



# Service Manual

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



## Table of Contents

<b>Part I : Technical Information</b> .....	1
<b>1. Summary</b> .....	1
<b>2. Specifications</b> .....	4
2.1 Specification Sheet.....	4
2.2 Operation Characteristic Curve.....	16
2.3 Capacity Variation Ratio According to Temperature.....	16
2.4 Cooling and Heating Data Sheet in Rated Frequency.....	17
2.5 Noise Curve.....	18
<b>3. Outline Dimension Diagram</b> .....	19
3.1 Indoor Unit.....	19
3.2 Outdoor Unit.....	20
<b>4. Refrigerant System Diagram</b> .....	21
<b>5. Electrical Part</b> .....	22
5.1 Wiring Diagram.....	22
5.2 PCB Printed Diagram.....	26
<b>6. Function and Control</b> .....	28
6.1 Remote Controller Introduction of YAN1F6(WIFI).....	28
6.2 Remote Controller Introduction of YAW1F5(WiFi).....	33
6.3 Brief Description of Modes and Functions.....	36
6.4 GREE+ App Operation Manual.....	45
6.5 Ewpe Smart App Operation Manual.....	46
<b>Part II : Installation and Maintenance</b> .....	47
<b>7. Notes for Installation and Maintenance</b> .....	47
<b>8. Installation</b> .....	51
8.1 Installation Dimension Diagram.....	51
8.2 Installation Parts-checking.....	53
8.3 Selection of Installation Location.....	53
8.4 Requirements for electric connection.....	53
8.5 Installation of Indoor Unit.....	53
8.6 Installation of Outdoor Unit.....	56
8.7 Vacuum Pumping and Leak Detection.....	57
8.8 Check after Installation and Test Operation.....	57

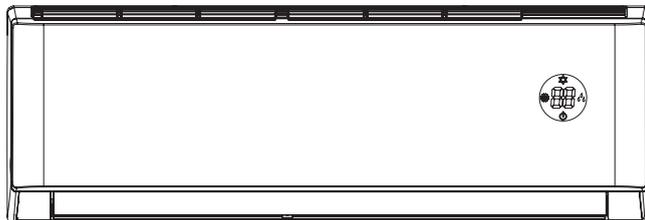




GWH18QD-K6DNE4C/I GWH24QE-K6DNE4C/I  
GWH24QD-K6DNE4A/I



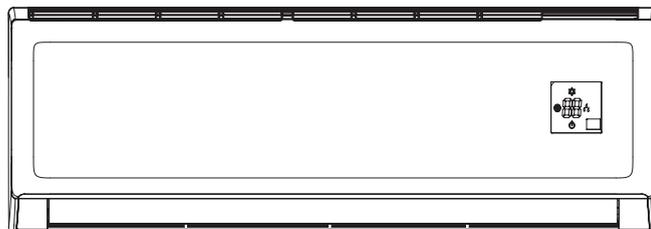
GWH18QD-K6DNB2A/I GWH18QD-K6DNB2C/I  
GWH24QD-K6DNB2A/I GWH24QE-K6DNB2C/I



GWH18QD-K6DNB8C/I  
GWH24QE-K6DNB8C/I



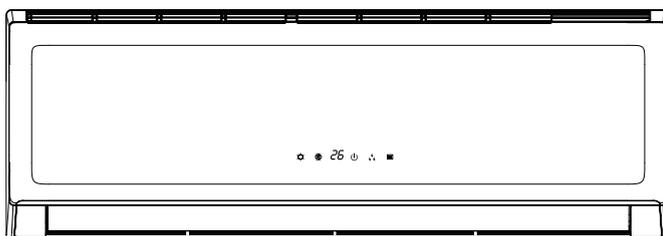
GWH18QD-K6DNB4A/I GWH18QD-K6DNB4C/I  
GWH24QE-K6DNB4C/I GWH24QD-K6DNB4A/I



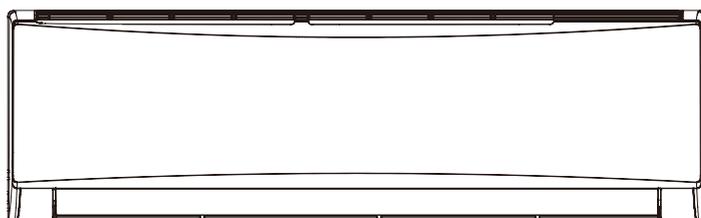
GWH24QD-K6DNC4A/I GWH18QD-K6DNC4C/I  
GWH24QE-K6DNC4C/I



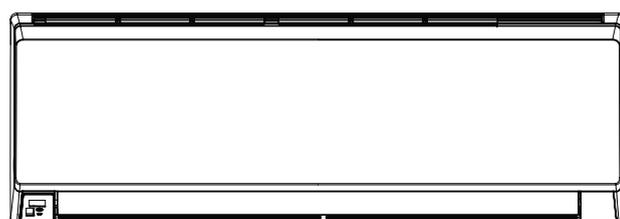
GWH24QE-K6DNC8C/I  
GWH24QD-K6DNC8A/I



GWH24QE-K6DND6C/I  
GWH18QD-K6DND6C/I

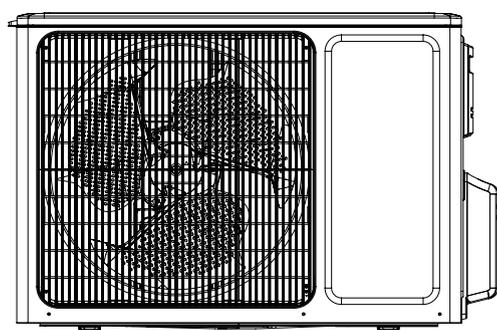


GWH24QD-K6DNA6A/I

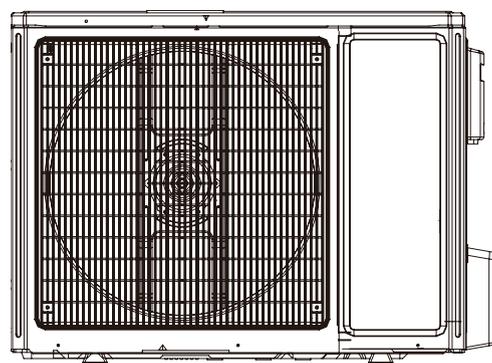


**Outdoor Unit**

GWH18QD-K6DNA1C/O  
GWH18AAD-K6DNA1A/O



GWH24QE-K6DNA1C/O GWH24QE-K6DNC2C/O  
GWH24AAD-K6DNA1A/O



Remote Controller



YAN1F6(WiFi)



YAW1F5(WiFi)

No	Model	Product code	Indoor model	Indoor product code	Outdoor model	Outdoor product code	Remote Controller
1	GWH18QD-K6DNC2C	CB439009100	GWH18QD-K6DNC2C/I	CB439N09100	GWH18QD-K6DNC2C/O	CB439W09100	YAN1F6(WiFi)
2	GWH18QD-K6DND4C	CB464000400	GWH18QD-K6DND4C/I	CB464N00400	GWH18QD-K6DNA1C/O	CB419W12500	
3	GWH18QD-K6DNE6C	CB465000700	GWH18QD-K6DNE6C/I	CB465N00700			
4	GWH18QD-K6DND4C	CB464000401	GWH18QD-K6DND4C/I	CB464N00401			
5	GWH18QD-K6DNE6C	CB465000701	GWH18QD-K6DNE6C/I	CB465N00701			
6	GWH18QD-K6DNA3C	CB424005100	GWH18QD-K6DNA3C/I	CB424N05100			
7	GWH18QD-K6DNA1C	CB419012500	GWH18QD-K6DNA1C/I	CB419N12500			
8	GWH18QD-K6DNB8C	CB438007100	GWH18QD-K6DNB8C/I	CB438N07100			
9	GWH18QD-K6DNB4C	CB434010500	GWH18QD-K6DNB4C/I	CB434N10500			
10	GWH18QD-K6DNB2C	CB432014902	GWH18QD-K6DNB2C/I	CB432N14901			
11	GWH18QD-K6DNB6C	CB435007600	GWH18QD-K6DNB6C/I	CB435N07600			
12	GWH18QD-K6DNC4C	CB444009400	GWH18QD-K6DNC4C/I	CB444N09400			
13	GWH18QD-K6DNB4C	CB434010502	GWH18QD-K6DNB4C/I	CB434N10502			
14	GWH18QD-K6DNC2F	CB439013700	GWH18QD-K6DNC2F/I	CB439N13700			
15	GWH18QD-K6DNB6C	CB435007601	GWH18QD-K6DNB6C/I	CB435N07600			
16	GWH18QD-K6DNE4C	CB470001901	GWH18QD-K6DNE4C/I	CB470N01900			GWH18QD-K6DNA1C/O
17	GWH18QD-K6DNA1C	CB419012501	GWH18QD-K6DNA1C/I	CB419N12500			
18	GWH18QD-K6DND6C	CB460003101	GWH18QD-K6DND6C/I	CB460N03100			
19	GWH18QD-K6DNB2C	CB432014901	GWH18QD-K6DNB2C/I	CB432N14900			
20	GWH18QD-K6DNC4C	CB444009401	GWH18QD-K6DNC4C/I	CB444N09400			
21	GWH18QD-K6DNB4A	CB434010400	GWH18QD-K6DNB4A/I	CB434N10400			
22	GWH18QD-K6DNB2A	CB432011300	GWH18QD-K6DNB2A/I	CB432N11300	GWH18AAD-K6DNA1A/O	CB476W00200	YAW1F5(WiFi)
23	GWH24QE-K6DNB2C	CB432015002	GWH24QE-K6DNB2C/I	CB432N15001	GWH24QE-K6DNA1C/O	CB419W12200	YAN1F6(WiFi)
24	GWH24QE-K6DNA3C	CB424005000	GWH24QE-K6DNA3C/I	CB424N05000			
25	GWH24QE-K6DNA1C	CB419012200	GWH24QE-K6DNA1C/I	CB419N12200			
26	GWH24QE-K6DND4C	CB464000100	GWH24QE-K6DND4C/I	CB464N00100			
27	GWH24QE-K6DNE6C	CB465000400	GWH24QE-K6DNE6C/I	CB465N00400			
28	GWH24QE-K6DND4C	CB464000101	GWH24QE-K6DND4C/I	CB464N00101			
29	GWH24QE-K6DNE6C	CB465000401	GWH24QE-K6DNE6C/I	CB465N00401			
30	GWH24QE-K6DNB8C	CB438007000	GWH24QE-K6DNB8C/I	CB438N07000			
31	GWH24QE-K6DNB4C	CB434010700	GWH24QE-K6DNB4C/I	CB434N10700			
32	GWH24QE-K6DNB4C	CB434010701	GWH24QE-K6DNB4C/I	CB434N10701			
33	GWH24QE-K6DNC8C	CB456003300	GWH24QE-K6DNC8C/I	CB456N03300			
34	GWH24QE-K6DNB6C	CB435007400	GWH24QE-K6DNB6C/I	CB435N07400			
35	GWH24QE-K6DNC4C	CB444007900	GWH24QE-K6DNC4C/I	CB444N07900			
36	GWH24QE-K6DNC2D	CB439013800	GWH24QE-K6DNC2D/I	CB439N13800			
37	GWH24QE-K6DNA1C	CB419012201	GWH24QE-K6DNA1C/I	CB419N12200			
38	GWH24QE-K6DNE4C	CB470001801	GWH24QE-K6DNE4C/I	CB470N01800			
39	GWH24QE-K6DND6C	CB460003701	GWH24QE-K6DND6C/I	CB460N03700			
40	GWH24QE-K6DNB6C	CB435007401	GWH24QE-K6DNB6C/I	CB435N07400			
41	GWH24QE-K6DNB2C	CB432015001	GWH24QE-K6DNB2C/I	CB432N15000			
42	GWH24QE-K6DNC4C	CB444007901	GWH24QE-K6DNC4C/I	CB444N07900			
43	GWH24QE-K6DNC2C	CB439009300	GWH24QE-K6DNC2C/I	CB439N09300	GWH24QE-K6DNC2C/O	CB439W09300	YAW1F5(WiFi)
44	GWH24QD-K6DNE4A	CB470002500	GWH24QD-K6DNE4A/I	CB470N02500	GWH24AAD-K6DNA1A/O	CB476W00100	
45	GWH24QD-K6DNC4A	CB444007700	GWH24QD-K6DNC4A/I	CB444N07700			
46	GWH24QD-K6DNA1A	CB419014900	GWH24QD-K6DNA1A/I	CB419N14900			
47	GWH24QD-K6DNA6A	CB427009800	GWH24QD-K6DNA6A/I	CB427N09800			
48	GWH24QD-K6DNB4A	CB434011600	GWH24QD-K6DNB4A/I	CB434N11600			
49	GWH24QD-K6DND6A	CB460005400	GWH24QD-K6DND6A/I	CB460N05400			
50	GWH24QD-K6DNB2A	CB432011400	GWH24QD-K6DNB2A/I	CB432N11400			
51	GWH24QD-K6DNC4A	CB444007701	GWH24QD-K6DNC4A/I	CB444N07701			
52	GWH24QD-K6DNE4A	CB470002501	GWH24QD-K6DNE4A/I	CB470N02501			
53	GWH24QD-K6DNC8A	CB456005900	GWH24QD-K6DNC8A/I	CB456N05900			
54	GWH24QD-K6DNA5A	CB425012000	GWH24QD-K6DNA5A/I	CB425N12000			
55	GWH24QD-K6DNB8A	CB438009900	GWH24QD-K6DNB8A/I	CB438N09900			
56	GWH24QD-K6DNB4A	CB434011601	GWH24QD-K6DNB4A/I	CB434N11601			
57	GWH24QD-K6DNC2A	CB439012900	GWH24QD-K6DNC2A/I	CB439N12900			

## 2. Specifications

### 2.1 Specification Sheet

Parameter		Unit	Value	
Model			1.GWH18QD-K6DNA1C 2.GWH18QD-K6DNA3C 3.GWH18QD-K6DND4C 4.GWH18QD-K6DNE6C 5.GWH18QD-K6DNB8C 6.GWH18QD-K6DNB4C 7.GWH18QD-K6DNB6C 8.GWH18QD-K6DNC4C 9.GWH18QD-K6DNC2F	1.GWH18QD-K6DNA1C 2.GWH18QD-K6DNE4C 3.GWH18QD-K6DNB6C 4.GWH18QD-K6DND6C 5.GWH18QD-K6DNB2C 6.GWH18QD-K6DNC4C
Product Code			1.CB419012500 2.CB424005100 3.CB464000400/CB464000401 4.CB465000700/CB465000701 5.CB438007100 6.CB434010500 7.CB435007600 8.CB444009400 9.CB439013700	1.CB419012501 2.CB470001901 3.CB435007601 4.CB460003101 5.CB432014901 6.CB444009401
Power Supply	Rated Voltage	V~	220-240	220-240
	Rated Frequency	Hz	50	50
	Phases		1	1
Power Supply Mode			Outdoor	Outdoor
Cooling Capacity		W	5130	5130
Heating Capacity		W	5280	5280
Cooling Power Input		W	1580	1580
Heating Power Input		W	1420	1420
Cooling Current Input		A	7.0	7.0
Heating Current Input		A	6.3	6.3
Rated Input		W	2300	2600
Rated Current		A	10.8	10.8
Air Flow Volume(SH/H/M/L/SL)		m <sup>3</sup> /h	850/720/610/520/-	850/720/610/520/-
Dehumidifying Volume		L/h	1.8	1.8
EER		W/W	3.25	3.25
COP		W/W	3.72	3.72
SEER		W/W	6.1	6.1
SCOP(Average/Warmer/Colder)		W/W	4.0/5.1/3.4	4.0/5.1/3.4
Application Area		m <sup>2</sup>	23-34	23-34
Indoor Unit	Fan Type		Cross-flow	Cross-flow
	Fan Diameter Length(DXL)	mm	Φ106X706	Φ106X706
	Cooling Speed(SH/H/M/L/SL)	r/min	1230/1130/1030/800/-	1230/1130/1030/800/-
	Heating Speed(SH/H/M/L/SL)	r/min	1350/1200/1050/900/-	1350/1200/1050/900/-
	Fan Motor Power Output	W	35	35
	Fan Motor RLA	A	0.35	0.35
	Fan Motor Capacitor	μF	2.5	2.5
	Evaporator Form		Aluminum Fin-copper Tube	Aluminum Fin-copper Tube
	Evaporator Pipe Diameter	mm	Φ7	Φ7
	Evaporator Row-fin Gap	mm	2-1.4	2-1.4
	Evaporator Coil Length (LXDXW)	mm	715X25.4X304.8	715X25.4X304.8
	Swing Motor Model		MP35CJ	MP35CJ
	Swing Motor Power Output	W	2.5	2.5
	Fuse Current	A	3.15	3.15
	Sound Pressure Level(SH/H/M/L/SL)	dB (A)	49/44/39/34/-	49/44/39/34/-
	Sound Power Level(SH/H/M/L/SL)	dB (A)	59/54/49/44/-	59/54/49/44/-
	Dimension (WXHXD)	mm	970X300X224	970X300X224
	Dimension of Carton Box (LXWXH)	mm	1038X380X305	1038X380X305
	Dimension of Package(LXWXH)	mm	1041X383X320	1041X383X320
	Net Weight	kg	13.5	13.5
Gross Weight	kg	16.5	16.5	

Outdoor Unit	Outdoor Unit Model		GWH18QD-K6DNA1C/O	GWH18QD-K6DNA1C/O
	Outdoor Unit Product Code		CB419W12500	CB419W12501
	Compressor Manufacturer		ZHUHAI LANDA COMPRESSOR CO.,LTD	ZHUHAI LANDA COMPRESSOR CO.,LTD
	Compressor Model		QXF-B141ZF030A	QXF-B141ZF030A
	Compressor Oil		68DA	68DA
	Compressor Type		Rotary	Rotary
	Compressor LRA.	A	25	25
	Compressor RLA	A	6.5	6.5
	Compressor Power Input	W	1410	1410
	Compressor Overload Protector		1NT11L-6233/KSD115°C /HPC 115/95	1NT11L-6233/KSD115°C /HPC 115/95
	Throttling Method		Electron expansion valve	Electron expansion valve
	Set Temperature Range	°C	16~30	16~30
	Cooling Operation Ambient Temperature Range	°C	-15~43	-15~43
	Heating Operation Ambient Temperature Range	°C	-15~24	-20~24
	Condenser Form		Aluminum Fin-copper Tube	Aluminum Fin-copper Tube
	Condenser Pipe Diameter	mm	Φ7.94	Φ7.94
	Condenser Rows-fin Gap	mm	2-1.4	2-1.4
	Condenser Coil Length (LXDXW)	mm	742X38.1X550	742X38.1X550
	Fan Motor Speed	rpm	780	780
	Fan Motor Power Output	W	40	40
	Fan Motor RLA	A	0.62	0.62
	Fan Motor Capacitor	μF	/	/
	Outdoor Unit Air Flow Volume	m <sup>3</sup> /h	2400	2400
	Fan Type		Axial-flow	Axial-flow
	Fan Diameter	mm	Φ445	Φ445
	Defrosting Method		Automatic Defrosting	Automatic Defrosting
	Climate Type		T1	T1
	Isolation		I	I
	Moisture Protection		IPX4	IPX4
	Permissible Excessive Operating Pressure for the Discharge Side	MPa	4.3	4.3
	Permissible Excessive Operating Pressure for the Suction Side	MPa	2.5	2.5
	Sound Pressure Level (H/M/L)	dB (A)	56/-/-	56/-/-
	Sound Power Level (H/M/L)	dB (A)	64/-/-	64/-/-
Dimension(WXHXD)	mm	899X596X378	899X596X378	
Dimension of Carton Box (LXWXH)	mm	945X417X630	945X417X630	
Dimension of Package(LXWXH)	mm	948X420X645	948X420X645	
Net Weight	kg	39	39	
Gross Weight	kg	42	42	
Refrigerant		R32	R32	
Refrigerant Charge	kg	0.9	0.9	
Connection Pipe	Connection Pipe Length	m	5	5
	Connection Pipe Gas Additional Charge	g/m	16	16
	Outer Diameter Liquid Pipe	mm	Φ6	Φ6
	Outer Diameter Gas Pipe	mm	Φ12	Φ12
	Max Distance Height	m	10	10
	Max Distance Length	m	25	25
Note: The connection pipe applies metric diameter.				

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

Parameter		Unit	Value	
Model			1.GWH24QE-K6DNA1C 2.GWH24QE-K6DNA3C 3.GWH24QE-K6DND4C 4.GWH24QE-K6DNE6C 5.GWH24QE-K6DNB8C 6.GWH24QE-K6DNB4C 7.GWH24QE-K6DNC8C 8.GWH24QE-K6DNB6C 9.GWH24QE-K6DNC4C 10.GWH24QE-K6DNC2D	1.GWH24QE-K6DNA1C 2.GWH24QE-K6DNB6C 3.GWH24QE-K6DNE4C 4.GWH24QE-K6DND6C 5.GWH24QE-K6DNB2C 6.GWH24QE-K6DNC4C
Product Code			1.CB419012200 2.CB424005000 3.CB464000100/CB464000101 4.CB465000400/CB465000401 5.CB438007000 6.CB434010700/CB434010701 7.CB456003300 8.CB435007400 9.CB444007900 10.CB439013800	1.CB419012201 2.CB435007401 3.CB470001801 4.CB460003701 5.CB432015001 6.CB444007901
Power Supply	Rated Voltage	V~	220-240	220-240
	Rated Frequency	Hz	50	50
	Phases		1	1
Power Supply Mode			Outdoor	Outdoor
Cooling Capacity		W	6450	6450
Heating Capacity		W	6450	6450
Cooling Power Input		W	1950	1950
Heating Power Input		W	1735	1735
Cooling Current Input		A	8.4	8.4
Heating Current Input		A	8.0	8.0
Rated Input		W	3100	3100
Rated Current		A	13.04	13.04
Air Flow Volume(SH/H/M/L/SL)		m <sup>3</sup> /h	1250/1050/950/850/-	1250/1050/950/850/-
Dehumidifying Volume		L/h	2.0	2.0
EER		W/W	3.3	3.3
COP		W/W	3.71	3.71
SEER		W/W	6.30	6.30
SCOP(Average/Warmer/Colder)		W/W	4.0/5.1/3.3	4.0/5.1/3.3
Application Area		m <sup>2</sup>	23-34	23-34
Indoor Unit	Fan Type		Cross-flow	Cross-flow
	Fan Diameter Length(DXL)	mm	Φ108X830	Φ108X830
	Cooling Speed(SH/H/M/L/SL)	r/min	1250/1000/900/800/-	1250/1000/900/800/-
	Heating Speed(SH/H/M/L/SL)	r/min	1250/1000/900/850/-	1250/1000/900/850/-
	Fan Motor Power Output	W	35	35
	Fan Motor RLA	A	0.35	0.35
	Fan Motor Capacitor	μF	3	3
	Evaporator Form		Aluminum Fin-copper Tube	Aluminum Fin-copper Tube
	Evaporator Pipe Diameter	mm	Φ7	Φ7
	Evaporator Row-fin Gap	mm	2-1.4	2-1.4
	Evaporator Coil Length (LXDXW)	mm	845X25.4X342.9	845X25.4X342.9
	Swing Motor Model		MP35CJ	MP35CJ
	Swing Motor Power Output	W	2.5	2.5
	Fuse Current	A	3.15	3.15
	Sound Pressure Level(SH/H/M/L/SL)	dB (A)	49/44/41/39/-	49/44/41/39/-
	Sound Power Level(SH/H/M/L/SL)	dB (A)	63/59/56/53/-	63/59/56/53/-
	Dimension (WXHXD)	mm	1078X325X246	1078X325X246
	Dimension of Carton Box (LXWXH)	mm	1145X410X335	1145X410X335
Dimension of Package(LXWXH)	mm	1148X413X350	1148X413X350	
Net Weight	kg	16.5	16.5	
Gross Weight	kg	20	20	

Outdoor Unit	Outdoor Unit Model		GWH24QE-K6DNA1C/O	GWH24QE-K6DNA1C/O
	Outdoor Unit Product Code		CB419W12200	CB419W12201
	Compressor Manufacturer		ZHUHAI LANDA COMPRESSOR CO.,LTD.	ZHUHAI LANDA COMPRESSOR CO.,LTD.
	Compressor Model		QXFS-D23zX090A	QXFS-D23zX090A
	Compressor Oil		FW68DA	FW68DA
	Compressor Type		Rotary	Rotary
	Compressor LRA.	A	25	25
	Compressor RLA	A	11.50	11.50
	Compressor Power Input	W	2400	2400
	Compressor Overload Protector		1NT11L-6233 or HPC115/95/ or KSD115°C	1NT11L-6233 or HPC115/95/ or KSD115°C
	Throttling Method		Electron expansion valve	Electron expansion valve
	Set Temperature Range	°C	16~30	16~30
	Cooling Operation Ambient Temperature Range	°C	-15~43	-15~43
	Heating Operation Ambient Temperature Range	°C	-15~24	-20~24
	Condenser Form		Aluminum Fin-copper Tube	Aluminum Fin-copper Tube
	Condenser Pipe Diameter	mm	Φ7	Φ7
	Condenser Rows-fin Gap	mm	2-1.4	2-1.4
	Condenser Coil Length (LXDXW)	mm	935X38.1X660	935X38.1X660
	Fan Motor Speed	rpm	800	800
	Fan Motor Power Output	W	60	60
	Fan Motor RLA	A	0.58	0.58
	Fan Motor Capacitor	μF	/	/
	Outdoor Unit Air Flow Volume	m <sup>3</sup> /h	3200	3200
	Fan Type		Axial-flow	Axial-flow
	Fan Diameter	mm	Φ520	Φ520
	Defrosting Method		Automatic Defrosting	Automatic Defrosting
	Climate Type		T1	T1
	Isolation		I	I
	Moisture Protection		IPX4	IPX4
	Permissible Excessive Operating Pressure for the Discharge Side	MPa	4.3	4.3
	Permissible Excessive Operating Pressure for the Suction Side	MPa	2.5	2.5
	Sound Pressure Level (H/M/L)	dB (A)	58/-/-	58/-/-
	Sound Power Level (H/M/L)	dB (A)	68/-/-	68/-/-
Dimension(WXHXD)	mm	963X700X396	963X700X396	
Dimension of Carton Box (LXWXH)	mm	1026X455X735	1026X455X735	
Dimension of Package(LXWXH)	mm	1029X458X750	1029X458X750	
Net Weight	kg	52.5	52.5	
Gross Weight	kg	57	57	
Refrigerant		R32	R32	
Refrigerant Charge	kg	1.7	1.7	
Connection Pipe	Connection Pipe Length	m	5	5
	Connection Pipe Gas Additional Charge	g/m	50	50
	Outer Diameter Liquid Pipe	mm	Φ6	Φ6
	Outer Diameter Gas Pipe	mm	Φ16	Φ16
	Max Distance Height	m	10	10
	Max Distance Length	m	25	25
Note: The connection pipe applies metric diameter.				

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

Parameter		Unit	Value		
Model			GWH18QD-K6DNB2C GWH18QD-K6DNB4C	GWH24QE-K6DNB2C	
Product Code			CB432014902 CB434010502	CB432015002	
Power Supply	Rated Voltage	V~	220-240	220-240	
	Rated Frequency	Hz	50	50	
	Phases		1	1	
Power Supply Mode			Outdoor	Outdoor	
Cooling Capacity		W	5130	6450	
Heating Capacity		W	5280	6450	
Cooling Power Input		W	1580	1950	
Heating Power Input		W	1420	1735	
Cooling Current Input		A	7.0	8.4	
Heating Current Input		A	6.3	8.0	
Rated Input		W	2300	3100	
Rated Current		A	10.8	13.04	
Air Flow Volume(SH/H/M/L/SL)		m <sup>3</sup> /h	850/720/610/520/-	1250/1050/950/850/-	
Dehumidifying Volume		L/h	1.8	2.0	
EER		W/W	3.25	3.3	
COP		W/W	3.72	3.71	
SEER		W/W	6.1	6.30	
SCOP(Average/Warmer/Colder)		W/W	4.0/5.1/3.4	4.0/5.1/3.3	
Application Area		m <sup>2</sup>	23-34	23-34	
Indoor Unit	Indoor Unit Model		GWH18QD-K6DNB2C/I GWH18QD-K6DNB4C/I	GWH24QE-K6DNB2C/I	
	Indoor Unit Product Code		CB432N14901 CB434N10502	CB432N15001	
	Fan Type		Cross-flow	Cross-flow	
	Fan Diameter Length(DXL)		mm	Φ106X706	Φ108X830
	Cooling Speed(SH/H/M/L/SL)		r/min	1230/1130/1030/800/-	1250/1000/900/800/-
	Heating Speed(SH/H/M/L/SL)		r/min	1350/1200/1050/900/-	1250/1000/900/850/-
	Fan Motor Power Output		W	35	35
	Fan Motor RLA		A	0.35	0.35
	Fan Motor Capacitor		μF	2.5	3
	Evaporator Form			Aluminum Fin-copper Tube	Aluminum Fin-copper Tube
	Evaporator Pipe Diameter		mm	Φ7	Φ7
	Evaporator Row-fin Gap		mm	2-1.4	2-1.4
	Evaporator Coil Length (LXDXW)		mm	715X25.4X304.8	845X25.4X342.9
	Swing Motor Model			MP35CJ	MP35CJ
	Swing Motor Power Output		W	2.5	2.5
	Fuse Current		A	3.15	3.15
	Sound Pressure Level(SH/H/M/L/SL)		dB (A)	49/44/39/34/-	49/44/41/39/-
	Sound Power Level(SH/H/M/L/SL)		dB (A)	59/54/49/44/-	63/59/56/53/-
	Dimension (WXHXD)		mm	970X300X224	1078X325X246
	Dimension of Carton Box (LXWXH)		mm	1038X380X305	1145X410X335
Dimension of Package(LXWXH)		mm	1041X383X320	1148X413X350	
Net Weight		kg	13.5	16.5	
Gross Weight		kg	16.5	20	

Outdoor Unit	Outdoor Unit Model		GWH18QD-K6DNA1C/O	GWH24QE-K6DNA1C/O
	Outdoor Unit Product Code		CB419W12500	CB419W12200
	Compressor Manufacturer		ZHUHAI LANDA COMPRESSOR CO.,LTD	ZHUHAI LANDA COMPRESSOR CO.,LTD.
	Compressor Model		QXF-B141ZF030A	QXFS-D23zX090A
	Compressor Oil		68DA	FW68DA
	Compressor Type		Rotary	Rotary
	Compressor LRA.	A	25	25
	Compressor RLA	A	6.5	11.50
	Compressor Power Input	W	1410	2400
	Compressor Overload Protector		1NT11L-6233/KSD115°C /HPC 115/95	1NT11L-6233 or HPC115/95/ or KSD115°C
	Throttling Method		Electron expansion valve	Electron expansion valve
	Set Temperature Range	°C	16~30	16~30
	Cooling Operation Ambient Temperature Range	°C	-15~43	-15~43
	Heating Operation Ambient Temperature Range	°C	-15~24	-15~24
	Condenser Form		Aluminum Fin-copper Tube	Aluminum Fin-copper Tube
	Condenser Pipe Diameter	mm	Φ7.94	Φ7
	Condenser Rows-fin Gap	mm	2-1.4	2-1.4
	Condenser Coil Length (LXDXW)	mm	742X38.1X550	935X38.1X660
	Fan Motor Speed	rpm	780	800
	Fan Motor Power Output	W	40	60
	Fan Motor RLA	A	0.62	0.58
	Fan Motor Capacitor	μF	/	/
	Outdoor Unit Air Flow Volume	m <sup>3</sup> /h	2400	3200
	Fan Type		Axial-flow	Axial-flow
	Fan Diameter	mm	Φ445	Φ520
	Defrosting Method		Automatic Defrosting	Automatic Defrosting
	Climate Type		T1	T1
	Isolation		I	I
	Moisture Protection		IPX4	IPX4
	Permissible Excessive Operating Pressure for the Discharge Side	MPa	4.3	4.3
	Permissible Excessive Operating Pressure for the Suction Side	MPa	2.5	2.5
	Sound Pressure Level (H/M/L)	dB (A)	56/-/-	58/-/-
	Sound Power Level (H/M/L)	dB (A)	64/-/-	68/-/-
Dimension(WXHXD)	mm	899X596X378	963X700X396	
Dimension of Carton Box (LXWXH)	mm	945X417X630	1026X455X735	
Dimension of Package(LXWXH)	mm	948X420X645	1029X458X750	
Net Weight	kg	39	52.5	
Gross Weight	kg	42	57	
Refrigerant		R32	R32	
Refrigerant Charge	kg	0.9	1.7	
Connection Pipe	Connection Pipe Length	m	5	5
	Connection Pipe Gas Additional Charge	g/m	16	50
	Outer Diameter Liquid Pipe	mm	Φ6	Φ6
	Outer Diameter Gas Pipe	mm	Φ12	Φ16
	Max Distance Height	m	10	10
	Max Distance Length	m	25	25
Note: The connection pipe applies metric diameter.				

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

Parameter		Unit	Value	
Model			GWH18QD-K6DNC2C	GWH24QE-K6DNC2C
Product Code			CB439009100	CB439009300
Power Supply	Rated Voltage	V~	220-240	220-240
	Rated Frequency	Hz	50	50
	Phases		1	1
Power Supply Mode			Outdoor	Outdoor
Cooling Capacity		W	5130	6450
Heating Capacity		W	5280	6450
Cooling Power Input		W	1580	1950
Heating Power Input		W	1420	1735
Cooling Current Input		A	7.0	8.4
Heating Current Input		A	6.3	8.0
Rated Input		W	2300	3100
Rated Current		A	10.8	13.04
Air Flow Volume(SH/H/M/L/SL)		m <sup>3</sup> /h	850/720/610/520/-	1250/1050/950/850/-
Dehumidifying Volume		L/h	1.8	2.0
EER		W/W	3.25	3.3
COP		W/W	3.72	3.71
SEER		W/W	6.1	6.30
SCOP(Average/Warmer/Colder)		W/W	4.0/5.1/3.4	4.0/5.1/3.3
Application Area		m <sup>2</sup>	23-34	27-42
Indoor Unit	Indoor Unit Model		GWH18QD-K6DNC2C/I	GWH24QE-K6DNC2C/I
	Indoor Unit Product Code		CB439N09100	CB439N09300
	Fan Type		Cross-flow	Cross-flow
	Fan Diameter Length(DXL)	mm	Φ106X706	Φ108X830
	Cooling Speed(SH/H/M/L/SL)	r/min	1230/1130/1030/800/-	1250/1000/900/800/-
	Heating Speed(SH/H/M/L/SL)	r/min	1350/1200/1050/900/-	1250/1000/900/850/-
	Fan Motor Power Output	W	35	35
	Fan Motor RLA	A	0.35	0.35
	Fan Motor Capacitor	μF	2.5	3
	Evaporator Form		Aluminum Fin-copper Tube	Aluminum Fin-copper Tube
	Evaporator Pipe Diameter	mm	Φ7	Φ7
	Evaporator Row-fin Gap	mm	2-1.4	2-1.4
	Evaporator Coil Length (LXD <sub>X</sub> W)	mm	715X25.4X304.8	850X25.4X342.9
	Swing Motor Model		MP35CJ	MP35CJ
	Swing Motor Power Output	W	2.5	2.5
	Fuse Current	A	3.15	3.15
	Sound Pressure Level(SH/H/M/L/SL)	dB (A)	49/44/39/34/-	49/44/41/39/-
	Sound Power Level(SH/H/M/L/SL)	dB (A)	59/54/49/44/-	63/59/56/53/-
	Dimension (WXHXD)	mm	970X300X224	1078X325X246
	Dimension of Carton Box (LXWXH)	mm	1038X380X305	1145X410X335
	Dimension of Package(LXWXH)	mm	1041X383X320	1148X413X350
	Net Weight	kg	13.5	16.5
	Gross Weight	kg	16.5	20

Outdoor Unit	Outdoor Unit Model		GWH18QD-K6DNC2C/O	GWH24QE-K6DNC2C/O
	Outdoor Unit Product Code		CB439W09100	CB439W09300
	Compressor Manufacturer		ZHUHAI LANDA COMPRESSOR CO.,LTD	ZHUHAI LANDA COMPRESSOR CO.,LTD.
	Compressor Model		QXF-B141ZF030A	QXFS-D23zX090A
	Compressor Oil		68DA	FW68DA
	Compressor Type		Rotary	Rotary
	Compressor LRA.	A	25	25
	Compressor RLA	A	6.5	11.50
	Compressor Power Input	W	1410	2400
	Compressor Overload Protector		1NT11L-6233/KSD115°C /HPC 115/95	1NT11L-6233 or HPC115/95/ or KSD115°C
	Throttling Method		Electron expansion valve	Electron expansion valve
	Set Temperature Range	°C	16~30	16~30
	Cooling Operation Ambient Temperature Range	°C	-15~43	-15~43
	Heating Operation Ambient Temperature Range	°C	-15~24	-22~24
	Condenser Form		Aluminum Fin-copper Tube	Aluminum Fin-copper Tube
	Condenser Pipe Diameter	mm	Φ7.94	Φ7
	Condenser Rows-fin Gap	mm	2-1.4	2-1.4
	Condenser Coil Length (LXDXW)	mm	742X38.1X550	935X38.1X660
	Fan Motor Speed	rpm	780	800
	Fan Motor Power Output	W	40	60
	Fan Motor RLA	A	0.62	0.58
	Fan Motor Capacitor	μF	/	/
	Outdoor Unit Air Flow Volume	m <sup>3</sup> /h	2400	3200
	Fan Type		Axial-flow	Axial-flow
	Fan Diameter	mm	Φ445	Φ520
	Defrosting Method		Automatic Defrosting	Automatic Defrosting
	Climate Type		T1	T1
	Isolation		I	I
	Moisture Protection		IPX4	IPX4
	Permissible Excessive Operating Pressure for the Discharge Side	MPa	4.3	4.3
	Permissible Excessive Operating Pressure for the Suction Side	MPa	2.5	2.5
	Sound Pressure Level (H/M/L)	dB (A)	56/-/-	58/-/-
	Sound Power Level (H/M/L)	dB (A)	64/-/-	68/-/-
Dimension(WXHXD)	mm	899X596X378	963X700X396	
Dimension of Carton Box (LXWXH)	mm	945X417X630	1026X455X735	
Dimension of Package(LXWXH)	mm	948X420X645	1029X458X750	
Net Weight	kg	39	52.5	
Gross Weight	kg	42	57	
Refrigerant		R32	R32	
Refrigerant Charge	kg	0.9	1.7	
Connection Pipe	Connection Pipe Length	m	5	5
	Connection Pipe Gas Additional Charge	g/m	16	50
	Outer Diameter Liquid Pipe	mm	Φ6	Φ6
	Outer Diameter Gas Pipe	mm	Φ12	Φ16
	Max Distance Height	m	10	10
	Max Distance Length	m	25	25
	Note: The connection pipe applies metric diameter.			

