GREE
Change for life

Service Manual

GREE ELECTRIC APPLIANCES, INC. OF ZHUHAI



Table of Contents

Part I : Technical Information 1

1. Summary 1

2. Specifications 4

2.1 Specification Sheet 4

2.2 Capacity Variation Ratio According to Temperature 14

2.3 Cooling and Heating Data Sheet in Rated Frequency 14

3. Outline Dimension Diagram 16

3.1 Indoor Unit 16

3.2 Outdoor Unit 17

4. Refrigerant System Diagram 20

5. Electrical Part 21

5.1 Wiring Diagram 21

5.2 PCB Printed Diagram 26

6. Function and Control 29

6.1 Remote Controller Introduction 29

6.2 Brief Description of Models and Functions 31

Part II : Installation and Maintenance 35

7. Notes for Installation and Maintenance 35

8. Installation 38

8.1 Installation Dimension Diagram 38

8.2 Installation Parts-checking 40

8.3 Selection of Installation Location 40

8.4 Electric Connection Requirement 40

8.5 Installation of Indoor Unit 41

8.6 Installation of Outdoor unit 43

8.7 Vacuum Pumping and Leak Detection....44
8.8 Check after Installation and Test operation....45
9. Maintenance....46
9.1 Error Code List....46
9.2 Procedure of Troubleshooting....49
9.3 Troubleshooting for Normal Malfunction....59
10. Exploded View and Parts List....61
10.1 Indoor Unit....61
10.2 Outdoor Unit....71
11. Removal Procedure....81
11.1 Removal Procedure of Indoor Unit....81
11.2 Removal Procedure of Outdoor Unit....91
Appendix....111
Appendix 1: Reference Sheet of Celsius and Fahrenheit....111
Appendix 2: Configuration of Connection Pipe....111
Appendix 3: Pipe Expanding Method....112
Appendix 4: List of Resistance for Temperature Sensor....113

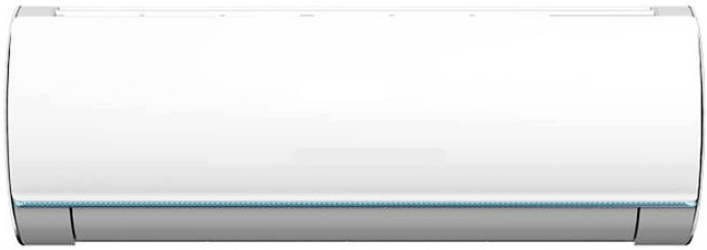
1. Summary

Indoor Unit:

A1



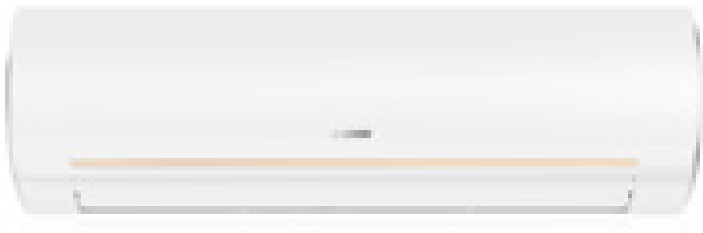
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A4

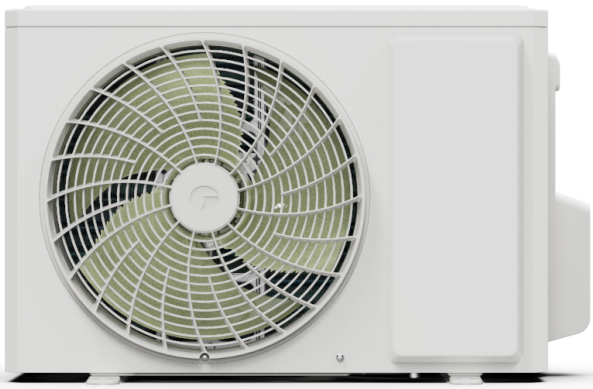


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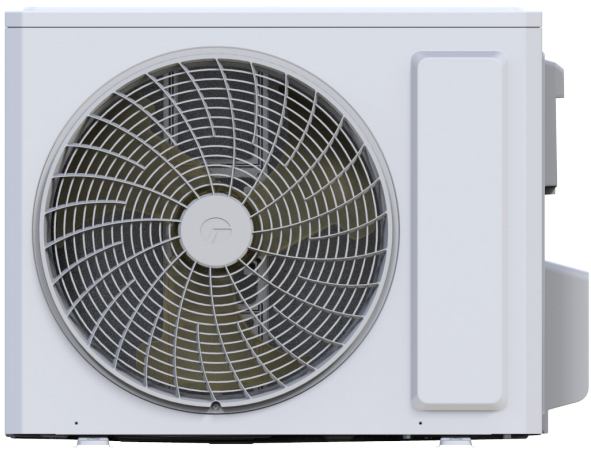


Outdoor Unit:

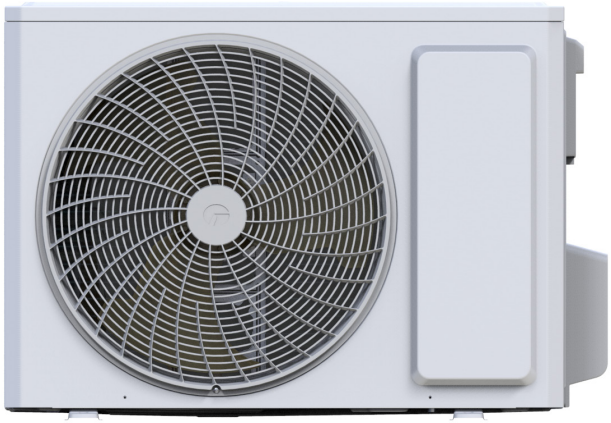
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GWH09AGAXA-K3NNA1A/O



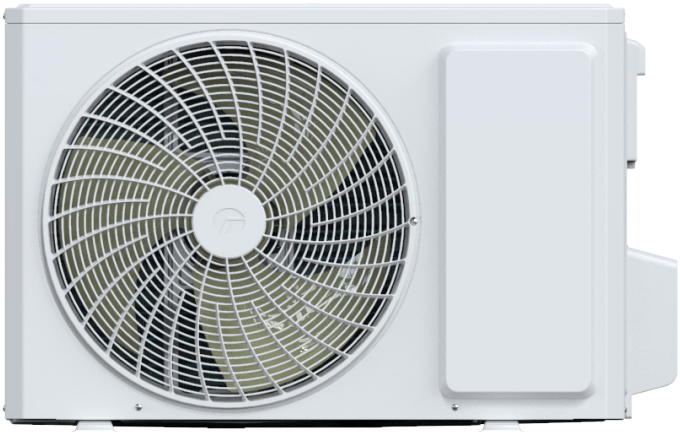
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GWH12AGBXB-K3NNA1B/O



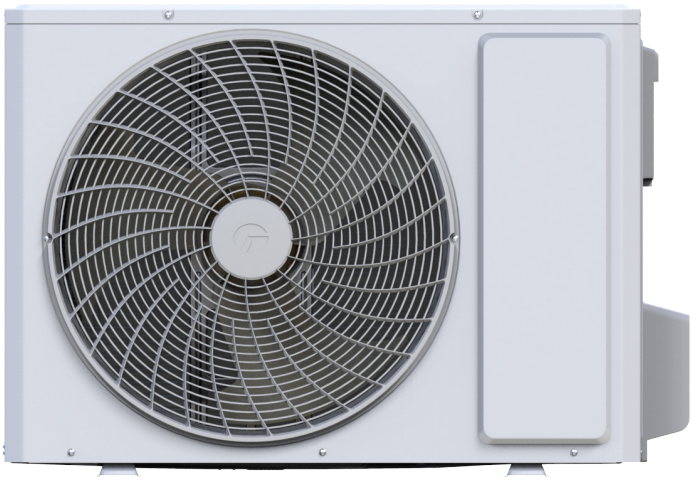
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GWH18QDXD-K3NNA6A/O



GWH24AADXE-K3NNA1A/O



GWH28AGEXF-K3NNA1A/O



Remote Controller:

YAW1F



Model list:

No	Model	Product code	Indoor model	Indoor product code	Outdoor model	Outdoor product code	Remote Controller
1	GWH07ACAXA-K3NNA3A	CA343003700	GWH07ACAXA-K3NNA3A/I	CA343N03700	GWH07AGAXA-K3NNA1A/O	CA385W11300	YAW1F
2	GWH07ACAXA-K3NNA5A	CA341002900	GWH07ACAXA-K3NNA5A/I	CA341N02900			
3	GWH07ACAXA-K3NNA1A	CA513005200	GWH07ACAXA-K3NNA1A/I	CA513N05200			
4	GWH07ACAXA-K3NNA2A	CA342004100	GWH07ACAXA-K3NNA2A/I	CA342N04100			
5	GWH09ACAXA-K3NNA5A	CA341003400	GWH09ACAXA-K3NNA5A/I	CA341N03400	GWH09AGAXA-K3NNA1A/O	CA385W12800	
6	GWH09ACAXA-K3NNA3A	CA343004200	GWH09ACAXA-K3NNA3A/I	CA343N04200			
7	GWH09ACAXA-K3NNA2A	CA342003900	GWH09ACAXA-K3NNA2A/I	CA342N03900			
8	GWH09ACAXA-K3NNA1A	CA497014900	GWH09ACAXA-K3NNA1A/I	CA497N14900			
9	GWH09ACAXA-K3NNA4A	CA344003300	GWH09ACAXA-K3NNA4A/I	CA344N03300			
10	GWH09ACAXA-K3NNA5A	CA341003401	GWH09ACAXA-K3NNA5A/I	CA341N03401			
11	GWH12ACCXB-K3NNA1A	CA497013900	GWH12ACCXB-K3NNA1A/I	CA497N13900	GWH12AGCXB-K3NNA1A/O	CA385W10800	
12	GWH12ACBXB-K3NNA5B	CA341003100	GWH12ACBXB-K3NNA5B/I	CA341N03100	GWH12AGBXB-K3NNA1B/O	CA385W11400	
13	GWH12ACBXB-K3NNA3B	CA343003800	GWH12ACBXB-K3NNA3B/I	CA343N03800			
14	GWH12ACBXB-K3NNA1B	CA497014800	GWH12ACBXB-K3NNA1B/I	CA497N14800			
15	GWH12ACBXB-K3NNA4B	CA344002300	GWH12ACBXB-K3NNA4B/I	CA344N02300			
16	GWH12ACBXB-K3NNA5B	CA341003101	GWH12ACBXB-K3NNA5B/I	CA341N03101			
17	GWH12ACBXB-K3NNA2B	CA342004200	GWH12ACBXB-K3NNA2B/I	CA342N04200			
18	GWH18ACCXD-K3NNA5B	CA341003201	GWH18ACCXD-K3NNA5B/I	CA341N03201	GWH18AGCXD-K3NNA1B/O	CA385W10100	
19		CA341003200		CA341N03200			
20	GWH18ACCXD-K3NNA3B	CA343003900	GWH18ACCXD-K3NNA3B/I	CA343N03900			
21	GWH18ACCXD-K3NNA2B	CA342004000	GWH18ACCXD-K3NNA2B/I	CA342N04000			
22	GWH18ACCXD-K3NNA1B	CA497014600	GWH18ACCXD-K3NNA1B/I	CA497N14600			
23	GWH18ACCXD-K3NNA4B	CA344002101	GWH18ACCXD-K3NNA4B/I	CA344N02101			
24	GWH18ACDXD-K3NNA1A	CA497014000	GWH18ACDXD-K3NNA1A/I	CA497N14000	GWH18QDXD-K3NNA6A/O	CA427W15500	
25	GWH24ACDXE-K3NNA3A	CA343004000	GWH24ACDXE-K3NNA3A/I	CA343N04000	GWH24AADXE-K3NNA1A/O	CA476W11400	
26	GWH24ACDXE-K3NNA5A	CA341003001	GWH24ACDXE-K3NNA5A/I	CA341N03001			
27		CA341003000		CA341N03000			
28	GWH24ACDXE-K3NNA1A	CA497014500	GWH24ACDXE-K3NNA1A/I	CA497N14500			
29	GWH24ACDXE-K3NNA2A	CA342003800	GWH24ACDXE-K3NNA2A/I	CA342N03800			
30	GWH24ACDXE-K3NNA4A	CA344002201	GWH24ACDXE-K3NNA4A/I	CA344N02201			
31	GWH28ACEXF-K3NNA5A	CA341003300	GWH28ACEXF-K3NNA5A/I	CA341N03300	GWH28AGEXF-K3NNA1A/O	CA385W12400	
32	GWH28ACEXF-K3NNA1A	CA497014700	GWH28ACEXF-K3NNA1A/I	CA497N14700			
33	GWH28ACEXF-K3NNA3A	CA343004100	GWH28ACEXF-K3NNA3A/I	CA343N04100			

2. Specifications

2.1 Specification Sheet

Model			1.GWH07ACAXA-K3NNA3A 2.GWH07ACAXA-K3NNA5A 3.GWH07ACAXA-K3NNA1A 4.GWH07ACAXA-K3NNA2A	GWH09ACAXA-K3NNA5A
Product Code			1.CA343003700 2.CA341002900 3.CA513005200 4.CA342004100	CA341003400/CA341003401
Power Supply	Rated Voltage	V~	220-240	220-240
	Rated Frequency	Hz	50	50
	Phases		1	1
Power Supply Mode			Indoor	Indoor
Cooling Capacity		W	2250	2550
Heating Capacity		W	2300	2650
Cooling Power Input		W	700	794
Heating Power Input		W	637	734
Cooling Power Current		A	3.5	3.7
Heating Power Current		A	3.1	3.4
Rated Input		W	1000	1050
Rated Cooling Current		A	4.7	5.8
Rated Heating Current		A	4.6	5.7
Air Flow Volume		m^3/h	520/470/420/250	520/470/420/250
Dehumidifying Volume		L/h	0.6	0.8
EER		W/W	3.21	3.21
COP		W/W	3.61	3.61
Application Area		m^2	10-16	12-18
Indoor Unit	Model of indoor unit		1.GWH07ACAXA-K3NNA3A/I 2.GWH07ACAXA-K3NNA5A/I 3.GWH07ACAXA-K3NNA1A/I 4.GWH07ACAXA-K3NNA2A/I	GWH09ACAXA-K3NNA5A/I
	Indoor Unit Product Code		1.CA343N03700 2.CA341N02900 3.CA513N05200 4.CA342N04100	CA341N03400/CA341N03401
	Fan Type		Cross-flow	Cross-flow
	Fan Diameter Length(DXL)	mm	Φ93X505	Φ93X505
	Cooling Speed	r/min	1350/1200/1000/850	1350/1200/1000/850
	Heating Speed	r/min	1300/1200/1000/900	1300/1200/1000/900
	Fan Motor Power Output	W	20	20
	Fan Motor RLA	A	0.2	0.2
	Fan Motor Capacitor	μF	1	1
	Evaporator Form		Aluminum Fin-copper Tube	Aluminum Fin-copper Tube
	Evaporator Pipe Diameter	mm	Φ7.94	Φ7.94
	Evaporator Row-fin Gap	mm	1-1.2	1-1.2
	Evaporator Coil Length (LXDXW)	mm	508X19.05X254	508X19.05X254
	Swing Motor Model		MP24AN	MP24AN
	Swing Motor Power Output	W	1.5	1.5
	Fuse Current	A	3.15	3.15
	Sound Pressure Level	dB (A)	Cooling: 40/37/31/26 Heating: 39/37/32/27	Cooling: 40/37/31/26 Heating: 39/37/32/28
	Sound Power Level	dB (A)	Cooling: 50/47/41/36 Heating: 49/47/42/37	Cooling: 50/47/41/36 Heating: 49/47/42/38
	Dimension (WXHXD)	mm	744X256X185	744X256X185
	Dimension of Carton Box (LXWXH)	mm	788X314X249	788X314X249
	Dimension of Package (LXWXH)	mm	793X330X260	793X330X260
	Net Weight	kg	8	8
	Gross Weight	kg	9.1	9.3

