03000600420	03000600420	1
11	Right Side Plate Sub-Assy	01303243	01303243	1
12	Valve	07100005	07100005	1
13	Valve	07100005	07100005	1
14	Big Handle	26233101	26233101	1
15	Valve Support	01713423	01713424	1
16	Terminal Board	42010265	42010265	1
17	Capacitor CBB61S	3301074701	3301074701	1
18	Capacitor CBB65	3300008102	3300008102	1
19	Electric Box Assy	100002000395	100002000395	1
20	Rear Grill	/	/	/
21	Condenser Assy	011002000259	011002000258	1
22	Top Cover Plate	01253045P	01253045P	1
23	Motor Support Sub-Assy	01703019	01703204	1
24	Clapboard Sub-Assy	01233207	01233207	1
25	Axial flow fan	10333002	10333002	1
26	Small Handle	26233100	26233100	1

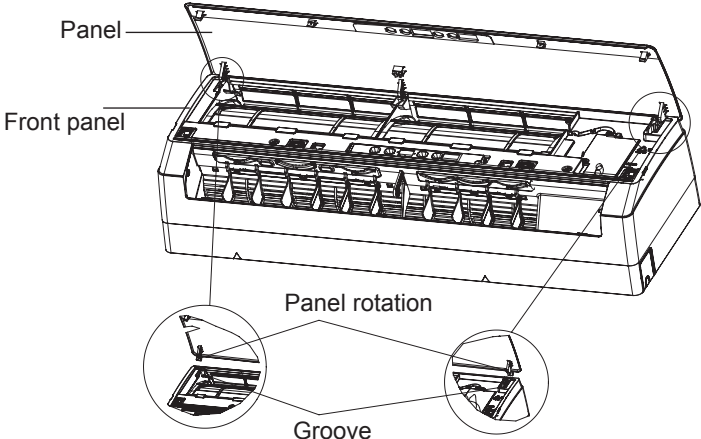
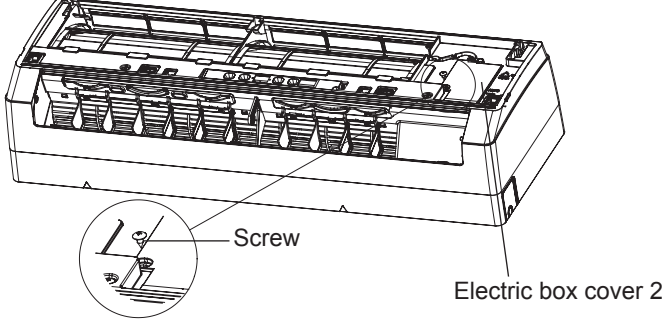
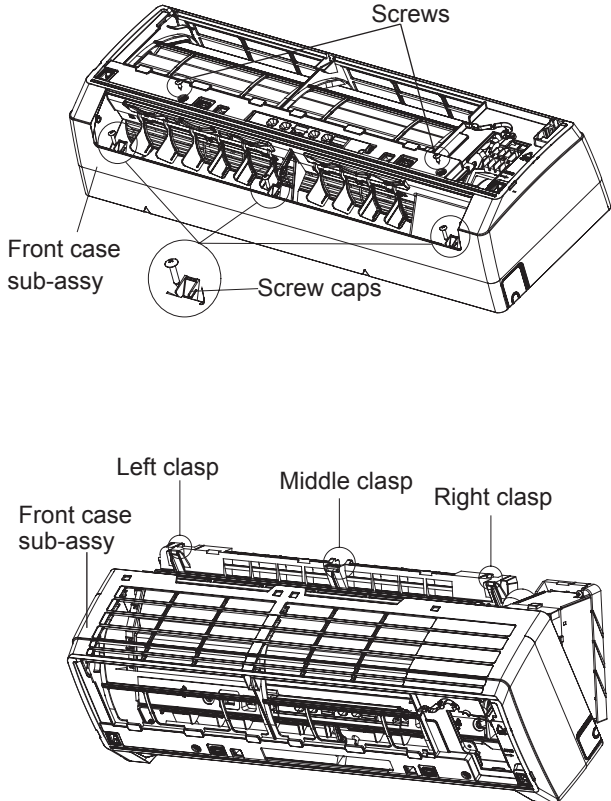
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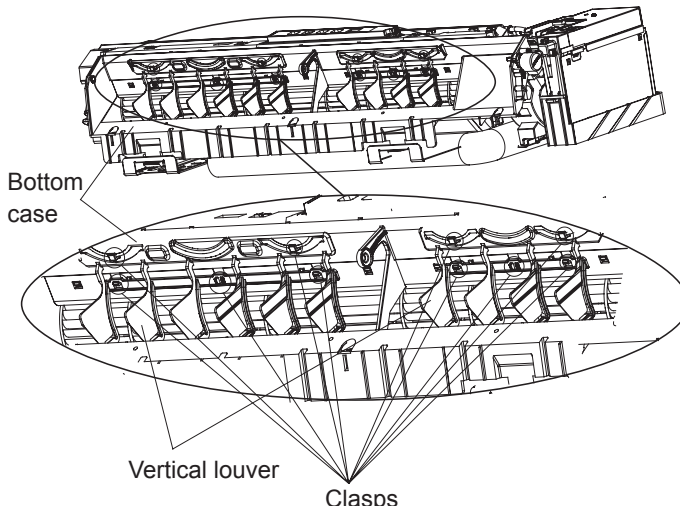
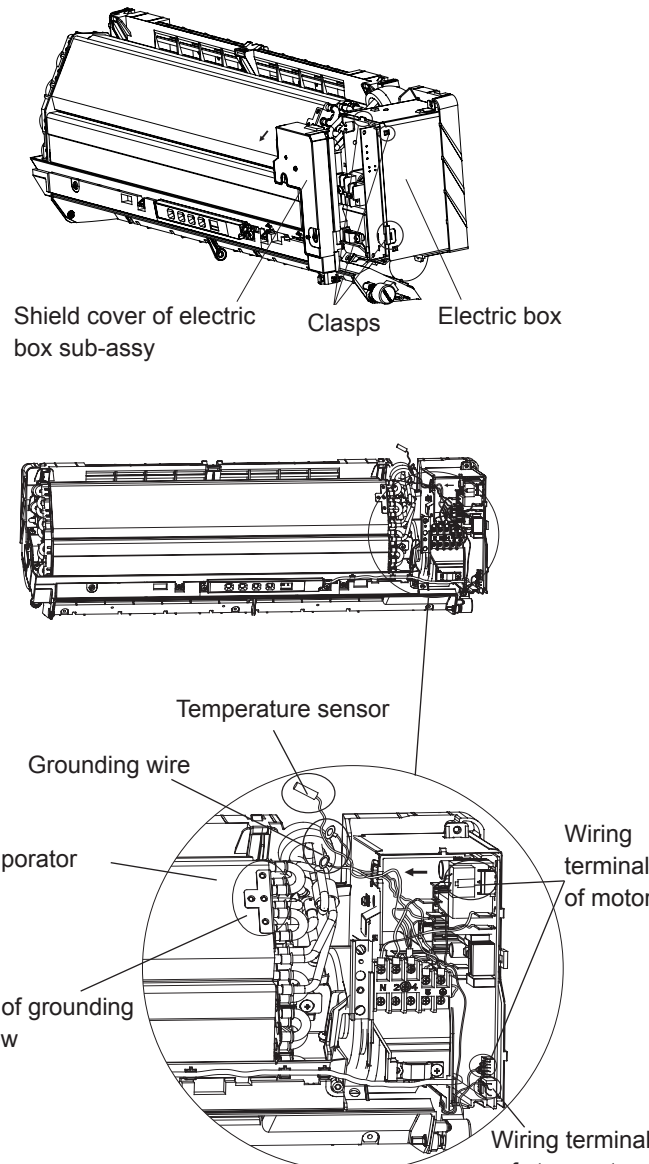
11. Removal Procedure