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

Model			1.GWH24QD-K6DNB2A 2.GWH24QD-K6DNE4A 3.GWH24QD-K6DNC4A 4.GWH24QD-K6DNA1A 5.GWH24QD-K6DNA6A 6.GWH24QD-K6DNB4A 7.GWH24QD-K6DND6A 8.GWH24QD-K6DNC4A 9.GWH24QD-K6DNE4A 10.GWH24QD-K6DNC8A 11.GWH24QD-K6DNA5A 12.GWH24QD-K6DNB8A 13.GWH24QD-K6DNB4A 14.GWH24QD-K6DNC2A
Product Code			1.CB432011400 2.CB470002500 3.CB444007700 4.CB419014900 5.CB427009800 6.CB434011600 7.CB460005400 8.CB444007701 9.CB470002501 10.CB456005900 11.CB425012000 12.CB438009900 13.CB434011601 14.CB439012900
Power Supply	Rated Voltage	V~	220-240
	Rated Frequency	Hz	50
	Phases		1
Power Supply Mode			Outdoor
Cooling Capacity		W	6155
Heating Capacity		W	6448
Cooling Power Input		W	1760
Heating Power Input		W	1860
Cooling Power Current		A	7.7
Heating Power Current		A	8.1
Rated Input		W	2600
Rated Current		A	10.9
Rated Heating Current		A	11.3
Air Flow Volume(SH/H/M/L/SL)		m <sup>3</sup> /h	850/720/610/520/-
Dehumidifying Volume		L/h	1.8
EER		W/W	3.5
COP		W/W	3.47
SEER		W/W	6.1
HSPF		W/W	/
Application Area		m <sup>2</sup>	23-34
Indoor Unit	Fan Type		Cross-flow
	Diameter Length(DXL)	mm	Φ106X706
	Fan Motor Cooling Speed(SH/H/M/L/SL)	r/min	1230/1130/1030/800/-
	Fan Motor Heating Speed(SH/H/M/L/SL)	r/min	1350/1200/1050/900/-
	Output of Fan Motor	W	35
	Fan Motor RLA	A	0.35
	Fan Motor Capacitor	μF	2.5
	Input of Heater	W	/
	Evaporator Form		Aluminum Fin-copper Tube
	Pipe Diameter	mm	Φ7
	Row-fin Gap	mm	2-1.4
	Coil Length (LXD <sub>X</sub> W)	mm	715X25.4X304.8
	Swing Motor Model		MP35CP
	Output of Swing Motor	W	2.5
	Fuse	A	3.15
	Sound Pressure Level (SH/H/M/L/SL)	dB (A)	48/44/40/34/-
	Sound Power Level (SH/H/M/L/SL)	dB (A)	58/54/50/44/-
	Dimension (WXH <sub>X</sub> D)	mm	1078X325X246
	Dimension of Carton Box (LXWXH)	mm	1145X410X335
	Dimension of Package (LXWXH)	mm	1148X413X350
Net Weight	kg	13.5	
Gross Weight	kg	16.5	



Model			GWH18QD-K6DNB2A GWH18QD-K6DNB4A
Product Code			CB432011300 CB434010400
Power Supply	Rated Voltage	V~	220-240
	Rated Frequency	Hz	50
	Phases		1
Power Supply Mode			Outdoor
Cooling Capacity		W	5130
Heating Capacity		W	5280
Cooling Power Input		W	1600
Heating Power Input		W	1450
Cooling Power Current		A	7.0
Heating Power Current		A	6.3
Rated Input		W	2300
Rated Current		A	10.8
Rated Heating Current		A	12
Air Flow Volume(SH/H/M/L/SL)		m <sup>3</sup> /h	850/720/610/520/-
Dehumidifying Volume		L/h	1.8
EER		W/W	3.21
COP		W/W	3.64
SEER		W/W	6.1
HSPF		W/W	/
Application Area		m <sup>2</sup>	23-34
Indoor Unit	Fan Type		Cross-flow
	Diameter Length(DXL)	mm	Φ106X706
	Fan Motor Cooling Speed(SH/H/M/L/SL)	r/min	1230/1130/1030/800/-
	Fan Motor Heating Speed(SH/H/M/L/SL)	r/min	1350/1200/1050/900/-
	Output of Fan Motor	W	35
	Fan Motor RLA	A	0.35
	Fan Motor Capacitor	μF	2.5
	Input of Heater	W	/
	Evaporator Form		Aluminum Fin-copper Tube
	Pipe Diameter	mm	Φ7
	Row-fin Gap	mm	2-1.4
	Coil Length (LXDXW)	mm	715X25.4X304.8
	Swing Motor Model		MP35CP
	Output of Swing Motor	W	2.5
	Fuse	A	3.15
	Sound Pressure Level (SH/H/M/L/SL)	dB (A)	48/44/39/34/-
	Sound Power Level (SH/H/M/L/SL)	dB (A)	58/54/49/44/-
	Dimension (WXHXD)	mm	970X300X224
	Dimension of Carton Box (LXWXH)	mm	1038X380X305
	Dimension of Package (LXWXH)	mm	1041X383X320
Net Weight	kg	13.5	
Gross Weight	kg	16.5	

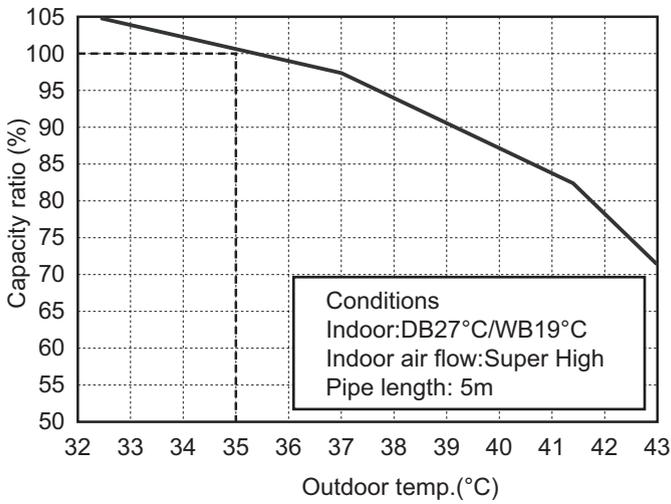
Outdoor Unit	Model of Outdoor Unit		GWH18AAD-K6DNA1A/O	
	Product Code of Outdoor Unit		CB476W00200	
	Compressor Manufacturer/Trademark		ZHUHAI LANDA COMPRESSOR CO.,LTD	
	Compressor Model		QXF-B141ZF030A	
	Compressor Oil		68DA	
	Compressor Type		Rotary	
	L.R.A.	A		25
	Compressor RLA	A		6.5
	Compressor Power Input	W		1410
	Overload Protector			1NT11L-6233/KSD115°C/HPC 115/95
	Throttling Method			Electron expansion valve
	Operation Temp	°C		16~30
	Ambient Temp (Cooling)	°C		-15~43
	Ambient Temp (Heating)	°C		-15~24
	Condenser Form			Aluminum Fin-copper Tube
	Pipe Diameter	mm		Φ7.94
	Rows-fin Gap	mm		2-1.4
	Coil Length (LXDXW)	mm		742X38.1X550
	Fan Motor Speed	rpm		780
	Output of Fan Motor	W		40
	Fan Motor RLA	A		0.62
	Fan Motor Capacitor	μF		/
	Air Flow Volume of Outdoor Unit	m <sup>3</sup> /h		2400
	Fan Type			Axial-flow
	Fan Diameter	mm		Φ445
	Defrosting Method			/
	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)		56/-/-
	Sound Power Level (H/M/L)	dB (A)		66/-/-
Dimension (WXHXD)	mm		899X596X378	
Dimension of Carton Box (LXWXH)	mm		945X417X630	
Dimension of Package (LXWXH)	mm		948X420X645	
Net Weight	kg		39	
Gross Weight	kg		42	
Refrigerant			R32	
Refrigerant Charge	kg		0.9	
Connection Pipe	Length	m	5	
	Gas Additional Charge	g/m	16	
	Outer Diameter Liquid Pipe	mm	Φ6	
	Outer Diameter Gas Pipe	mm	Φ12	
	Max Distance Height	m	10	
	Max Distance Length	m	25	
	Note: The connection pipe applies metric diameter.			

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

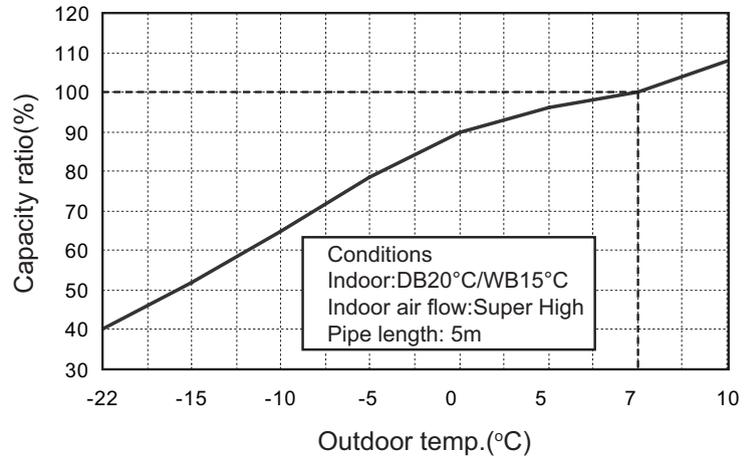


Heating operation ambient temperature range is -22°C~24°C

Cooling



Heating



## 2.4 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	Compressor frequency (Hz)
Indoor	Outdoor			T1 (°C)	T2 (°C)			
27/19	35/24	18K	0.9 to 1.1	12 to 14	75 to 37	Super High	High	52
		24K						72

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	Compressor frequency (Hz)
Indoor	Outdoor			T1 (°C)	T2 (°C)			
20/-	7/6	18K	2.2 to 2.4	70 to 35	2 to 4	Super High	High	65
		24K						77

**Instruction:**

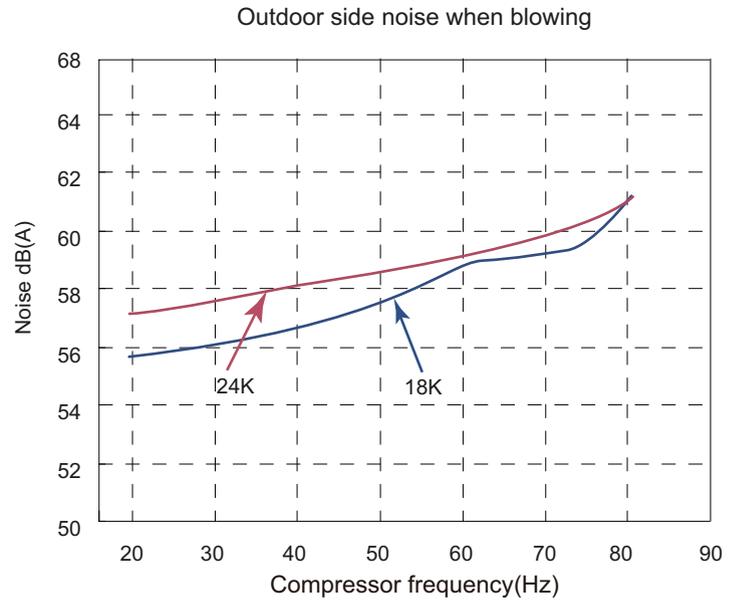
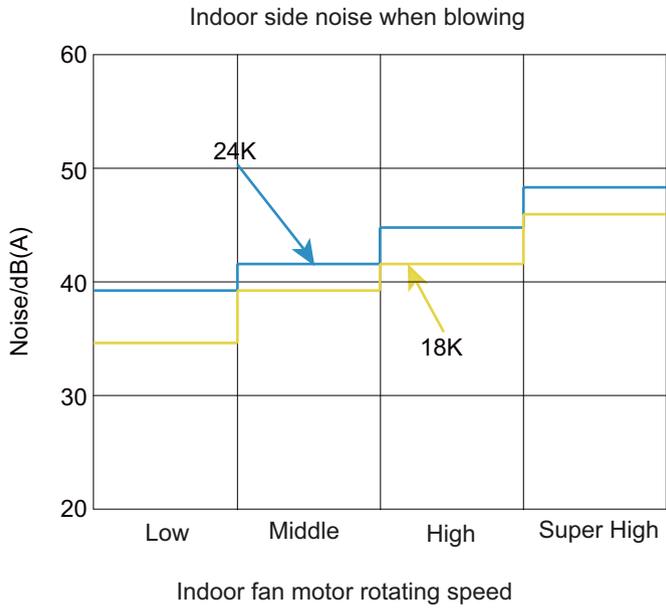
T1: Inlet and outlet pipe temperature of evaporator

T2: Inlet and outlet pipe temperature of condenser

P: Pressure at the side of big valve

Connection pipe length: 5m.

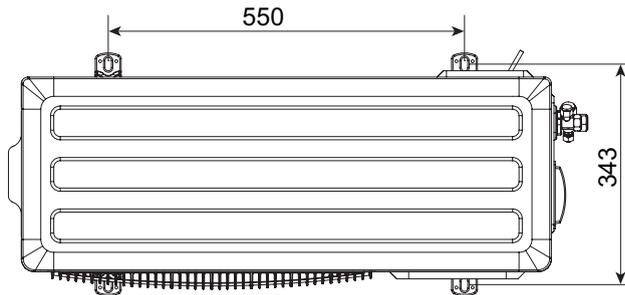
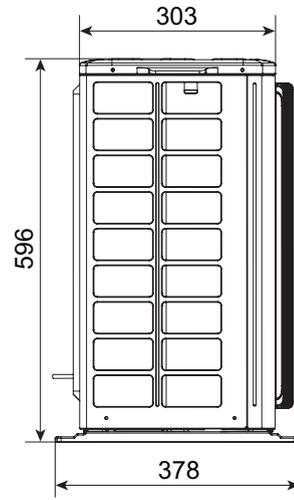
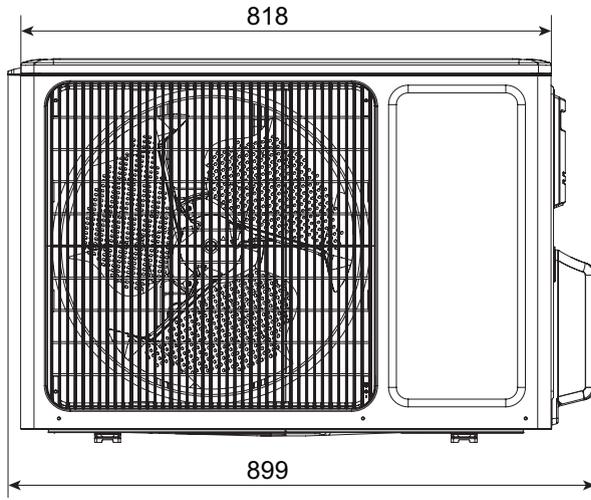
## 2.5 Noise Curve





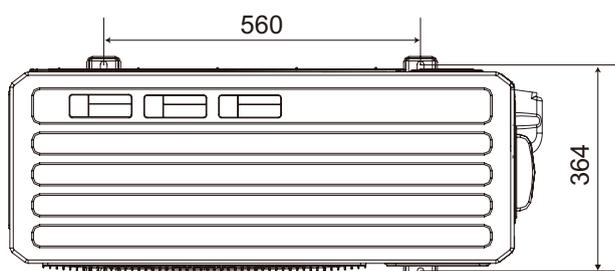
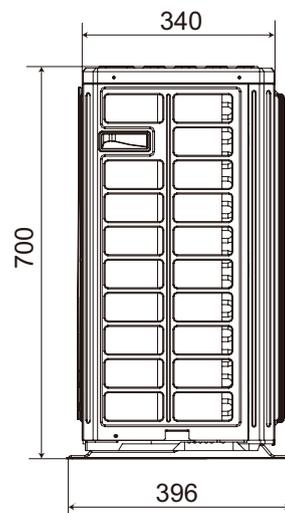
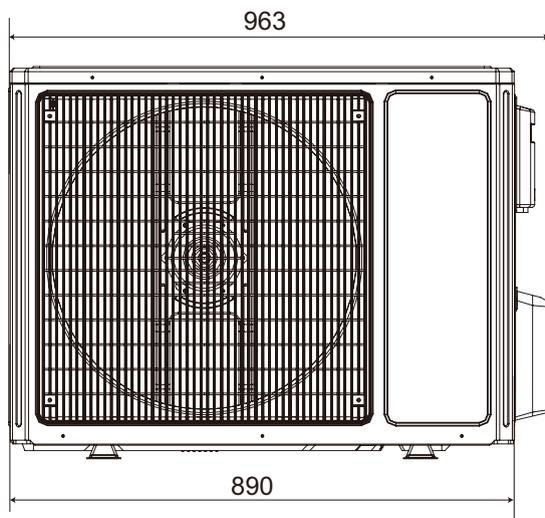
### 3.2 Outdoor Unit

18K



Unit:mm

24K



Unit:mm



## 5. Electrical Part

### 5.1 Wiring Diagram

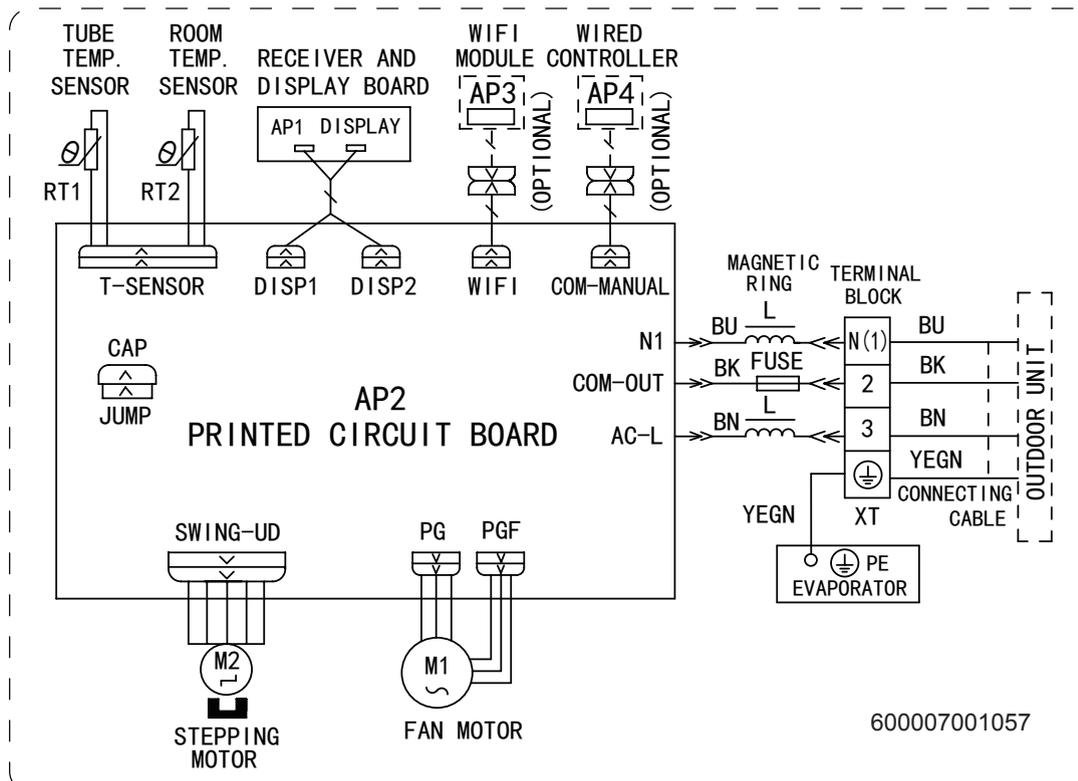
• Instruction

Symbol	Symbol Color	Symbol	Symbol Color	Symbol	Name
WH	White	GN	Green	CAP	Jumper cap
YE	Yellow	BN	Brown	COMP	Compressor
RD	Red	BU	Blue	⊕	Grounding wire
YEGN	Yellow/Green	BK	Black	/	/
VT	Violet	OG	Orange	/	/

Note: Jumper cap is used to determine fan speed and the swing angle of horizontal lover for this model.

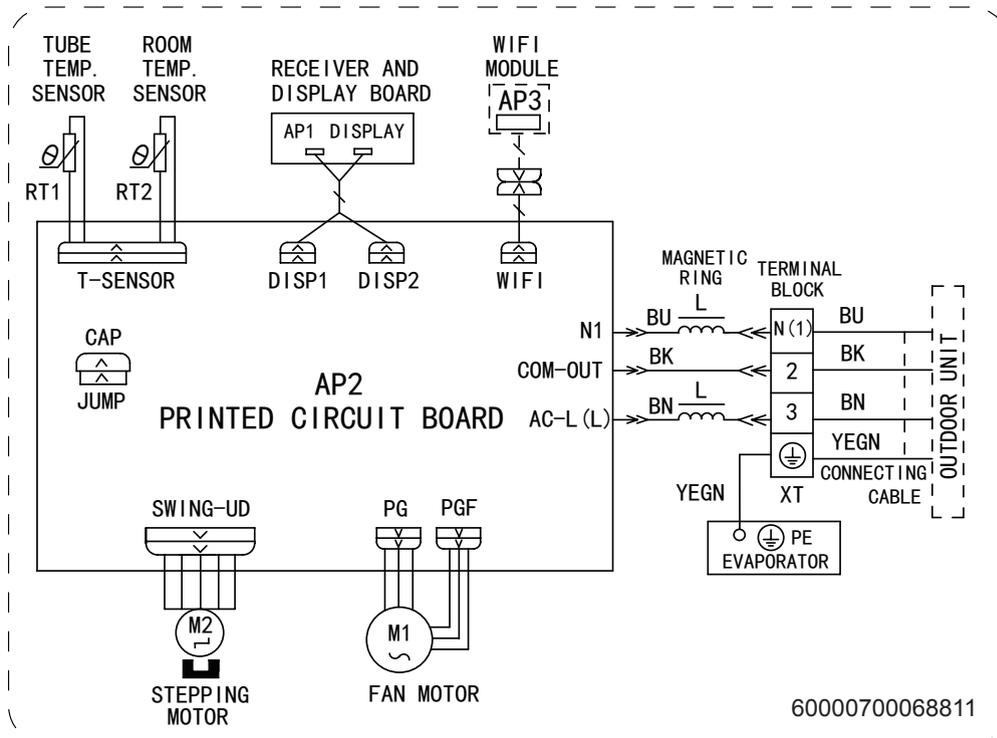
• Indoor Unit

GWH18QD-K6DNC2C/I GWH24QE-K6DNC2C/I

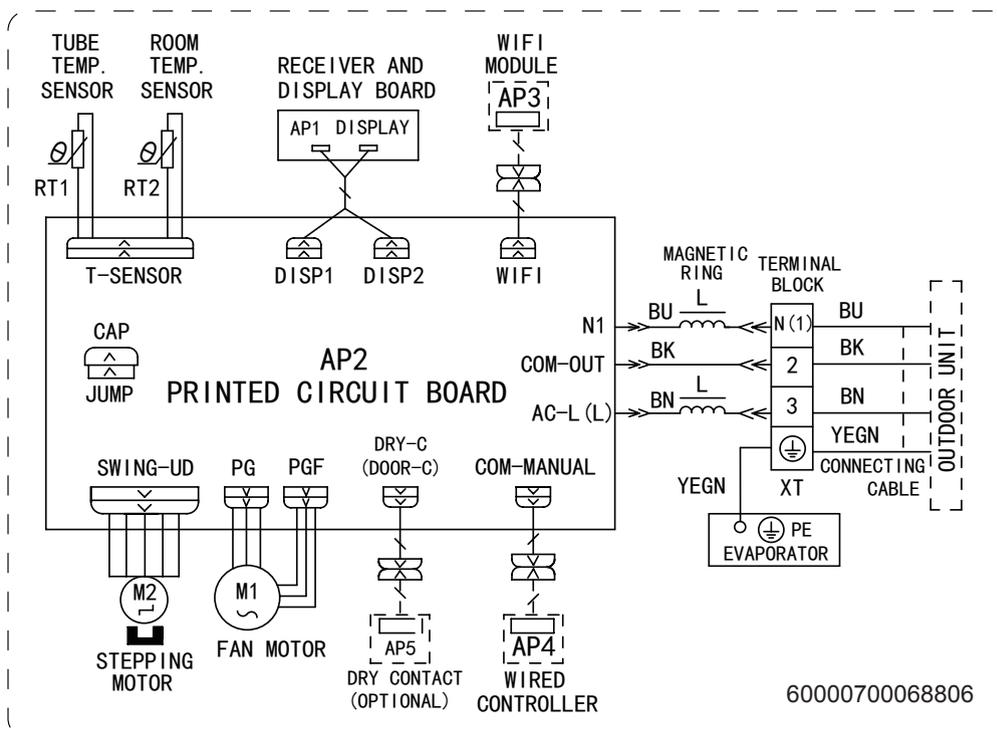




GWH24QD-K6DND6A/I GWH24QD-K6DNE4A/I(CB470N02501) GWH24QD-K6DNB8A/I GWH24QD-K6DNB4A/I(CB434N11601)



GWH18QD-K6DND4C/I GWH18QD-K6DNE6C/I GWH24QE-K6DNB2C/I GWH24QE-K6DNE6C/I  
 GWH24QD-K6DNC4A/I(CB444N07701) GWH18QD-K6DNB4C/I(CB434N10502) GWH24QE-K6DNB4C/I(CB434N10701)  
 GWH18QD-K6DNC2F/I GWH24QE-K6DNC2D/I







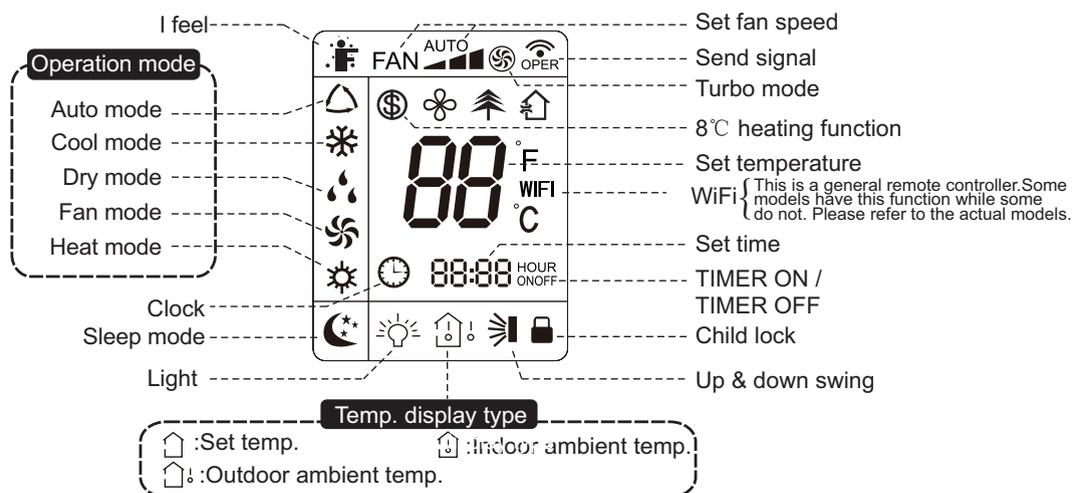


## 6. Function and Control

### 6.1 Remote Controller Introduction of YAN1F6(WIFI)



#### Introduction for icons on display screen



#### Introduction for buttons on remote controller

**Note:**

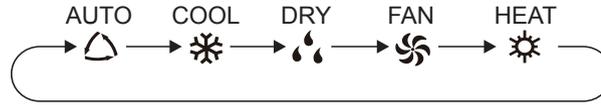
- This is a general use remote controller, it could be used for the air conditioners with multifunction; For some function, which the model doesn't have, if press the corresponding button on the remote controller that the unit will keep the original running status.
- After putting through the power, the air conditioner will give out a sound. Operation indicator "⏻" is ON (red indicator, the colour is different for different models). After that, you can operate the air conditioner by using remote controller.
- Under on status, pressing the button on the remote controller, the signal icon "📶" on the display of remote controller will blink once and the air conditioner will give out a "de" sound, which means the signal has been sent to the air conditioner.
- Under off status, set temperature and clock icon will be displayed on the display of remote controller (If timer on, timer off and light functions are set, the corresponding icons will be displayed on the display of remote controller at the same time); Under on status, the display will show the corresponding set function icons.

### 1. ON/OFF button

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

### 2. MODE button

Press this button to select your required operation mode.



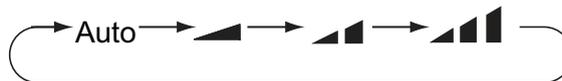
- When selecting auto mode, air conditioner will operate automatically according to ex-factory setting. Set temperature cant be adjusted and will not be displayed as well. Press "FAN" button can adjust fan speed. Press "SWING" button can adjust fan blowing angle.
- After selecting cool mode, air conditioner will operate under cool mode. Cool indicator on indoor unit is ON.(This indicator is not available for some models). Press "▲" or "▼" button to adjust set temperature. Press "FAN" button to adjust fan speed. Press "SWING" button to adjust fan blowing angle.
- When selecting dry mode, the air conditioner operates at low speed under dry mode. Dry indicator "💧" on indoor unit is ON(This indicator is not available for some models). Under dry mode, fan speed cant be adjusted. Press "SWING" button to adjust fan blowing angle.
- When selecting fan mode, the air conditioner will only blow fan, no cooling and no heating. All indicators are OFF. Press "FAN" button to adjust fan speed. Press "SWING" button to adjust fan blowing angle.
- When selecting heating mode, the air conditioner operates under heat mode. Heat indicator on indoor unit is ON(This indicator is not available for some models). Press "▲" or "▼" button to adjust set temperature. Press "FAN" button to adjust fan speed. Press "SWING" button to adjust fan blowing angle. (Cooling only unit wont receive heating mode signal. If setting heat mode with remote controller, press ON/OFF button cant start up the unit).

**Note:**

- For preventing cold air, after starting up heating mode, indoor unit will delay 1~5 minutes to blow air (actual delay time is depend on indoor ambient temperature).
- Set temperature range from remote controller: 16~30°C ; Fan speed: auto, low speed, medium speed, high speed.

### 3. FAN button

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



**Note:**

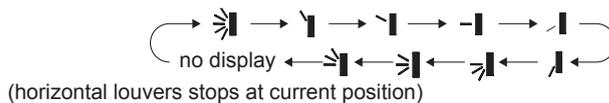
- Under AUTO speed, air conditioner will select proper fan speed automatically according to ex-factory setting.
- Fan speed under dry mode is low speed.
- X-FAN function: Hold fan speed button for 2s in COOL or DRY mode, the icon "⊗" is displayed and the indoor fan will continue operation for a few minutes in order to dry the indoor unit even though you have turned off the unit. After energization, X-FAN OFF is defaulted. X-FAN is not available in AUTO, FAN or HEAT mode.

This function indicates that moisture on evaporator of indoor unit will be blown after the unit is stopped to avoid mould.

- Having set X-FAN function on: After turning off the unit by pressing ON/OFF button indoor fan will continue running for a few minutes. at low speed. In this period, Hold fan speed button for 2s to stop indoor fan directly.
- Having set X-FAN function off: After turning off the unit by pressing ON/OFF button, the complete unit will be off directly.

### 4. SWING button

Press this button can select up&down swing angle. Fan blow angle can be selected circularly as below:



- When selecting "no display", air conditioner is blowing fan automatically. Horizontal louver will automatically swing up & down at maximum angle.
- When selecting "up, down, left, right", air conditioner is blowing fan at fixed position. Horizontal louver will stop at the fixed position.
- When selecting "↗, ↘, ↙, ↚", air conditioner is blowing fan at fixed angle. Horizontal louver will send air at the fixed angle.
- Hold "no display" button above 2s to set your required swing angle. When reaching your required angle, release the button.

**Note:**

- "↗, ↘, ↙, ↚" may not be available. When air conditioner receives this signal, the air conditioner will blow fan automatically.

### 5. TURBO button

Under COOL or HEAT mode, press this button to turn to quick COOL or quick HEAT mode. "⊗" icon is displayed on remote controller. Press this button again to exit turbo function and "⊗" icon will disappear.

## 6. ▲/▼ button

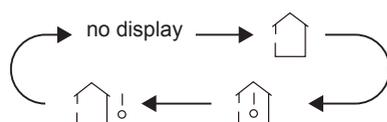
- Press "▲" or "▼" button once increase or decrease set temperature 1°C . Holding "▲" or "▼" button, 2s later, set temperature on remote controller will change quickly. On releasing button after setting is finished, temperature indicator on indoor unit will change accordingly. (Temperature cant be adjusted under auto mode)
- When setting TIMER ON, TIMER OFF or CLOCK, press "▲" or "▲" button to adjust time. (Refer to CLOCK, TIMER ON, TIMER OFF buttons) When setting TIMER ON, TIMER OFF or CLOCK, press "▲" or "▲" button to adjust time. (Refer to CLOCK, TIMER ON, TIMER OFF buttons)

## 7. SLEEP button

Under COOL, HEAT or DRY mode, press this button to start up sleep function. "☾" icon is displayed on remote controller. Press this button again to cancel sleep function and "☾" icon will disappear.

## 8. TEMP button

By pressing this button, you can see indoor set temperature, indoor ambient temperature or outdoor ambient temperature on indoor units display. The setting on remote controller is selected circularly as below:



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

### Note:

- Outdoor temperature display is not available for some models. At that time, indoor unit receives "🏠🌡️!" signal, while it displays indoor set temperature.
- Its defaulted to display set temperature when turning on the unit. There is no display in the remote controller.
- Only for the models whose indoor unit has dual-8 display.
- When selecting displaying of indoor or outdoor ambient temperature, indoor temperature indicator displays corresponding temperature and automatically turn to display set temperature after three or five seconds.

## 9. WIFI button

Press "WiFi" button to turn on or turn off WiFi function. When WiFi function is turned on, the "WiFi" icon will be displayed on remote controller; Under status of remote controller off, press "MODE" and "WiFi" buttons simultaneously for 1s, WiFi module will restore to factory default setting. (This function is only available for some models.)