Outdoor Unit	Outdoor Unit Model		GWH07AGAXA-K3NNA1A/O	GWH09AGAXA-K3NNA1A/O
	Outdoor Unit Product Code		CA385W11300	CA385W12800
	Compressor Manufacturer		ZHUHAI LANDA COMPRESSOR CO.,LTD	ZHUHAI LANDA COMPRESSOR CO.,LTD
	Compressor Model		QXA-A081T170	QXF-B095T170
	Compressor Oil		/	FW68DA or equivalent
	Compressor Type		Rotary	Rotary
	Compressor LRA.	A	15	19.4
	Compressor RLA	A	3.2	3.60
	Compressor Power Input	W	713	778
	Compressor Overload Protector		UP3-MC0(MC0L)	HPA-420
	Throttling Method		Capillary	Capillary
	Set Temperature Range	ºC	16~30	16~30
	Cooling Operation Ambient Temperature Range	ºC	18~43	18~43
	Heating Operation Ambient Temperature Range	ºC	-15~24	-15~24
	Condenser Form		Aluminum Fin-copper Tube	Aluminum Fin-copper Tube
	Condenser Pipe Diameter	mm	Φ7	Φ7.94
	Condenser Rows-fin Gap	mm	1-1.3	1-1.3
	Condenser Coil Length (LXDXW)	mm	638X12.7X419	632X19.05X418
	Fan Motor Speed	rpm	930±20	930
	Fan Motor Power Output	W	20	20
	Fan Motor RLA	A	0.3	0.27
	Fan Motor Capacitor	μF	1.5	1.5
	Outdoor Unit Air Flow Volume	m^3/h	1400	1400
	Fan Type		Axial-flow	Axial-flow
	Fan Diameter	mm	Φ350	Φ350
	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)	49	49
	Sound Power Level (H/M/L)	dB (A)	59	59
	Dimension(WXHXD)	mm	710X450X293	710X450X293
	Dimension of Carton Box (LXWXH)	mm	761X327X500	761X327X500
	Dimension of Package(LXWXH)	mm	764X330X525	764X330X525
	Net Weight	kg	22.3	24.7
	Gross Weight	kg	24.3	26.7
	Refrigerant		R410A	R410A
	Refrigerant Charge	kg	0.55	0.56
Connection Pipe	Connection Pipe Length	m	5	5
	Connection Pipe Gas Additional Charge	g/m	20	20
	Outer Diameter Liquid Pipe	inch	1/4	1/4
	Outer Diameter Gas Pipe	inch	3/8	3/8
	Max Distance Height	m	10	10
	Max Distance Length	m	15	15
	Note: The connection pipe applies metric diameter.			

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

Model			GWH09ACAXA-K3NNA2A	1.GWH09ACAXA-K3NNA3A 2.GWH09ACAXA-K3NNA1A 3.GWH09ACAXA-K3NNA4A
Product Code			CA342003900	1.CA343004200 2.CA497014900 3.CA344003300
Power Supply	Rated Voltage	V~	220-240	220-240
	Rated Frequency	Hz	50	50
	Phases		1	1
Power Supply Mode			Indoor	Indoor
Cooling Capacity		W	2550	2550
Heating Capacity		W	2650	2650
Cooling Power Input		W	794	794
Heating Power Input		W	734	734
Cooling Power Current		A	3.7	3.7
Heating Power Current		A	3.4	3.4
Rated Input		W	1050	1050
Rated Cooling Current		A	5.8	5.8
Rated Heating Current		A	5.7	5.7
Air Flow Volume		m^3/h	520/470/420/250	520/470/420/250
Dehumidifying Volume		L/h	0.8	0.8
EER		W/W	3.21	3.21
COP		W/W	3.61	3.61
Application Area		m^2	12-18	12-18
Indoor Unit	Model of indoor unit		GWH09ACAXA-K3NNA2A/I	1.GWH09ACAXA-K3NNA3A/I 2.GWH09ACAXA-K3NNA1A/I 3.GWH09ACAXA-K3NNA4A/I
	Indoor Unit Product Code		CA342N03900	1.CA343N04200 2.CA497N14900 3.CA344N03300
	Fan Type		Cross-flow	Cross-flow
	Fan Diameter Length(DXL)	mm	Φ93X505	Φ93X505
	Cooling Speed	r/min	1350/1200/1000/850	1350/1200/1000/850
	Heating Speed	r/min	1300/1200/1000/900	1300/1200/1000/900
	Fan Motor Power Output	W	20	20
	Fan Motor RLA	A	0.2	0.2
	Fan Motor Capacitor	μF	1	1
	Evaporator Form		Aluminum Fin-copper Tube	Aluminum Fin-copper Tube
	Evaporator Pipe Diameter	mm	Φ7.94	Φ7.94
	Evaporator Row-fin Gap	mm	1-1.2	1-1.2
	Evaporator Coil Length (LXDXW)	mm	508X19.05X254	508X19.05X254
	Swing Motor Model		MP24AN	MP24AN
	Swing Motor Power Output	W	1.5	1.5
	Fuse Current	A	3.15	3.15
	Sound Pressure Level	dB (A)	Cooling: 40/37/31/26 Heating: 39/37/32/28	Cooling: 40/37/31/26 Heating: 39/37/32/28
	Sound Power Level	dB (A)	Cooling: 50/47/41/36 Heating: 49/47/42/38	Cooling: 50/47/41/36 Heating: 49/47/42/38
	Dimension (WXHXD)	mm	744X256X185	744X256X185
	Dimension of Carton Box (LXWXH)	mm	788X314X249	788X314X249
	Dimension of Package (LXWXH)	mm	793X330X260	793X330X260
	Net Weight	kg	8	8
	Gross Weight	kg	9.4	9.1

Outdoor Unit	Outdoor Unit Model		GWH09AGAXA-K3NNA1A/O
	Outdoor Unit Product Code		CA385W12800
	Compressor Manufacturer		ZHUHAI LANDA COMPRESSOR CO.,LTD
	Compressor Model		QXF-B095T170
	Compressor Oil		FW68DA or equivalent
	Compressor Type		Rotary
	Compressor LRA.	A	19.4
	Compressor RLA	A	3.60
	Compressor Power Input	W	778
	Compressor Overload Protector		HPA-420
	Throttling Method		Capillary
	Set Temperature Range	ºC	16~30
	Cooling Operation Ambient Temperature Range	ºC	18~43
	Heating Operation Ambient Temperature Range	ºC	-15~24
	Condenser Form		Aluminum Fin-copper Tube
	Condenser Pipe Diameter	mm	Φ7.94
	Condenser Rows-fin Gap	mm	1-1.3
	Condenser Coil Length (LXDXW)	mm	632X19.05X418
	Fan Motor Speed	rpm	930
	Fan Motor Power Output	W	20
	Fan Motor RLA	A	0.27
	Fan Motor Capacitor	μF	1.5
	Outdoor Unit Air Flow Volume	m^3/h	1400
	Fan Type		Axial-flow
	Fan Diameter	mm	Φ350
	Defrosting Method		Automatic Defrosting
	Climate Type		T1
	Isolation		I
	Moisture Protection		IPX4
	Permissible Excessive Operating Pressure for the Discharge Side	MPa	4.3
	Permissible Excessive Operating Pressure for the Suction Side	MPa	2.5
	Sound Pressure Level (H/M/L)	dB (A)	49
	Sound Power Level (H/M/L)	dB (A)	59
	Dimension(WXHXD)	mm	710X450X293
	Dimension of Carton Box (LXWXH)	mm	761X327X500
	Dimension of Package(LXWXH)	mm	764X330X525
	Net Weight	kg	24.7
	Gross Weight	kg	26.7
	Refrigerant		R410A
	Refrigerant Charge	kg	0.56
Connection Pipe	Connection Pipe Length	m	5
	Connection Pipe Gas Additional Charge	g/m	20
	Outer Diameter Liquid Pipe	inch	1/4
	Outer Diameter Gas Pipe	inch	3/8
	Max Distance Height	m	10
	Max Distance Length	m	15
	Note: The connection pipe applies metric diameter.		