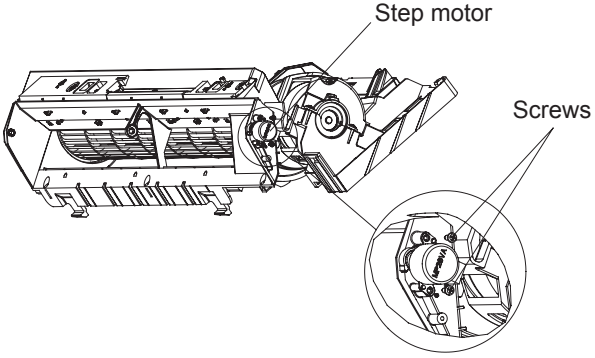
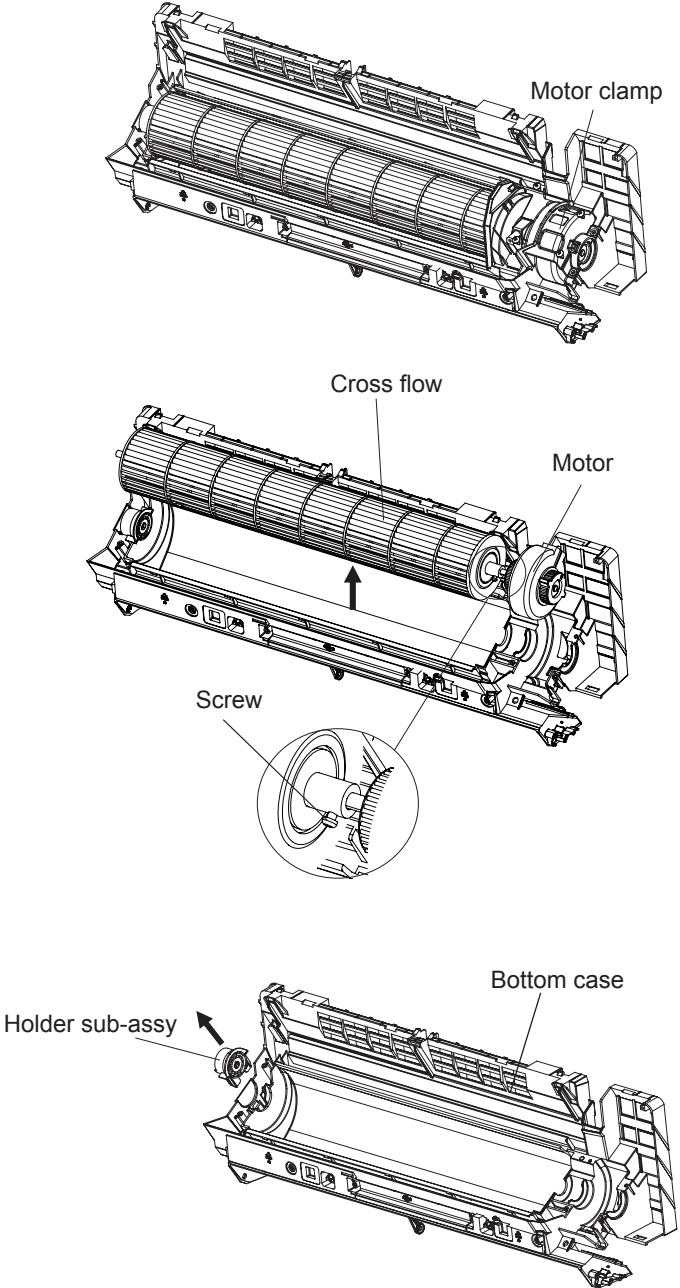
11.1 Removal Procedure of Indoor Unit