## 10. LIGHT button

Press this button to turn off display light on indoor unit. "💡" icon on remote controller disappears. Press this button again to turn on display light. "💡" icon is displayed.

## 11. CLOCK button

Press this button to set clock time. "🕒" icon on remote controller will blink. Press "▲" or "▼" button within 5s to set clock time. Each pressing of "▲" or "▼" button, clock time will increase or decrease 1 minute. If hold "▲" or "▼" button, 2s later, time will change quickly. Release this button when reaching your required time. Press "CLOCK" button to confirm the time. "🕒" icon stops blinking.

### Note:

- Clock time adopts 24-hour mode.
- The interval between two operation cant exceeds 5s. Otherwise, remote controller will quit setting status. Operation for TIMER ON/TIMER OFF is the same.

## 12. TIMER ON / TIMER OFF button

### ● TIMER ON button

"TIMER ON" button can set the time for timer on. After pressing this button, "🕒" icon disappears and the word "ON" on remote controller blinks. Press "▲" or "▼" button to adjust TIMER ON setting. After each pressing "▲" or "▼" button, TIMER ON setting will increase or decrease 1min. Hold "▲" or "▼" button, 2s later, the time will change quickly until reaching your required time. Press "TIMER ON" to confirm it. The word "ON" will stop blinking. "🕒" icon resumes displaying. Cancel TIMER ON: Under the condition that TIMER ON is started up, press "TIMER ON" button to cancel it.

### ● TIMER OFF button

"TIMER OFF" button can set the time for timer off. After pressing this button, "🕒" icon disappears and the word "OFF" on remote controller blinks. Press "▲" or "▼" button to adjust TIMER OFF setting. After each pressing "▲" or "▼" button, TIMER OFF setting will increase or decrease 1min. Hold "▲" or "▼" button, 2s later, the time will change quickly until reaching your required time. Press "TIMER OFF" word "OFF" will stop blinking. "🕒" icon resumes displaying. Cancel TIMER OFF. Under the condition that TIMER OFF is started up, press "TIMER OFF" button to cancel it.

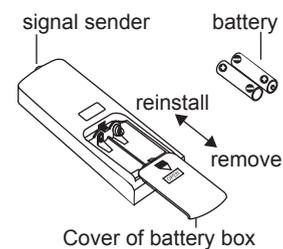


## Replacement of batteries in remote controller

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.

### Note:

- 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 don't use remote controller for a long time, please take out the batteries.
- If the display on remote controller is fuzzy or there's no display, please replace batteries.





### 1. ON/OFF button

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

### 2. MODE button

Each time you press this button, a mode is selected in a sequence that goes from AUTO, COOL, DRY, FAN, and HEAT \*, as the following:

\* Note: Only for models with heating function.



### 3. FAN button

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

\* Note: Fan speed under dry mode is low speed.

- X-FAN function: Hold fan speed button for 2s in COOL or DRY mode, the icon is displayed and the indoor fan will continue operation for a few minutes in order to dry the indoor unit even though you have turned off the unit. After energization, X-FAN OFF is defaulted. X-FAN is not available in AUTO, FAN or HEAT mode.

This function indicates that moisture on evaporator of indoor unit will be blown after the unit is stopped to avoid mould.

- Having set X-FAN function on: After turning off the unit by pressing ON/OFF button indoor fan will continue running for a few minutes. at low speed. In this period, Hold fan speed button for 2s to stop indoor fan directly.
- Having set X-FAN function off: After turning off the unit by pressing ON/OFF button, the complete unit will be off directly.

### 4. ▲ / ▼ button

Press ▲ / ▼ button to increase/decrease set temperature. In AUTO mode, set temperature is not adjustable.

- When setting TIMER ON, TIMER OFF or CLOCK, press "▲" or "▼" button to adjust time.

### 5. SWING button

Press this button to set up & down swing angle.

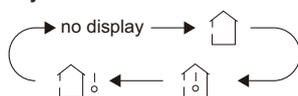
### 6. SLEEP button

Under COOL, HEAT or DRY mode, press this button to start up sleep function.

Press this button again to cancel Sleep function. Under Fan and Auto modes, this function is unavailable.

### 7. TEMP button

Press this button, you can see indoor set temperature, indoor ambient temperature on indoor unit's display. The setting on remote controller is selected circularly as below:



#### Note:

- Outdoor temperature display is not available for some models. At that time, indoor unit receives " " signal, while it displays indoor set temperature.

### 8. TURBO button

Under COOL or HEAT mode, press this button to activate / deactivate the Turbo function.

### 9. I FEEL button

Press this button to start I FEEL function and " " will be displayed on the remote controller. After this function is set, the remote controller will send the detected ambient temperature to the controller and the unit will automatically adjust the indoor temperature according to the detected temperature. Press this button again to close I FEEL function and " " will disappear. When I FEEL function is turned on, the remote controller should be put within the area where indoor unit can receive the signal sent by the remote controller.

### 10. Timer button

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

- Press this button once and the characters of HOUR ON (OFF) will flash to be displayed. Meanwhile, press " ▲ " button or " ▼ " button to adjust timer setting (time will change quickly if holding " ▲ " or " ▼ " button). Time setting range is 0.5~24hours. Press this button again to confirm timer setting and the characters of HOUR ON (OFF) will stop flashing. If the characters are flashing but you haven't press timer button, timer setting status will be quit after 5s. If timer is confirmed, press this button again to cancel timer.

### 11. WIFI button

Press "WiFi" button to turn on or turn off WiFi function. When WiFi function is turned on, the "WiFi" icon will be displayed on remote controller; Under status of unit off, press "MODE" and "WiFi" buttons simultaneously for 1s, WiFi module will restore to factory default setting.

- This function is only available for some models.

### 12. Light button

Press this button to turn on the display's light and press this button again to turn off the display's light.

## Function introduction for combination buttons

### Combination of "▲" and "▼" buttons: About lock

Press "▲" and "▼" buttons simultaneously 3s to lock or unlock the keypad. If the remote controller is locked,  is displayed. In this case, pressing any button,  blinks three times.

### Combination of "MODE" and "▼" buttons: About switch between Fahrenheit and centigrade

At unit OFF, press "MODE" and "▼" buttons simultaneously to switch between °C and °F.

### Combination of "TEMP" and "TIMER" buttons: About Energy-saving Function

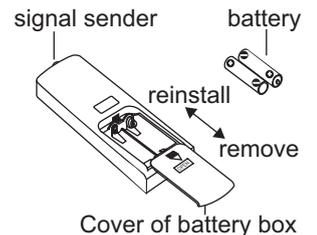
Press "TEMP" and "TIMER" simultaneously in COOL mode to start energy-saving function. Nixie tube on the remote controller displays "SE". Repeat the operation to quit the function.

### Combination of "TEMP" and "TIMER" buttons: About 8 °C Heating Function

Press "TEMP" and "TIMER" simultaneously in HEAT mode to start 8 °C Heating Function Nixie tube on the remote controller displays "8" and a selected temperature of "8°C". (46°F if Fahrenheit is adopted). Repeat the operation to quit the function.

## 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.



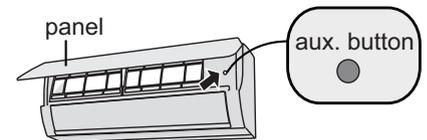
## Emergency operation

If remote controller is lost or damaged, please use auxiliary button to turn on or turn off the air conditioner. The operation in details are as below:

As shown in the fig. Open panel, press aux. button to turn on or turn off the air conditioner. When the air conditioner is turned on, it will operate under auto mode.

### ⚠ WARNING:

Use insulated object to press the auto button



## 6.3 Brief Description of Modes and Functions

### 1. Basic function of system

#### (1) Cooling mode

- (1) Under this mode, fan and swing operates at setting status. Temperature setting range is 16~30°C.
- (2) During malfunction of outdoor unit or the unit is stopped because of protection, indoor unit keeps original operation status.

#### (2) Drying mode

- (1) Under this mode, fan operates at low speed and swing operates at setting status. Temperature setting range is 16~30°C.
- (2) During malfunction of outdoor unit or the unit is stopped because of protection, indoor unit keeps original operation status.
- (3) Protection status is same as that under cooling mode.
- (4) Sleep function is not available for drying mode.

#### (3) Heating mode

- (1) Under this mode, Temperature setting range is 16~30°C.
- (2) Working condition and process for heating mode:

When turn on the unit under heating mode, indoor unit enters into cold air prevention status. When the unit is stopped or at OFF status, and indoor unit has been started up just now, the unit enters into residual heat-blowing status.

#### (4) Working method for AUTO mode:

1. Working condition and process for AUTO mode:
  - a. Under auto mode set temperature can be adjusted. The unit switch mode automatically according to ambient temperature.
2. Protection function
  - a. During cooling operation, protection function is same as that under cooling mode.
  - b. During heating operation, protection function is same as that under heating mode.
3. Display: Set temperature is the set value under each condition. Ambient temperature is (Tamb.-Tcompensation) for heat pump unit and Tamb. for cooling only unit.
4. If there's I feel function, Tcompensation is 0. Others are same as above.

#### (5) Fan mode

Under this mode, indoor fan operates at set fan speed. Compressor, outdoor fan, 4-way valve and electric heating tube stop operation. Indoor fan can select to operate at high, medium, low or auto fan speed. Temperature setting range is 16~30°C.

### 2. Other control

#### (1) Buzzer

Upon energization or availablely operating the unit or remote controller, the buzzer will give out a beep.

#### (2) Auto button

If press this auto button when turning off the unit, the complete unit will operate at auto mode. Indoor fan operates at auto fan speed and swing function is turned on. Press this auto button at ON status to turn off the unit.

#### (3) Auto fan

Heating mode: During auto heating mode or normal heating mode, auto fan speed will adjust the fan speed automatically according to ambient temperature and set temperature.

#### (4) Sleep

After setting sleep function for a period of time, system will adjust set temperature automatically.

#### (5) Timer function:

General timer and clock timer functions are compatible by equipping remote controller with different functions.

#### (6) Memory function

memorize compensation temperature, off-peak energization value.

Memory content: mode, up&down swing, light, set temperature, set fan speed, general timer (clock timer cant be memorized).

After power recovery, the unit will be turned on automatically according to memory content.

#### (7) Health function

During operation of indoor fan, set health function by remote controller. Turn off the unit will also turn off health function.

Turn on the unit by pressing auto button, and the health is defaulted ON.

### **(8) I feel control mode**

After controller received I feel control signal and ambient temperature sent by remote controller, controller will work according to the ambient temperature sent by remote controller.

### **(9) Compulsory defrosting function**

(1) Start up compulsory defrosting function

Under ON status, set heating mode with remote controller and adjust the temperature to 16°C. Press “+, -, +, -, +,-” button successively within 5s and the complete unit will enter into compulsory defrosting status. Meanwhile, heating indicator on indoor unit will ON 10s and OFF 0.5s successively. (Note: If complete unit has malfunction or stops operation due to protection, compulsory defrosting function can be started up after malfunction or protection is resumed.

(2) Exit compulsory defrosting mode

After compulsory defrosting is started up, the complete unit will exit defrosting operation according to the actual defrosting result, and the complete unit will resume normal heating operation.

### **(10) Refrigerant recovery function:**

(1) Enter refrigerant recycling function

Within 5min after energizing (unit ON or OFF status is ok), continuously press LIGHT button for 3 times within 3s to enter refrigerant recycling mode; Fo is displayed and refrigerant recycling function is started. At this moment, the maintenance people closes liquid valve. After 5min, stick the thimble of maintenance valve with a tool. If there is no refrigerant spraying out, close the gas valve immediately and then turn off the unit to remove the connection pipe.

(2) Exit refrigerant recycling function

After entering refrigerant recycling mode, when receive any remote control signal or enter refrigerant recycling mode for 25min, the unit will exit refrigerant recycling mode automatically. If the unit is in standby mode before refrigerant recycling, it will be still in standby mode after finishing refrigerant recycling; if the unit is in ON status before refrigerant recycling, it will still run in original operation mode.

### **(11) Ambient temperature display control mode**

1. When user set the remote controller to display set temperature (corresponding remote control code: 01), current set temperature will be displayed.

2. Only when remote control signal is switched to indoor ambient temperature display status (corresponding remote control code: 10) from other display status (corresponding remote control code: 00, 01,11), controller will display indoor ambient temperature for 3s and then turn back to display set temperature.

Under this mode, indoor fan operates at set fan speed. Compressor, outdoor fan, 4-way valve and electric heating tube stop operation. Indoor fan can select to operate at high, medium, low or auto fan speed. Temperature setting range is 16~30°C.

### **(12) Off-peak energization function:**

Adjust compressors minimum stop time. The original minimum stop time is 180s and then we change to:

The time interval between two start-ups of compressor can't be less than  $180+T$  s ( $0 \leq T \leq 15$ ). T is the variable of controller. That's to say the minimum stop time of compressor is 180s~195s. Read-in T into memory chip when refurbish the memory chip each time. After power recovery, compressor can only be started up after  $180+T$  s at least.

### **(13) SE control mode**

The unit operates at SE status.

### **(14) X-fan mode**

When X-fan function is turned on, after turn off the unit, indoor fan will still operate at low speed for 2min and then the complete unit will be turned off. When x-fan function is turned off, after turn off the unit, the complete unit will be turned off directly.

### **(15) 8°C heating function**

Under heating mode, you can set 8°C heating function by remote controller. The system will operate at 8°C set temperature.

### **(16) Turbo fan control function**

Set turbo function under cooling or heating mode to enter into turbo fan speed. Press fan speed button to cancel turbo wind.

No turbo function under auto, dry or fan mode.

## Outdoor Units

### 1. Input Parameter Compensation and Calibration

#### (1) Check the ambient temperature compensation function Indoor ambient temperature compensation function.

a. In cooling mode, the indoor ambient temperature participating in computing control = (T<sub>indoor ambient temperature</sub> - Δ T<sub>cooling indoor ambient temperature compensation</sub>)

b. In heating mode, the indoor ambient temperature participating in computing control = (T<sub>indoor ambient temperature</sub> - Δ T<sub>heating indoor ambient temperature compensation</sub>)

#### (2) Check effective judgment controls of parameters

Effective judgment function of the outdoor exhaust temperature thermo-bulb When conditions a and b are satisfied, the outdoor exhaust temperature thermo-bulb is judged not to be connected into place, the mainboard of outer units will display failure of the outdoor exhaust temperature thermo-bulb (not connected into place), stop the machine for repairing, and resume the machine by remote controls of ON/OFF.

a. Judgment of exhaust detection temperature change:

After the compressor starts up and runs for 10 minutes, if the compressor frequency  $f \geq 40\text{Hz}$ , and the rising value  $T_{\text{exhaust}}$  ( $T_{\text{exhaust}}$  (after start-up for 10 minutes) -  $T_{\text{exhaust}}$  (before start-up))  $< 2^{\circ}\text{C}$ , the outdoor exhaust temperature thermo-bulb can be judged not to be connected into place (judging once when the power is on the first time).

b. Comparative judgment of exhaust detection temperature and condenser detection temperature ( $T_{\text{pipe temperature}} = T_{\text{outdoor pipe temperature}}$  in cooling mode,  $T_{\text{pipe temperature}} = T_{\text{indoor pipe temperature}}$  in heating mode): After the compressor starts up and runs for 10 minutes, if the compressor frequency  $f \geq 40\text{Hz}$ , and  $T_{\text{pipe temperature}} \geq (T_{\text{exhaust}} + 3)$ , the outdoor exhaust temperature thermobulb can be judged not to be connected into place (judging once when power is on the first time).

### 2. Basic Functions

#### (1) Cooling Mode

##### 1. Conditions and processes of cooling operation:

(1) If the compressor is shut down, and  $[T_{\text{set up}} - (T_{\text{indoor ambient temperature}} - \Delta T_{\text{cooling indoor ambient temperature compensation}})] \leq 0.5^{\circ}\text{C}$ , start up the machine for cooling, the cooling operation will start;

(2) During operations of cooling, if  $0^{\circ}\text{C} \leq [T_{\text{set up}} - (T_{\text{indoor ambient temperature}} - \Delta T_{\text{cooling indoor ambient temperature compensation}})] < 2^{\circ}\text{C}$ , the cooling operation will be still running;

(3) During operations of cooling, if  $2^{\circ}\text{C} \leq [T_{\text{set up}} - (T_{\text{indoor ambient temperature}} - \Delta T_{\text{cooling indoor ambient temperature compensation}})]$ , the cooling operation will stop after reaching the temperature point.

##### 2. Temperature setting range

(1) If  $T_{\text{outdoor ambient temperature}} \geq [T_{\text{low-temperature cooling temperature}}]$ , the temperature can be set at: 16~30°C (Cooling at room temperature);

(2) If  $T_{\text{outdoor ambient temperature}} < [T_{\text{low-temperature cooling temperature}}]$ , the temperature can be set at: 25~30°C (Cooling at low temperature), that is, the minimum setting temperature for outer units judgment is 25°C .

#### (2) Dehumidifying Mode

1. Conditions and processes of dehumidifying operations: Same as the cooling mode;

2. The temperature setting range is: 16~30°C ;

#### (3) Air-supplying Mode

1. The compressor, outdoor fans and four-way valves are switched off;

2. The temperature setting range is: 16~30°C.

#### (4) Heating Mode

1. Conditions and processes of heating operations: (T<sub>indoor ambient temperature</sub> is the actual detection temperature of indoor environment thermo-bulb, T<sub>heating indoor ambient temperature compensation</sub> is the indoor ambient temperature compensation during heating operations)

(1) If the compressor is shut down, and  $[(T_{\text{indoor ambient temperature}} - \Delta T_{\text{heating indoor ambient temperature compensation}}) - T_{\text{set up}}] \leq 0.5^{\circ}\text{C}$ , start the machine to enter into heating operations for heating;

(2) During operations of heating, if  $0^{\circ}\text{C} \leq [(T_{\text{indoor ambient temperature}} - \Delta T_{\text{heating indoor ambient temperature compensation}}) - T_{\text{set up}}] < 2^{\circ}\text{C}$ , the heating operation will be still running;

(3) During operations of heating, if  $2^{\circ}\text{C} \leq [(T_{\text{indoor ambient temperature}} - \Delta T_{\text{heating indoor ambient temperature compensation}}) - T_{\text{set up}}]$ , the heating operation will stop after reaching the temperature point.

2. The temperature setting range in this mode is: 16~30°C .

### 3. Special Functions

#### Defrosting Control

##### ① Conditions for starting defrosting

After the time for defrosting is judged to be satisfied, if the temperature for defrosting is satisfied after detections for continuous 3minutes, the defrosting operation will start.

##### ② Conditions of finishing defrosting

The defrosting operation can exit when any of the conditions below is satisfied:

##### ③ $T_{\text{outdoor pipe temperature}} \geq (T_{\text{outdoor ambient temperature}} - [T_{\text{temperature 1 of finishing defrosting}}])$ ;

##### ④ The continuous running time of defrosting reaches [tmax. defrosting time].

### 4. Control Logic

#### (1) Compressor Control

Start the compressor after starting cooling, heating, dehumidifying operations, and the outer fans start for 5s; When the machine is shutdown, in safety stops and when switching to air-supplying mode, the compressor will stop immediately. In all modes: once the compressor starts up, it will not be allowed to stop until having run for the [tmin. compressor running time] (Note: including cases of shutdown when the temperature point is reached; except the cases requiring stopping the compressor such as fault protection, remote shutdown, mode switching etc.); In all modes: once the compressor stops, it will be allowed be restart after 3-minute delay (Note: The indoor units have a function of power memory, the machine can be restarted after remote shutdown and powering up again without delay).

##### 1. Cooling mode

Start the machine to enter into cooling operation for cooling, the compressor is switched on.

##### 2. Dehumidifying mode

Same as the cooling mode.

##### 3. Air-supplying mode

The compressor is switched off.

##### 4. Heating mode

(1) Start the machine to enter into heating operation for heating, the compressor is switched on.

(2) Defrosting:

a. Defrosting starts: the compressor is shut down, and restarts it after 55-second delay.

b. Defrosting ends: the compressor stops, then starts it after 55-second delay.

#### (2) Outer Fans Control

Notes:

Only the outer fans run for at least 80s in each air flow speed can the air flow be switched;

After the outer fans run compulsively in high speed for 80s when the machine starts up, control the air flow according to the logic.

After remote shutdown, safety stops, and when the machine stops after reaching the temperature point, as well as after the compressor stops, extend 1 minute, the outer fans will stop (During the period in the 1 minute, the air flow of outer fans can be changed according to the outdoor ambient temperature changes); When running with force, the outdoor fans shall run in the highest air flow.

#### (3) 4-way valve control

1. The 4-way valve control under the modes of Cooling, dehumidification and supplying air: closing;

2. The status of 4-way valve control under the heating mode: getting power;

(1) 4-way valve power control under heating mode

Starts the machine under heating mode, the 4-way valve will get power immediately.

(2) 4-way valve power turn-off control under heating mode

a. When you should turn off the power or switch to other mode under heating mode, the power of 4-way valve will be cut after 2 minutes of the compressor stopped.

b. When all kinds of protection stops, the power of 4-way valve will be cut after delaying 4 minutes.

(3) Defrosting control under heating mode:

a. Defrosting begins: The power of 4-way valve will be cut after 50s of entering into the defrosting compressor.

b. Defrosting stops: The 4-way valve will get power after 50s of exiting the defrosting compressor.

#### (4) Evaporator frozen-preventing protection function

At the mode of Cooling, dehumidifying:

Evaporator frozen-preventing protection function is allowed to begin after 6 min of starting the compressor.

**1. Starting estimation:**

After the compressor stopped working for 180s, if  $T_{\text{inner pipe}} > [T_{\text{frozen-preventing frequency-limited temperature}}$  (the temperature of hysteresis is 2 °C), the machine is only allowed to start for operating, otherwise it should not be started, and should be stopped to treat according to the frozen-preventing protection: Clear the trouble under the mode of power turn-off / heating, and the protection times are not counted.

**2. Frequency limited**

$[T_{\text{frozen-preventing normal speed frequency-reducing temperature}}] \leq T_{\text{inner pipe}} [T_{\text{frozen-preventing frequency-limited temperature}}]$  , you should limit the frequency raising of compressor.

**3. Reducing frequency at normal speed:**

If  $[T_{\text{frozen-preventing high speed frequency-reducing temperature}}] \leq T_{\text{inner pipe}} [T_{\text{frozen-preventing normal speed frequency-reducing temperature}}]$ , you should adjust the compressor frequency by reducing 8Hz/90s till the lower limit;

**4. Reducing frequency at high speed:**

If  $[T_{\text{frozen-preventing power turn-off temperature}}] \leq T_{\text{inner pipe}} [T_{\text{frozen-preventing high speed frequency-reducing temperature}}]$  you should adjust the compressor frequency by reducing 30Hz/90s till the lower limit;

**5. Power turn-off:**

If the  $T_{\text{inner pipe}} < [T_{\text{frozen-preventing power turn-off temperature}}]$ , then frozen-preventing protect to stop the machine; If  $[T_{\text{frozen-preventing frequency-limited temperature}}] < T_{\text{inner pipe}}$  , and the compressor has stopped working for 3 minutes, the whole machine should be allowed to operate.

6. If the frozen-preventing protection power turn-off continuously occurs for six times, it should not be resumed automatically, and you should press the ON/OFF button to resume if the fault keeps on. During the process of running, if the running time of compressor exceeds the t evaporator frozen-preventing protection times zero clearing time , the times of frozen-preventing power turn-off should be cleared to recount. The mode of stopping the machine or transferring to supply air will clear the trouble times immediately (if the trouble can not be resumed, mode transferring will not clear it).

**(5) Overload protection function**

Overload protection function at the mode of cooling and dehumidifying

**1. Starting estimation:**

After the compressor stopped working for 180s, if  $T_{\text{outer pipe}} < [T_{\text{cooling overload frequency-limited temperature}}]$  (the temperature of hysteresis is 2°C ), the machine is allowed to start, otherwise it should not be started, and should be stopped to treat according to the overload protection: Clear the trouble at the mode of power turn-off / heating, and the protection times are not counted.

**2. Frequency limited**

If  $[T_{\text{cooling overload frequency-limited temperature}}] \leq T_{\text{outer pipe}} [T_{\text{cooling overload frequency reducing temperature at normal speed}}]$ , you should limit the frequency raising of compressor.

**3. Reducing frequency at normal speed and power turn-off:**

If  $[T_{\text{cooling overload frequency reducing temperature at high speed}}] \leq T_{\text{outer pipe}} < [T_{\text{cooling overload power turn-off temperature}}]$  , you should adjust the compressor frequency by reducing 8Hz/90s till the lower limit; After it was running 90s at the lower limit, if  $[T_{\text{cooling overload frequency reducing temperature at normal speed}}] \leq T_{\text{outer pipe}}$ , then Cooling overload protects machine stopping;

**4. Reducing frequency at high speed and stop machine:**

If  $[T_{\text{cooling overload frequency reducing temperature at high speed}}] \leq T_{\text{outer pipe}} [T_{\text{cooling overload power turn-off temperature}}]$ , you should adjust the compressor frequency by reducing 30Hz/90s till the lower limit; After it was running 90s at the lower limit, if  $[T_{\text{cooling overload frequency reducing temperature at normal speed}}] \leq [T_{\text{outer pipe}}]$ , then Cooling overload protects machine stopping;

**5. Power turn-off:**

If the  $[T_{\text{cooling overload power turn-off temperature}}] \leq T_{\text{outer pipe}}$ , then Cooling overload protects machine stopping; If  $[T_{\text{outer pipe}}] < [T_{\text{cooling overload frequency-limited temperature}}]$  and the compressor has been stopped working for 3 minutes, the machine should be allowed to operate.

6. If the Cooling overload protection power turn-off continuously occurs for six times, it should not be resumed automatically, and you should press the ON/OFF button to resume if the fault keeps on. During the process of running, if the running time of compressor exceeds the t overload protection times zero clearing time , the times of overload protection power turn-off should be cleared to recount. The mode of stopping the machine or transferring to supply air will clear the trouble times immediately (if the trouble can not be resumed, transferring mode will not clear it).

**Overload protection function at the mode of heating****Starting estimation :**

After the compressor stopped working for 180s, if  $T_{\text{inner pipe}} > T_{\text{heating overload frequency-limited temperature}}$  (the temperature of hysteresis is 2 °C), the machine is allowed to start, otherwise it should not be started, and should be stopped to treat according to the overload protection:

Clear the trouble at the mode of power turn-off / heating, and the protection times are not counted.

### 1. Frequency limited

If  $[T_{\text{heating overload frequency-limited temperature}}] \leq T_{\text{inner pipe}} < [T_{\text{heating overload frequency reducing temperature at normal speed}}]$  , you should limit the frequency raising of compressor.

### 2. Reducing frequency at normal speed and stopping machine:

If  $T_{\text{heating overload frequency reducing temperature at normal speed}} \leq T_{\text{inner pipe}} < [T_{\text{heating overload frequency reducing temperature at high speed}}]$ , you should adjust the compressor frequency by reducing 8Hz/90s till the lower limit; After it was running 90s at the lower limit, if  $T_{\text{heating overload frequency reducing temperature at normal speed}} \leq T_{\text{inner pipe}}$ , then overload protects machine stopping;

### 3. Reducing frequency at high speed and power turn-off:

If  $[T_{\text{heating overload frequency reducing temperature at high speed}}] \leq T_{\text{inner pipe}} < [T_{\text{heating overload power turn-off temperature}}]$ , you should adjust the compressor frequency by reducing 30Hz/90s till the lower limit; After it was running 90s at the lower limit, if  $T_{\text{heating overload frequency reducing temperature at normal speed}} \leq T_{\text{outer pipe}}$ , then Cooling overload protects machine stopping;

### 4. Power turn-off:

If the  $[T_{\text{heating overload power turn-off temperature}}] \leq T_{\text{inner pipe}}$ , then overload protects machine stopping; If  $T_{\text{inner pipe}} > T_{\text{heating overload frequency-limited temperature}}$  and the compressor has been stopped working for 3 minutes, the machine should be allowed to operate.

5. If the overload protection power turn-off continuously occurs for six times, it should not be resumed automatically, and you should press the ON/OFF button to resume if the fault keeps on. During the process of running, if the running time of compressor exceeds the  $t_{\text{overload protection times zero clearing time}}$  , the times of overload protection power turn-off should be cleared to recount. The mode of stopping the machine or transferring to supply air will clear the trouble times immediately (if the trouble can not be resumed, transferring mode will not clear it). Protective function for discharge temperature of compressor

### 1. Starting estimation:

After the compressor stopped working for 180s, if  $T_{\text{Discharge}} < T_{\text{Discharge limited temperature}}$  (the temperature of hysteresis is 2°C ), the machine is allowed to start, otherwise it should not be started, and should be stopped to treat according to the discharge temperature:

The machine should be stopped or transferred to supply air, the trouble should be cleared immediately, and the protection times are not counted.

### 2. Frequency limited

If  $[T_{\text{Limited frequency temperature during discharging}}] \leq T_{\text{Discharge}} < [T_{\text{frequency reducing temperature at normal speed during discharging}}]$  , you should limit the frequency raising of compressor.

### 3. Reducing frequency at normal speed and stopping machine:

If  $[T_{\text{frequency reducing temperature at normal speed during discharging}}] \leq T_{\text{Discharge}} < [T_{\text{frequency reducing temperature at high speed during discharging}}]$ , you should adjust the compressor frequency by reducing 8Hz/90s till the lower limit; After it was running 90s at the lower limit, if  $[T_{\text{frequency reducing temperature at normal speed during discharging}}] \leq T_{\text{Discharge}}$ , you should discharge to protect machine stopping;

### 4. Reducing frequency at high speed and power turn-off:

If  $[T_{\text{frequency reducing temperature at high speed during discharging}}] \leq T_{\text{Discharge}} < [T_{\text{Stop temperature during discharging}}]$ , you should adjust the compressor frequency by reducing 30Hz/90s till the lower limit; After it was running 90s at the lower limit, if  $[T_{\text{frequency reducing temperature at normal speed during discharging}}] \leq T_{\text{Discharge}}$ , you should discharge to protect machine stopping;

### 5. Power turn-off:

If the  $[T_{\text{Power turn-off temperature during discharging}}] \leq T_{\text{Discharge}}$ , you should discharge to protect machine stopping; If  $[T_{\text{Discharge}}] < [T_{\text{Limited frequency temperature during discharging}}]$  and the compressor has been stopped for 3 minutes, the machine should be allowed to operate.

6. If the discharging temperature protection of compressor continuously occurs for six times, it should not be resumed automatically, and you should press the ON/OFF button to resume. During the process of running, if the running time of compressor exceeds the  $t_{\text{Protection times clearing of discharge}}$  , the discharge protection is cleared to recount. Stopped or transferred to supply air mode will clear the trouble times immediately (if the trouble can not be resumed, mode transferring also will not clear it).

### 7. Frequency limited

If  $[I_{\text{Limited frequency when overcurrent}}] \leq [I_{\text{AC Electric current}}] < [I_{\text{frequency reducing when overcurrent}}]$ , you should limit the frequency raising of compressor.

### 8. Reducing frequency:

If  $[I_{\text{Frequency reducing when overcurrent}}] \leq [I_{\text{AC Electric current}}]$  |  $[I_{\text{Power turn-off when overcurrent}}]$  , you should reduce the compressor frequency till the lower limit or exit the frequency reducing condition;

### 9. Power turn-off:

If  $[I_{\text{Power turn-off machine when overcurrent}}] \leq [I_{\text{AC Electric current}}]$  , you should carry out the overcurrent stopping protection; If  $[I_{\text{AC Electric current}}] < [I_{\text{Limited frequency when overcurrent}}]$  and the compressor has been stopped for 3 minutes, the machine should be allowed to operate.

10. If the overcurrent protection continuously occurs for six times, it should not be resumed automatically, and you should press the ON/OFF button to resume. During the process of running, if the running time of compressor exceeds the  $[t_{\text{Protection times clearing of over current}}]$  , the discharge protection is cleared to recount.

## (6)Voltage sag protection

After start the compressor, if the time of DC link Voltage sag [ $U_{\text{Sagging protection voltage}}$ ] is measured to be less than  $t_{\text{Voltage sag protection time}}$ , the machine should be stop at once, hand on the voltage sag trouble, reboot automatically after 30 minutes.

## (7)Communication fault

When you have not received any correct signal from the inner machine in three minutes, the machine will stop for communication fault. When you have not received any correct signal from driver IC (aim to the controller for the separating of main control IC and driver IC), and the machine will stop for communication fault. If the communication is resumed, the machine will be allowed to operate.

## (8)Module protection

Testing the module protective signal immediately after started, once the module protective signal is measured, stop the machine with module protection immediately. If the module protection is resumed, the machine will be allowed to operate. If the module protection continuously occurs for three times, it should not be resumed automatically, and you should press the ON/OFF button to resume. If the running time of compressor exceeds the [ $t_{\text{Protection times clearing of module}}$ ], the module protection is cleared to recount.

## (9)Module overheating protection

### 1. Starting estimation:

After the compressor stopped working for 180s, if  $T_{\text{Module}} < [T_{\text{Module frequency limited temperature}}]$  (the temperature of hysteresis is 2), the machine is allowed to start, otherwise it should not be started, and should be stopped to treat according to the module overheating protection: The machine should be stopped or transferred to supply air, the trouble should be cleared immediately, and the protection times are not counted.

### 2. Frequency limited

If  $[T_{\text{Limited frequency temperature of module}}] \leq T_{\text{Module}} < [T_{\text{frequency reducing temperature at normal speed of module}}]$ , you should limit the frequency raising of compressor.

### 3. Reducing frequency at normal speed and power turn-off:

If  $[T_{\text{frequency reducing temperature at normal speed of module}}] \leq T_{\text{Module}} < [T_{\text{frequency reducing temperature at high speed of module}}]$ , you should adjust the compressor frequency by reducing 8Hz/90s till the lower limit; After it was running 90s at the lower limit, if  $[T_{\text{frequency reducing temperature at normal speed of module}}] \leq T_{\text{Module}}$ , you should stop the machine for module overheating protection;

### 4. Reducing frequency at high speed and power turn-off:

If  $[T_{\text{frequency reducing temperature at high speed of module}}] \leq T_{\text{Module}} < [T_{\text{Power turn-off temperature of module}}]$  you should adjust the compressor frequency by reducing 30Hz/90s till the lower limit; After it was running 90s at the lower limit, if  $[T_{\text{frequency reducing temperature at normal speed of module}}] \leq T_{\text{Module}}$ , you should stop the machine for module overheating protection;

### 5. Power turn-off:

If the  $[T_{\text{Power turn-off temperature of module}}] \leq T_{\text{Module}}$ , you should stop the machine for module overheating protection; If  $T_{\text{Module}} < [T_{\text{Limited frequency temperature of module}}]$  and the compressor has been stopped for 3 minutes, the machine should be allowed to operate.

6. If protection continuously occurs for six times, it should not be resumed automatically, and you should press the ON/OFF button to resume. During the process of running, if the running time of compressor exceeds the [ $t_{\text{Protection times clearing of module}}$ ], the discharge protection is cleared to recount. Stopped or transferred to supply air mode will clear the trouble times immediately (if the trouble can not be resumed, mode transferring also will not clear it).

## (10)Compressor overloads protection

If you measure the compressor overload switch action in 3s, the compressor should be stopped for overloading. The machine should be allowed to operate after overload protection was measured to resume. If the overloading protection continuously occurs for three times, it should not be resumed automatically, and you should press the ON/OFF button to resume. The protection times of compressor is allowed to clear after the compressor run [ $t_{\text{Protection times clearing of compressor overloading}}$ ] 30 minutes.

## (11)Phase current overcurrent protection of compressor

During the running process of compressor, you could measure the phase current of the compressor, and control it according to the following steps:

### 1. Frequency limited

If  $[I_{\text{Limited frequency phase current}}] \leq [I_{\text{Phase current T frequency reducing phase current}}]$ , you should limit the frequency raising of compressor.

### 2. Reducing Frequency

If  $[I_{\text{Frequency Reducing Phase Current}}] \leq I_{\text{Phase Current}} < [I_{\text{Power Turn-Off Phase Current}}]$ , the compressor shall continue to reduce frequency till the lowest frequency limit or out of the condition of reducing frequency;

### 3. Power turn-off

If  $[I_{\text{Phase Current}}] \geq [I_{\text{Power Turn-Off Phase Current}}]$ , the compressor phase current shall stop working for overcurrent protection; if  $[I_{\text{Phase Current}}] \leq [I_{\text{Frequency Reducing Phase Current}}]$ , and the compressor have stopped working for 3 min, the machine shall be allowed to operate;

4. If the overcurrent protection of compressor phase current continuously occurs for six times, it should not be resumed automatically, and you should press the ON/OFF button to resume. During the process of running, if the running time of compressor exceeds the [ $t_{\text{Clearing Time of Compressor Phase Current Times}}$ ], the overcurrent protection is cleared to recount.