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

Model			GWH12ACCXB-K3NNA1A	1.GWH12ACBXB-K3NNA5B 2.GWH12ACBXB-K3NNA3B 3.GWH12ACBXB-K3NNA1B 4.GWH12ACBXB-K3NNA4B 5.GWH12ACBXB-K3NNA2B
Product Code			CA497013900	1.CA341003100/CA341003101 2.CA343003800 3.CA497014800 4.CA344002300 5.CA342004200
Power Supply	Rated Voltage	V~	220-240	220-240
	Rated Frequency	Hz	50	50
	Phases		1	1
Power Supply Mode			Indoor	Indoor
Cooling Capacity		W	3550	3250
Heating Capacity		W	3700	3400
Cooling Power Input		W	1076	1009
Heating Power Input		W	1010	942
Cooling Power Current		A	5.1	4.8
Heating Power Current		A	4.7	4.6
Rated Input		W	1400	1350
Rated Cooling Current		A	7.7	7
Rated Heating Current		A	7.6	7
Air Flow Volume		m^3/h	680/620/490/390	590/520/400/300
Dehumidifying Volume		L/h	1.4	1.6
EER		W/W	3.3	3.22
COP		W/W	3.66	3.61
SEER		W/W	/	/
HSPF		W/W	/	/
Application Area		m^2	16-24	16-24
Indoor Unit	Model of indoor unit		GWH12ACCXB-K3NNA1A/I	1.GWH12ACBXB-K3NNA5B/I 2.GWH12ACBXB-K3NNA3B/I3.GWH12ACBXB-K3NNA1B/I 4.GWH12ACBXB-K3NNA4B/I 5.GWH12ACBXB-K3NNA2B/I
	Indoor Unit Product Code		CA497N13900	1.CA341N03100/CA341N03101 2.CA343N03800 3.CA497N14800 4.CA344N02300 5.CA342N04200
	Fan Type		Cross-flow	Cross-flow
	Fan Diameter Length(DXL)	mm	Φ98X630	Φ93X580
	Cooling Speed	r/min	1350/1200/1050/850	1350/1200/1100/850
	Heating Speed	r/min	1300/1150/1000/900	1350/1200/1100/900
	Fan Motor Power Output	W	20	20
	Fan Motor RLA	A	0.3	0.22
	Fan Motor Capacitor	μF	1.5	1
	Evaporator Form		Aluminum Fin-copper Tube	Aluminum Fin-copper Tube
	Evaporator Pipe Diameter	mm	Φ5	Φ5
	Evaporator Row-fin Gap	mm	2-1.4	2-1.4
	Evaporator Coil Length (LXDXW)	mm	634X22.8X304.8	584X22.8X266.7
	Swing Motor Model		MP24HF	MP24AN
	Swing Motor Power Output	W	1.5	1.5
	Fuse Current	A	3.15	3.15
	Sound Pressure Level	dB (A)	Cooling: 41/37/33/28 Heating: 41/37/33/26	Cooling: 40/37/34/28 Heating: 40/37/34/27
	Sound Power Level	dB (A)	Cooling: 51/47/43/38 Heating: 51/47/42/36	Cooling: 50/47/44/38 Heating: 50/47/44/37
	Dimension (WXHXD)	mm	889X294X212	819X256X185
	Dimension of Carton Box (LXWXH)	mm	935X349X273	863X314X249
	Dimension of Package (LXWXH)	mm	940X365X284	868X330X260
	Net Weight	kg	10.8	8.5
	Gross Weight	kg	12.3	10

Outdoor Unit	Outdoor Unit Model		GWH12AGCXB-K3NNA1A/O	GWH12AGBXB-K3NNA1B/O
	Outdoor Unit Product Code		CA385W10800	CA385W11400
	Compressor Manufacturer		ZHUHAI LANDA COMPRESSOR CO., LTD	ZHUHAI LANDA COMPRESSOR CO,LTD.
	Compressor Model		QXA-B129C170	QXA-B120C170
	Compressor Oil		RB68EP or equivalent	RB 68EP or equivalent
	Compressor Type		Rotary	Rotary
	Compressor LRA.	A	27	24
	Compressor RLA	A	4.8	4.5
	Compressor Power Input	W	1055	990
	Compressor Overload Protector		HPA-522L	HPA-522A
	Throttling Method		Capillary	Capillary
	Set Temperature Range	ºC	16~30	16~30
	Cooling Operation Ambient Temperature Range	ºC	18~43	18~43
	Heating Operation Ambient Temperature Range	ºC	-7~24	-15~24
	Condenser Form		Aluminum Fin-copper Tube	Aluminum Fin-copper Tube
	Condenser Pipe Diameter	mm	Φ7.94	Φ7
	Condenser Rows-fin Gap	mm	1.3	1-1.3
	Condenser Coil Length (LXDXW)	mm	673X19.05X528	673X12.7X514.4
	Fan Motor Speed	rpm	900	900
	Fan Motor Power Output	W	35	35
	Fan Motor RLA	A	0.33	0.33
	Fan Motor Capacitor	μF	2.5	2.5
	Outdoor Unit Air Flow Volume	m^3/h	1950	1950
	Fan Type		Axial-flow	Axial-flow
	Fan Diameter	mm	Φ400	Φ400
	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)	51	52
	Sound Power Level (H/M/L)	dB (A)	61	62
	Dimension(WXHXD)	mm	732X555X330	732X555X330
	Dimension of Carton Box (LXWXH)	mm	791X373X590	791X373X590
	Dimension of Package(LXWXH)	mm	794X376X615	794X376X615
	Net Weight	kg	29.5	28
	Gross Weight	kg	32	30.5
	Refrigerant		R410A	R410A
	Refrigerant Charge	kg	0.81	0.73
Connection Pipe	Connection Pipe Length	m	5	5
	Connection Pipe Gas Additional Charge	g/m	20	20
	Outer Diameter Liquid Pipe	inch	1/4	1/4
	Outer Diameter Gas Pipe	inch	1/2	1/2
	Max Distance Height	m	10	10
	Max Distance Length	m	20	20
	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			GWH18ACCXD-K3NNA5B GWH18ACCXD-K3NNA3B GWH18ACCXD-K3NNA2B GWH18ACCXD-K3NNA1B GWH18ACCXD-K3NNA4B	1.GWH24ACDXE-K3NNA3A 2.GWH24ACDXE-K3NNA5A 3.GWH24ACDXE-K3NNA1A/I 4.GWH24ACDXE-K3NNA2A/I 5.GWH24ACDXE-K3NNA4A/I
Product Code			CA341003201/CA341003200 CA343003900 CA342004000 CA497014600 CA344002101	1.CA343004000 2.CA341003001/CA341003000 3.CA497014500 4.CA342003800 5.CA344002201
Power Supply	Rated Voltage	V~	220-240	220-240
	Rated Frequency	Hz	50	50
	Phases		1	1
Power Supply Mode			Indoor	Indoor
Cooling Capacity		W	4800	6155
Heating Capacity		W	5158	6700
Cooling Power Input		W	1477	1917
Heating Power Input		W	1428	1856
Cooling Power Current		A	6.62	8.89
Heating Power Current		A	6.4	/
Rated Input		W	2150	2400
Rated Cooling Current		A	11.62	/
Rated Heating Current		A	11.35	/
Air Flow Volume		m^3/h	650/590/480/340	850/780/650/580/550
Dehumidifying Volume		L/h	1.8	1.8
EER		W/W	3.25	3.21
COP		W/W	3.61	3.6
SEER		W/W	/	/
HSPF		W/W	/	/
Application Area		m^2	21-31	23-34
Indoor Unit	Model of indoor unit		GWH18ACCXD-K3NNA5B/I GWH18ACCXD-K3NNA3B/I GWH18ACCXD-K3NNA2B/I GWH18ACCXD-K3NNA1B/I GWH18ACCXD-K3NNA4B/I	1.GWH24ACDXE-K3NNA3A/I 2.GWH24ACDXE-K3NNA5A/I 3.GWH24ACDXE-K3NNA1A/I 4.GWH24ACDXE-K3NNA2A/I 5.GWH24ACDXE-K3NNA4A/I
	Indoor Unit Product Code		CA341N03201/CA341N03200 CA343N03900 CA342N04000 CA497N14600 CA344N02101	1.CA343N04000 2.CA341N03000/CA341N03001 3.CA497N14500 4.CA342N03800 5.CA344N02201
	Fan Type		Cross-flow	Cross-flow
	Fan Diameter Length(DXL)	mm	Φ98X630	Φ106X706
	Cooling Speed	r/min	1350/1200/1050/900	1350/1200/1050/900
	Heating Speed	r/min	1350/1200/1100/900	1350/1200/1100/900
	Fan Motor Power Output	W	20	35
	Fan Motor RLA	A	0.3	0.35
	Fan Motor Capacitor	μF	1.5	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	634X25.4X304.8	715X25.4X304.8
	Swing Motor Model		MP24HF	MP35CP
	Swing Motor Power Output	W	1.5	2.5
	Fuse Current	A	3.15	3.15
	Sound Pressure Level	dB (A)	Cooling: 41/40/36/32 Heating: 42/40/37/32	48/43/39/37/35
	Sound Power Level	dB (A)	Cooling: 51/50/46/42 Heating: 52/50/47/42	58/53/49/47/45
	Dimension (WXHXD)	mm	889X294X212	1013X307X221
	Dimension of Carton Box (LXWXH)	mm	935X349X273	1055X366X287
	Dimension of Package (LXWXH)	mm	940X365X284	1060X374X297
	Net Weight	kg	11.4	14.2
	Gross Weight	kg	13	16.3