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

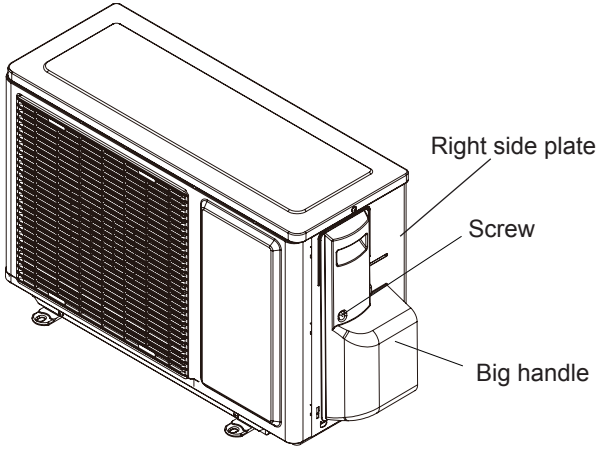
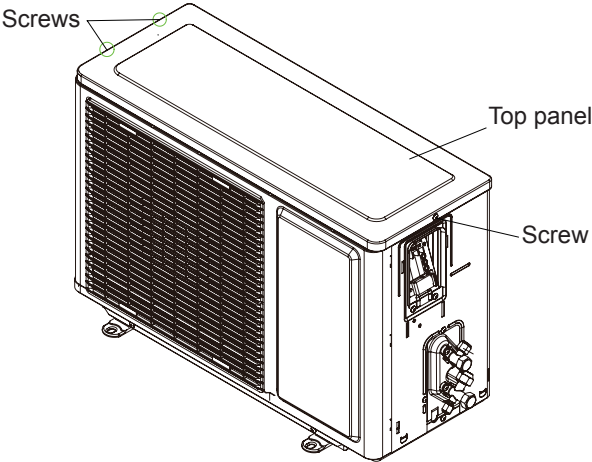
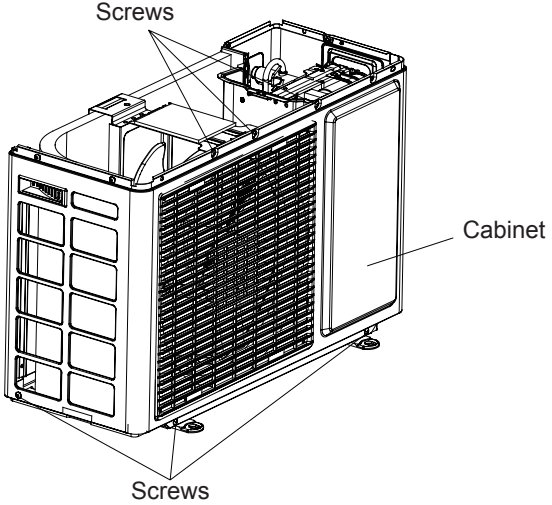
Step	Procedure	Diagram
1. Remove filter	<p>a Open the panel.</p> <p>b Loosen the clasp shown in the fig and then pull the left filter and right filter outwards to remove them.</p>	 <p>Panel</p> <p>Clasps</p> <p>Left filter and right filter</p>
2. Remove horizontal louver	<p>Push out the axle bush on horizontal louver. Bend the horizontal louver with hand and then separate the horizontal louver from the crankshaft of step motor to remove it.</p>	 <p>Horizontal louver</p> <p>Axile bush</p> <p>Location of step motor</p>

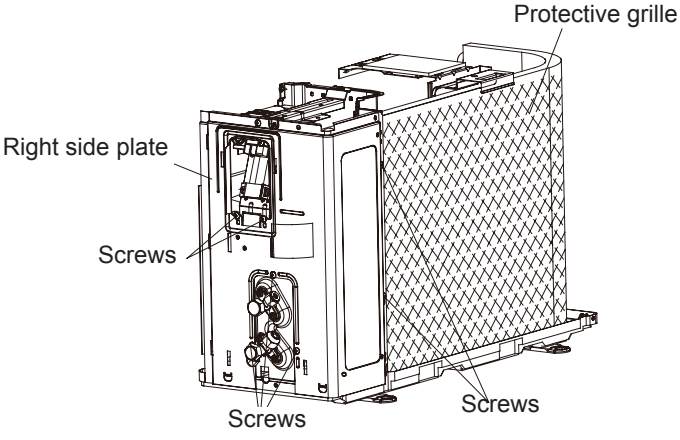
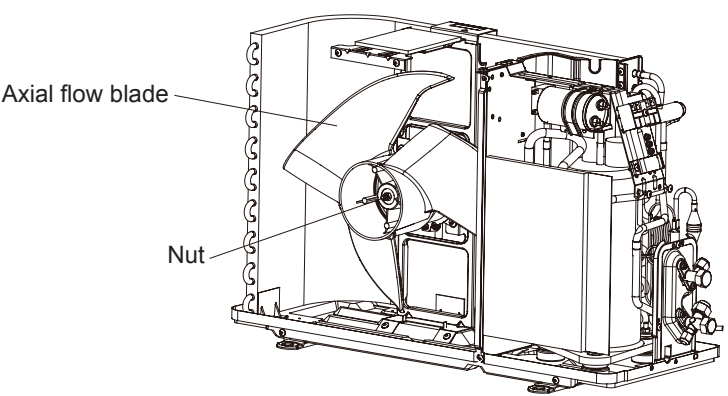
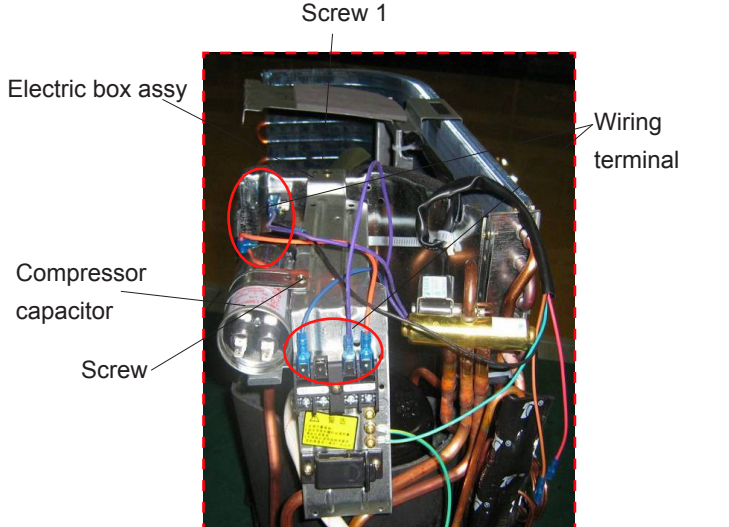
Step	Procedure	Procedure
3. Remove panel	<p>Open the front panel; separate the panel rotation shaft from the groove fixing the front panel and then removes the front panel.</p> <p>Note: The display of some models is fixed on the panel; unscrew the screws fixing the display on the panel before removing the panel.</p>	
4. Remove electric box cover 2	<p>Remove the screws on the electric box cover 2 to remove the electric box cover 2.</p>	
5. Remove front case sub-assy	<p>a Remove the screws fixing front case.</p> <p>Note: 1.Open the screw caps before removing the screws around the air outlet. 2.The quantity of screws fixing the front case sub-assy is different for different models.</p> <p>b Loosen the clasps at left, middle and right sides of front case. Lift the front case sub-assy upwards to remove it.</p>	