**(12) Starting-up Failure Protection for Compressor**

Stop the compressor after its starting-up fails, restart it after 20s if the fault doesn't show, and if they are all failing for the successive start 3 times, it shall be reported as Starting-up Failure, and then restart up it after 3 min. When it still not be able to operate through carry out the above process for 5 times, it is available if press ON/OFF. And the compressor should be cleared the times after it run 2 min.

**(13) Out-of-Step Protection for Compressor**

The out-of-step protection signal should be detected immediately after starting-up compressor, and once find the out-of-step protection signal, the out-of-step protection shall be stopped; if it can run for lasting power turn-off 3 min, the machine shall be allowed to operate. If it still can't run automatically when the out-of-step protection for compressor happens to stop working for 6 times in succession, it needs to press ON/OFF to operate. And if the running time is more than 10 min, the power turn-off times for out-of-step protection shall be cleared and recounted.

**(14) Voltage Abnormity Protection for DC Bus**

To detect voltage abnormity protection for dc bus after completing the pre-charge:

**1.Over-High Voltage Protection for DC Bus:**

If it found the DCbus voltage  $U_{DC} > [U_{DC \text{ Jiekuangchun Protection}}]$ , turn off PFC and stop the compressor at once, and it shall show the DC over-high voltage failure; it should clear out the failure when the voltage dropped to  $U_{DC} < [U_{DC \text{ Jiekuangchun Recovery}}]$  and the compressor stopped for 3 min.

**2.Over-Low Voltage Protection for DC Bus:**

If it found the DC bus voltage  $U_{DC} < [U_{DC \text{ Wantuochun Protection}}]$ , turn off PFC and stop the compressor at once, and it shall show the DC over-low voltage; and it should clear out the failure when the voltage raised to  $U_{DC} > [U_{DC \text{ Wantuochun Recovery}}]$  and the compressor stopped for 3 min.

**3.To detect voltage abnormity protect for DC bus when getting electricity:**

If it found the DC bus voltage  $U_{DC} > [U_{DC \text{—Over-High Voltage}}]$ , turn off the relay at once, and shows voltage abnormity failure for DC Bus. And the failure can't recover except to break off and get the electricity.

**(15)Abnormity Protection for Four-way Valve**

Under the model of heating operation in good condition: the compressor is detected  $[T_{\text{Inner Tube}} < (T_{\text{Inner Ring}} - T_{\text{Abnormity Temperature Difference For Four-Way Valve Reversion}})]$ , during the running, it should be regarded as four-way valve reversion abnormity. And then it can run if stop the reversion abnormity protection for four-way valve 3 min; and if it still can't run when the reversion abnormity protection for four-way valve happens to stop working for 3 times in succession, it is available if presses ON/OFF.

Attention: the protection shall be shielded during the testing mode and defrosting process, and it shall be cleared out the failure and its times immediately when turning off or delivering wind / cooling / dehumidifying mode conversed (the inverted mode don't clear out the failure when it can't recover to operate).

**(16) PFC Protection**

1. After start up the PFC, it should detect the protection signal of PFC immediately; under the condition of PFC protection, it should turn off the PFC and compressor at one time;
2. It shows the failure is cleared out if PFC Protection stopped working 3 min and recovers to run automatically;
3. If it still can't run when it occurs PFC protection for 3 times in succession, it is available if presses ON/OFF; and clear the PFC Protection times when start up PFC for 10min.

**(17) Failure Detection for Sensor**

1. Outdoor Ambient Sensor: detect the failure of sensor at all times.
2. Outdoor Tube Sensor: You should not detect the failure of outdoor tube sensor within 10 minutes heating operation compressor except the defrosting, and you could detect it at other time.
3. Outdoor Exhaust Sensor:
  - (a) The compressor only detect the sensor failure after it start up 3 min in normal mode;
  - (b) It should detect the exhaust sensor failure immediately in the testing mode.
4. Module Temperature Sensor:
  - (a) Short-Circuit Detection: the compressor should be detected immediately when the module temperature sensor occurs short-circuits;
  - (b) Open-Circuit Detection: the compressor should be detected on open-circuit when it runs 3min (it needn't 30s avoiding the module over-heated).
  - (c) Detect the sensor failure at all times in the testing mode.
5. Disposal for Sensor Protection
  - (1) When the short-circuit of sensor is detected within 30s, It is regarded as the temperature of sensor over-high (or infinitely high), and now according to the over-high sensor, the machine should carry out the corresponding protection to stop working, and show the corresponding temperature shutdown protection and sensor failure at the same time (for example: the compressor stops immediately when the outdoor tube sensor short-circuit, and the machine shall show the overload protection and outdoor tube sensor failure).
  - (2) When the open-circuit of sensor is detected within 30s, The protection shall be stopped and it shall show the corresponding sensor failure.

## 6. Electric Heating Function of Chassis

- (1) When  $T_{\text{outdoor amb.}} \leq 0^{\circ}\text{C}$ , the electric heating of chassis will operate;
- (2) When  $T_{\text{outdoor amb.}} > 2^{\circ}\text{C}$ , the electric heating of chassis will stop operation;
- (3) When  $0^{\circ}\text{C} < T_{\text{outdoor amb.}} \leq 2^{\circ}\text{C}$ , the electric heating of chassis will keep original status.

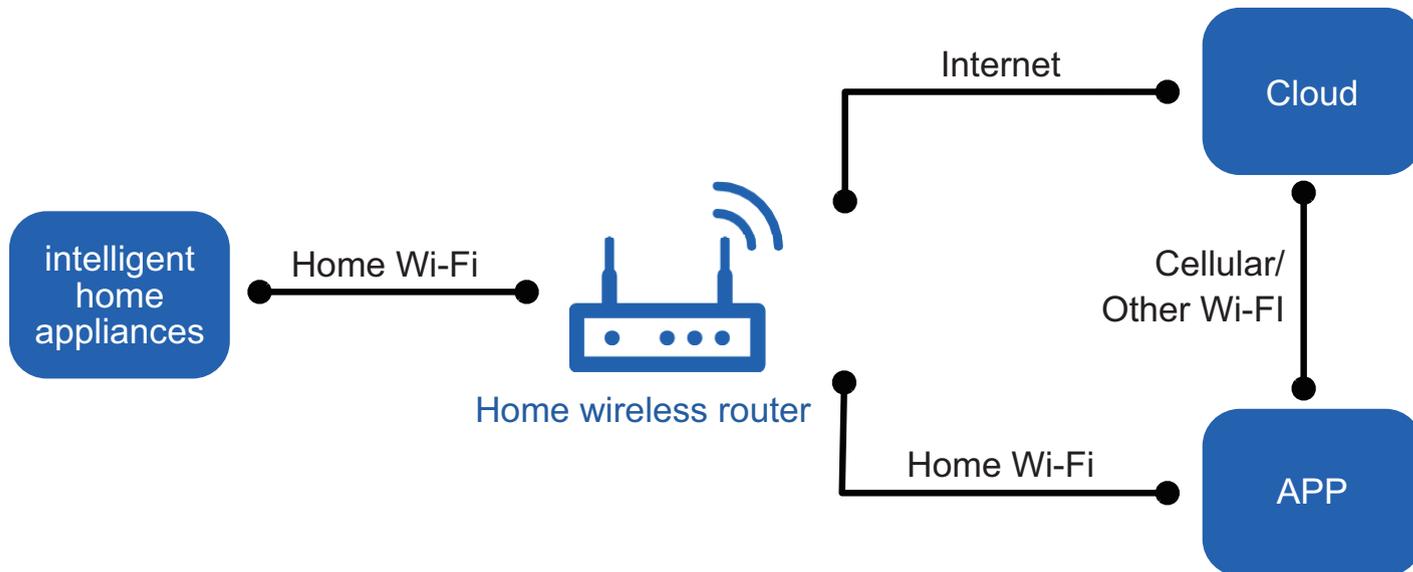
## 7. Electric Heating Function of Compressor

- (1) When  $T_{\text{outdoor amb.}} \leq -5^{\circ}\text{C}$ , compressor stops operation, while the electric heating of compressor starts operation;
- (2) When  $T_{\text{outdoor amb.}} > -2^{\circ}\text{C}$ , the electric heating of compressor stops operation;
- (3) When  $-5^{\circ}\text{C} < T_{\text{outdoor amb.}} \leq -2^{\circ}\text{C}$ , the electric heating of compressor will keep original status.



## 6.5 Ewpe Smart App Operation Manual

### Control Flow Chart



### Operating Systems

Requirement for Users smart phone:



iOS system  
Support iOS7.0 and above version



Android system  
Support Android 4.4 and above version

### Download and installation



App Download Linkage

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

# 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.

## Safety Precautions for Installing and Relocating the Unit:

To ensure safety, please be mindful of the following precautions.



### Warnings

**1. When installing or relocating the unit, be sure to keep the refrigerant circuit free from air or substances other than the specified refrigerant.**

Any presence of air or other foreign substance in the refrigerant circuit will cause system pressure rise or compressor rupture, resulting in injury.

**2. When installing or moving this unit, do not charge the refrigerant which is not comply with that on the nameplate or unqualified refrigerant.**

Otherwise, it may cause abnormal operation, wrong action, mechanical malfunction or even series safety accident.

**3. When refrigerant needs to be recovered during relocating or repairing the unit, be sure that the unit is running in cooling mode. Then, fully close the valve at high pressure side (liquid valve). About 30-40 seconds later, fully close the valve at low pressure side (gas valve), immediately stop the unit and disconnect power. Please note that the time for refrigerant recovery should not exceed 1 minute.**

If refrigerant recovery takes too much time, air may be sucked in and cause pressure rise or compressor rupture, resulting in injury.

**4. During refrigerant recovery, make sure that liquid valve and gas valve are fully closed and power is disconnected before detaching the connection pipe.**

If compressor starts running when stop valve is open and connection pipe is not yet connected, air will be sucked in and cause pressure rise or compressor rupture, resulting in injury.

**5. When installing the unit, make sure that connection pipe is securely connected before the compressor starts running.**

If compressor starts running when stop valve is open and connection pipe is not yet connected, air will be sucked in and cause pressure rise or compressor rupture, resulting in injury.

**6. Prohibit installing the unit at the place where there may be leaked corrosive gas or flammable gas.**

If there leaked gas around the unit, it may cause explosion and other accidents.

**7. Do not use extension cords for electrical connections. If the electric wire is not long enough, please contact a local service center authorized and ask for a proper electric wire.**

Poor connections may lead to electric shock or fire.

**8. Use the specified types of wires for electrical connections between the indoor and outdoor units. Firmly clamp the wires so that their terminals receive no external stresses.**

Electric wires with insufficient capacity, wrong wire connections and insecure wire terminals may cause electric shock or fire.

## Safety Precautions for Refrigerant

•To realize the function of the air conditioner unit, a special refrigerant circulates in the system. The used refrigerant is the fluoride R32, which is specially cleaned. The refrigerant is flammable and inodorous. Furthermore, it can lead to explosion under certain conditions. But the flammability of the refrigerant is very low. It can be ignited only by fire.

•Compared to common refrigerants, R32 is a nonpolluting refrigerant with no harm to the ozoneosphere. The influence upon the greenhouse effect is also lower. R32 has got very good thermodynamic features which lead to a really high energy efficiency. The units therefore need a less filling.

### WARNING:

•Do not use means to accelerate the defrosting process or to clean, other than those recommended by the manufacture.

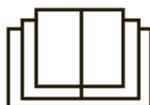
Should repair be necessary, contact your nearest authorized Service Centre. Any repairs carried out by unqualified personnel may be dangerous. The appliance shall be stored in a room without continuously operating ignition sources. (for example: open flames, an operating gas appliance or an operating electric heater.)

•Do not pierce or burn.

•Appliance shall be installed, operated and stored in a room with a floor area larger than "X"m<sup>2</sup> (see table a). (only applies to appliances that are not fixed appliances).

•Appliance filled with flammable gas R32. For repairs, strictly follow manufacturers instructions only. Be aware that refrigerants not contain odour.

•Read specialists manual.



# Safety Operation of Flammable Refrigerant

## Qualification requirement for installation and maintenance man

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

## Installation notes

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

table a - Minimum room area(m<sup>2</sup>)

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

## Maintenance notes

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

## Welding

- If you should cut or weld the refrigerant system pipes in the process of maintaining, please follow the steps as below:
  - a. Shut down the unit and cut power supply
  - b. Eliminate the refrigerant
  - c. Vacuuming
  - d. Clean it with N2 gas
  - e. Cutting or welding
  - f. Carry back to the service spot for welding
- Make sure that there isnt any naked flame near the outlet of the vacuum pump and its well-ventilated.
- The refrigerant should be recycled into the specialized storage tank.

## Filling the refrigerant

- Use the refrigerant filling appliances specialized for R32. Make sure that different kinds of refrigerant wont contaminate with each other.
- The refrigerant tank should be kept upright at the time of filling refrigerant.
- Stick the label on the system after filling is finished (or havent finished).
- Dont overfilling.
- After filling is finished, please do the leakage detection before test running; another time of leak detection should be done when its removed.

## Safety instructions for transportation and storage

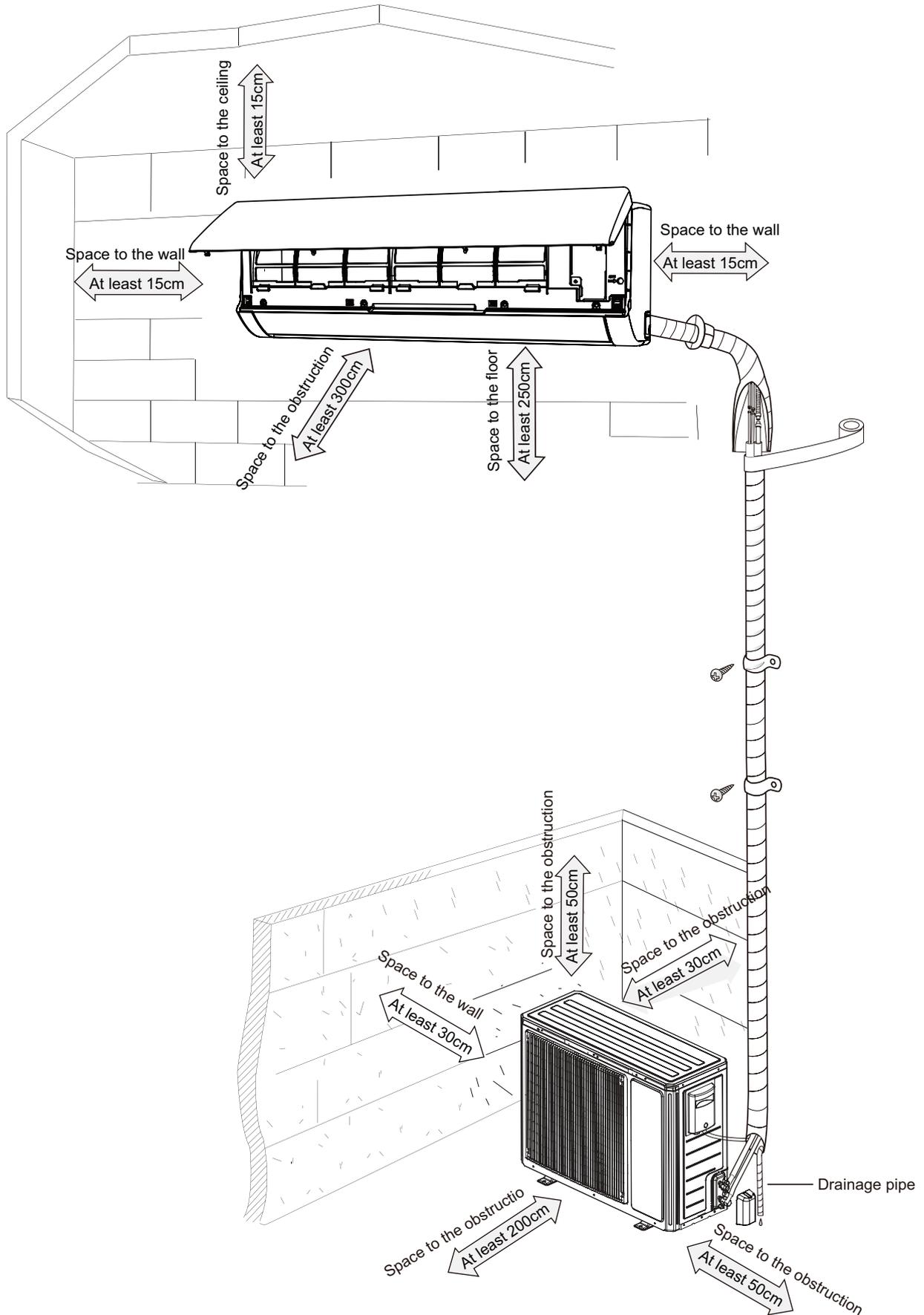
- Please use the flammable gas detector to check before unload and open the container.
- No fire source and smoking.
- According to the local rules and laws.

# Main Tools for Installation and Maintenance

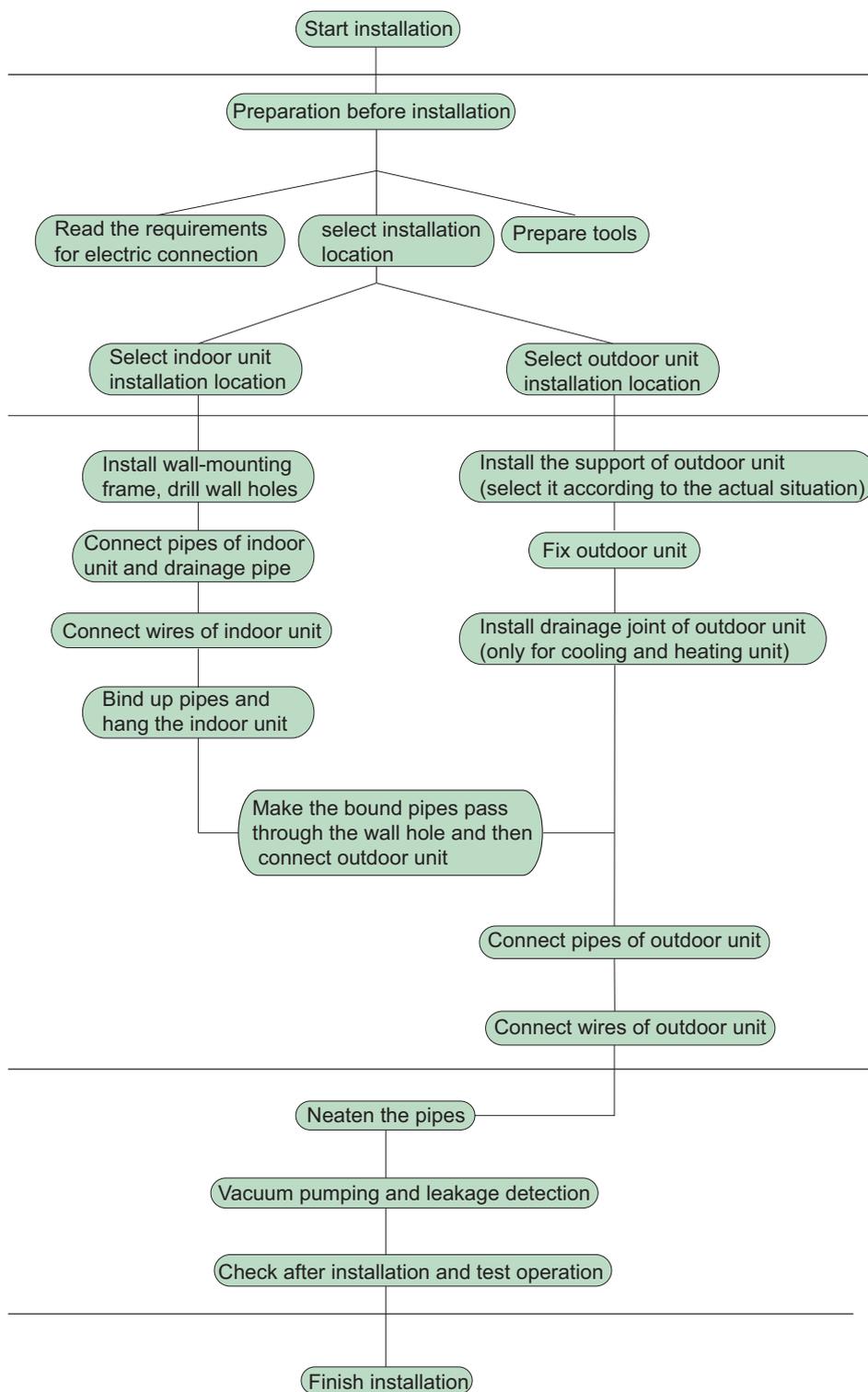
<p>1. Level meter, measuring tape</p> 	<p>2. Screw driver</p> 	<p>3. Impact drill, drill head, electric drill</p> 
<p>4. Electroprobe</p> 	<p>5. Universal meter</p> 	<p>6. Torque wrench, open-end wrench, inner hexagon spanner</p> 
<p>7. Electronic leakage detector</p> 	<p>8. Vacuum pump</p> 	<p>9. Pressure 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



Installation procedures



Note: this flow is only for reference; please find the more detailed installation steps in this section.

## 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.
- (7) The appliance shall not be installed in the laundry.

### 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) Please try your best to keep way from fluorescent lamp.

### 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 Requirements for electric connection

### 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
18K/24K	16A

- (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) 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.
- (9) The appliance shall be installed in accordance with national wiring regulations.
- (10) Appliance shall be installed, operated and stored in a room with a floor area larger than 4m.



Please notice that the unit is filled with flammable gas R32. Inappropriate treatment of the unit involves the risk of severe damages of people and material. Details to this refrigerant are found in chapter "refrigerant".

### 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.

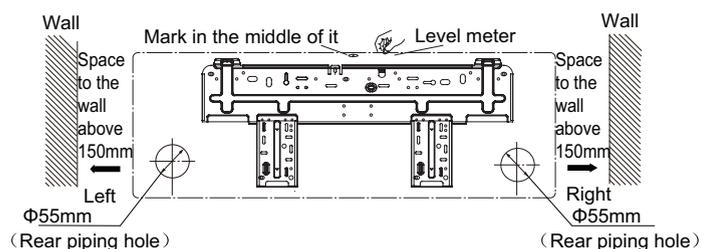
(2) Drill the screw fixing holes on the wall with impact drill (the specification of drill head should be the same as the plastic expansion particle) and then fill the plastic expansion particles in the holes.

(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)

18K:



24K:

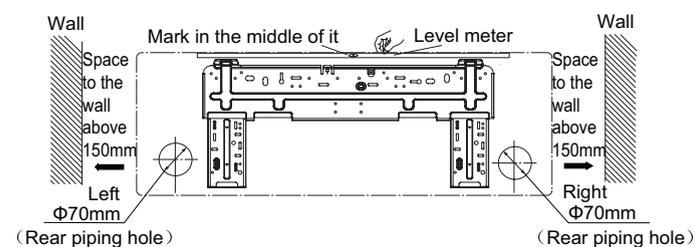


Fig.1

(2) Open a piping hole with the diameter of  $\Phi 55(70)\text{mm}$  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  $5\sim 10^\circ$ .(As show in Fig.2)

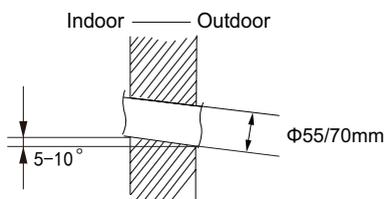


Fig.2

#### ⚠ 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)

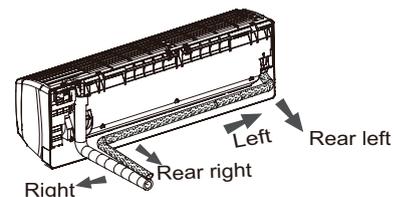


Fig.3

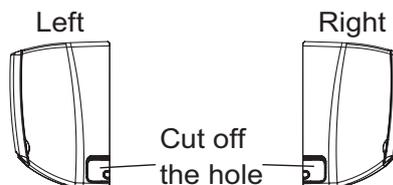


Fig.4

### 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)

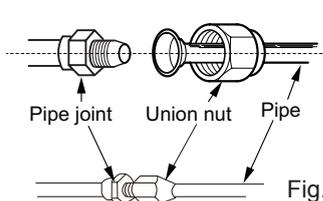


Fig.5

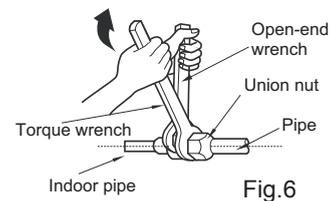


Fig.6



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)

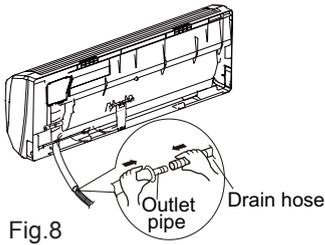


Fig.8

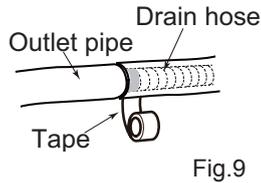


Fig.9

**⚠ 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)

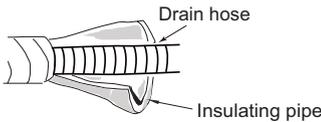


Fig.10

**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)

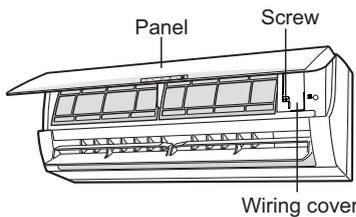


Fig.11

- (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)

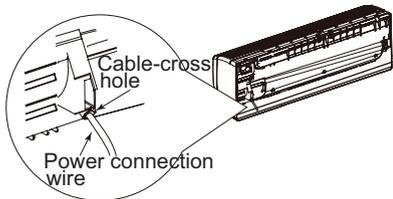


Fig.12

- (3) Remove the wire clip; connect the power connection wire 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)

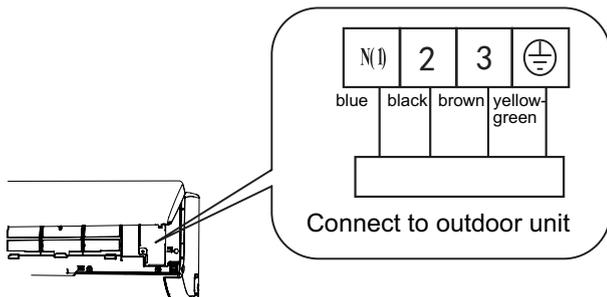


Fig.13

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

- (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.

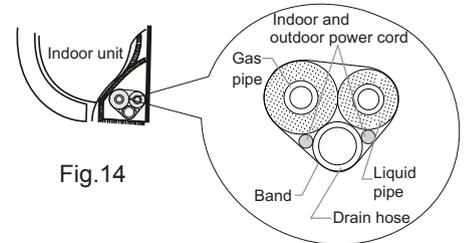


Fig.14

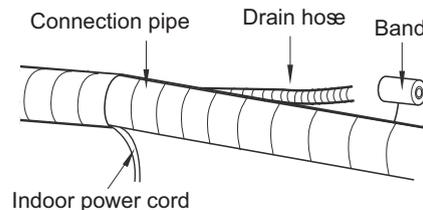


Fig.15

**⚠ 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)

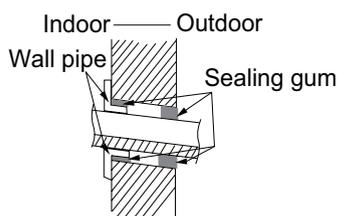


Fig.16

**⚠ Note:**

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

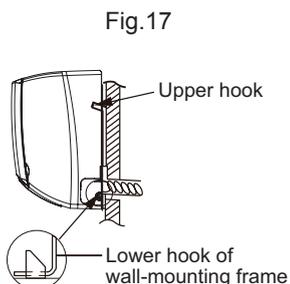


Fig.17

## 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.

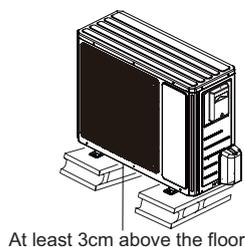


Fig.18

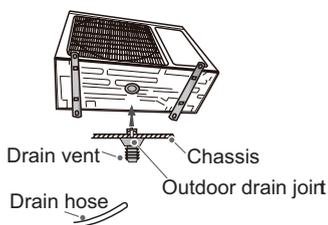


Fig.19

### 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)

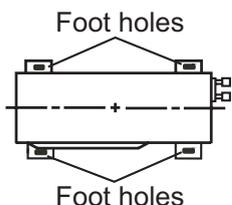


Fig.20

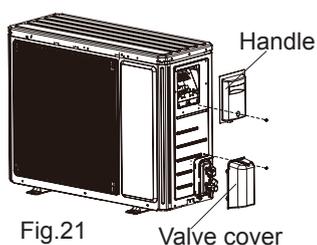


Fig.21

### 4. Connect Indoor and Outdoor Pipes

- (1) Remove the screw on the handle and valve cover of outdoor unit and then remove the handle and valve cover.(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)

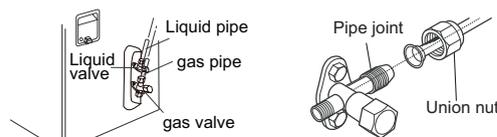


Fig.22

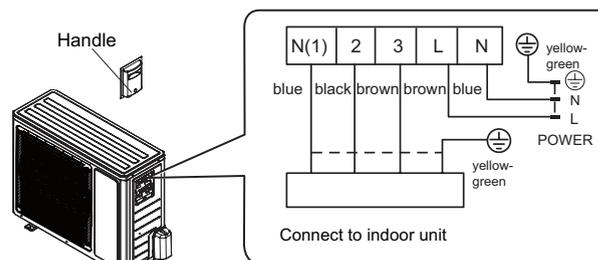
- (3) Pretightening the union nut with hand.
- (4) Tighten the union nut with torque wrench .

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 power card 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 with wire clip.

**⚠ 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)

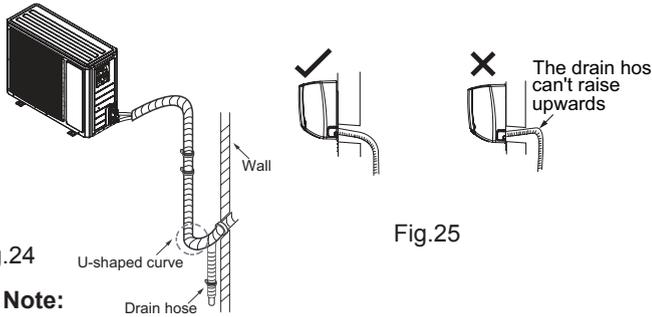


Fig.24

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 cant be placed in water in order to drain smoothly.(As show in Fig.27)

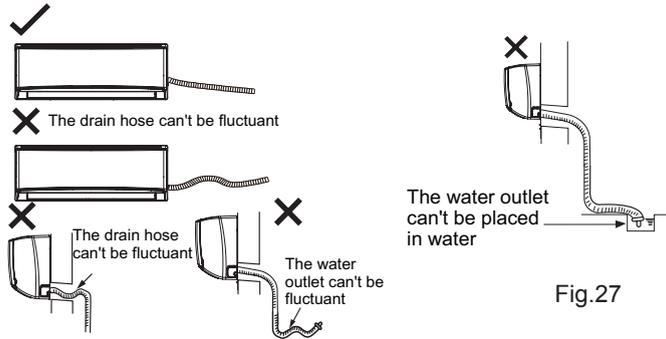


Fig.26

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)

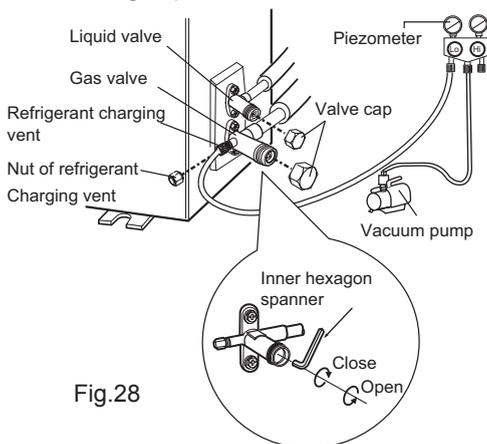


Fig.28

### 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, theres 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) capacity.
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.
12	Is the inlet and outlet of piping hole been covered?	It may cause insufficient cooling (heating) capacity or waster eletricity.

### 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 cant start cooling.

## 9. Maintenance

### 9.1 Malfunction Display of Indoor Unit

#### 1. Malfunction display requirement

When there are several malfunctions, they will be displayed circularly.

#### 2. Malfunction display method

(1) Hardware malfunction: immediate display; refer to “malfunction display table”;

(2) Operation state: immediate display; refer to “malfunction display table”;

(3) Other malfunctions: it is displayed after the compressor stops for 200s; refer to “malfunction display table”.

Note: when the compressor is restarted, the malfunction display delay time (200s) is cleared.

(4) When the unit is under limit frequency or frequency drop state, the display can be controlled via remote controller.

#### 3. Display control via remote controller

Enter display control: press light button successively for 6 times within 3s to display the corresponding malfunction code;

Exit display control: pressing light button successively for 6 times within 3s or after display is shown for 5min, the display will terminate.

#### Display under test state

Dual 8 nixie tube display: minimum cooling (heating)-P0; middle cooling (heating)-P3

Nominal cooling (heating) –P1; maximum cooling (heating) –P2;

#### •Error Code List

Malfunction Name	Dual-8 Nixie Tube
Malfunction of jumper cap	C5
No feedback from indoor units motor	H6
Circuit malfunction of zero crossing detection	U8
Indoor ambient temperature sensor is open/short-circuited	F1
Indoor evaporator temperature sensor is open/short-circuited	F2
Module temperature sensor is open/short-circuited	P7
Outdoor ambient temperature sensor is open/short-circuited	F3
Outdoor condenser tube temperature sensor is open/short-circuited	F4
Outdoor discharge temperature sensor is open/short-circuited	F5
Communication malfunction between indoor and outdoor units	E6
Malfunction of phase current circuit detection for compressor	U1
Module temperature protection	P8
Charging malfunction of capacitor	PU
Overload protection of compressor	H3
Freon recovery mode	Fo
Failure start-up of compressor	LC
Discharge high-temperature protection of compressor	E4
Overload protection	E8
Overcurrent protection of the complete unit	E5
Overcurrent protection of phase current	P5
Desynchronizing of compressor	H7
Module current protection (IPM protection)	H5
Low voltage protection of DC bus bar	PL
High voltage protection of DC bus bar	PH
Limit/decrease frequency due to current protection of the complete unit	F8
Limit/decrease frequency due to module current protection (phase current)	En
Limit/decrease frequency due to discharge	F9
Limit/decrease frequency due to freeze protection	FH
Limit/decrease frequency due to overload	F6
Limit/decrease frequency due to module temperature protection	EU
Cold air prevention protection	E9
Freeze protection	E2
Gathering refrigerant	Fo
Malfunction of ODU DC fan	L3
In defect of refrigerant	F0
Malfunction of detecting plate(WIFI)	JF

Note: Please refer to service manual for the troubleshooting procedure for outdoor unit.