Outdoor Unit	Outdoor Unit Model		GWH18AGCXD-K3NNA1B/O	GWH24AADXE-K3NNA1A/O
	Outdoor Unit Product Code		CA385W10100	CA476W11400
	Compressor Manufacturer		ZHUHAI LANDA COMPRESSOR CO. LTD.	ZHUHAI LANDA COMPRESSOR CO. LTD.
	Compressor Model		QXA-D19F070	QXA-D232F070
	Compressor Oil		ATMOS-RB68EP or equivalent	FW68DA or equivalent
	Compressor Type		Rotary	Rotary
	Compressor LRA.	A	42	55
	Compressor RLA	A	7	8.9
	Compressor Power Input	W	1510	1986
	Compressor Overload Protector		UP3-06	UP3-09
	Throttling Method		Capillary	Capillary
	Set Temperature Range	ºC	16~30	16~30
	Cooling Operation Ambient Temperature Range	ºC	18~43	18~43
	Heating Operation Ambient Temperature Range	ºC	-15~24	-15~24
	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	780X23X514	848x38.1x528
	Fan Motor Speed	rpm	880	840
	Fan Motor Power Output	W	45	45
	Fan Motor RLA	A	0.44	0.42
	Fan Motor Capacitor	μF	3	3.5
	Outdoor Unit Air Flow Volume	m^3/h	2300	2400
	Fan Type		Axial-flow	Axial-flow
	Fan Diameter	mm	Φ420	Φ445
	Defrosting Method		/	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)	53	56
	Sound Power Level (H/M/L)	dB (A)	63	66
	Dimension(WXHXD)	mm	802X555X350	873X555X376
	Dimension of Carton Box (LXWXH)	mm	869X395X594	948X428X591
	Dimension of Package(LXWXH)	mm	872X398X620	951X431X620
	Net Weight	kg	38.5	43
	Gross Weight	kg	41	46
	Refrigerant		R410A	R410A
	Refrigerant Charge	kg	1	1.28
Connection Pipe	Connection Pipe Length	m	5	5
	Connection Pipe Gas Additional Charge	g/m	12	20
	Outer Diameter Liquid Pipe	inch	1/4	1/4
	Outer Diameter Gas Pipe	inch	1/2	1/2
	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			GWH18ACDXD-K3NNA1A	GWH28ACEXF-K3NNA5A GWH28ACEXF-K3NNA1A GWH28ACEXF-K3NNA3A
Product Code			CA497014000	CA341003300 CA497014700 CA343004100
Power Supply	Rated Voltage	V~	220-240	220-240
	Rated Frequency	Hz	50	50
	Phases		1	1
Power Supply Mode			Indoor	Indoor
Cooling Capacity		W	5275	8500
Heating Capacity		W	5700	8900
Cooling Power Input		W	1600	2615
Heating Power Input		W	1500	2465
Cooling Power Current		A	7.4	12
Heating Power Current		A	6.9	11.5
Rated Input		W	2050	3400
Rated Cooling Current		A	10.5	18.5
Rated Heating Current		A	9	17.1
Air Flow Volume		m^3/h	850/720/610/520	1250/1100/980/820
Dehumidifying Volume		L/h	1.8	3
EER		W/W	3.30	3.25
COP		W/W	3.80	3.61
SEER		W/W	/	/
HSPF		W/W	/	/
Application Area		m^2	21-31	46-70
Indoor Unit	Model of indoor unit		GWH18ACDXD-K3NNA1A/I	GWH28ACEXF-K3NNA5A/I GWH28ACEXF-K3NNA1A/I GWH28ACEXF-K3NNA3A/I
	Indoor Unit Product Code		CA497N14000	CA341N03300 CA497N14700 CA343N04100
	Fan Type		Cross-flow	Cross-flow
	Fan Diameter Length(DXL)	mm	Φ98X630	Φ108X830
	Cooling Speed	r/min	1350/1200/1050/900	1300/1150/1000/850
	Heating Speed	r/min	1350/1200/1100/900	1300/1150/1000/850
	Fan Motor Power Output	W	35	35
	Fan Motor RLA	A	0.35	0.45
	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	850X25.4X381
	Swing Motor Model		MP35CJ	MP35CP
	Swing Motor Power Output	W	2.5	2.5
	Fuse Current	A	3.15	3.15
	Sound Pressure Level	dB (A)	Cooling: 47/43/39/35 Heating: 47/44/37/32	Cooling: 48/45/40/37 Heating: 46/43/40/33
	Sound Power Level	dB (A)	Cooling: 57/53/49/45 Heating: 54/53/47/42	Cooling: 58/55/50/47 Heating: 56/53/50/43
	Dimension (WXHXD)	mm	1013X307X221	1122X329X247
	Dimension of Carton Box (LXWXH)	mm	1055X366X287	1172X398X322
	Dimension of Package (LXWXH)	mm	1060X374X297	1177X406X332
	Net Weight	kg	14	17.5
	Gross Weight	kg	16.1	20.2

Outdoor Unit	Outdoor Unit Model		GWH18QDXD-K3NNA6A/O	GWH28AGEXF-K3NNA1A/O
	Outdoor Unit Product Code		CA427W15500	CA385W12400
	Compressor Manufacturer		ZHUHAI LANDA COMPRESSOR CO. LTD.	ZHUHAI LANDA COMPRESSOR CO., LTD.
	Compressor Model		QXA-D19F070	QXAS-E305H070
	Compressor Oil		ATMOS-RB68EP or equivalent	RB68EP or FVC68D or FV50S or equivalent
	Compressor Type		Rotary	Rotary
	Compressor LRA.	A	42	60
	Compressor RLA	A	7	11.4
	Compressor Power Input	W	1510	2520
	Compressor Overload Protector		UP3-06	HPD-456
	Throttling Method		Capillary	Capillary
	Set Temperature Range	ºC	16~30	16~30
	Cooling Operation Ambient Temperature Range	ºC	18~43	18~43
	Heating Operation Ambient Temperature Range	ºC	-7~24	-15~24
	Condenser Form		Aluminum Fin-copper Tube	Aluminum Fin-copper Tube
	Condenser Pipe Diameter	mm	Φ7	Φ7.94
	Condenser Rows-fin Gap	mm	2-1.4	2-1.4
	Condenser Coil Length (LXDXW)	mm	780X23X514	851X38.1X616
	Fan Motor Speed	rpm	880	780
	Fan Motor Power Output	W	45	85
	Fan Motor RLA	A	0.44	0.7
	Fan Motor Capacitor	μF	3	4.5
	Outdoor Unit Air Flow Volume	m^3/h	2300	3200
	Fan Type		Axial-flow	Axial-flow
	Fan Diameter	mm	Φ420	Φ520
	Defrosting Method		/	/
	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)	53	60
	Sound Power Level (H/M/L)	dB (A)	63	70
	Dimension(WXHXD)	mm	802X555X350	958X660X402
	Dimension of Carton Box (LXWXH)	mm	869X395X594	1029X453X715
	Dimension of Package(LXWXH)	mm	872X398X620	1032X456X737
	Net Weight	kg	38.5	56.9
	Gross Weight	kg	41	60.6
	Refrigerant		R410A	R410A
	Refrigerant Charge	kg	1.2	1.9
Connection Pipe	Connection Pipe Length	m	5	5
	Connection Pipe Gas Additional Charge	g/m	12	50
	Outer Diameter Liquid Pipe	inch	1/4	1/4
	Outer Diameter Gas Pipe	inch	1/2	5/8
	Max Distance Height	m	10	10
	Max Distance Length	m	25	30
	Note: The connection pipe applies metric diameter.			