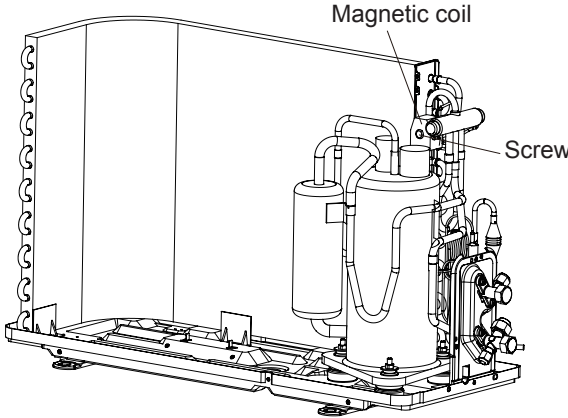
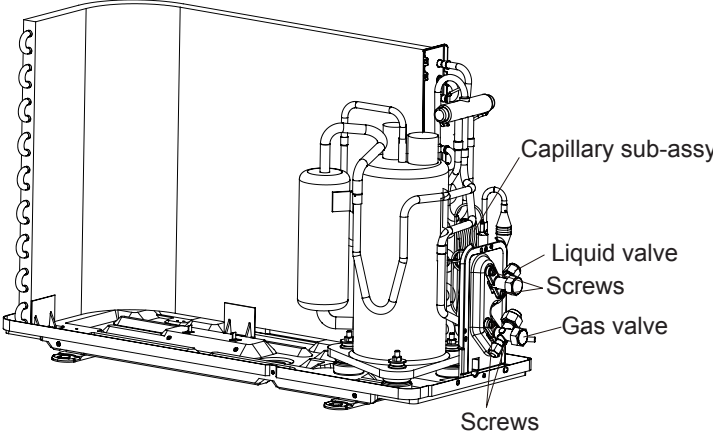
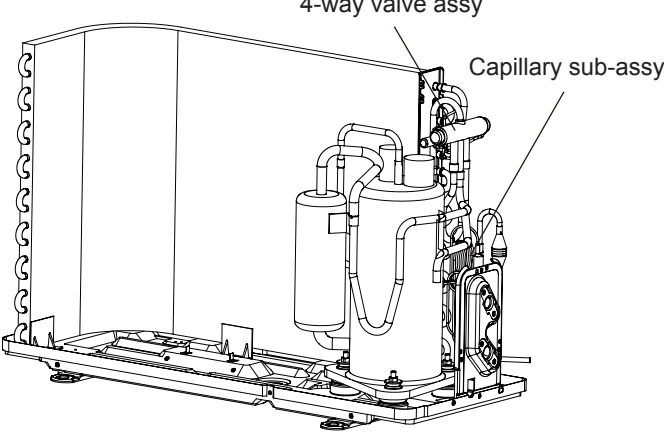
Step	Procedure	
6. Remove vertical louver	<p>Loosen the connection clasps between vertical louver and bottom case to remove vertical louver.</p>	
7. Remove electric box assy	<p>a Loosen the connection clasps between shield cover of electric box sub-assy and electric box, and then remove the shield cover of electric box sub-assy.</p> <p>b Cut off the tieline which binding the temperature sensor and grounding wire on the evaporator, and then pull out the indoor tube temperature sensor from the evaporator. Remove the screws at the connection place between grounding wire and evaporator. Pull out the wiring terminal of motor and wiring terminal of step motor from the mainboard.</p> <p>Note: 1. Location of tube temperature sensor and tieline on the evaporator is different for different models. 2. When pulling out the wiring terminal, pay attention to loose the clasp and dont pull it so hard.</p>	