## 9.2 Procedure of Troubleshooting

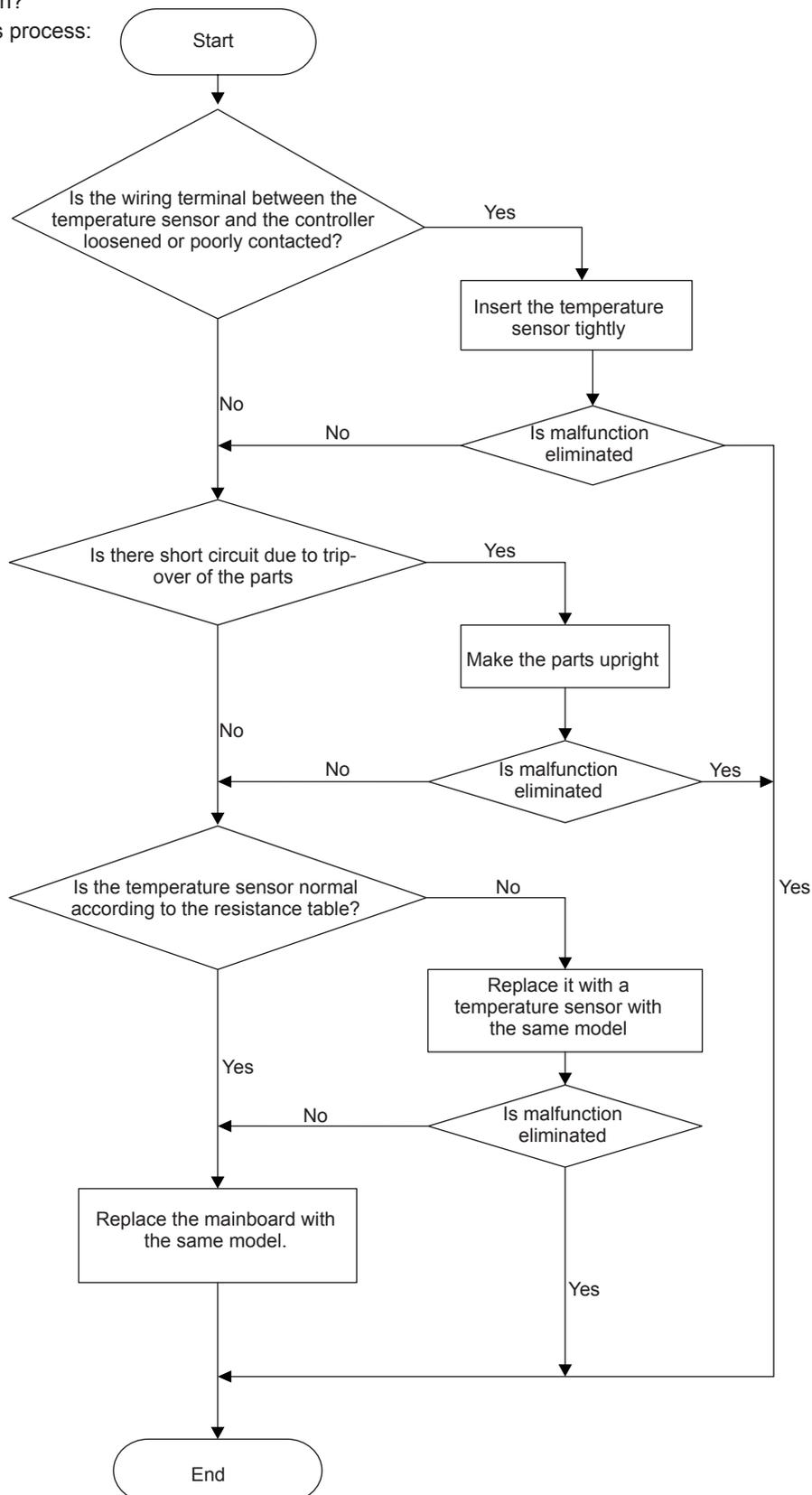
### Indoor unit

#### (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:



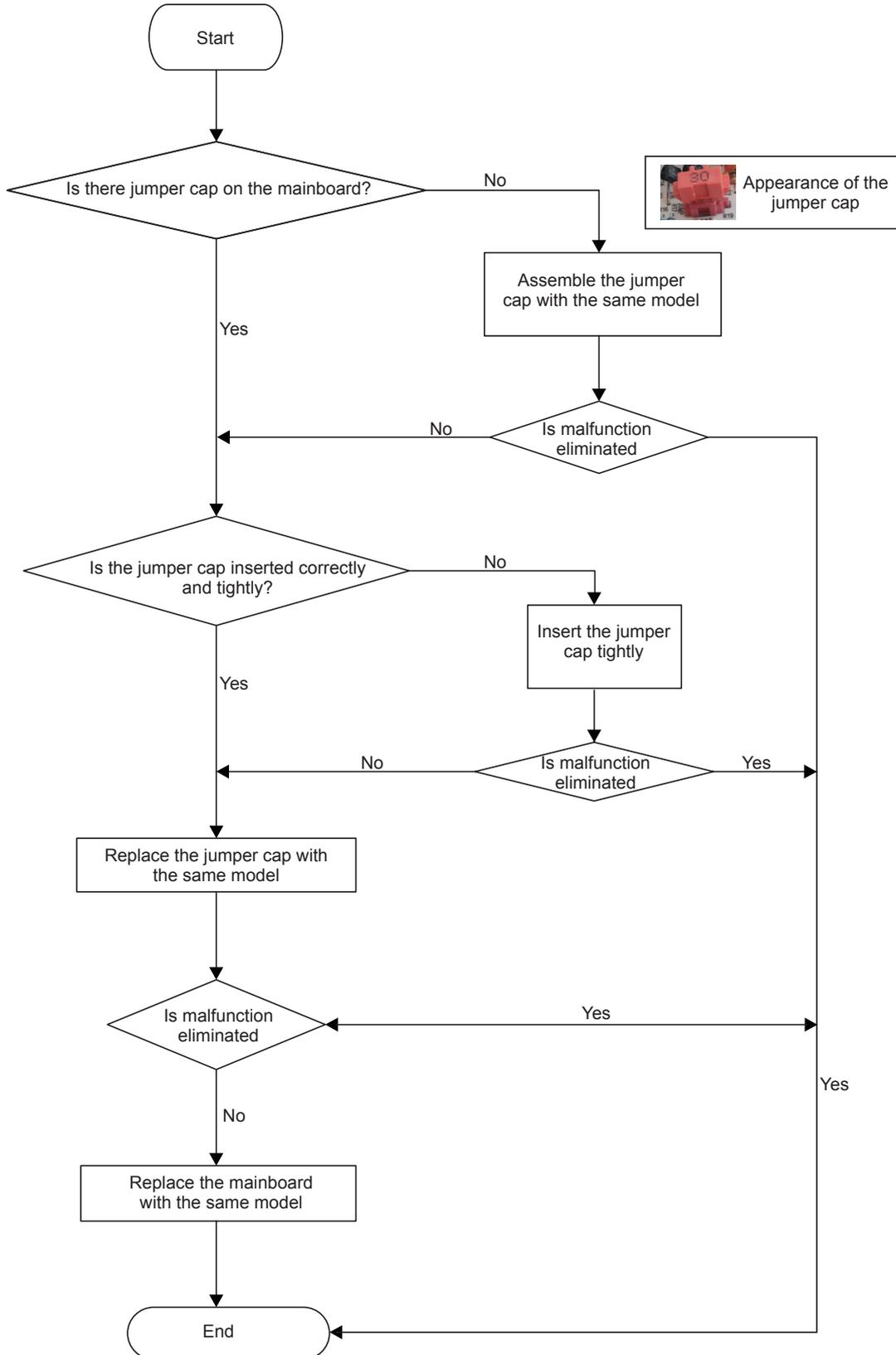


**(3) Malfunction of Protection of Jumper Cap C5**

Main detection points:

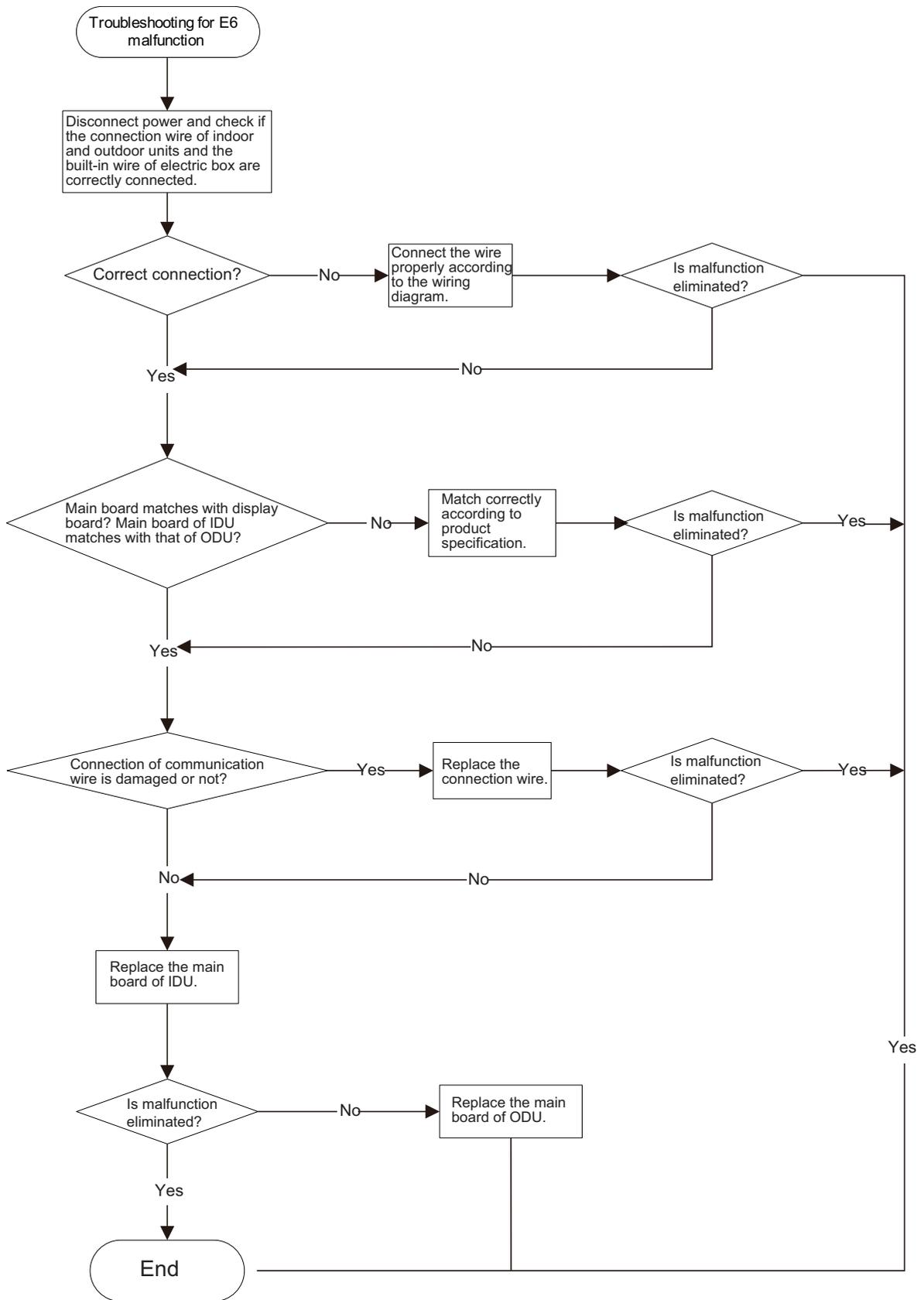
- Is there jumper cap on the mainboard?
- Is the jumper cap inserted correctly and tightly?
- The jumper is broken?
- The motor is broken?
- Detection circuit of the mainboard is defined abnormal?

Malfunction diagnosis process:





(5) Communication malfunction (E6)





Outdoor Unit

(1) Malfunction of Desynchronizing of Compressor (H7)

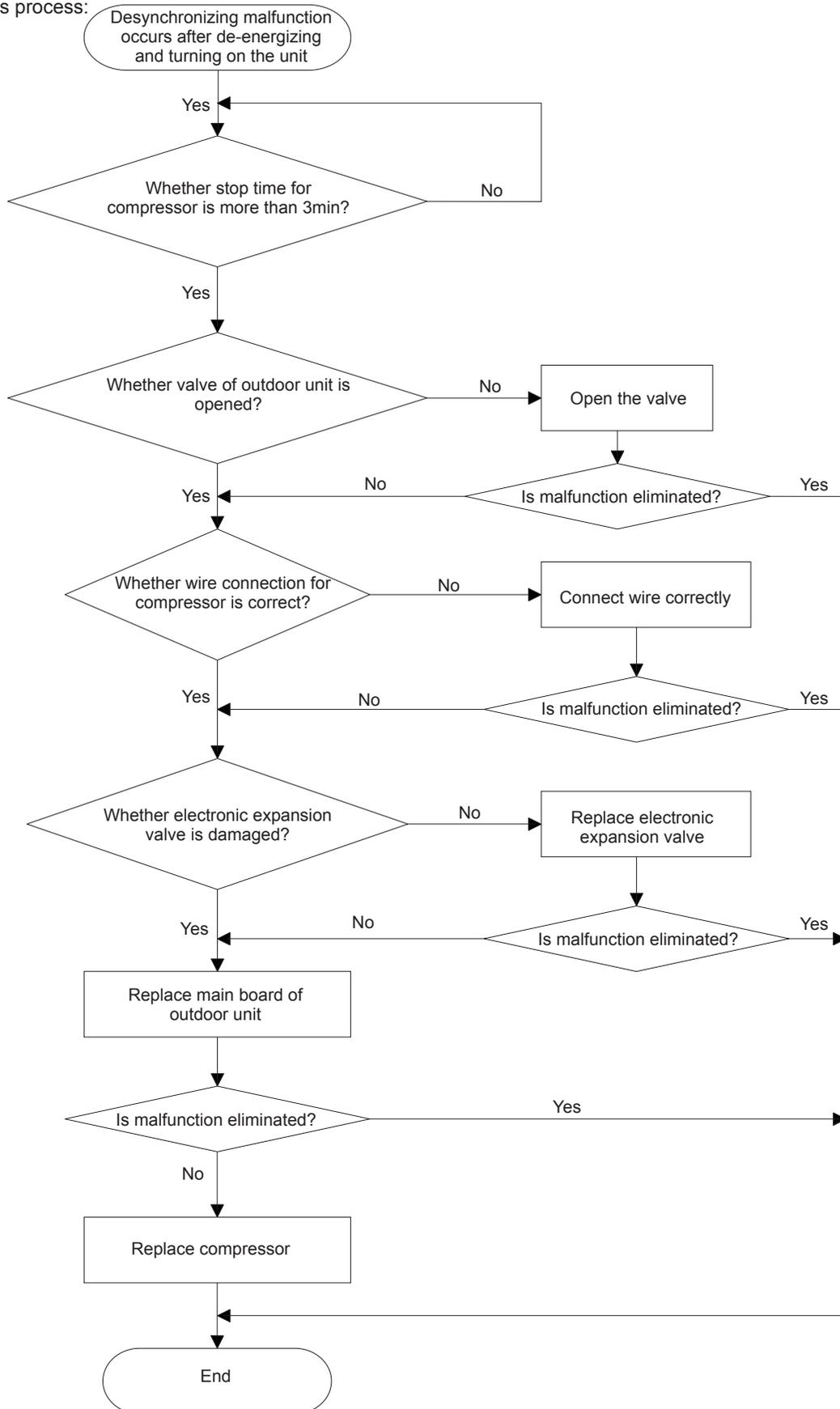
Main check point:

Whether the system pressure is too high?

Whether the electronic expansion valve can work normally?

Whether the radiation for the unit is in good condition?

Malfunction diagnosis process:





**(2) Malfunction of Temperature Sensor (F3/F4/F5)**

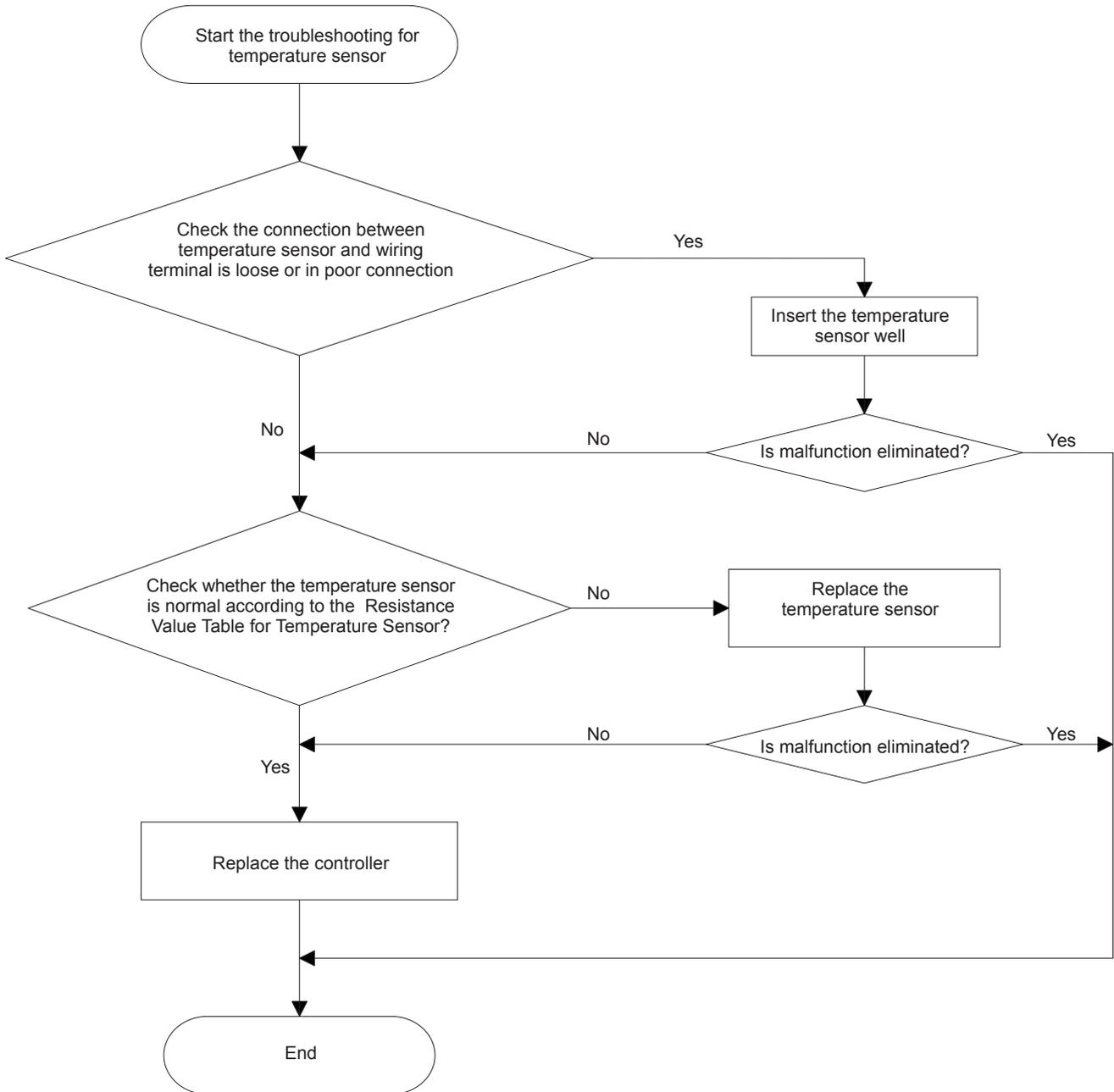
Main check point:

Whether the temperature sensor is damaged?

Whether the terminal of temperature sensor is loose or not connected?

Whether the main board is damaged?

Malfunction diagnosis process:



**(3) Malfunction of Overload Protection of Compressor (H3) and Discharge High-temperature Protection of Compressor (E4)**

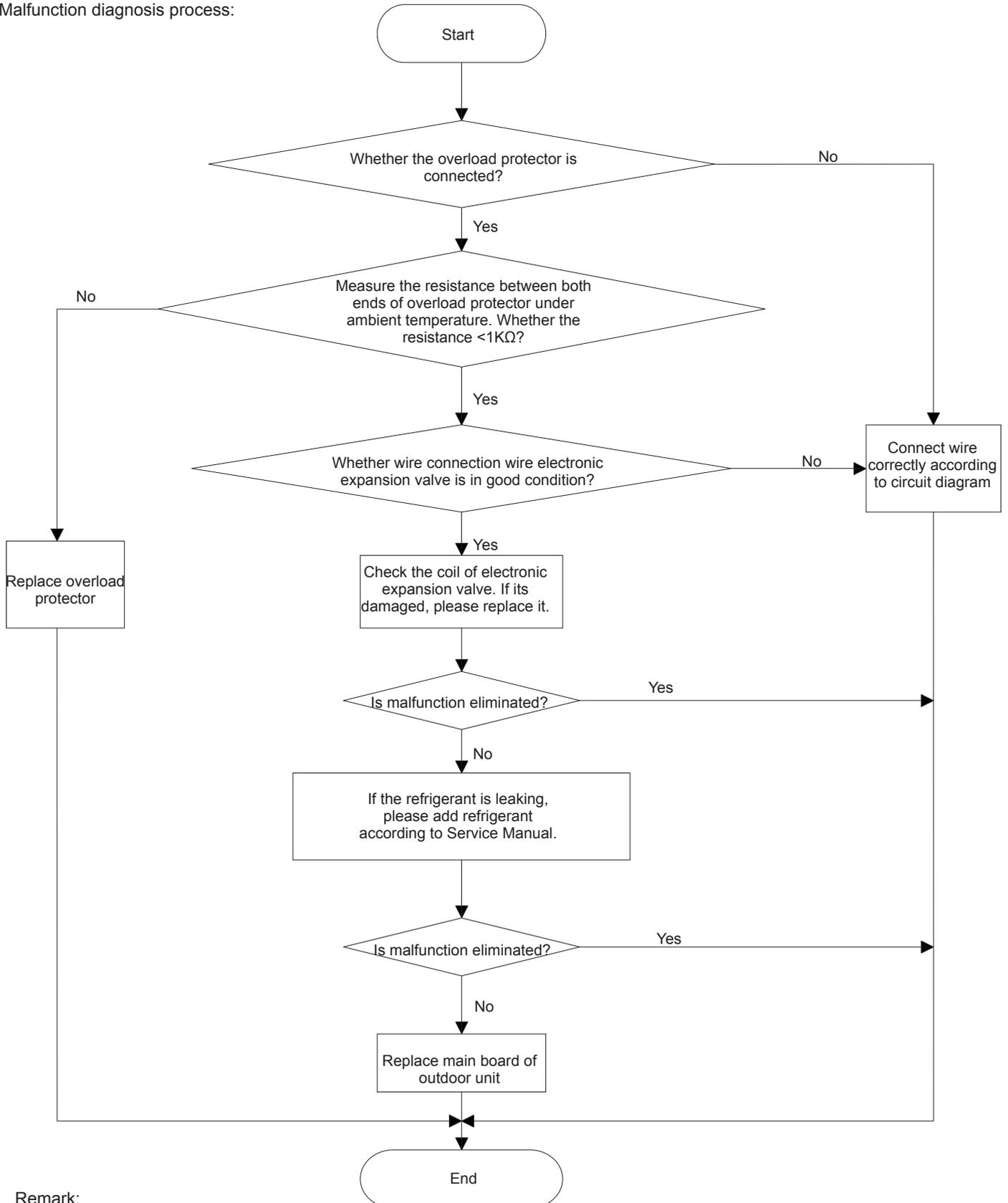
Main check point:

Whether the electronic expansion valve is connected well and whether its damaged?

Whether the refrigerant is leaking?

Whether the overload protector is damaged?

Malfunction diagnosis process:



Remark:

Detection method for electronic expansion valve: There are 5 wires for the coil of electronic expansion valve and one of them are common port (the left or the right wire) .The resistance for other terminals are all most the same (about 100Ω). You can measure those resistance values to judge whether the electronic expansion valve is damaged or not.

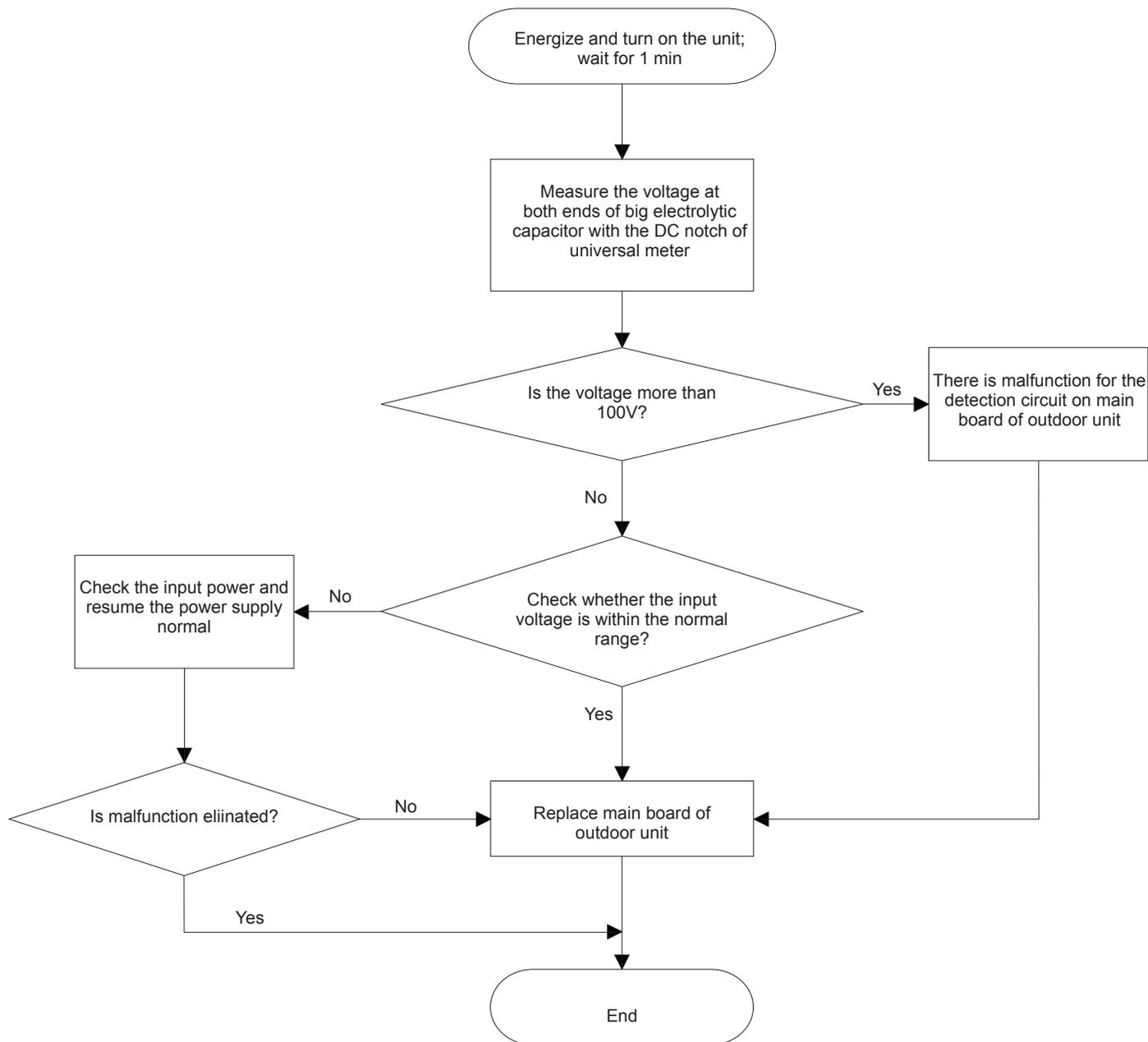
**(4) Charging Malfunction of Capacitor (PU)**

Main check point:

Whether input power is normal?

Main board is damaged.

Malfunction diagnosis process:



**(5) Malfunction of Overload Protection (E8)**

Main check point:

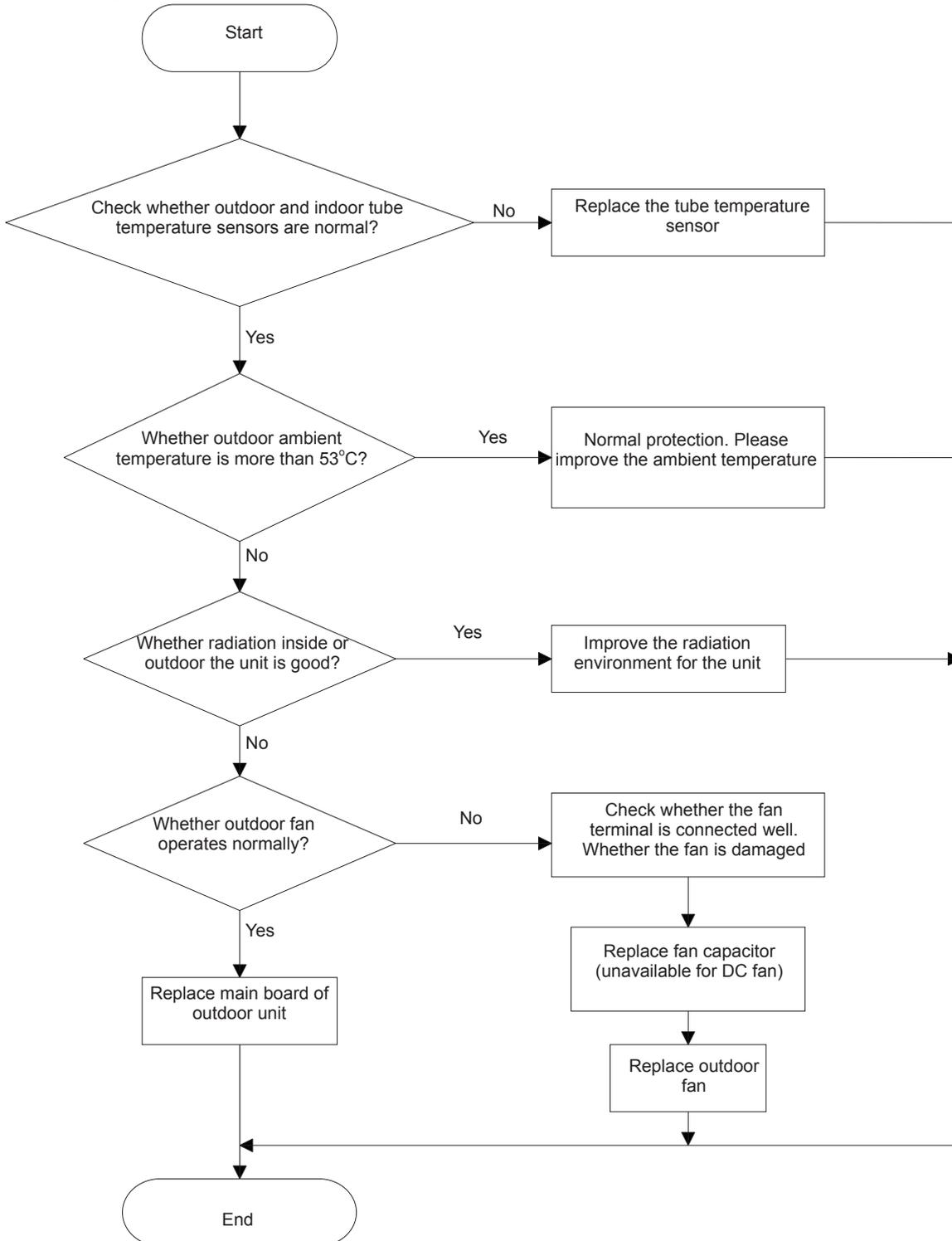
Whether the tube temperature sensor is normal?

Whether the outdoor ambient temperature is within the normal range?

Whether indoor fan and outdoor fan can operate normally?

Whether radiation environment inside or outside the unit is good?

Malfunction diagnosis process:



Remark:

When overload protection occurs under cooling mode, its because the main board detected the outdoor tube temperature sensor exceeds limited temperature and then the unit stops operation. Please check outdoor tube temperature sensor;

When overload protection occurs under heating mode, its because the main board detected the indoor tube temperature sensor exceeds limited temperature and then the unit stops operation. Please check indoor tube temperature sensor;

**(6) Malfunction of IPM Protection (H5)**

Main check point:

Whether input voltage is within the normal range?

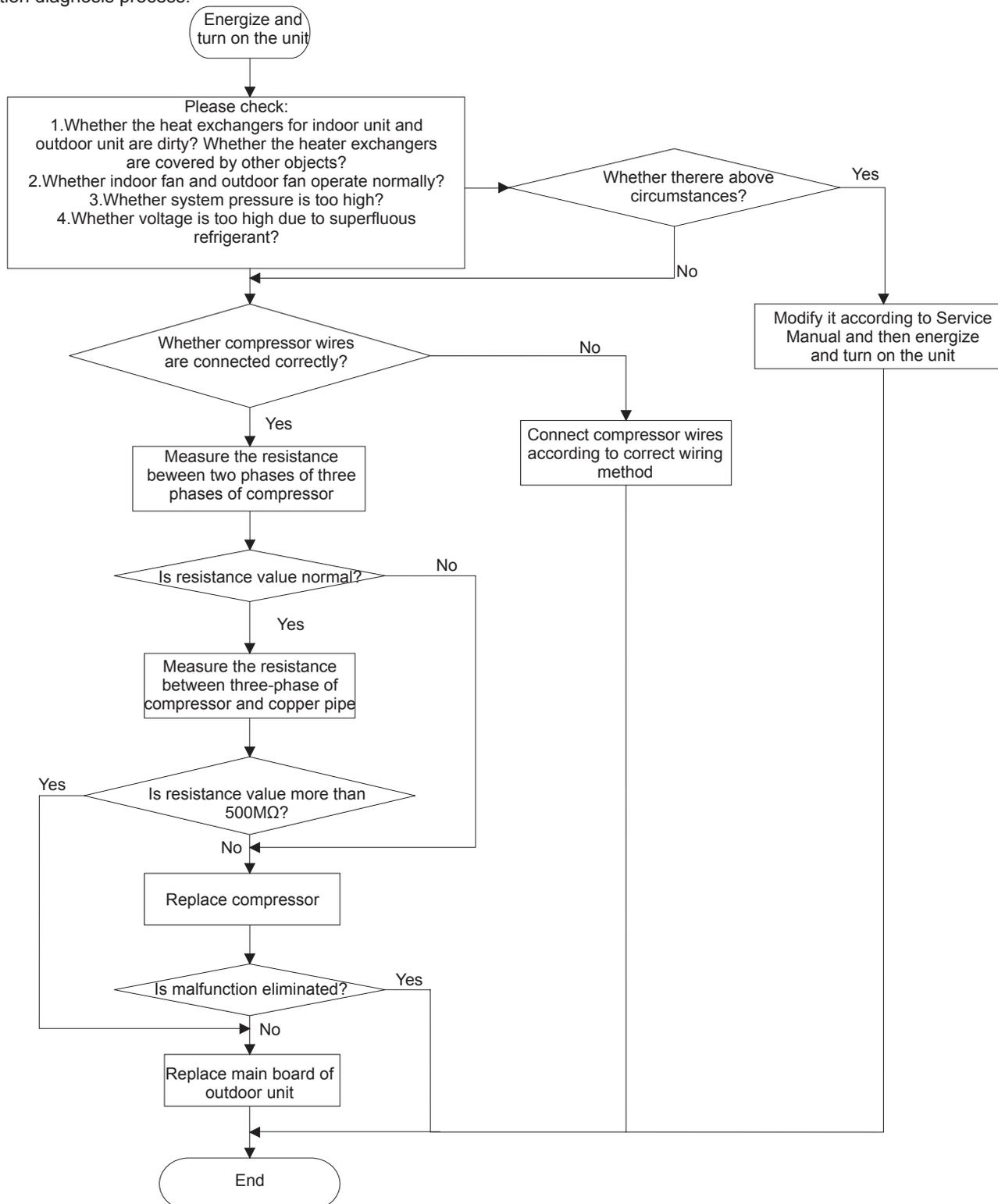
Whether wires of compressor are connected reliably, tightly or correctly?

Whether the resistance of compressor coil is normal? Whether the insulation between compressor coil and copper pipe is in good condition?

Whether the unit is overloading? Whether the radiation for the unit is in good condition?

Whether the volume of charged refrigerant is proper?