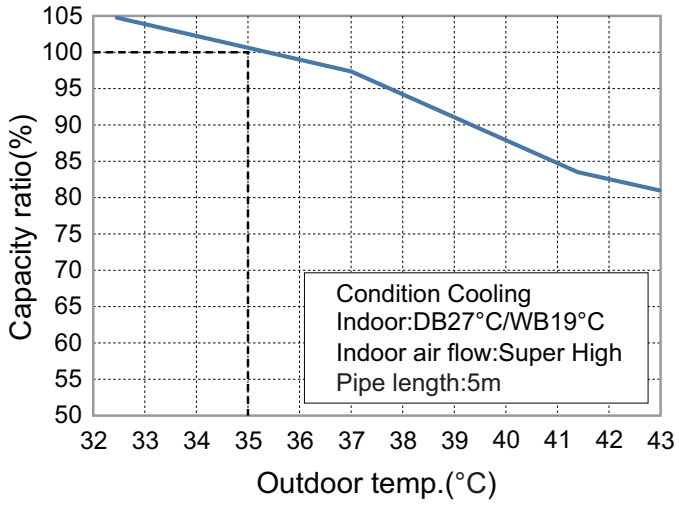
The above data is subject to change without notice. Please refer to the nameplate of the unit.

2.2 Capacity Variation Ratio According to Temperature

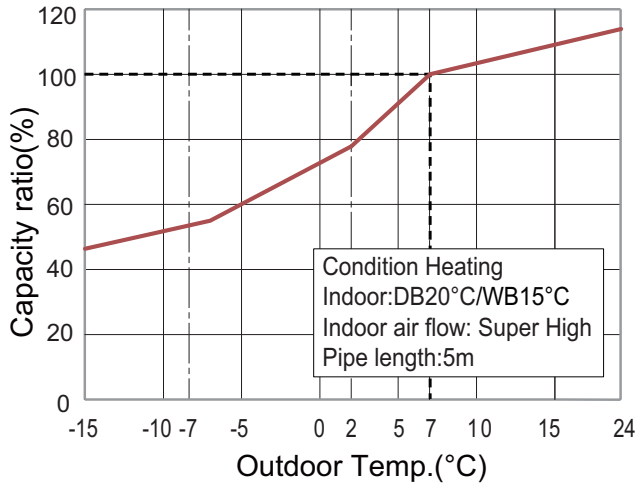
07/09/12/24/28K

18K(ACC)

Cooling:

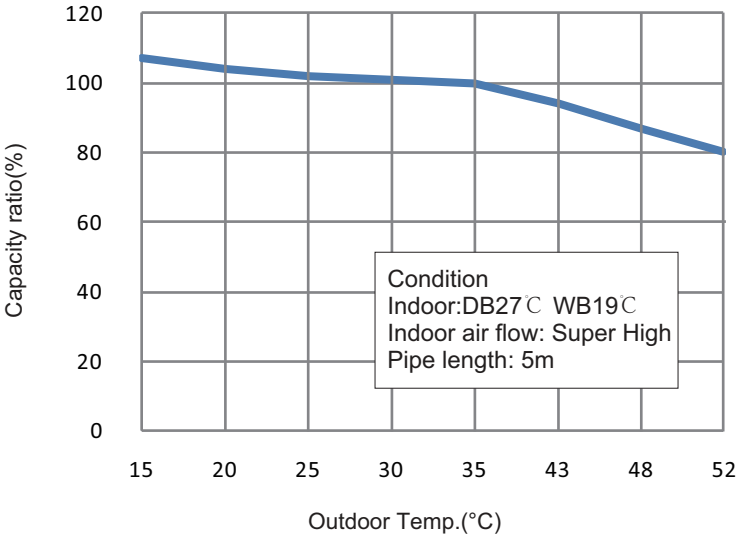


Heating:

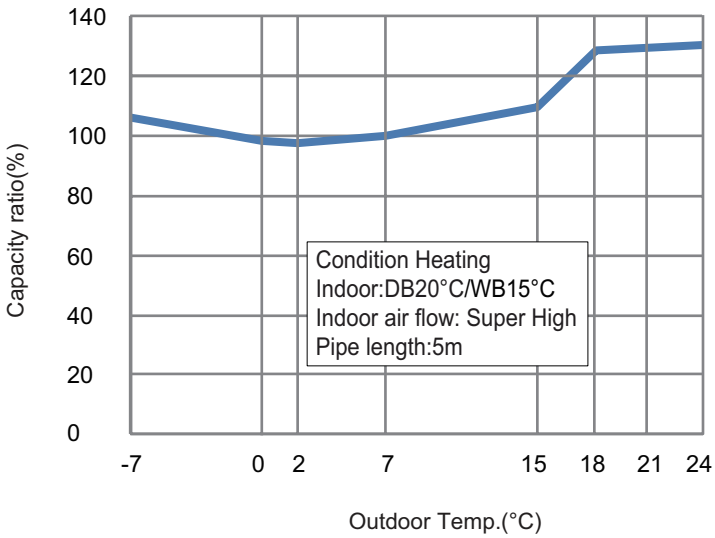


18K(ACD)

Cooling:



Heating:



2.3 Cooling and Heating Data Sheet in Rated Frequency

Cooling:

Rated cooling condition(°C) (DB/WB)		Model	Pressure of gas pipe connecting indoor and outdoor unit	Inlet and outlet pipe temperature of heat exchanger		Fan speed of indoor unit	Fan speed of outdoor unit
Indoor	Outdoor		P (MPa)	T1 (°C)	T2 (°C)		
27/19	35/24	07/09K	0.8 to 1.0	in:8~11 out:11~14	in:75~85 out:37~43	Super High	High
27/19	35/24	12K	0.8 to 1.1	in:10~14 out:11~14	in:69~74 out:38~45	Super High	High
27/19	35/24	18K	0.8 to 1.0	in:8~11 out:11~14	in:75~85 out:37~43	Super High	High
27/19	35/24	24K	0.9 to 1.1	in:8~12 out:11~14	in:75~85 out:37~43	Super High	High
27/19	35/24	28K	0.9 to 1.1	in:6~8 out:10~12	in:75~85 out:37~43	Super High	High

Heating:

Rated cooling condition(°C) (DB/WB)		Model	Pressure of gas pipe connecting indoor and outdoor unit	Inlet and outlet pipe temperature of heat exchanger		Fan speed of indoor unit	Fan speed of outdoor unit
Indoor	Outdoor		P (MPa)	T1 (°C)	T2 (°C)		
20/-	7/6	07/09K	2.4 to 2.6	in:55~65 out:30~37	in:1~3 out:2~5	Super High	High
20/-	7/6	12K	2.4 to 2.6	in:55~65 out:25~32	in:1~3 out:2~5	Super High	High
20/-	7/6	18K	2.2 to 2.4	in:75~85 out:37~43	in:1~3 out:2~5	Super High	High
20/-	7/6	24K	2.2 to 2.4	in:70~85 out:37~43	in:1~3 out:2~5	Super High	High
20/-	7/6	28K	2.8 to 3.0	in:70~85 out:37~43	in:1~3 out:2~5	Super High	High

Instruction:

T1: Inlet and outlet pipe temperature of evaporator

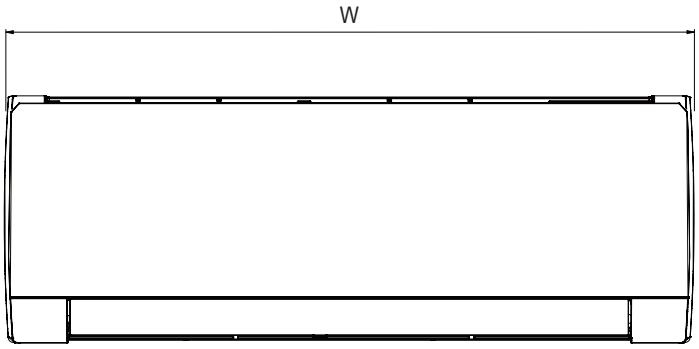
T2: Inlet and outlet pipe temperature of condenser

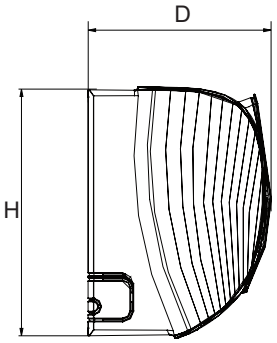
P: Pressure at the side of big valve

Connection pipe length: 5 m.