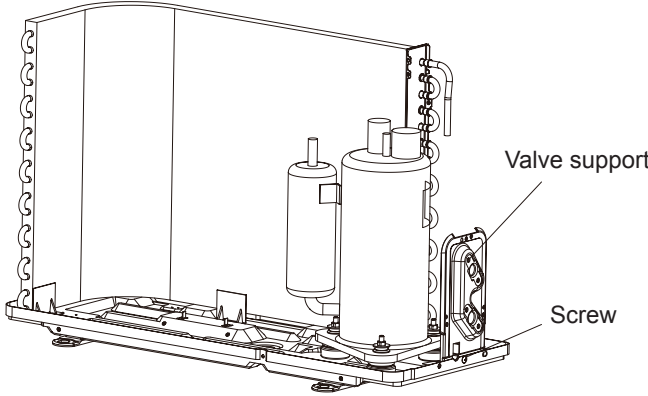
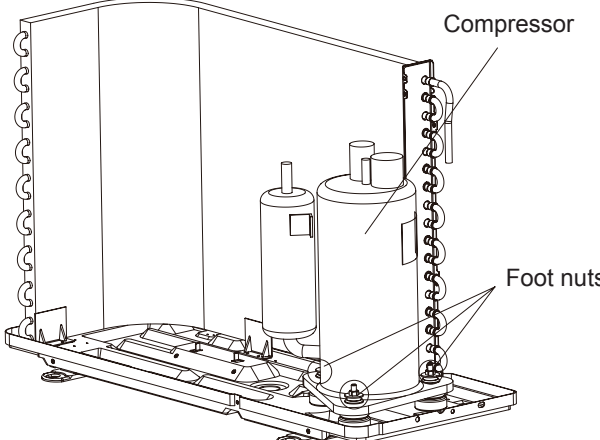
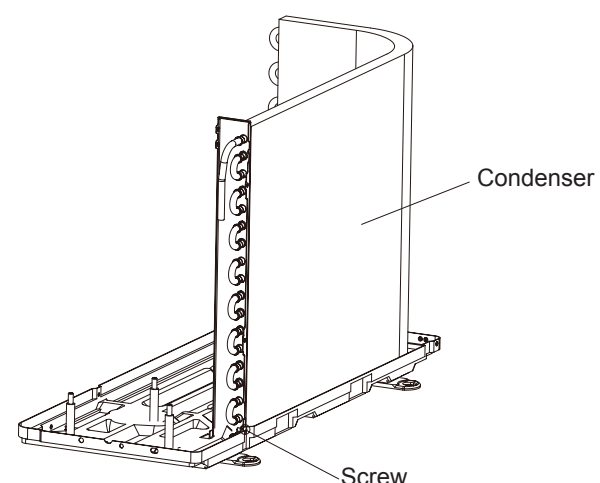
Step	Procedure	Diagram
9. Remove stepping motor	Remove the screw fixing step motor and then remove the step motor.	
10. Remove motor and cross flow blade	<p>a Remove the screws fixing motor clamp and then remove the motor clamp.</p> <p>b Remove the screws at the connection place of cross flow blade and motor; lift the motor and cross flow blade upwards to remove them.</p> <p>c Remove the bearing holder sub-assy.</p>	