Malfunction diagnosis process:

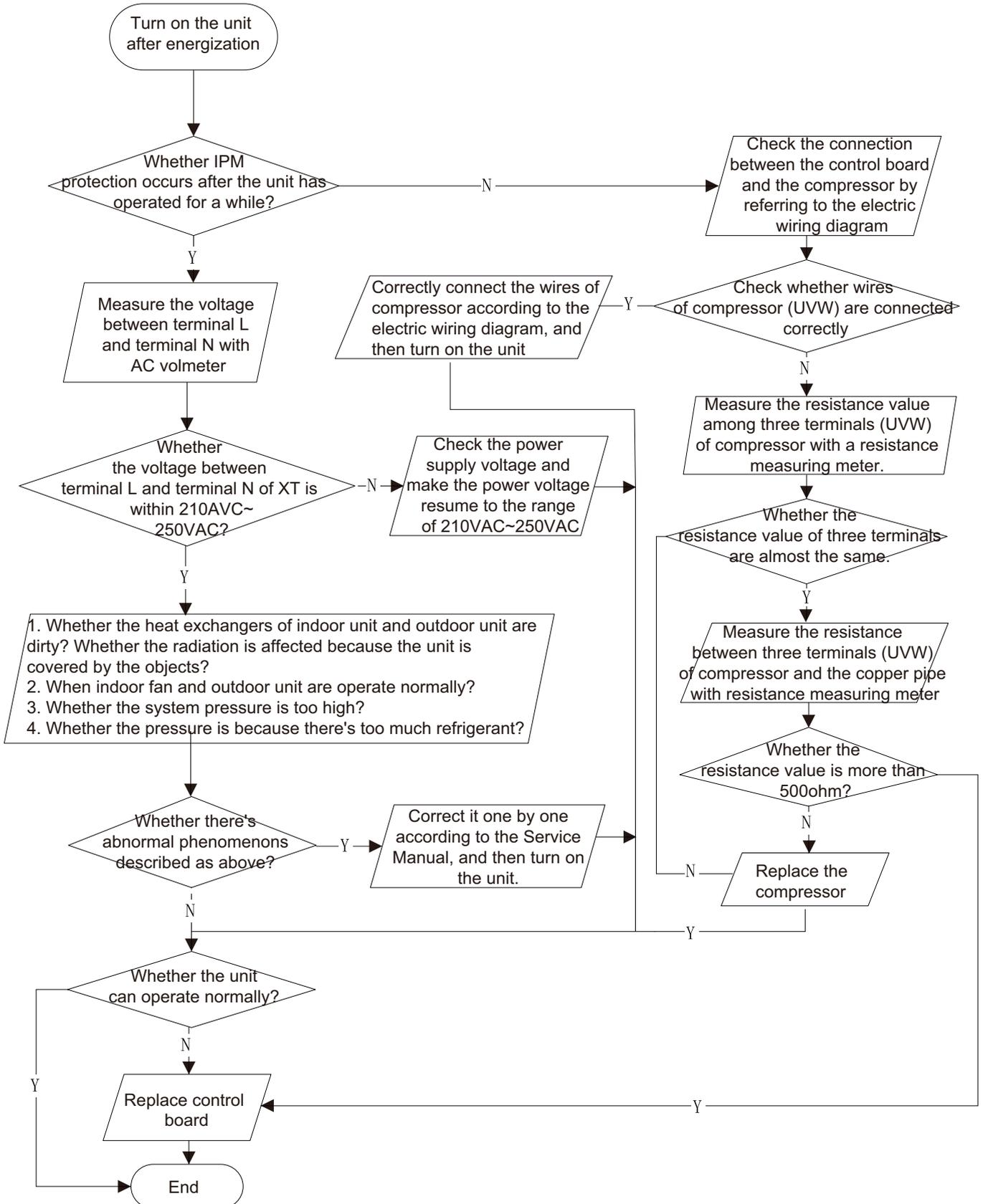


**7. IPM protection, phase current overcurrent (the control board as below indicates the control board of outdoor unit) H5/P5**

Mainly detect:

- (1) Compressor COMP terminal
- (2) voltage of power supply
- (3) compressor
- (4) Refrigerant-charging volume
- (5) air outlet and air inlet of outdoor/indoor unit

Troubleshooting:



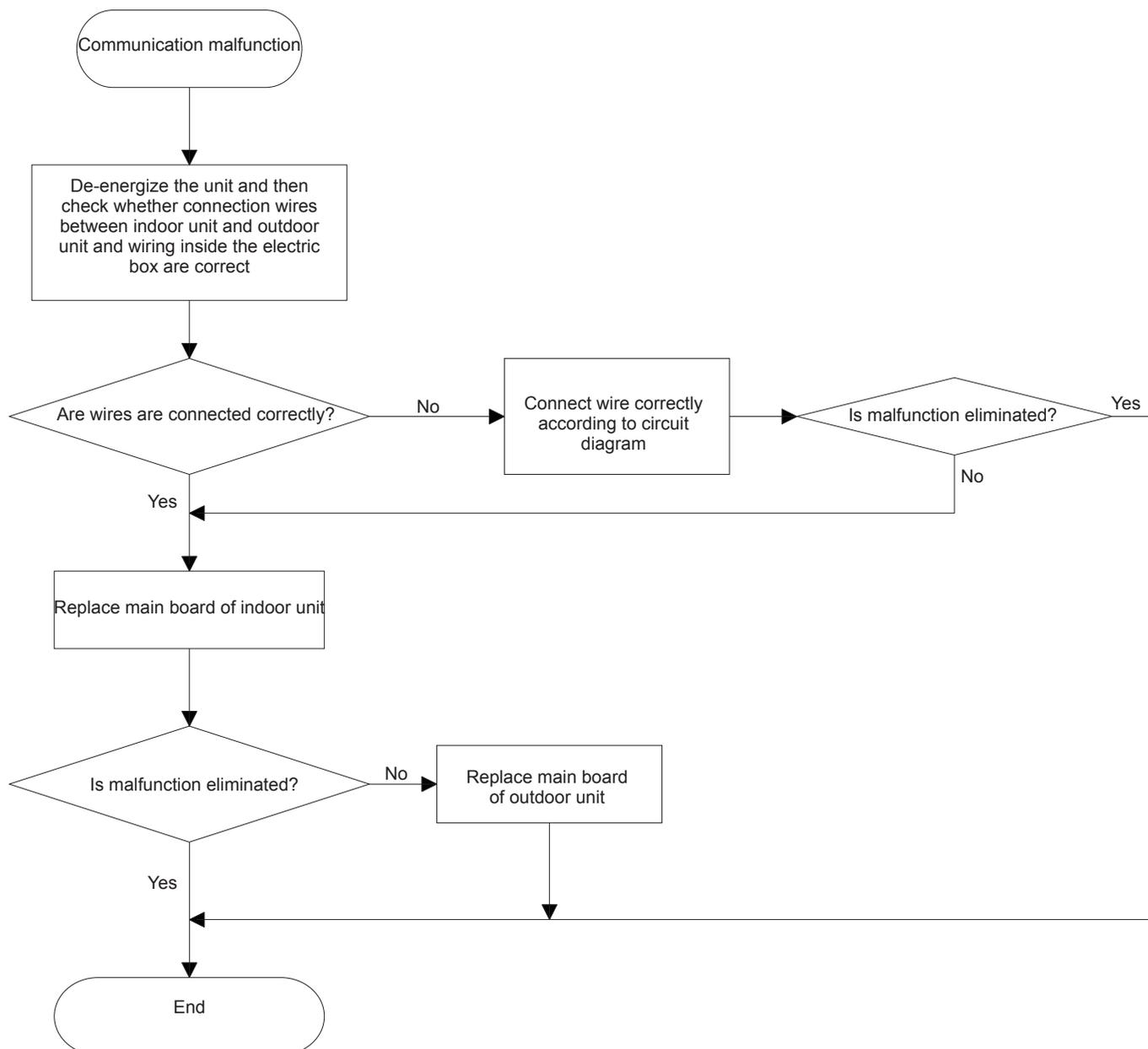
**(8) Malfunction of Communication (E6)**

Main check point:

Check whether connection wires between indoor unit and outdoor unit and wiring inside the unit are connected well?

Check the main board of indoor unit or main board of outdoor unit is damaged?

Malfunction diagnosis process:



**(9) Malfunction of Failure Start-up of Compressor (LC)**

Main check point:

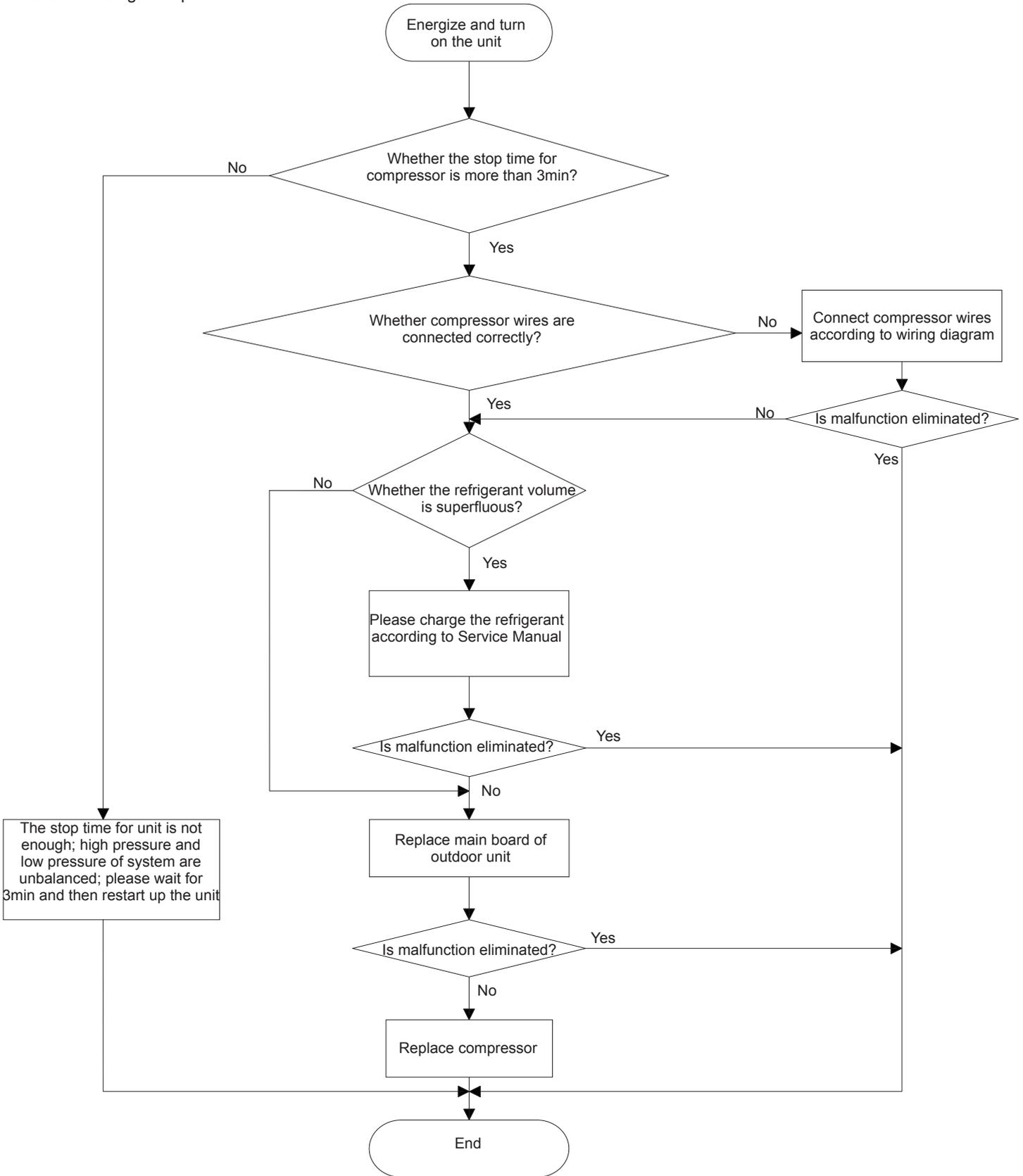
Whether the compressor wires are connected correctly?

Whether the stop time for compressor is enough?

Whether compressor is damaged?

Whether the refrigerant-charging volume is superfluous?

Malfunction diagnosis process:

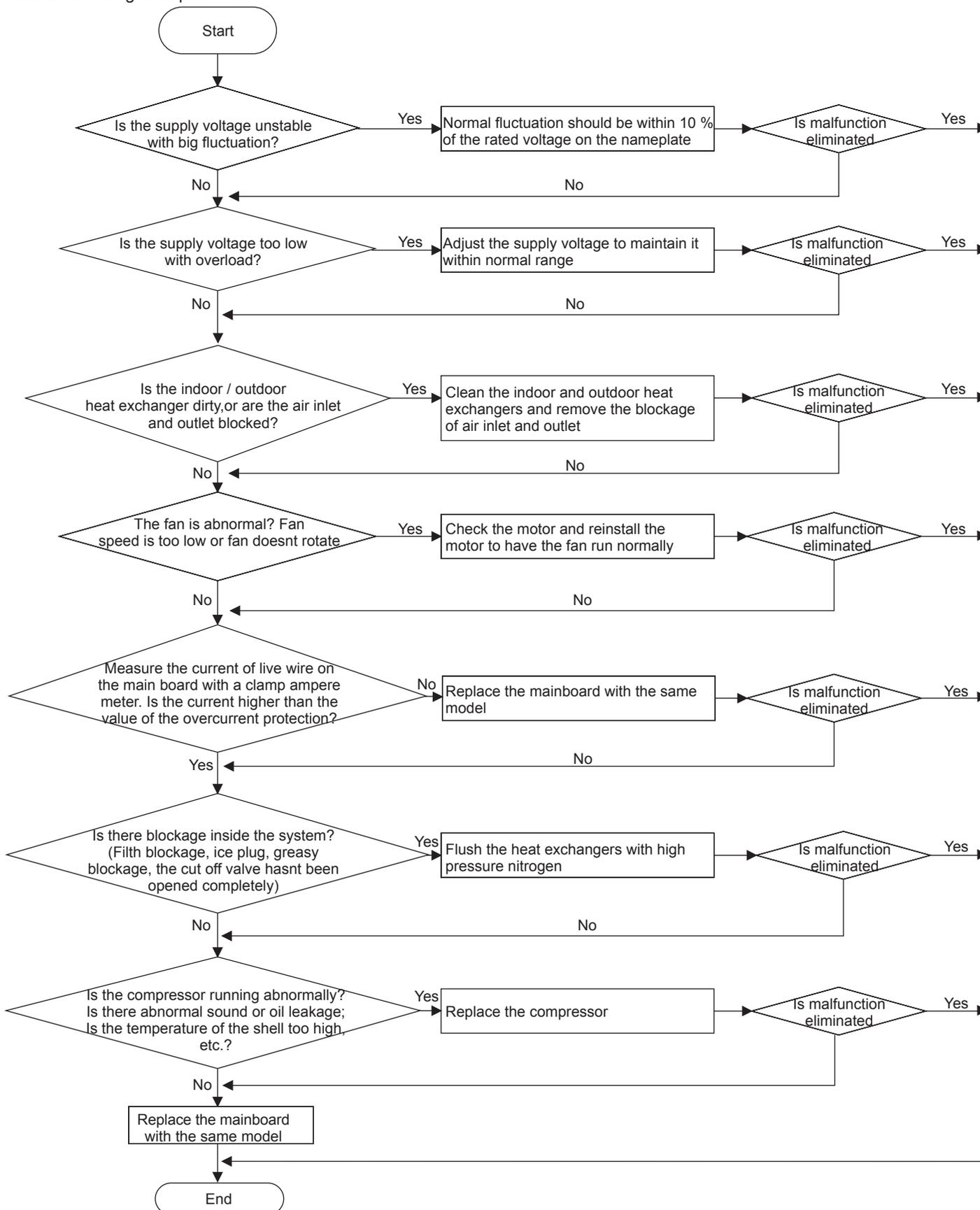


**(10) Malfunction of Overcurrent Protection E5**

Main detection points:

- Is the supply voltage unstable with big fluctuation?
- Is the supply voltage too low with overload?
- Hardware trouble?

Malfunction diagnosis process:





**(12) Other Malfunction****1. IPM module temperature sensor is open-circuited (P7)**

Hardware of main board is damaged. Please replace main board.

**2. Overheating protection of IPM module (P8)**

- ① Poor radiation because the module radiator is dirty;
- ② IPM module is damaged;
- ③ Malfunction of outdoor fan, etc;

**3. Detection circuit malfunctions of phase-current of compressor (U1)**

Hardware of main board is damaged. Please replace main board.

**4. DC busbar voltage is too high (PH)**

- ① Input voltage is too high or unstable;
- ② Hardware of main board is damaged;

**5. DC busbar voltage is too low (PL)**

- ① Input voltage is too low or unstable;
- ② Hardware of main board is damaged;

**6. Malfunction of ODU DC fan (L3)**

- ① The wire terminal of outdoor fan motor is loosed, fix the terminal.
- ② Motor damaged, replace the motor.
- ③ Fan motor module on mainboard is damaged, replace the main board AP1

## 9.3 Troubleshooting 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
		GWH18QD-K6DNA1C/I	GWH18QD-K6DNA3C/I	GWH18QD-K6DNB8C/I	
		Product Code	CB419N12500	CB424N05100	
1	Decorative Strip	20192613	2019267602	/	1
2	Front Panel	20022481	2002270801	20000300075	1
3	Display Board	30565233	30565262	30565260	1
4	Filter Sub-Assy	11122089	11122089	11122089	2
5	Decorative Board (Left)	20192612	2019269302	20192662	1
6	Front Case	20022484	2002248401	2002248401	1
7	Guide Louver	10512734	1051273402	1051276501	1
8	Axile Bush	10542036	10542036	10542036	2
9	Air Louver	10512734	1051273402	1051276501	1
10	Helicoid tongue	26112512	26112512	26112512	1
11	Left Axile Bush	10512037	10512037	10512037	1
12	Rear Case assy	22202571	22202571	22202571	1
13	Rubber Plug (Water Tray)	76712012	76712012	76712012	1
14	O-Gasket sub-assy of Bearing	7651205102	7651205102	7651205102	1
15	Ring of Bearing	26152025	26152025	26152025	1
16	Evaporator Support	24212177	24212177	24212177	1
17	Evaporator Assy	011001000207	011001000207	011001000207	1
18	Cross Flow Fan	10352060	10352060	10352060	1
19	Fan Motor	1501214502	1501214502	1501214502	1
20	Motor Press Plate	26112511	26112511	26112511	1
21	Wall Mounting Frame	01362026	01362026	01362026	1
22	Connecting pipe clamp	2611218801	2611218801	2611218801	1
23	Crank	73012005	73012005	73012005	1
24	Stepping Motor	1521240212	1521240212	1521240212	1
25	Drainage hose	05230014	05230014	05230014	1
26	Electric Box Assy	100002001266	100002002268	100002003232	1
27	Lower Shield of Electric Box	01592139	01592139	01592139	1
28	Electric Box	20112211	20112211	20112211	1
29	Jumper	4202021912	4202021912	4202021921	1
30	Main Board	300002000296	300002000296	300002000296	1
31	Shield Cover of Electric Box	01592176	01592176	01592176	1
32	Electric Box Cover	20112209	20112209	20112209	1
33	Terminal Board	42011233	42011233	42011233	1
34	Decorative Board (Right)	20192611	2019269302	20192662	1
35	Screw Cover	242520179	2425201726	2425201726	3
36	Electric Box Cover2	20112210	20112210	20112210	1
37	Power Cord	/	/	/	/
38	Connecting Cable	4002052317	4002052317	4002052317	0
39	Connecting Cable	/	/	/	/
40	Remote Controller	305001000087	305001000087	305001000087	1
41	Cold Plasma Generator	1114001602	1114001602	1114001602	1
42	Detecting Plate	30110144	30110144	30110144	1

Above data is subject to change without notice.

NO.	Description	Part Code			Qty
		GWH18QD-K6DNE4C/I	GWH18QD-K6DNB6C/I	GWH18QD-K6DND6C/I	
		Product Code	CB470N01900	CB435N07600	
1	Decorative Strip	/	/	/	1
2	Front Panel	200003000064S	20000300040S	200003000027S	1
3	Display Board	300001000081	30565278	300001000042	1
4	Filter Sub-Assy	11122089	11122089	11122089	2
5	Decorative Board (Left)	20192662	20192662	20192662	1
6	Front Case	2002248401	2002248401	2002248401	1
7	Guide Louver	1051276501	1051276501	1051276501	1
8	Axile Bush	10542036	10542036	10542036	2
9	Air Louver	10512732	1051276501	1051276501	1
10	Helicoid tongue	26112512	26112512	26112512	1
11	Left Axile Bush	10512037	10512037	10512037	1
12	Rear Case assy	22202571	22202571	22202571	1
13	Rubber Plug (Water Tray)	76712012	76712012	76712012	1
14	O-Gasket sub-assy of Bearing	7651205102	7651205102	7651205102	1
15	Ring of Bearing	26152025	26152025	26152025	1
16	Evaporator Support	24212177	24212177	24212177	1
17	Evaporator Assy	011001000207	011001000207	011001000207	1
18	Cross Flow Fan	10352060	10352060	10352060	1
19	Fan Motor	1501214502	1501214502	1501214502	1
20	Motor Press Plate	26112511	26112511	26112511	1
21	Wall Mounting Frame	01362026	01362026	01362026	1
22	Connecting pipe clamp	2611218801	2611218801	2611218801	1
23	Crank	73012005	73012005	73012005	1
24	Stepping Motor	1521240212	1521240212	1521240212	1
25	Drainage hose	05230014	05230014	05230014	1
26	Electric Box Assy	100002002488	100002003061	100002003174	1
27	Lower Shield of Electric Box	01592139	01592139	01592139	1
28	Electric Box	20112211	20112211	20112211	1
29	Jumper	4202021921	4202021921	4202021921	1
30	Main Board	300002000296	300002000296	300002000296	1
31	Shield Cover of Electric Box	01592176	01592176	01592176	1
32	Electric Box Cover	20112209	20112209	20112209	1
33	Terminal Board	42011233	42011233	42011233	1
34	Decorative Board (Right)	20192662	20192662	20192662	1
35	Screw Cover	2425201726	2425201726	2425201726	3
36	Electric Box Cover2	20112210	20112210	20112210	1
37	Power Cord	/	/	/	/
38	Connecting Cable	4002052317	4002052317	4002052317	0
39	Connecting Cable	/	/	/	/
40	Remote Controller	305001000087	305001000087	305001000087	1
41	Cold Plasma Generator	1114001602	1114001602	1114001602	1
42	Detecting Plate	000409000001	30110144	30110144	1

Above data is subject to change without notice.

NO.	Description	Part Code			Qty
		GWH18QD-K6DND4C/I	GWH18QD-K6DNE6C/I	GWH18QD-K6DNB2C/I	
		Product Code	CB464N00400	CB465N00700	
1	Decorative Strip	/	/	/	/
2	Front Panel	200003000068	200003000042	20000300023	1
3	Display Board	300001000081	300001000036	30565260	1
4	Filter Sub-Assy	11122089	11122089	11122089	2
5	Decorative Board (Left)	20192662	20192662	20192662	1
6	Front Case	2002248401	2002248401	2002248401	1
7	Guide Louver	1051276501	1051276501	1051276501	1
8	Axile Bush	10542036	10542036	10542036	2
9	Air Louver	10512732	10512732	10512732	1
10	Helicoid tongue	26112512	26112512	26112512	1
11	Left Axile Bush	10512037	10512037	10512037	1
12	Rear Case assy	22202571	22202571	22202571	1
13	Rubber Plug (Water Tray)	76712012	76712012	76712012	1
14	O-Gasket sub-assy of Bearing	7651205102	7651205102	7651205102	1
15	Ring of Bearing	26152025	26152025	26152025	1
16	Evaporator Support	24212177	24212177	24212177	1
17	Evaporator Assy	011001000207	011001000207	011001000207	1
18	Cross Flow Fan	10352060	10352060	10352060	1
19	Fan Motor	1501214502	1501214502	1501214502	1
20	Motor Press Plate	26112511	26112511	26112511	1
21	Wall Mounting Frame	01362026	01362026	01362026	1
22	Connecting pipe clamp	2611218801	2611218801	2611218801	1
23	Crank	73012005	73012005	73012005	1
24	Stepping Motor	1521240212	1521240212	1521240212	1
25	Drainage hose	05230014	05230014	05230014	1
26	Electric Box Assy	100002002488	100002002489	100002003232	1
27	Lower Shield of Electric Box	01592139	01592139	01592139	1
28	Electric Box	20112211	20112211	20112211	1
29	Jumper	4202021921	4202021921	4202021921	1
30	Main Board	300002000296	300002000296	300002000296	1
31	Shield Cover of Electric Box	01592176	01592176	01592176	1
32	Electric Box Cover	20112209	20112209	20112209	1
33	Terminal Board	42011233	42011233	42011233	1
34	Decorative Board (Right)	20192662	20192662	20192662	1
35	Screw Cover	2425201726	2425201726	2425201726	3
36	Electric Box Cover2	20112210	20112210	20112210	1
37	Power Cord	/	/	/	/
38	Connecting Cable	4002052317	4002052317	4002052317	0
39	Connecting Cable	/	/	/	/
40	Remote Controller	305001000087	305001000087	305001000087	1
41	Cold Plasma Generator	1114001602	1114001602	1114001602	1
42	Detecting Plate	30110144	30110144	30110144	1

Above data is subject to change without notice.

NO.	Description	Part Code			Qty
		GWH18QD-K6DND4C/I	GWH18QD-K6DNE6C/I	GWH18QD-K6DNB4C/I	
	Product Code	CB464N00401	CB465N00701	CB434N10502	
1	Decorative Strip	/	/	/	/
2	Front Panel	200003000068	200003000042	20000300028T	1
3	Display Board	300001000081	300001000036	30565260	1
4	Filter Sub-Assy	11122089	11122089	1112208906	2
5	Decorative Board (Left)	20192662	20192662	20192662	1
6	Front Case	2002248401	2002248401	2002248401	1
7	Guide Louver	1051276501	1051276501	1051276501	1
8	Axile Bush	10542036	10542036	10542036	2
9	Air Louver	10512732	10512732	10512732	1
10	Helicoid tongue	26112512	26112512	26112512	1
11	Left Axile Bush	10512037	10512037	10512037	1
12	Rear Case assy	22202571	22202571	22202571	1
13	Rubber Plug (Water Tray)	76712012	76712012	76712012	1
14	O-Gasket sub-assy of Bearing	7651205102	7651205102	7651205102	1
15	Ring of Bearing	26152025	26152025	26152025	1
16	Evaporator Support	24212177	24212177	24212177	1
17	Evaporator Assy	011001000207	011001000207	011001000207	1
18	Cross Flow Fan	10352060	10352060	10352060	1
19	Fan Motor	1501214502	1501214502	1501214502	1
20	Motor Press Plate	26112511	26112511	26112511	1
21	Wall Mounting Frame	01362026	01362026	01362026	1
22	Connecting pipe clamp	2611218801	2611218801	2611218801	1
23	Crank	73012005	73012005	73012005	1
24	Stepping Motor	1521240212	1521240212	1521240212	1
25	Drainage hose	05230014	05230014	05230014	1
26	Electric Box Assy	100002003279	100002003281	100002061239	1
27	Lower Shield of Electric Box	01592139	01592139	01592139	1
28	Electric Box	20112211	20112211	20112211	1
29	Jumper	4202021921	4202021921	4202021921	1
30	Main Board	300002000295	300002000295	300002000295	1
31	Shield Cover of Electric Box	1592176	1592176	01592176	1
32	Electric Box Cover	20112209	20112209	20112209	1
33	Terminal Board	42011233	42011233	42011233	1
34	Decorative Board (Right)	20192662	20192662	20192662	1
35	Screw Cover	2425201726	2425201726	2425201726	3
36	Electric Box Cover2	20112210	20112210	20112210	1
37	Power Cord	/	/	/	/
38	Connecting Cable	4002052317	4002052317	4002052317	0
39	Connecting Cable	/	/	4002052317	/
40	Remote Controller	305001000087	305001000087	305001000087	1
41	Cold Plasma Generator	/	/	/	/
42	Detecting Plate	30110144	30110144	30110144	1

Above data is subject to change without notice.

NO.	Description	Part Code			Qty
		GWH18QD-K6DNC2C/I	GWH18QD-K6DNB2A/I	GWH18QD-K6DNC2F/I	
	Product Code	CB439N09100	CB432N11300	CB439N13700	
1	Decorative Strip	/	/	/	1
2	Front Panel	20000300070S	20000300023S	20000300070S	1
3	Display Board	30565278	30565260	30565278	1
4	Filter Sub-Assy	11122089	11122089	1112208906	2
5	Decorative Board (Left)	20192662	20192662	20192662	1
6	Front Case	2002248401	2002248401	2002248401	1
7	Guide Louver	1051276501	1051276501	1051276501	1
8	Axile Bush	10542036	10542036	10542036	2
9	Air Louver	10512732	10512732	1051276501	1
10	Helicoid tongue	26112512	26112512	26112512	1
11	Left Axile Bush	10512037	10512037	10512037	1
12	Rear Case assy	22202571	22202571	22202571	1
13	Rubber Plug (Water Tray)	76712012	76712012	76712012	1
14	O-Gasket sub-assy of Bearing	7651205102	7651205102	76512051	1
15	Ring of Bearing	26152025	26152025	26152025	1
16	Evaporator Support	24212177	24212177	24212177	1
17	Evaporator Assy	011001000207	011001000207	011001000207	1
18	Cross Flow Fan	10352060	10352060	10352060	1
19	Fan Motor	1501214502	1501214502	1501214502	1
20	Motor Press Plate	26112511	26112511	26112511	1
21	Wall Mounting Frame	01362026	01362026	01362026	1
22	Connecting pipe clamp	2611218801	2611218801	2611218801	1
23	Crank	73012005	73012005	73012005	1
24	Stepping Motor	1521240212	1521240212	1521240212	1
25	Drainage hose	05230014	05230014	05230014	1
26	Electric Box Assy	100002002514	100002003619	100002062476	1
27	Lower Shield of Electric Box	01592139	01592139	01592139	1
28	Electric Box	20112211	20112211	20112211	1
29	Jumper	4202021921	4202021921	4202021921	1
30	Main Board	300002000295	300002000397	300002000295	1
31	Shield Cover of Electric Box	01592176	01592176	01592176	1
32	Electric Box Cover	20112209	20112209	20112209	1
33	Terminal Board	4201026902	42011233	42011233	1
34	Decorative Board (Right)	20192662	20112209	20112209	1
35	Screw Cover	2425201726	2425201726	2425201726	3
36	Electric Box Cover2	20112210	20112210	20112210	1
37	Power Cord	/	/	/	/
38	Connecting Cable	4002052317	4002052317	4002052317	0
39	Connecting Cable	/	/	/	/
40	Remote Controller	305001000087	305001000117	305001000087	1
41	Cold Plasma Generator	/	1114001602	/	1
42	Detecting Plate	30110144	30110144	30110144	1

Above data is subject to change without notice.

NO.	Description	Part Code			Qty
		GWH18QD-K6DNB4A/I	GWH18QD-K6DNB4C/I	GWH18QD-K6DNC4C/I	
		Product Code	CB434N10400	CB434N10500	
1	Decorative Strip	/	/	/	/
2	Front Panel	20000300028T	20000300028T	20000300106S	1
3	Display Board	30565260	30565260	30565260	1
4	Filter Sub-Assy	11122089	11122089	1112208906	2
5	Decorative Board (Left)	20192662	20192662	20192662	1
6	Front Case	2002248401	2002248401	2002248401	1
7	Guide Louver	1051276501	1051276501	1051276501	1
8	Axile Bush	10542036	10542036	10542036	2
9	Air Louver	10512732	10512732	1051276501	1
10	Helicoid tongue	26112512	26112512	26112512	1
11	Left Axile Bush	10512037	10512037	10512037	1
12	Rear Case assy	22202571	22202571	22202571	1
13	Rubber Plug (Water Tray)	76712012	76712012	76712012	1
14	O-Gasket sub-assy of Bearing	7651205102	7651205102	76512051	1
15	Ring of Bearing	26152025	26152025	26152025	1
16	Evaporator Support	24212177	24212177	24212177	1
17	Evaporator Assy	011001000207	011001000207	011001000207	1
18	Cross Flow Fan	10352060	10352060	10352060	1
19	Fan Motor	1501214502	1501214502	1501214502	1
20	Motor Press Plate	26112511	26112511	26112511	1
21	Wall Mounting Frame	01362026	01362026	01362026	1
22	Connecting pipe clamp	2611218801	2611218801	2611218801	1
23	Crank	73012005	73012005	73012005	1
24	Stepping Motor	1521240212	1521240212	1521240212	1
25	Drainage hose	05230014	05230014	05230014	1
26	Electric Box Assy	100002003619	100002003232	100002003232	1
27	Lower Shield of Electric Box	01592139	01592139	01592139	1
28	Electric Box	20112211	20112211	20112211	1
29	Jumper	4202021921	4202021921	4202021921	1
30	Main Board	300002000397	300002000296	300002000296	1
31	Shield Cover of Electric Box	01592176	01592176	01592176	1
32	Electric Box Cover	20112209	20112209	20112209	1
33	Terminal Board	42011233	42011233	42011233	1
34	Decorative Board (Right)	20112209	20192662	20192662	1
35	Screw Cover	2425201726	2425201726	2425201726	3
36	Electric Box Cover2	20112210	20112210	20112210	1
37	Power Cord	/	/	/	/
38	Connecting Cable	4002052317	4002052317	4002052317	0
39	Connecting Cable	/	/	/	/
40	Remote Controller	305001000087	305001000087	305001000087	1
41	Cold Plasma Generator	1114001602	1114001602	1114001602	1
42	Detecting Plate	30110144	30110144	30110144	1

Above data is subject to change without notice.

NO.	Description	Part Code		Qty
		GWH18QD-K6DNB2C/I	GWH18QD-K6DNC4C/I	
		Product Code		
		CB432N14901	CB444N09400	
1	Decorative Strip	/	/	/
2	Front Panel	20000300023S	20000300106S	1
3	Display Board	30565260	30565260	1
4	Filter Sub-Assy	11122089	1112208906	2
5	Decorative Board (Left)	20192662	20192662	1
6	Front Case	2002248401	2002248401	1
7	Guide Louver	1051276501	1051276501	1
8	Axile Bush	10542036	10542036	2
9	Air Louver	10512732	1051276501	1
10	Helicoid tongue	26112512	26112512	1
11	Left Axile Bush	10512037	10512037	1
12	Rear Case assy	22202571	22202571	1
13	Rubber Plug (Water Tray)	76712012	76712012	1
14	O-Gasket sub-assy of Bearing	7651205102	7651205102	1
15	Ring of Bearing	26152025	26152025	1
16	Evaporator Support	24212177	24212177	1
17	Evaporator Assy	011001000424	011001000207	1
18	Cross Flow Fan	10352060	10352060	1
19	Fan Motor	1501214502	1501214502	1
20	Motor Press Plate	26112511	26112511	1
21	Wall Mounting Frame	01362026	01362026	1
22	Connecting pipe clamp	2611218801	2611218801	1
23	Crank	73012005	73012005	1
24	Stepping Motor	1521240212	1521240212	1
25	Drainage hose	05230014	05230014	1
26	Electric Box Assy	100002061239	100002003232	1
27	Lower Shield of Electric Box	01592139	01592139	1
28	Electric Box	20112211	20112211	1
29	Jumper	4202021921	4202021921	1
30	Main Board	300002000295	300002000296	1
31	Shield Cover of Electric Box	01592176	01592176	1
32	Electric Box Cover	20112209	20112209	1
33	Terminal Board	42011233	42011233	1
34	Decorative Board (Right)	20192662	20192662	1
35	Screw Cover	2425201726	2425201726	3
36	Electric Box Cover2	20112210	20112210	1
37	Power Cord	/	/	/
38	Connecting Cable	4002052317	4002052317	0
39	Connecting Cable	/	/	/
40	Remote Controller	305001000087	305001000087	1
41	Cold Plasma Generator	/	1114001602	1
42	Detecting Plate	30110144	30110144	1

Above data is subject to change without notice.