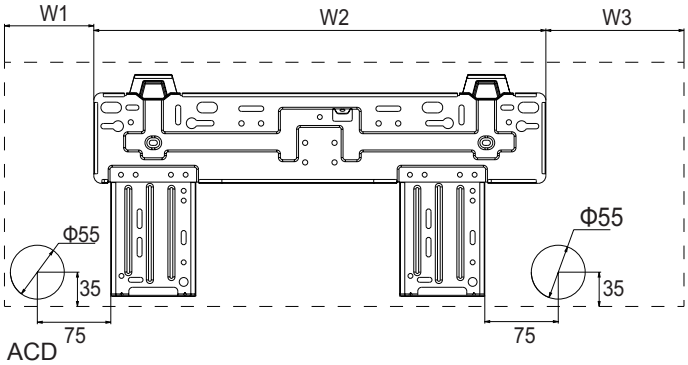
3. Outline Dimension Diagram

3.1 Indoor Unit

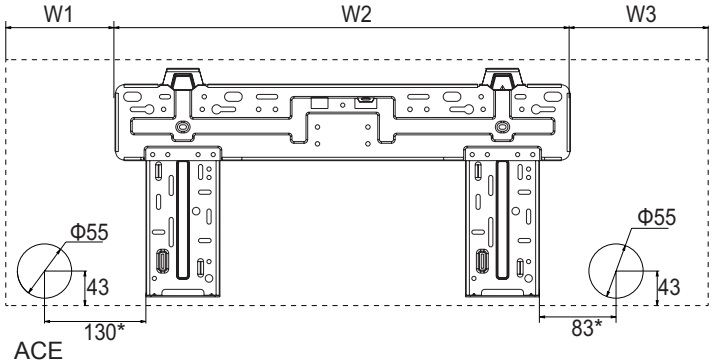




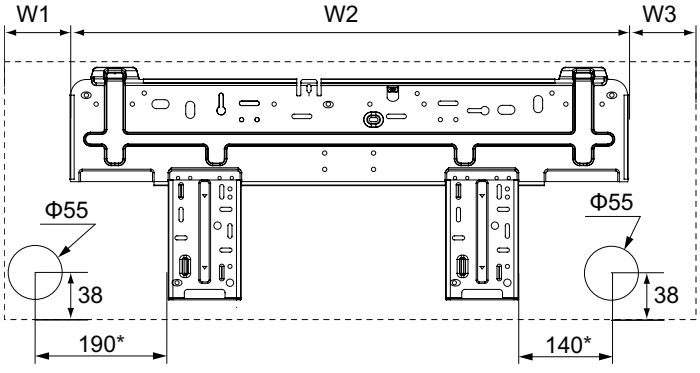
ACA/ACB



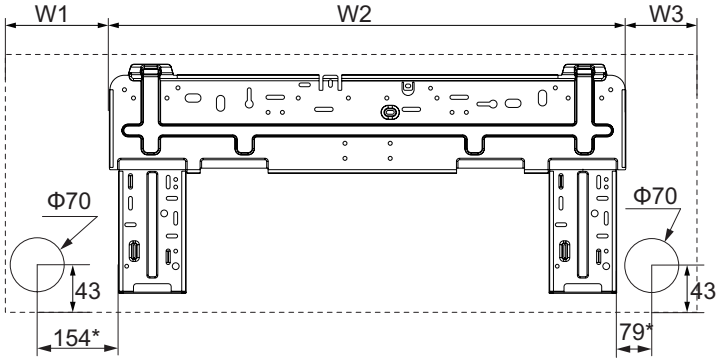
ACC



ACD



ACE



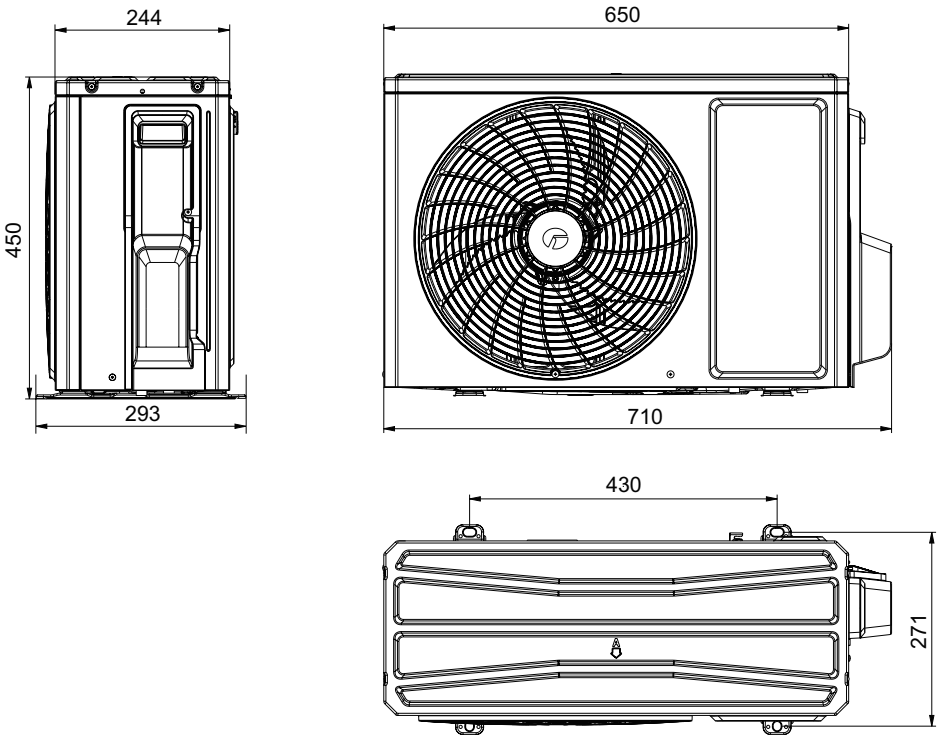
Unit:mm

Model	W	H	D	W1	W2	W3
ACA	744	256	185	116	462	166
ACB	819	256	185	154	462	203
ACC	889	294	212	146	542	201
ACD	1013	307	221	125.5	685	202.5
ACE	1122	329	247	207	685	230