11.2 Removal Procedure of Outdoor Unit

Step	Procedure
1. Remove big handle	<p>Remove the screw fixing big handle; slide out the big handle upwards to make the clasp of big handle separate from the groove of right side plate, and then remove the big handle.</p>  <p>The diagram shows a perspective view of the outdoor unit. A screw is shown passing through the right side plate into the big handle. Labels include 'Right side plate', 'Screw', and 'Big handle'.</p>
2. Remove top panel	<p>Remove the screws fixing top panel and then remove the top panel.</p>  <p>The diagram shows a perspective view of the outdoor unit with the top panel partially removed. Two screws are shown being removed from the top panel. Labels include 'Screws', 'Top panel', and 'Screw'.</p>
3. Remove cabinet	<p>Remove the cabinet by screwing off the locking screws on cabinet.</p>  <p>The diagram shows a perspective view of the outdoor unit with the cabinet removed. Several screws are shown being removed from the cabinet. Labels include 'Screws' and 'Cabinet'.</p>

Step	Procedure
<p>4. Remove right side plate</p>	<p>Remove the screws fixing right side plate and then remove the right side plate.</p> <p>Cut off the wire binder fixing the protective grille and then remove the protective grille.</p> 
<p>5. Remove axial flow blade</p>	<p>Remove the nut fixing axial flow blade and then remove the axial flow blade.</p> 
<p>6. Remove electric box assy</p>	<p>Remove the wiring terminals on electric box. Screw off screw 1 fixing the electric box assy and then remove the electric box assy. Screw off the screws fixing compressor capacitor. Then remove the compressor capacitor.</p> 

Step	Procedure
10. Remove magnetic coil	<p>Remove one screw on magnetic coil, and then remove the magnetic coil.</p>  <p>The diagram shows a side view of the magnetic coil assembly. A line points to a screw on the top of the coil, labeled 'Screw'. Another line points to the coil itself, labeled 'Magnetic coil'.</p>
11. Remove gas valve and liquid valve	<p>Unsolder the spot weld between capillary with valve and condenser; remove two screws fixing the gas valve; unsolder the spot weld connecting gas valve and air-return pipe, and then remove the gas valve.</p> <p>Remove two screws fixing the liquid valve; unsolder the spot weld connecting liquid valve and Y-type pipe, and then remove the liquid valve.</p> <p>Note: When unsoldering the spot weld, wrap the gas valve with wet cloth completely to avoid damaging the valve due to high temperature.</p>  <p>The diagram shows the gas and liquid valve assemblies. Labels include: 'Capillary sub-assy' pointing to the top connection, 'Liquid valve' pointing to the lower valve, 'Screws' pointing to the two screws on the liquid valve, and 'Gas valve' pointing to the right-side valve. There are also 'Screws' labeled at the base of the assembly.</p>
12. Remove 4-way valve assy and capillary sub-assy	<p>Unsolder the spot weld of 4-way valve assy, capillary, compressor and condenser, and then remove the 4-way valve assy and capillary sub-assy.</p> <p>Note: When unsoldering the spot weld, wrap the 4-way valve with wet cloth completely to avoid damaging the valve due to high temperature.</p>  <p>The diagram shows the 4-way valve assembly and capillary sub-assembly. Labels include: '4-way valve assy' pointing to the top valve assembly and 'Capillary sub-assy' pointing to the lower sub-assembly.</p>

Step	Procedure	Diagram
13. Remove valve support	<p>Screw off the screw fixing the valve support and then remove the valve support.</p>	 <p>Valve support</p> <p>Screw</p>
14. Remove compressor	<p>Remove 3 foot nuts on compressor, and then remove the compressor.</p> <p>Note: Protect the ports of discharge pipe and suction pipe to avoid foreign objects to enter it.</p>	 <p>Compressor</p> <p>Foot nuts</p>
15. Remove condenser	<p>Remove one screw fixing the condenser, then remove the condenser.</p>	 <p>Condenser</p> <p>Screw</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 2: Configuration of Connection Pipe

1. Standard length of connection pipe

- 5m, 7.5m, 8m.

2. Min. length of connection pipe is 3m.

3. Max. length of connection pipe and max. high difference.

4. The additional refrigerant oil and refrigerant charging required after prolonging connection pipe

- After the length of connection pipe is prolonged for 10m at the basis of standard length, you should add 5ml of refrigerant oil for each additional 5m of connection pipe.