NO.	Description	Part Code			Qty
		GWH24QE-K6DNA1C/I	GWH24QE-K6DNA3C/I	GWH24QE-K6DNB8C/I	
	Product Code	CB419N12200	CB424N05000	CB438N07000	
1	Front Panel Assy	20022491	20022717	20000300076T	1
2	Filter Sub-Assy	11012007	11012007	11012007	2
3	Screw Cover	24252453	2425245301	2425245301	3
4	Front Case Assy	20022487	00000200118	00000200043	1
5	Air Louver(Manual)	10512737	10512737	10512737	3
6	Helicoid Tongue	26112513	26112513	26112513	1
7	Left Axile Bush	10512037	10512037	10512037	1
8	Rear Case assy	22202570	22202570	22202570	1
9	Rubber Plug (Water Tray)	76712012	76712012	76712012	1
10	Ring of Bearing	26152025	26152025	26152025	1
11	O-Gasket of Cross Fan Bearing	76512203	76512203	76512203	1
12	Cross Flow Fan	10352057	10352057	10352057	1
13	Evaporator Support	24212178	24212178	24212178	1
14	Evaporator Assy	011001000073	011001000073	011001000073	1
15	Cold Plasma Generator	1114001602	1114001602	1114001602	1
16	Wall Mounting Frame	01252229	01252229	01252229	1
17	Motor Press Plate	26112515	26112515	26112515	1
18	Fan Motor	15012145	15012145	15012145	1
19	Connecting pipe clamp	26112514	26112514	26112514	1
20	Drainage Hose	0523001405	0523001405	0523001405	1
21	Stepping Motor	1521240212	1521240212	1521240212	1
22	Crank	73012005	73012005	73012005	1
23	Guide Louver	10512738	1051273802	1051232001	1
24	Axile Bush	10542036	10542036	10542036	2
25	Electric Box	20112211	20112211	20112211	1
26	Terminal Board	42011233	42011233	42011233	1
27	Electric Box Cover2	20112210	20112210	20112210	1
28	Main Board	300002000302	300002000302	300002000302	1
29	Display Board	30565233	30565262	30565260	1
30	Shield cover of Electric Box	01592176	01592176	01592176	1
31	Electric Box Cover	20112209	20112209	20112209	1
32	Jumper	4202021916	4202021916	4202021925	1
33	Lower Shield of Electric Box	01592139	01592139	01592139	1
34	Electric Box Assy	100002001123	100002001875	100002003178	1
35	Power Cord	/	/	/	/
36	Connecting Cable	4002052317	4002052317	4002052317	0
37	Temperature Sensor	3900031302	3900031302	3900031302	1
38	Remote Controller	305001000087	305001000087	305001000087	1
39	Detecting Plate	30110144	30110144	30110144	1

Above data is subject to change without notice.

NO.	Description	Part Code			Qty
		GWH24QE-K6DND4C/I	GWH24QE-K6DNE6C/I	GWH24QE-K6DNC8C/I	
	Product Code	CB464N00100	CB465N00400	CB456N03300	
1	Front Panel Assy	200003000076	200003000041	20000300152T	1
2	Filter Sub-Assy	11012007	11012007	11012007	2
3	Screw Cover	2425245301	2425245301	2425245301	3
4	Front Case Assy	00000200043	00000200043	00000200043	1
5	Air Louver(Manual)	10512737	10512737	10512737	3
6	Helicoid Tongue	26112513	26112513	26112513	1
7	Left Axile Bush	10512037	10512037	10512037	1
8	Rear Case assy	22202570	22202570	22202570	1
9	Rubber Plug (Water Tray)	76712012	76712012	76712012	1
10	Ring of Bearing	26152025	26152025	26152025	1
11	O-Gasket of Cross Fan Bearing	76512203	76512203	76512203	1
12	Cross Flow Fan	10352057	10352057	10352057	1
13	Evaporator Support	24212178	24212178	24212178	1
14	Evaporator Assy	011001000073	011001000073	011001000073	1
15	Cold Plasma Generator	1114001602	1114001602	1114001602	1
16	Wall Mounting Frame	01252229	01252229	01252229	1
17	Motor Press Plate	26112515	26112515	26112515	1
18	Fan Motor	15012145	15012145	15012145	1
19	Connecting pipe clamp	26112514	26112514	26112514	1
20	Drainage Hose	0523001405	0523001405	0523001405	1
21	Stepping Motor	1521240212	1521240212	1521240212	1
22	Crank	73012005	73012005	73012005	1
23	Guide Louver	1051232001	1051232001	1051232001	1
24	Axile Bush	10542036	10542036	10542036	2
25	Electric Box	20112211	20112211	20112211	1
26	Terminal Board	42011233	42011233	42011233	1
27	Electric Box Cover2	20112210	20112210	20112210	1
28	Main Board	300002000302	300002000302	300002000302	1
29	Display Board	300001000081	300001000036	30565278	1
30	Shield cover of Electric Box	01592176	01592176	01592176	1
31	Electric Box Cover	20112209	20112209	20112209	1
32	Jumper	4202021925	4202021925	4202021925	1
33	Lower Shield of Electric Box	01592139	01592139	01592139	1
34	Electric Box Assy	100002002494	100002002496	100002003041	1
35	Power Cord	/	/	/	/
36	Connecting Cable	4002052317	4002052317	4002052317	0
37	Temperature Sensor	3900031302	3900031302	3900031302	1
38	Remote Controller	305001000087	305001000087	305001000087	1
39	Detecting Plate	30110144	30110144	30110144	1

Above data is subject to change without notice.

NO.	Description	Part Code			Qty
		GWH24QE-K6DND4C/I	GWH24QE-K6DNE6C/I	GWH24QD-K6DNE4A/I	
	Product Code	CB464N00101	CB465N00401	CB470N02500	
1	Front Panel Assy	200003000076T	00000300007801	200003000064T	1
2	Filter Sub-Assy	11012007	11012007	11122089	2
3	Screw Cover	2425245301	2425245301	2425201726	3
4	Front Case Assy	00000200043	00000200043	00000200042	1
5	Air Louver(Manual)	10512737	10512737	10512732	3
6	Helicoid Tongue	26112513	26112513	26112512	1
7	Left Axile Bush	10512037	10512037	10512037	1
8	Rear Case assy	22202570	22202570	22202571	1
9	Rubber Plug (Water Tray)	76712012	76712012	76712012	1
10	Ring of Bearing	26152025	26152025	26152025	1
11	O-Gasket of Cross Fan Bearing	76512203	76512203	76512203	1
12	Cross Flow Fan	10352057	10352057	10352060	1
13	Evaporator Support	24212178	24212178	24212177	1
14	Evaporator Assy	011001000073	011001000073	01002000003	1
15	Cold Plasma Generator	/	/	1114001602	1
16	Wall Mounting Frame	01252229	01252229	01362026	1
17	Motor Press Plate	26112515	26112515	26112511	1
18	Fan Motor	15012145	15012145	1501214502	1
19	Connecting pipe clamp	26112514	26112514	2611218801	1
20	Drainage Hose	0523001405	0523001405	05230014	1
21	Stepping Motor	1521240212	1521240212	1521240212	1
22	Crank	73012005	73012005	73012005	1
23	Guide Louver	1051232001	1051232001	1051276501	1
24	Axile Bush	10542036	10542036	10542036	2
25	Electric Box	20112211	20112211	20112211	1
26	Terminal Board	42011233	42011233	42011233	1
27	Electric Box Cover2	20112210	20112210	20112210	1
28	Main Board	300002000300	300002000300	300002000397	1
29	Display Board	300001000081	300001000036	300001000081	1
30	Shield cover of Electric Box	01592176	01592176	01592176	1
31	Electric Box Cover	20112209	20112209	20112209	1
32	Jumper	4202021925	4202021925	4202021921	1
33	Lower Shield of Electric Box	01592139	01592139	01592139	1
34	Electric Box Assy	100002003173	100002003179	100002060402	1
35	Power Cord	/	/	/	/
36	Connecting Cable	4002052317	4002052317	4002052317	0
37	Temperature Sensor	3900031302	3900031302	3900031302	1
38	Remote Controller	305001000087	305001000087	305001000117	1
39	Detecting Plate	30110144	30110144	30110144	1

Above data is subject to change without notice.

NO.	Description	Part Code			Qty
		GWH24QE-K6DNB6C/I	GWH24QE-K6DNC2C/I	GWH24QD-K6DNC4A/I	
	Product Code	CB435N07400	CB439N09300	CB444N07700	
1	Front Panel Assy	20000300048T	00000200043	20000300106S	1
2	Filter Sub-Assy	11012007	11012007	11122089	2
3	Screw Cover	2425245301	2425245301	2425201726	3
4	Front Case Assy	00000200043	00000200043	00000200042	1
5	Air Louver(Manual)	10512737	10512737	10512732	3
6	Helicoid Tongue	26112513	26112513	26112512	1
7	Left Axile Bush	10512037	10512037	10512037	1
8	Rear Case assy	22202570	22202570	22202571	1
9	Rubber Plug (Water Tray)	76712012	76712012	76712012	1
10	Ring of Bearing	26152025	26152025	26152025	1
11	O-Gasket of Cross Fan Bearing	76512203	76512203	76512203	1
12	Cross Flow Fan	10352057	10352057	10352060	1
13	Evaporator Support	24212178	24212178	24212177	1
14	Evaporator Assy	011001000073	011001000073	01002000003	1
15	Cold Plasma Generator	1114001602	/	1114001602	1
16	Wall Mounting Frame	01252229	01252229	01362026	1
17	Motor Press Plate	26112515	26112515	26112511	1
18	Fan Motor	15012145	15012145	1501214502	1
19	Connecting pipe clamp	26112514	26112514	2611218801	1
20	Drainage Hose	0523001405	0523001405	05230014	1
21	Stepping Motor	1521240212	1521240212	1521240212	1
22	Crank	73012005	73012005	73012005	1
23	Guide Louver	1051232001	1051232001	1051276501	1
24	Axile Bush	10542036	10542036	10542036	2
25	Electric Box	20112211	20112211	20112211	1
26	Terminal Board	42011233	4201026902	42011233	1
27	Electric Box Cover2	20112210	20112210	20112210	1
28	Main Board	300002000302	300002000300	300002000397	1
29	Display Board	30565278	30565278	30565260	1
30	Shield cover of Electric Box	01592176	01592176	01592176	1
31	Electric Box Cover	20112209	20112209	20112209	1
32	Jumper	4202021925	4202021925	4202021921	1
33	Lower Shield of Electric Box	01592139	01592139	01592139	1
34	Electric Box Assy	100002003041	100002002558	100002003620	1
35	Power Cord	/	/	/	/
36	Connecting Cable	4002052317	4002052317	4002052317	0
37	Temperature Sensor	3900031302	3900031302	3900031302	1
38	Remote Controller	305001000087	305001000087	305001000117	1
39	Detecting Plate	30110144	30110144	30110144	1

Above data is subject to change without notice.

NO.	Description	Part Code			Qty
		GWH24QD-K6DNB2A/I	GWH24QE-K6DNE4C/I	GWH24QE-K6DND6C/I	
	Product Code	CB432N11400	CB470N01800	CB460N03700	
1	Front Panel Assy	20000300023S	200003000062T	200003000023S	1
2	Filter Sub-Assy	11122089	11012007	11012007	2
3	Screw Cover	2425201726	2425245301	2425245301	3
4	Front Case Assy	00000200042	00000200043	00000200043	1
5	Air Louver(Manual)	10512732	10512737	10512737	3
6	Helicoid Tongue	26112512	26112513	26112513	1
7	Left Axile Bush	10512037	10512037	10512037	1
8	Rear Case assy	22202571	22202570	22202570	1
9	Rubber Plug (Water Tray)	76712012	76712012	76712012	1
10	Ring of Bearing	26152025	26152025	26152025	1
11	O-Gasket of Cross Fan Bearing	7651205102	76512203	76512203	1
12	Cross Flow Fan	10352060	10352057	10352057	1
13	Evaporator Support	24212177	24212178	24212178	1
14	Evaporator Assy	01002000003	011001000073	011001000073	1
15	Cold Plasma Generator	1114001602	1114001602	1114001602	1
16	Wall Mounting Frame	01362026	01252229	01252229	1
17	Motor Press Plate	26112511	26112515	26112515	1
18	Fan Motor	1501214502	15012145	15012145	1
19	Connecting pipe clamp	2611218801	26112514	26112514	1
20	Drainage Hose	05230014	0523001405	0523001405	1
21	Stepping Motor	1521240212	1521240212	1521240212	1
22	Crank	73012005	73012005	73012005	1
23	Guide Louver	1051276501	1051232001	1051232001	1
24	Axile Bush	10542036	10542036	10542036	2
25	Electric Box	20112211	20112211	20112211	1
26	Terminal Board	42011233	42011233	42011233	1
27	Electric Box Cover2	20112210	20112210	20112210	1
28	Main Board	300002000397	300002000302	300002000302	1
29	Display Board	30565260	300001000081	300001000042	1
30	Shield cover of Electric Box	01592176	01592176	01592176	1
31	Electric Box Cover	20112209	20112209	20112209	1
32	Jumper	4202021921	4202021925	4202021925	1
33	Lower Shield of Electric Box	01592139	01592139	01592139	1
34	Electric Box Assy	100002003620	100002002494	100002003176	1
35	Power Cord	/	/	/	/
36	Connecting Cable	4002052317	4002052317	4002052317	0
37	Temperature Sensor	3900031302	3900031302	3900031302	1
38	Remote Controller	305001000117	305001000087	305001000087	1
39	Detecting Plate	30110144	30110144	30110144	1

Above data is subject to change without notice.

NO.	Description	Part Code			Qty
		GWH24QE-K6DNB4C/I	GWH24QE-K6DNB2C/I	GWH24QD-K6DNA6A/I	
	Product Code	CB434N10700	CB432N15000	CB427N09800	
1	Front Panel Assy	20000300029T	20000300016	2002269501	1
2	Filter Sub-Assy	11012007	11012007	11122089	2
3	Screw Cover	2425245301	2425245301	2425201726	3
4	Front Case Assy	00000200043	00000200043	2002272601	1
5	Air Louver(Manual)	10512737	10512737	10512732	3
6	Helicoid Tongue	26112513	26112513	26112512	1
7	Left Axile Bush	10512037	10512037	10512037	1
8	Rear Case assy	22202570	22202570	22202571	1
9	Rubber Plug (Water Tray)	76712012	76712012	76712012	1
10	Ring of Bearing	26152025	26152025	26152025	1
11	O-Gasket of Cross Fan Bearing	76512203	76512203	76512203	1
12	Cross Flow Fan	10352057	10352057	10352060	1
13	Evaporator Support	24212178	24212178	24212177	1
14	Evaporator Assy	011001000073	011001000073	01002000003	1
15	Cold Plasma Generator	1114001602	1114001602	1114001602	1
16	Wall Mounting Frame	01252229	01252229	01362026	1
17	Motor Press Plate	26112515	26112515	26112511	1
18	Fan Motor	15012145	15012145	1501214502	1
19	Connecting pipe clamp	26112514	26112514	2611218801	1
20	Drainage Hose	0523001405	0523001405	05230014	1
21	Stepping Motor	1521240212	1521240212	1521240212	1
22	Crank	73012005	73012005	73012005	1
23	Guide Louver	1051232001	1051232001	1051276501	1
24	Axile Bush	10542036	10542036	10542036	2
25	Electric Box	20112211	20112211	20112211	1
26	Terminal Board	42011233	42011233	42011233	1
27	Electric Box Cover2	20112210	20112210	20112210	1
28	Main Board	300002000302	300002000302	300002000397	1
29	Display Board	30565260	30565260	30565264	1
30	Shield cover of Electric Box	01592176	01592176	01592176	1
31	Electric Box Cover	20112209	20112209	20112209	1
32	Jumper	4202021925	4202021925	4202021921	1
33	Lower Shield of Electric Box	01592139	01592139	01592139	1
34	Electric Box Assy	100002003178	100002003178	100002060420	1
35	Power Cord	/	/	/	/
36	Connecting Cable	4002052317	4002052317	4002052317	0
37	Temperature Sensor	3900031302	3900031302	3900031302	1
38	Remote Controller	305001000087	305001000087	305001000117	1
39	Detecting Plate	30110144	30110144	30110144	1

Above data is subject to change without notice.



NO.	Description	Part Code			Qty
		GWH24QD-K6DNA1A/I	GWH24QD-K6DNB4A/I	GWH24QD-K6DND6A/I	
	Product Code	CB419N14900	CB434N11600	CB460N05400	
1	Front Panel Assy	00000300222	20000300028T	200003000027S	1
2	Filter Sub-Assy	11122089	11122089	11122089	2
3	Screw Cover	242520179	2425201726	2425201726	3
4	Front Case Assy	00000200172	00000200042	00000200042	1
5	Air Louver(Manual)	10512732	10512732	10512732	3
6	Helicoid Tongue	26112512	26112512	26112512	1
7	Left Axile Bush	10512037	10512037	10512037	1
8	Rear Case assy	22202571	22202571	22202571	1
9	Rubber Plug (Water Tray)	76712012	76712012	76712012	1
10	Ring of Bearing	26152025	26152025	26152025	1
11	O-Gasket of Cross Fan Bearing	76512203	76512203	76512203	1
12	Cross Flow Fan	10352060	10352060	10352060	1
13	Evaporator Support	24212177	24212177	24212177	1
14	Evaporator Assy	01002000003	01002000003	01002000003	1
15	Cold Plasma Generator	1114001602	1114001602	/	1
16	Wall Mounting Frame	01362026	01362026	01362026	1
17	Motor Press Plate	26112511	26112511	26112511	1
18	Fan Motor	1501214502	1501214502	1501214502	1
19	Connecting pipe clamp	2611218801	2611218801	2611218801	1
20	Drainage Hose	05230014	05230014	05230014	1
21	Stepping Motor	1521240212	1521240212	1521240212	1
22	Crank	73012005	73012005	73012005	1
23	Guide Louver	10512734	1051276501	1051276501	1
24	Axile Bush	10542036	10542036	10542036	2
25	Electric Box	20112211	20112211	20112211	1
26	Terminal Board	42011233	42011233	42011233	1
27	Electric Box Cover2	20112210	20112210	20112210	1
28	Main Board	300002000397	300002000397	300002000398	1
29	Display Board	30565262	30565260	300001000042	1
30	Shield cover of Electric Box	01592176	01592176	01592176	1
31	Electric Box Cover	20112209	20112209	20112209	1
32	Jumper	4202021912	4202021921	4202021921	1
33	Lower Shield of Electric Box	01592139	01592139	01592139	1
34	Electric Box Assy	100002060854	100002003620	100002060819	1
35	Power Cord	/	/	/	/
36	Connecting Cable	4002052317	4002052317	4002052317	0
37	Temperature Sensor	3900031302	3900031302	3900031302	1
38	Remote Controller	305001000117	305001000117	305001000117	1
39	Detecting Plate	30110144	30110144	30110144	1

Above data is subject to change without notice.

NO.	Description	Part Code			Qty
		GWH24QE-K6DNB2C/I	GWH24QE-K6DNC4C/I	GWH24QD-K6DNA5A/I	
	Product Code	CB432N15001	CB444N07900	CB425N12000	
1	Front Panel Assy	00000200043	00000200043	00000300035	1
2	Filter Sub-Assy	11012007	11012007	1112208906	2
3	Screw Cover	2425245301	2425245301	2425201726	3
4	Front Case Assy	00000200043	00000200043	00000200023	1
5	Air Louver(Manual)	10512737	10512737	10512732	3
6	Helicoid Tongue	26112513	26112513	26112512	1
7	Left Axile Bush	10512037	10512037	10512037	1
8	Rear Case assy	22202570	22202570	22202571	1
9	Rubber Plug (Water Tray)	76712012	76712012	76712012	1
10	Ring of Bearing	26152025	26152025	26152025	1
11	O-Gasket of Cross Fan Bearing	76512203	76512203	76512203	1
12	Cross Flow Fan	10352057	10352057	10352060	1
13	Evaporator Support	24212178	24212178	24212177	1
14	Evaporator Assy	011001000073	011001000073	01002000003	1
15	Cold Plasma Generator	/	1114001602	1114001602	1
16	Wall Mounting Frame	01252229	01252229	01362026	1
17	Motor Press Plate	26112515	26112515	26112511	1
18	Fan Motor	15012145	15012145	1501214502	1
19	Connecting pipe clamp	26112514	26112514	2611218801	1
20	Drainage Hose	0523001405	0523001405	05230014	1
21	Stepping Motor	1521240212	1521240212	1521240212	1
22	Crank	73012005	73012005	73012005	1
23	Guide Louver	1051232001	1051232001	1051273402	1
24	Axile Bush	10542036	10542036	10542036	2
25	Electric Box	20112211	20112211	20112211	1
26	Terminal Board	42011233	42011233	42011233	1
27	Electric Box Cover2	20112210	20112210	20112210	1
28	Main Board	300002000300	300002000302	300002000397	1
29	Display Board	30565260	30565260	30565260	1
30	Shield cover of Electric Box	01592176	01592176	01592176	1
31	Electric Box Cover	20112209	20112209	20112209	1
32	Jumper	4202021925	4202021925	4202021912	1
33	Lower Shield of Electric Box	01592139	01592139	01592139	1
34	Electric Box Assy	100002061240	100002003178	100002062107	1
35	Power Cord	/	/	/	/
36	Connecting Cable	4002052317	4002052317	4002052317	0
37	Temperature Sensor	3900031302	3900031302	3900031302	1
38	Remote Controller	305001000087	305001000087	305001000117	1
39	Detecting Plate	30110144	30110144	30110144	1

Above data is subject to change without notice.

NO.	Description	Part Code			Qty
		GWH24QD-K6DNC4A/I	GWH24QD-K6DNE4A/I	GWH24QD-K6DNC8A/I	
	Product Code	CB444N07701	CB470N02501	CB456N05900	
1	Front Panel Assy	20000300106S	200003000064T	20000300153T	1
2	Filter Sub-Assy	1112208906	1112208906	1112208906	2
3	Screw Cover	2425201726	2425201726	2425201726	3
4	Front Case Assy	00000200042	00000200042	00000200042	1
5	Air Louver(Manual)	10512732	10512732	10512732	3
6	Helicoid Tongue	26112512	26112512	26112512	1
7	Left Axile Bush	10512037	10512037	10512037	1
8	Rear Case assy	22202571	22202571	22202571	1
9	Rubber Plug (Water Tray)	76712012	76712012	76712012	1
10	Ring of Bearing	26152025	26152025	26152025	1
11	O-Gasket of Cross Fan Bearing	76512203	76512203	76512203	1
12	Cross Flow Fan	10352060	10352060	10352060	1
13	Evaporator Support	24212177	24212177	24212177	1
14	Evaporator Assy	01002000003	01002000003	01002000003	1
15	Cold Plasma Generator	/	/	1114001602	1
16	Wall Mounting Frame	01362026	01362026	01362026	1
17	Motor Press Plate	26112511	26112511	26112511	1
18	Fan Motor	1501214502	1501214502	1501214502	1
19	Connecting pipe clamp	2611218801	2611218801	2611218801	1
20	Drainage Hose	05230014	05230014	05230014	1
21	Stepping Motor	1521240212	1521240212	1521240212	1
22	Crank	73012005	73012005	73012005	1
23	Guide Louver	1051276501	1051276501	1051276501	1
24	Axile Bush	10542036	10542036	10542036	2
25	Electric Box	20112211	20112211	20112211	1
26	Terminal Board	42011233	42011233	42011233	1
27	Electric Box Cover2	20112210	20112210	20112210	1
28	Main Board	300002000295	300002000398	300002000397	1
29	Display Board	30565260	300001000081	30565278	1
30	Shield cover of Electric Box	01592176	01592176	01592176	1
31	Electric Box Cover	20112209	20112209	20112209	1
32	Jumper	202021921	4202021921	4202021921	1
33	Lower Shield of Electric Box	01592139	01592139	01592139	1
34	Electric Box Assy	100002062046	100002062051	10000204584	1
35	Power Cord	/	/	/	/
36	Connecting Cable	4002052317	4002052317	4002052317	0
37	Temperature Sensor	3900031302	3900031302	3900031302	1
38	Remote Controller	305001000117	305001000117	305001000117	1
39	Detecting Plate	30110144	30110144	30110144	1

Above data is subject to change without notice.

NO.	Description	Part Code			Qty
		GWH24QD-K6DNB8A/I	GWH24QD-K6DNB4A/I	GWH24QE-K6DNC4C/I	
	Product Code	CB438N09900	CB434N11601	CB444N07900	
1	Front Panel Assy	20000300075T	20000300028T	20000300099S	1
2	Filter Sub-Assy	1112208906	1112208906	11012007	2
3	Screw Cover	2425201726	2425201726	2425245301	3
4	Front Case Assy	00000200042	00000200042	00000200043	1
5	Air Louver(Manual)	10512732	10512732	10512737	3
6	Helicoid Tongue	26112512	26112512	26112513	1
7	Left Axile Bush	10512037	10512037	10512037	1
8	Rear Case assy	22202571	22202571	22202570	1
9	Rubber Plug (Water Tray)	76712012	76712012	76712012	1
10	Ring of Bearing	26152025	26152025	26152025	1
11	O-Gasket of Cross Fan Bearing	76512203	76512203	76512203	1
12	Cross Flow Fan	10352060	10352060	10352057	1
13	Evaporator Support	24212177	24212177	24212178	1
14	Evaporator Assy	01002000003	01002000003	011001000073	1
15	Cold Plasma Generator	/	/	1114001602	1
16	Wall Mounting Frame	01362026	01362026	01252229	1
17	Motor Press Plate	26112511	26112511	26112515	1
18	Fan Motor	1501214502	1501214502	15012145	1
19	Connecting pipe clamp	2611218801	2611218801	26112514	1
20	Drainage Hose	05230014	05230014	0523001405	1
21	Stepping Motor	1521240212	1521240212	1521240212	1
22	Crank	73012005	73012005	73012005	1
23	Guide Louver	1051276501	1051276501	1051232001	1
24	Axile Bush	10542036	10542036	10542036	2
25	Electric Box	20112211	20112211	20112211	1
26	Terminal Board	42011233	42011233	42011233	1
27	Electric Box Cover2	20112210	20112210	20112210	1
28	Main Board	300002000398	300002000398	300002000302	1
29	Display Board	30565260	30565260	30565260	1
30	Shield cover of Electric Box	01592176	01592176	01592176	1
31	Electric Box Cover	20112209	20112209	20112209	1
32	Jumper	4202021921	4202021921	4202021925	1
33	Lower Shield of Electric Box	01592139	01592139	01592139	1
34	Electric Box Assy	100002062056	100002062056	100002003178	1
35	Power Cord	/	/	/	/
36	Connecting Cable	4002052317	4002052317	4002052317	0
37	Temperature Sensor	3900031302	3900031302	3900031302	1
38	Remote Controller	305001000117	305001000117	305001000087	1
39	Detecting Plate	30110144	30110144	30110144	1

Above data is subject to change without notice.

NO.	Description	Part Code	Qty
		GWH24QE-K6DNC2D/I	
	Product Code	CB439N13800	
1	Front Panel Assy	20000300071S	1
2	Filter Sub-Assy	1101200703	2
3	Screw Cover	2425245301	3
4	Front Case Assy	00000200043	1
5	Air Louver(Manual)	10512737	3
6	Helicoid Tongue	26112513	1
7	Left Axile Bush	10512037	1
8	Rear Case assy	22202570	1
9	Rubber Plug (Water Tray)	76712012	1
10	Ring of Bearing	26152025	1
11	O-Gasket of Cross Fan Bearing	76512203	1
12	Cross Flow Fan	10352057	1
13	Evaporator Support	24212178	1
14	Evaporator Assy	011001000073	1
15	Cold Plasma Generator	/	/
16	Wall Mounting Frame	01252229	1
17	Motor Press Plate	26112515	1
18	Fan Motor	15012145	1
19	Connecting pipe clamp	26112514	1
20	Drainage Hose	0523001405	1
21	Stepping Motor	1521240212	1
22	Crank	73012005	1
23	Guide Louver	1051232001	1
24	Axile Bush	10542036	2
25	Electric Box	20112211	1
26	Terminal Board	42011233	1
27	Electric Box Cover2	20112210	1
28	Main Board	300002000300	1
29	Display Board	30565278	1
30	Shield cover of Electric Box	01592176	1
31	Electric Box Cover	20112209	1
32	Jumper	4202021925	1
33	Lower Shield of Electric Box	01592139	1
34	Electric Box Assy	100002062495	1
35	Power Cord	/	/
36	Connecting Cable	4002052317	0
37	Temperature Sensor	3900031302	1
38	Remote Controller	305001000087	1
39	Detecting Plate	30110144	1

Above data is subject to change without notice.



No.	Description	Part Code		Qty
		GWH18QD-K6DNA1C/O		
		Product Code	CB419W12500	
1	Front Grill	22413046	22413046	1
2	Cabinet	01433034P	01433034P	1
3	Axial Flow Fan	10333014	10333014	1
4	Chassis Sub-assy	01205176P	017000000198P	1
5	Drainage Joint	26113009	26113009	1
6	Compressor and Fittings	00103919G	00103919G	1
7	4-Way Valve Assy	030152000146	030152000146	1
8	Valve Support Sub-Assy	01713115P	01713115P	1
9	Cut off Valve Sub-Assy	030057000072	030057000072	1
10	Cut off Valve Assy	07133774	07133774	1
11	Valve Cover	22243005	22243005	1
12	Big Handle	2623343106	2623343106	1
13	Right Side Plate	0130324403P	0130324403P	1
14	4 Way Valve Coil	4300040087	4300040087	/
15	Wire Clamp	71010103	71010103	1
16	Temperature Sensor	3900030902	3900030902	1
17	Rear Grill	01473060	01473060	1
18	Condenser Assy	011002000417	011002000417	1
19	Clapboard Sub-Assy	01233168	01233168	1
20	Coping	01253034P	01253034P	1
21	Reactor	/	/	/
22	Motor Support Sub-Assy	0170339802	0170339802	1
23	Fan Motor	1501371701	1501371701	1
24	Condenser Support Plate	01795028	01795028	1
25	Left Side Plate	01303169P	01303169P	1
26	Electric Box Assy	100002001268	100002001265	1
27	Capacitor CBB61	/	/	/
28	Electric Box	20113027	20113027	1
29	Terminal Board	420101943	420101943	1
30	Radiator	49013060	49013076	1
31	Main Board	300027000175	300027000174	1
32	Electric Expansion Valve Sub-Assy	030026000166	030026000166	1

Above data is subject to change without notice.

No.	Description	Part Code		Qty
		GWH18QD-K6DNC2C/O		
		Product Code		
		CB439W09100	CB419W12501	
1	Front Grill	22413046	22413046	1
2	Cabinet	01433034P	01433034P	1
3	Axial Flow Fan	10333014	10333014	1
4	Chassis Sub-assy	01205176P	017000000198P	1
5	Drainage Joint	26113009	26113009	1
6	Compressor and Fittings	00103919G	00103919G	1
7	4-Way Valve Assy	030152000146	030152000146	1
8	Valve Support Sub-Assy	01713115P	01713115P	1
9	Cut off Valve Sub-Assy	030057000072	030057000072	1
10	Cut off Valve Assy	07133774	07133774	1
11	Valve Cover	/	22243005	1
12	Big Handle	2623343106	2623343106	1
13	Right Side Plate	0130326902P	0130324403P	1
14	4 Way Valve Coil	4300040087	4300040087	1
15	Wire Clamp	71010103	71010103	1
16	Temperature Sensor	3900030902	3900030902	1
17	Rear Grill	01473060	01473060	1
18	Condenser Assy	011002000417	011002000417	1
19	Clapboard Sub-Assy	01233168	01233168	1
20	Coping	01253034P	01253034P	1
21	Reactor	/	/	/
22	Motor Support Sub-Assy	0170339802	0170339802	1
23	Fan Motor	1501371701	1501371701	1
24	Condenser Support Plate	01795028	01795028	1
25	Left Side Plate	01303169P	01303169P	1
26	Electric Box Assy	100002001268	100002001265	1
27	Capacitor CBB61	/	/	/
28	Electric Box	20113027	20113027	1
29	Terminal Board	420101943	420101943	1
30	Radiator	49013060	49013076	1
31	Main Board	300027000175	300027000174	1
32	Electric Expansion Valve Sub-Assy	030026000166	030026000166	1

Above data is subject to change without notice.

No.	Description	Part Code	Qty
		GWH18AAD-K6DNA1A/O	
		Product Code	
		CB476W00200	
1	Front Grill	22413046	1
2	Cabinet	01433034P	1
3	Axial Flow Fan	10333014	1
4	Chassis Sub-assy	01205176P	1
5	Drainage Joint	26113009	1
6	Compressor and Fittings	00103919G	1
7	4-Way Valve Assy	030152000146	1
8	Valve Support Sub-Assy	01713115P	1
9	Cut off Valve Sub-Assy	030057000072	1
10	Cut off Valve Sub-Assy	07133774	1
11	Valve Cover	22243005	1
12	Big Handle	2623343106	1
13	Right Side Plate	0130324403P	1
14	4 Way Valve Coil	4300040087	1
15	Wire Clamp	71010103	1
16	Temperature Sensor	3900030902	1
17	Rear Grill	01473060	1
18	Condenser Assy	011002000417	1
19	Clapboard Sub-Assy	01233168	1
20	Coping	01253034P	1
21	Reactor	/	/
22	Motor Support Sub-Assy	0170339802	1
23	Fan Motor	1501371701	1
24	Condenser Support Plate	01795028	1
25	Left Side Plate	01303169P	1
26	Electric Box Assy	100002001268	1
27	Capacitor CBB61	/	/
28	Electric Box	20113027	1
29	Terminal Board	420101943	1
30	Radiator	49013076	1
31	Main Board	300027000175	1
32	Electric Expansion Valve Sub-Assy	030026000166	1

Above data is subject to change without notice.



NO.	Description	Part Code			Qty
		GWH24QE-K6DNA1C/O		GWH24QE-K6DNC2C/O	
		Product Code	CB419W12200	CB419W12201	
1	Front Grill	22415010	22415010	22415010	1
2	Front Panel	01535013P	01535013P	01535013P	1
3	Drainage Connector	06123401	06123401	06123401	1
4	Chassis Sub-assy	01205816P	01205816P	01205816P	1
5	Drainage hole Cap	06813401	06813401	06813401	3
6	Compressor and fittings	00103920	00103920	00103920	1
7	Magnet Coil	4300040087	4300040087	4300040087	1
8	4-Way Valve Assy	03073274	03073274	03073274	1
9	Cut off Valve Assy 1/2	07133844	07133844	07133844	1
10	Cut off Valve Sub-Assy	07133855	07133843	07133843	1
11	Valve support assy	01705046P	01705046P	01705046P	1
12	Right Side Plate	0130509001P	0130509001P	0130509001P	1
13	Valve cover	22245002	22245002	/	1
14	Handle	2623525404	26233053	26233053	1
15	Wiring Clamp	/	/	/	/
16	Rear Grill	01475020	01475020	01475020	1
17	Condenser Assy	011002000049	011002000244	011002000244	1
18	Reactor	/	/	/	/
19	Clapboard Assy	01235081	01235081	01235081	1
20	Coping	01255005P	012049000007P	012049000007P	1
21	Supporting Board(Condenser)	01795031	01795031	01795031	1
22	Motor Support Sub-Assy	01705067	01705067	01705067	1
23	Fan Motor	1501506402	1501506402	1501506402	1
24	Axial Flow Fan	10335008	10335008	10335008	1
25	Left Side Plate	01305093P	01305093P	01305093P	1
26	left handle	26233053	26233053	26233053	1
27	Electric Box Assy	100002000029	100002001122	100002001122	1
28	Wire Clamp	71010102	71010102	71010102	1
29	Terminal Board	420111041	420101943	420101943	1
30	Electric Box	20115003	20113027	20113027	1
31	Radiator	49013076	49013076	49013076	1
32	Main Board	30138001199	300027000234	300027000234	1
33	Insulated Board (Cover of Electric Box)	20113003	20113003	20113003	1
34	Temperature Sensor	3900030902	3900030902	3900030902	1
35	Electric Expansion Valve Sub-Assy	030174000049	030174000049	030174000049	1

Above data is subject to change without notice.