- The calculation method of additional refrigerant charging amount (on the basis of liquid pipe):

Cooling capacity	Max length of connection pipe	Max height difference
5000 Btu/h(1465 W)	15 m	5 m
7000 Btu/h(2051 W)	15 m	5 m
9000 Btu/h(2637 W)	15 m	10 m
12000 Btu/h(3516 W)	20 m	10 m
18000 Btu/h(5274 W)	25 m	10 m
24000 Btu/h(7032 W)	25 m	10 m
28000 Btu/h(8204 W)	30 m	10 m
36000 Btu/h(10548 W)	30 m	20 m
42000 Btu/h(12306 W)	30 m	20 m
48000 Btu/h(14064 W)	30 m	20 m

- When the length of connection pipe is above 5m, add refrigerant according to the prolonged length of liquid pipe. The additional refrigerant charging amount per meter is different according to the diameter of liquid pipe. See the following sheet.

- Additional refrigerant charging amount = prolonged length of liquid pipe X additional refrigerant charging amount per meter

Additional refrigerant charging amount for R22, R407C, R410A and R134a			
Diameter of connection pipe		Outdoor unit throttle	
Liquid pipe(mm)	Gas pipe(mm)	Cooling only(g/m)	Cooling and heating(g/m)
Φ6	Φ9.5 or Φ12	15	20
Φ6 or Φ9.5	Φ16 or Φ19	15	20
Φ12	Φ19 or Φ22.2	30	120
Φ16	Φ25.4 or Φ31.8	60	120
Φ19	/	250	250
Φ22.2	/	350	350

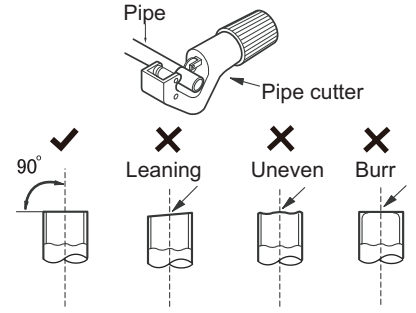
Appendix 2: Pipe Expanding Method

⚠ Note:

Improper pipe expanding is the main cause of refrigerant leakage. Please expand the pipe according to the following steps:

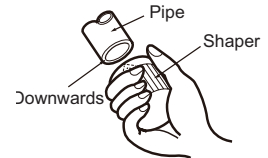
A: Cut the pipe

- Confirm the pipe length according to the distance of indoor unit and outdoor unit.
- Cut the required pipe with pipe cutter.



B: Remove the burrs

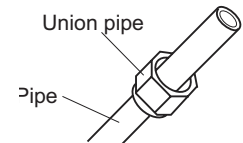
- Remove the burrs with shaper and prevent the burrs from getting into the pipe.



C: Put on suitable insulating pipe

D: Put on the union nut

- Remove the union nut on the indoor connection pipe and outdoor valve; install the union nut on the pipe.



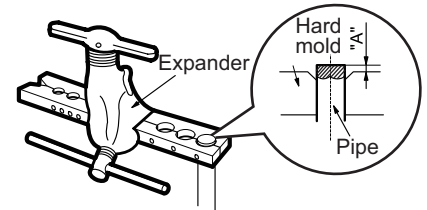
E: Expand the port

- Expand the port with expander.

⚠ Note:

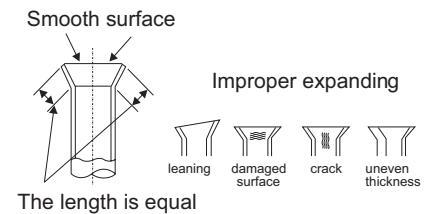
- "A" is different according to the diameter, please refer to the sheet below:

Outer diameter(mm)	A(mm)	
	Max	Min
Φ6 - 6.35 (1/4")	1.3	0.7
Φ9.52 (3/8")	1.6	1.0
Φ12 - 12.70 (1/2")	1.8	1.0
Φ16 - 15.88 (5/8")	2.4	2.2



F: Inspection

- Check the quality of expanding port. If there is any blemish, expand the port again according to the steps above.



Appendix 4: List of Resistance for Temperature Sensor

Resistance Table of Ambient Temperature Sensor for Indoor and Outdoor (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

Resistance Table of Tube Temperature Sensors for Outdoor and Indoor (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

Resistance Table of Discharge Temperature Sensor for Outdoor (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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