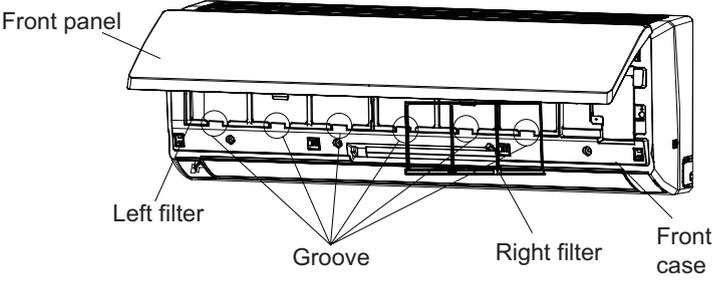
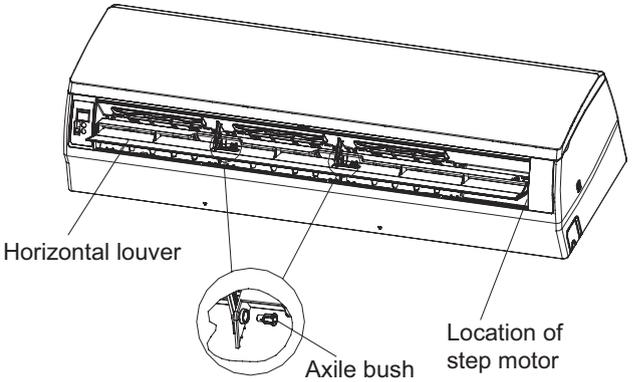
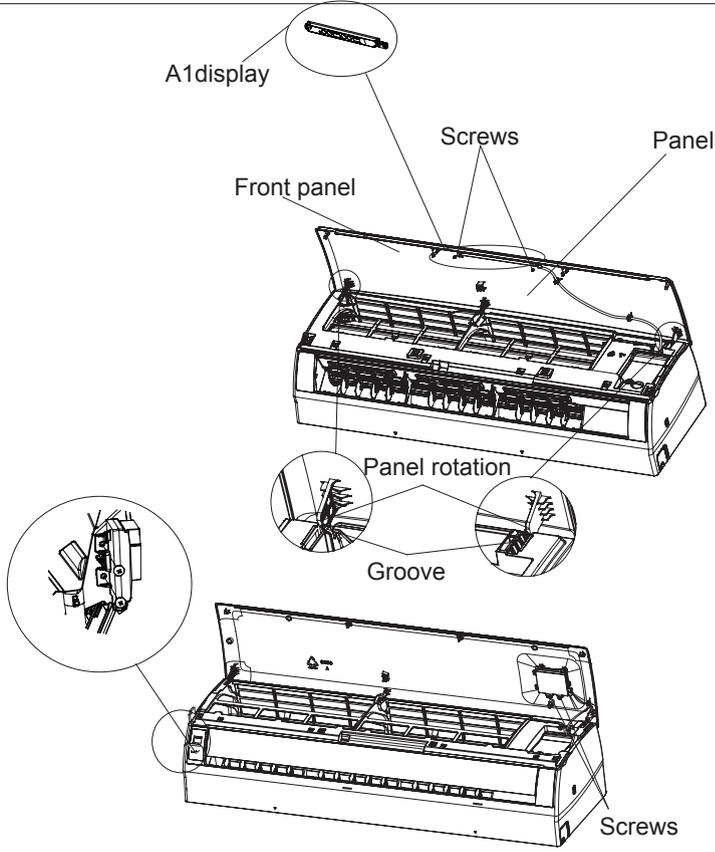
No.	Description	Part Code	Qty
		GWH24AAD-K6DNA1A/O	
Product Code		CB476W00100	
1	Front Grill	22415010	1
2	Front Panel	01535013P	1
3	Drainage Connector	06123401	1
4	Chassis Sub-assy	01700000161P01	1
5	Drainage Joint	06123401	1
6	Compressor and Fittings	00103919G	1
7	Magnet Coil	/	/
8	4-Way Valve Assy	030152000073	1
9	Cut off Valve Assy	07133844	1
10	Cut off Valve Sub-Assy	07133843	1
11	Valve support assy	26113017	1
12	Right Side Plate	0130509001P	1
13	Valve Support	01705047	1
14	Handle	2623305301	1
15	Wire Clamp	71010003	1
16	Rear Grill	01475020	1
17	Condenser Assy	011002000177	1
18	Reactor	/	/
19	Clapboard Sub-Assy	01235081	1
20	Coping	012049000007P	1
21	Supporting Board(Condenser)	01795031	1
22	Motor Support Sub-Assy	01705067	1
23	Fan Motor	1501506402	1
24	Axial Flow Fan	10335008	1
25	Left Side Plate	01305093P	1
26	Left handle	2623305301	1
27	Electric Box Assy	100002001276	1
28	Wire Clamp	71010003	1
29	Terminal Board	420101943	1
30	Electric Box	20113027	1
31	Radiator	49013076	1
32	Main Board	300027000263	1
33	Insulated Board (Cover of Electric Box)	20113003	1
34	Temperature Sensor	3900030902	1
35	Electronic Expansion Valve assy	03017400002801	1

Above data is subject to change without notice.

# 11. Removal Procedure

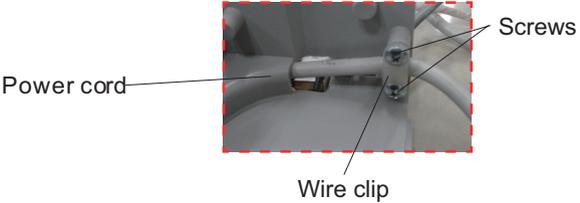
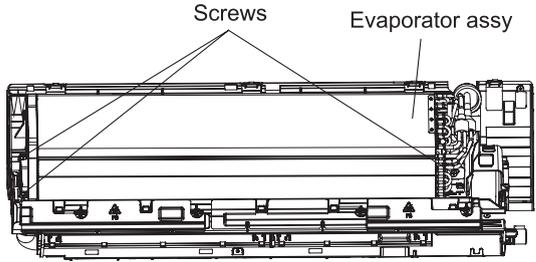
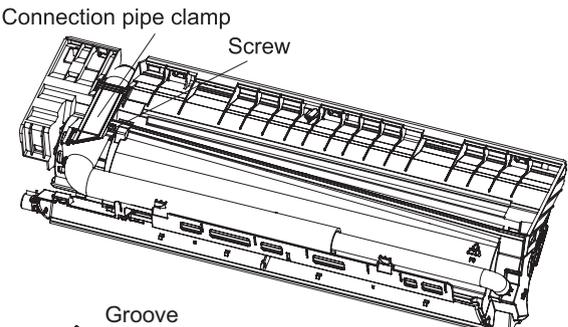
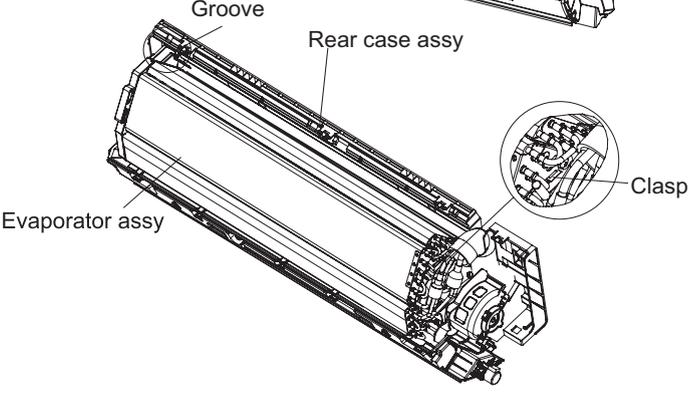
**!** Caution: discharge the refrigerant completely before removal.

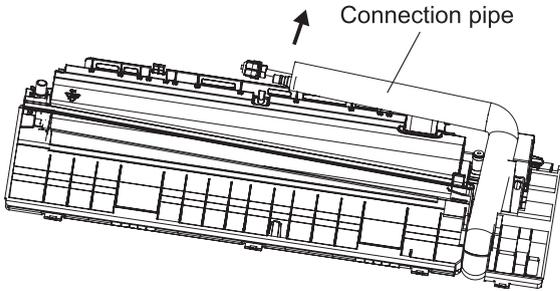
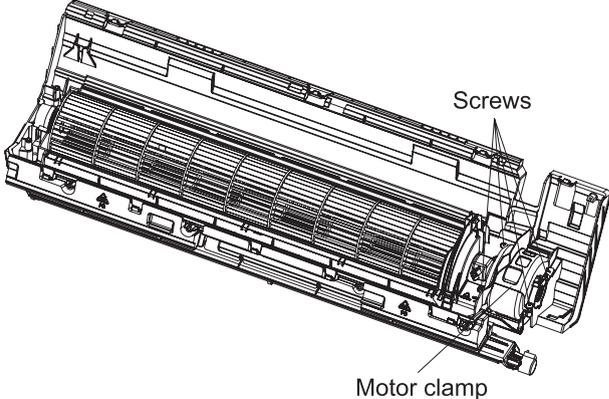
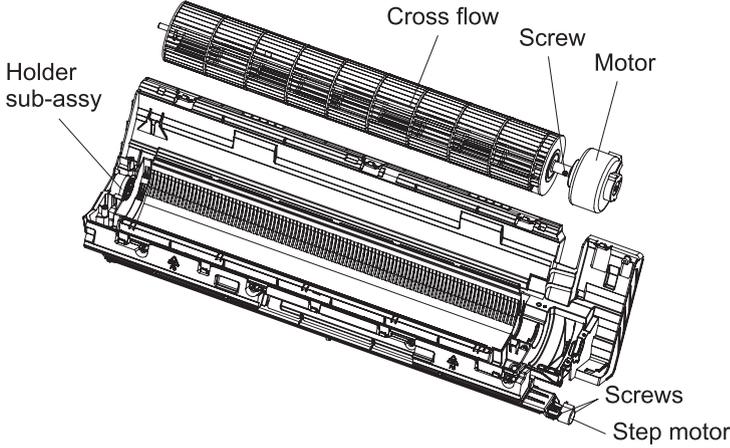
## 11.1 Removal Procedure of Indoor Unit

Step	Procedure
1.Remove filter assy	<p>Open the front panel. Push the left and right filters to make them break away from the groove on the front case. Then remove the left and right filters one by one.</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 crank shaft of step motor to remove it.</p> 
3.Remove panel and display	<p>Separate the panel rotation shaft from the groove fixing the front panel and then removes the front panel.</p> <p>Screw off the 2 screws that are locking the display board.</p> 



Step	Procedure	
7.Remove vertical louver	<p>a Loosen the connection clasps between vertical louver and bottom case to remove vertical louver.</p> <p>b Screw off the screws that are locking the swing motor and take the motor off.</p>	
8.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. Remove the screw fixing electric box assy.</p> <p>b</p> <ol style="list-style-type: none"> <li>① Cut off the wire binder and pull out the indoor tube temperature sensor.</li> <li>② Screw off one grounding screw.</li> <li>③ Remove the wiring terminals of motor and stepping motor.</li> <li>④ Remove the electric box assy.</li> <li>⑤ Screw off the screws that are locking each lead wire.</li> </ol>	

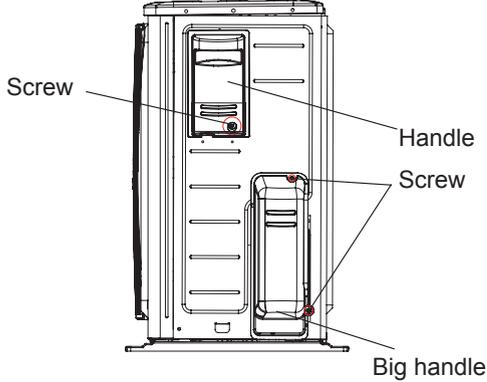
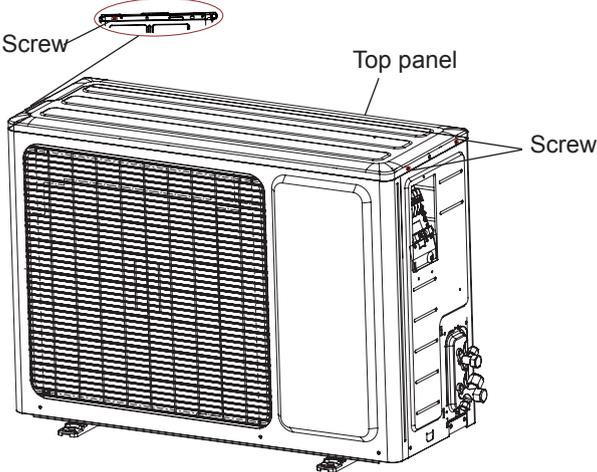
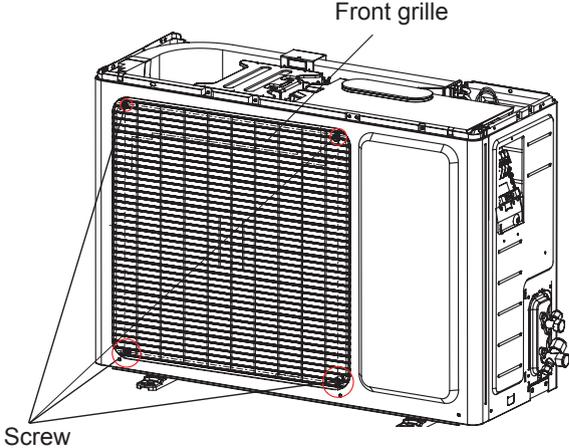
Step	Procedure	
c	<p>Rotate the electric box assy. Twist off the screws that are locking the wire clip and loosen the power cord. Remove the wiring terminal of power cord. Lift up the main board and take it off.</p> <p>Instruction: Some wiring terminal of this products is with lock catch and other devices. The pulling method is as below:</p> <ol style="list-style-type: none"> <li>① Remove the soft sheath for some terminals at first, hold the circlip and then pull out the terminals,</li> <li>② Pull out the holder for some terminals at first (holder is not available for some wiring terminal). hold the connector and then pull the terminal.</li> </ol>	 
9.Remove evaporator assy		
a	Remove 3 screws fixing evaporator assy.	
b	At the back of the unit, remove the screw fixing connection pipe clamp and then remove the connection pipe clamp.	
c	First remove the left side of evaporator from the groove on the rear case assy. Then remove the right side from the clasp on the rear case assy.	

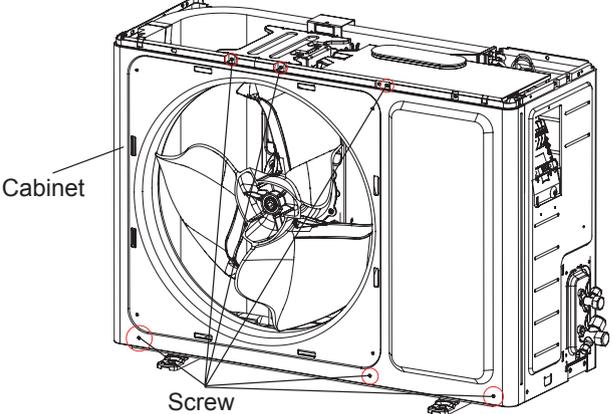
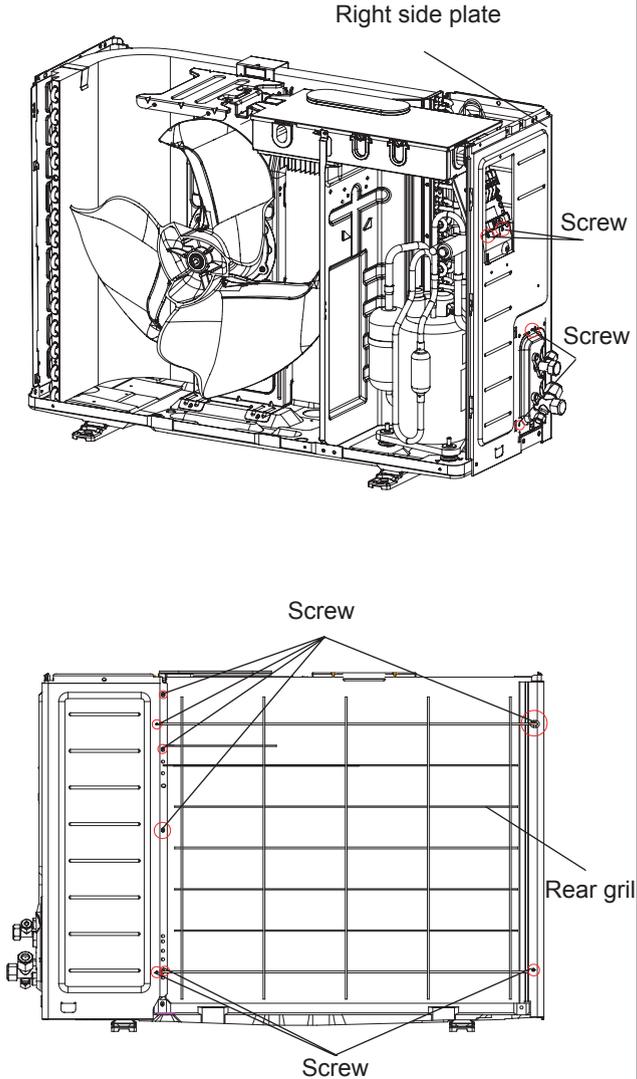
Step	Procedure	
d	Adjust the position of connection pipe on evaporator up wards to remove it.	 <p>Diagram showing the connection pipe being adjusted upwards on the evaporator. The label 'Connection pipe' points to the pipe at the top of the unit.</p>
10.Remove motor and cross flow blade		
a	Remove the screws fixing motor clamp and then remove the motor clamp.	 <p>Diagram showing the removal of screws and the motor clamp. The label 'Screws' points to the fasteners on top, and 'Motor clamp' points to the clamp on the right side.</p>
b	<p>① 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>② Remove the bearing holder sub-assy.</p> <p>③ Remove the screw fixing step motor and then remove the step motor.</p>	 <p>Diagram showing the removal of the cross flow blade, motor, and step motor. Labels include 'Holder sub-assy', 'Cross flow', 'Screw', 'Motor', 'Screws', and 'Step motor'.</p>

## 11.2 Removal Procedure of Outdoor Unit

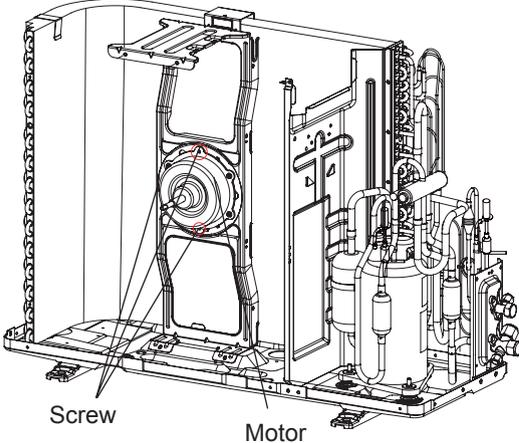
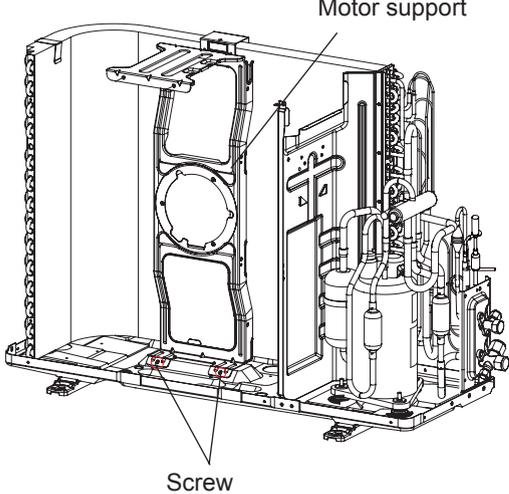
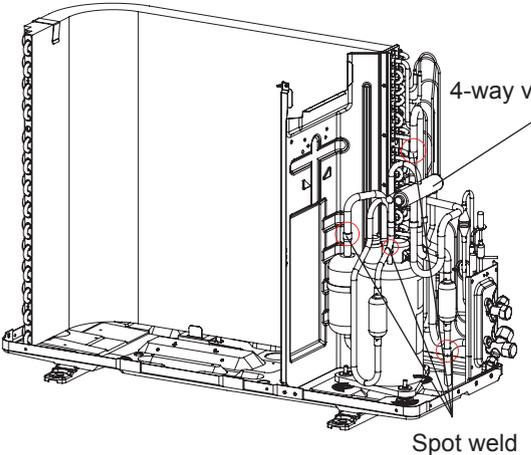
**Warning:** Be sure to wait for a minimum of 20 minutes after turning off all power supplies and discharge the refrigerant completely before removal.

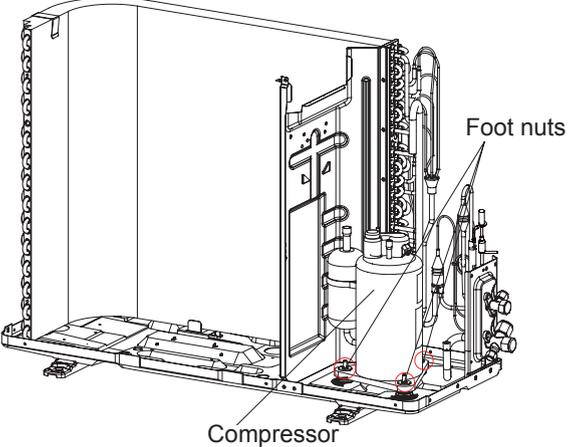
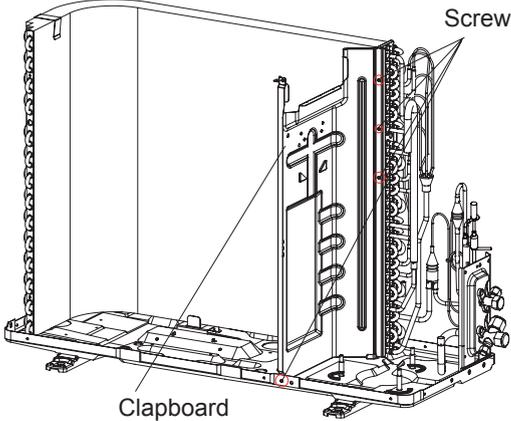
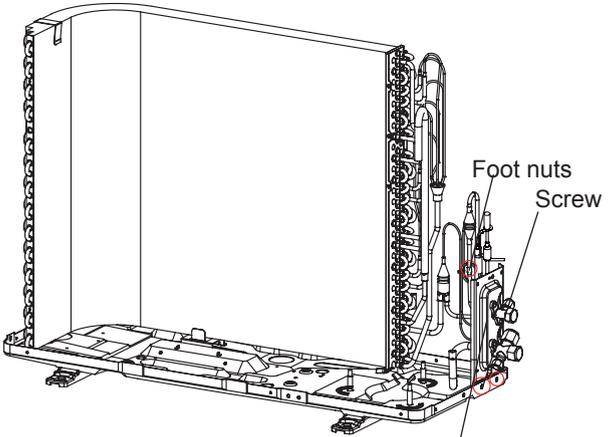
18K

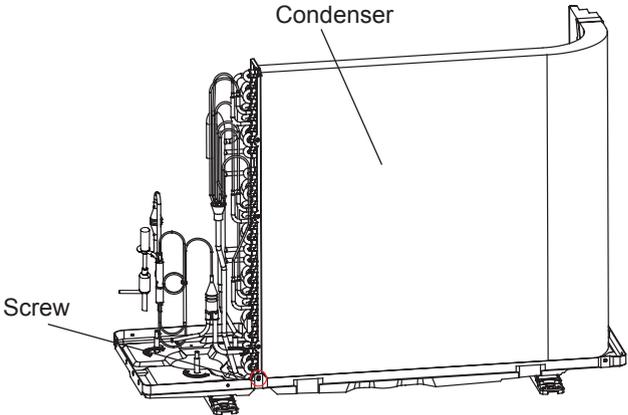
Step	Procedure
<p>1. Remove big handle</p>	<p>Remove the screw fixing big handle; slide out the big handle down wards to make the clasp of big handle separate from the groove of right side plate, and then remove the big handle.</p>  <p>Screw</p> <p>Handle</p> <p>Screw</p> <p>Big handle</p>
<p>2. Remove top panel</p>	<p>Remove the screws fixing top panel and then remove the top panel.</p>  <p>Screw</p> <p>Top panel</p> <p>Screw</p>
<p>3. Remove front grille</p>	<p>Remove connection screws between the front grille and the front panel. Then remove the front grille.</p>  <p>Front grille</p> <p>Screw</p>

Step	Procedure
4. Remove cabinet	<p>Remove the screws fixing cabinet and then remove the cabinet.</p> 
5. Remove right side plate and rear grill	<p>Remove the screws fixing right side plate and then remove the right side plate.</p> <p>Remove the screws and then remove the grille.</p> 

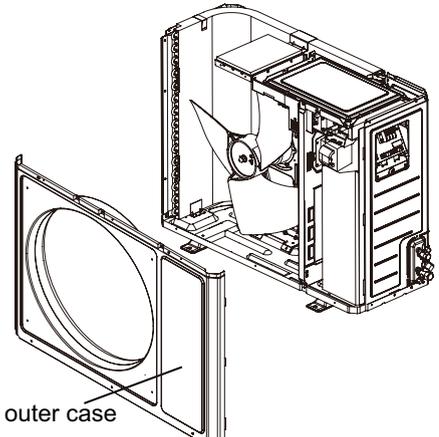
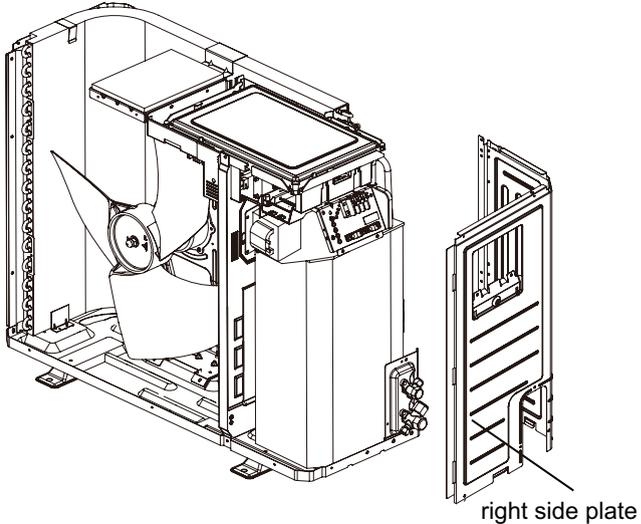
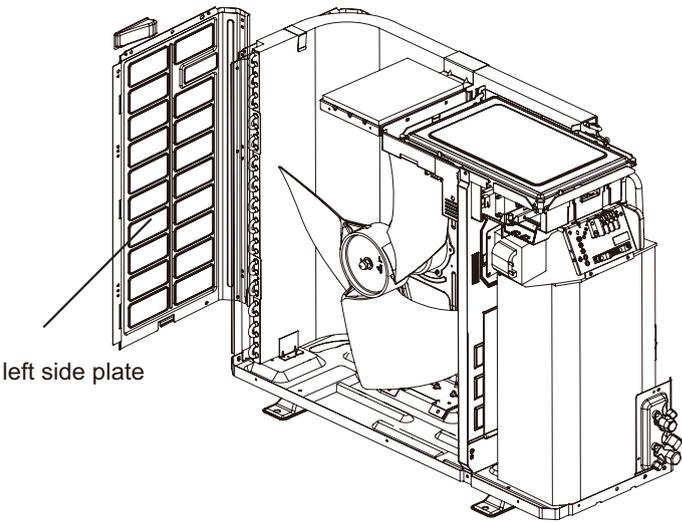


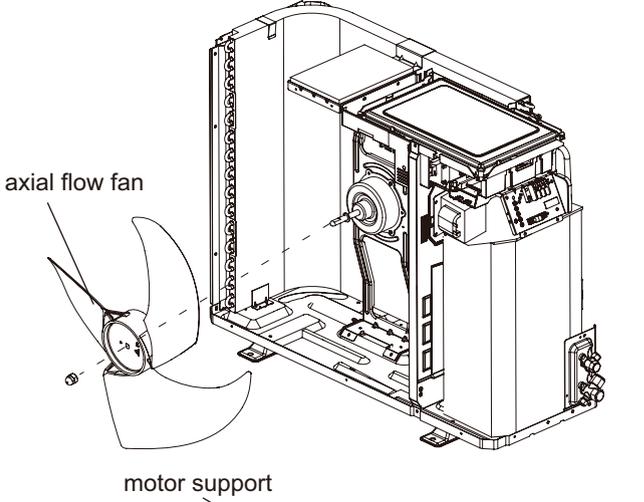
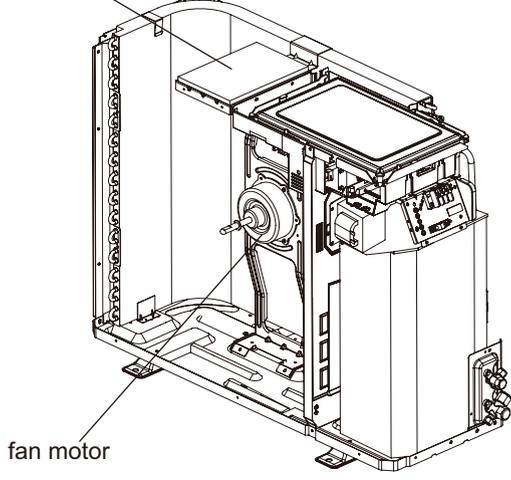
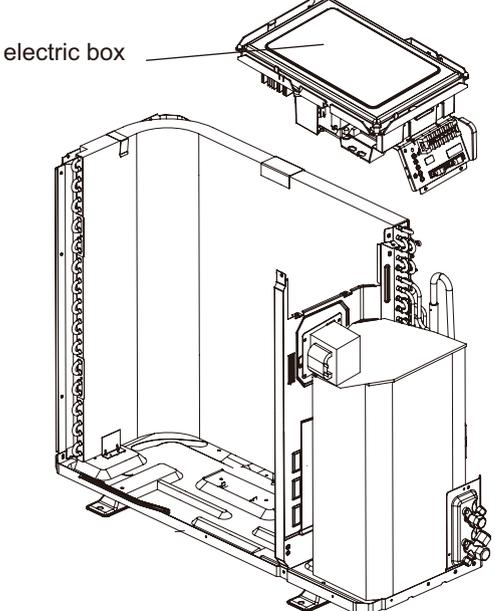
Step	Procedure
<p>9.Remove motor</p>	<p>Remove the screws fixing motor and then remove the motor.</p> 
<p>10.Remove motor support</p>	<p>Remove the screws fixing motor support and then remove the motor support.</p> 
<p>11.Remove 4-way valve assy</p>	<p>Unsolder the spot weld of 4-way valve assy, compressor and condenser, and then remove the 4-way valve assy .            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> 

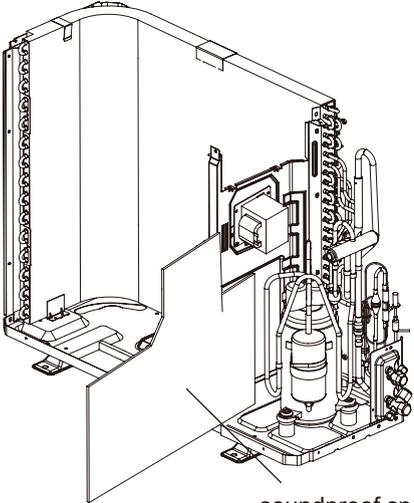
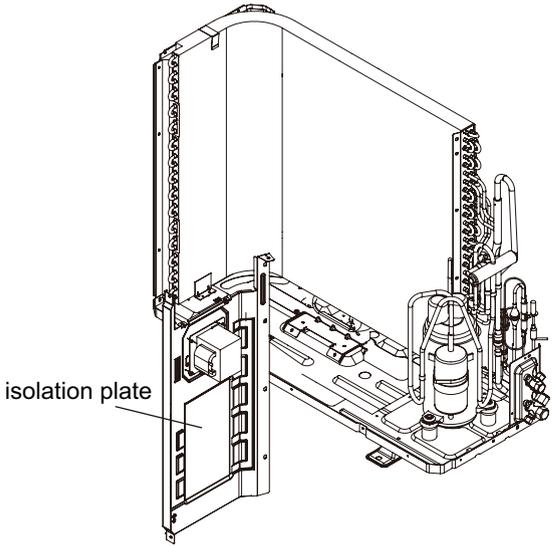
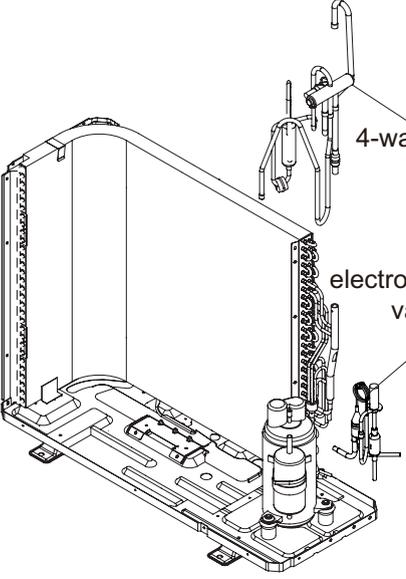
Step	Procedure
<p>12.Remove compressor</p>	<p>Remove 3 foot nuts on compressor, and then remove the compressor.                      Note:                      Protect the ports of discharge pipe and suction pipe to avoid foreign objects to enter it.</p> 
<p>13.Remove clapboard</p>	<p>Remove the screws fixing clapboard and then remove the clapboard.</p> 
<p>14. Remove Valve support sub-assy</p>	<p>Screw off the screws that are locking the valve support sub-assy. Then remove it.</p> 

Step	Procedure
15.Remove condenser	
	<p data-bbox="183 334 621 395">Remove one screw fixing the condenser, then remove the condenser.</p>  <p>The diagram shows a side view of a condenser unit. A screw is shown being removed from the base of the unit. The condenser coil is visible, and the unit is mounted on a base. Labels 'Screw' and 'Condenser' point to the respective parts.</p>



Steps	Procedure	
b	<p>Remove the screws connecting the outer case with motor support, isolation plate and chassis; lift the outer case upwards; loosen the clasps of outer case with right side plate and left side plate, and then remove the outer case.</p>	 <p>outer case</p>
3. Remove right&left side plate		
a	<p>Remove the screws connecting the right side plate with electric box assy, valve support, chassis and condenser side plate, and then remove the right side plate.</p>	 <p>right side plate</p>
b	<p>Remove the screws connecting the left side plate with chassis, and then remove the left side plate.</p>	 <p>left side plate</p>

Steps	Procedure	
4. Remove axial flow blade		
a	Remove the nut fixing axial flow blade and then remove the blade.	 <p>axial flow fan</p> <p>motor support</p>
b	Remove the 6 screws fixing the motor and then remove the motor. Remove the 2 screws connecting the motor support and chassis, and then loosen the stopper to remove the motor support.	 <p>fan motor</p>
5. Remove electric box		
	Remove the screws fixing the electric box sub-assy; loosen the wire bundle; pull out the wiring terminals and then pull the electric box upwards to remove it.	 <p>electric box</p>

Steps	Procedure	
6. Remove the soundproof sponge	Tear off the sticking stripe and then remove the soundproof sponge.	 <p data-bbox="1219 727 1430 755">soundproof sponge</p>
7. Remove isolation plate	Remove the 2 screws connecting the isolation plate and condenser side plate; remove the 3 screws connecting the isolation plate and chassis, and then remove the isolation plate.	 <p data-bbox="849 1207 1003 1236">isolation plate</p>
8. Remove 4-way valve assy and electronic expansion valve assy	<p data-bbox="212 1524 760 1672">Unsolder the welding joints connecting electronic expansion valve assy the 4-way valve assy with capillary sub-assy, compressor and condenser; remove the electronic expansion valve assy and 4-way valve.</p> <p data-bbox="212 1720 776 1847"><b>Note:</b> Before unsoldering the welding joint, wrap the 4-way valve with a wet cloth completely to avoid damage to the valve caused by high temperature.</p>	 <p data-bbox="1317 1524 1523 1552">4-way valve assy</p> <p data-bbox="1287 1666 1531 1727">electronic expansion valve assy</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 For the unit with standard connection pipe of 5m, there is no limitation for them in length of connection pipe. For the unit with standard connection pipe of 7.5m and 8m, the min length of connection pipe is 3m.

3. Max length of connection pipe (More details please refer to the specifications)

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):

- Basing on the length of standard pipe, add refrigerant according to the requirement as shown in the table. The additional refrigerant charging amount per meter is different according to the diameter of liquid pipe. See Sheet 2.

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

Additional refrigerant charging amount for R32				
Diameter of connection pipe		Indoor unit throttl	Outdoor unit throttle	
Liquid pipe	Gas pipe	Cooling only, cooling and heating(g / m)	Cooling only(g / m)	Cooling and heating(g / m)
Φ6	Φ9.5 or Φ12	16	12	16
Φ6 or Φ9.5	Φ16 or Φ19	40	12	40
Φ12	Φ19 or Φ22.2	80	24	96
Φ16	Φ25.4 or Φ31.8	136	48	96
Φ19	/	200	200	200
Φ22.2	/	280	280	280

Note: The additional refrigerant charging amount in Sheet 2 is recommended value, not compulsory.



## 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 Indoor and Outdoor (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



JF00303082



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

Add: West Jinji Rd, Qianshan, Zhuhai, Guangdong, China, 519070  
Tel: (+86-756) 8522218  
Fax: (+86-756) 8669426  
E-mail: [gree@gree.com.cn](mailto:gree@gree.com.cn) [www.gree.com](http://www.gree.com)

**HONG KONG GREE ELECTRIC APPLIANCES SALES LIMITED**

Add: Unit 2612,26/F.,Miramar Tower 132 Nathan Road,TST,Kowloon,HK  
Tel: (852) 31658898 Fax: (852) 31651029

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