* Recommended distance

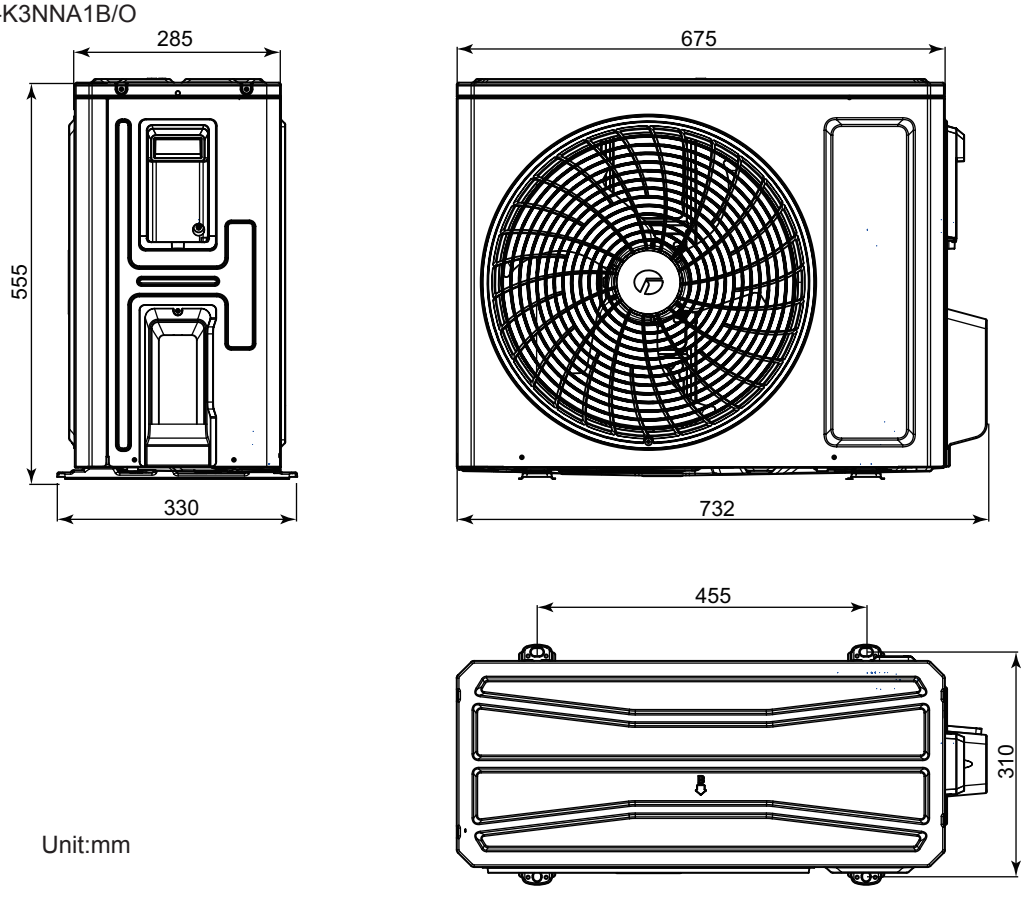
3.2 Outdoor Unit

GWH07AGAXA-K3NNA1A/O
GWH09AGAXA-K3NNA1A/O



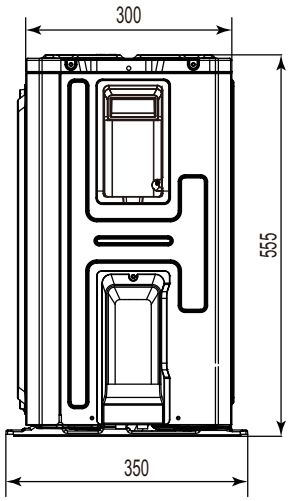
Unit:mm

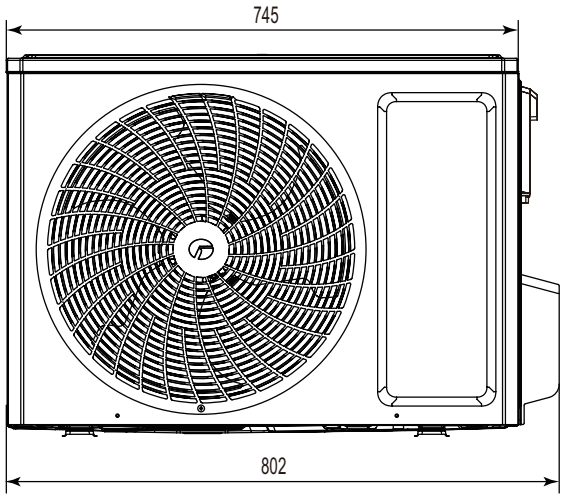
GWH12AGCXB-K3NNA1A/O
GWH12AGBXB-K3NNA1B/O

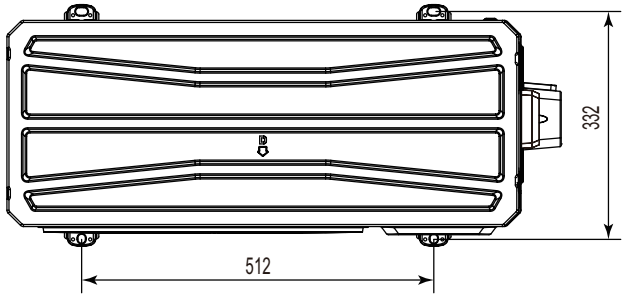


Unit:mm

GWH18AGCXD-K3NNA1B/O GWH18QDXD-K3NNA6A/O

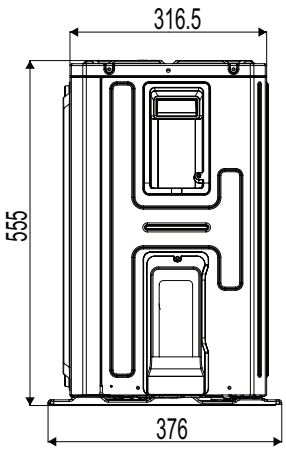


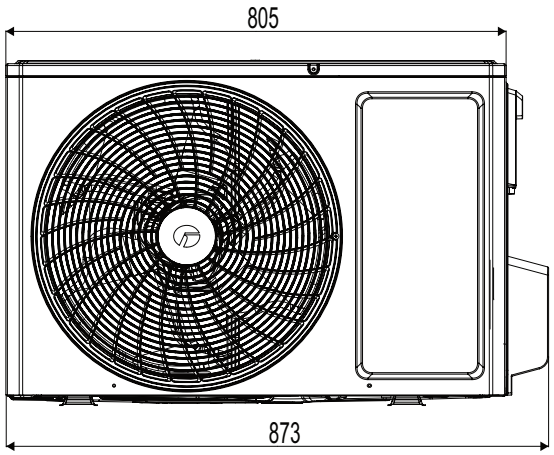


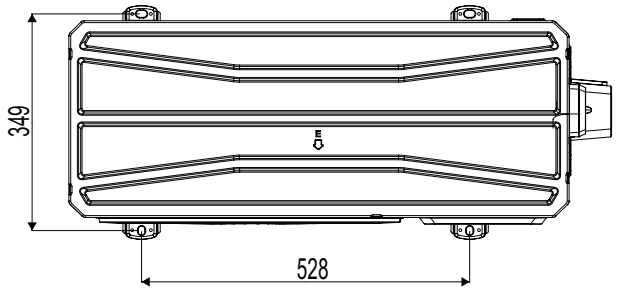


Unit:mm

GWH24AADXE-K3NNA1A/O

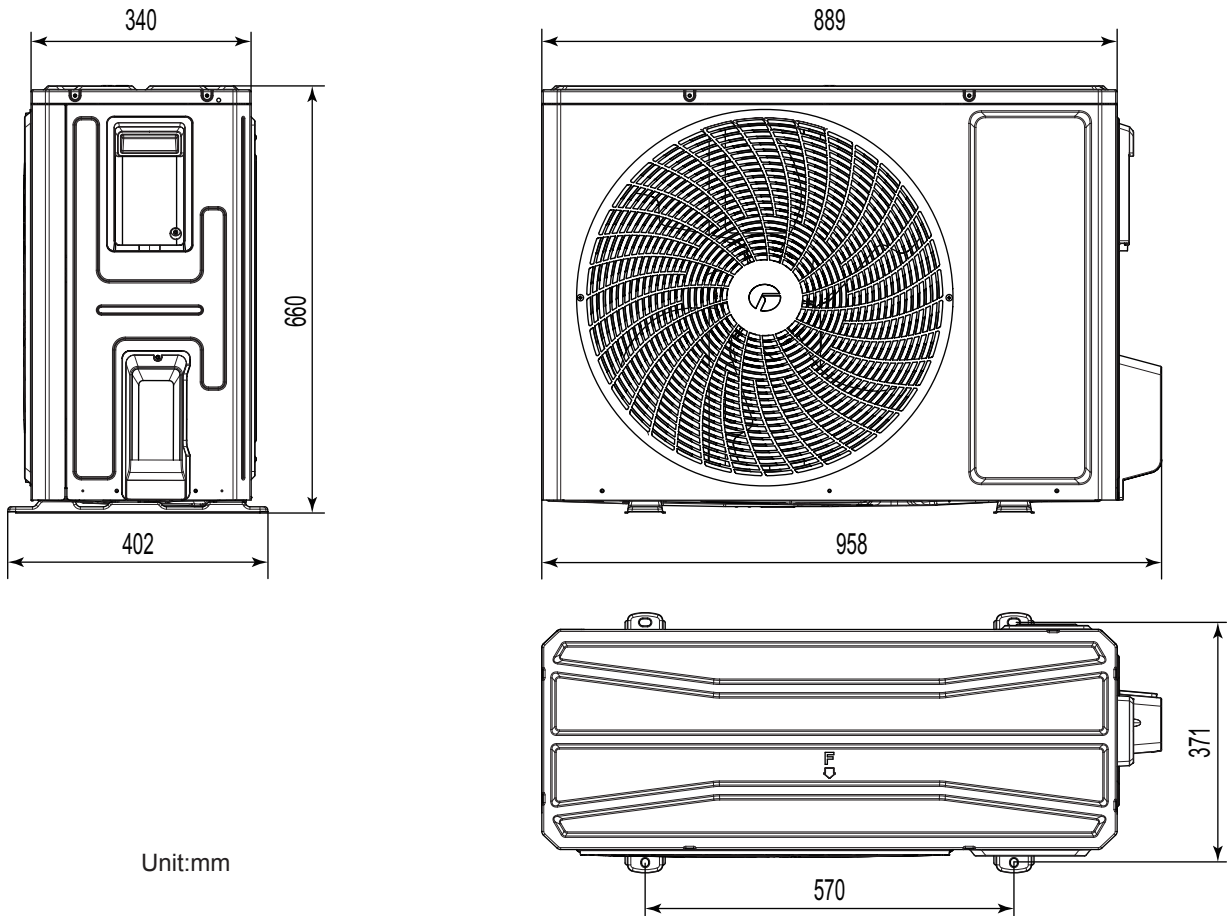






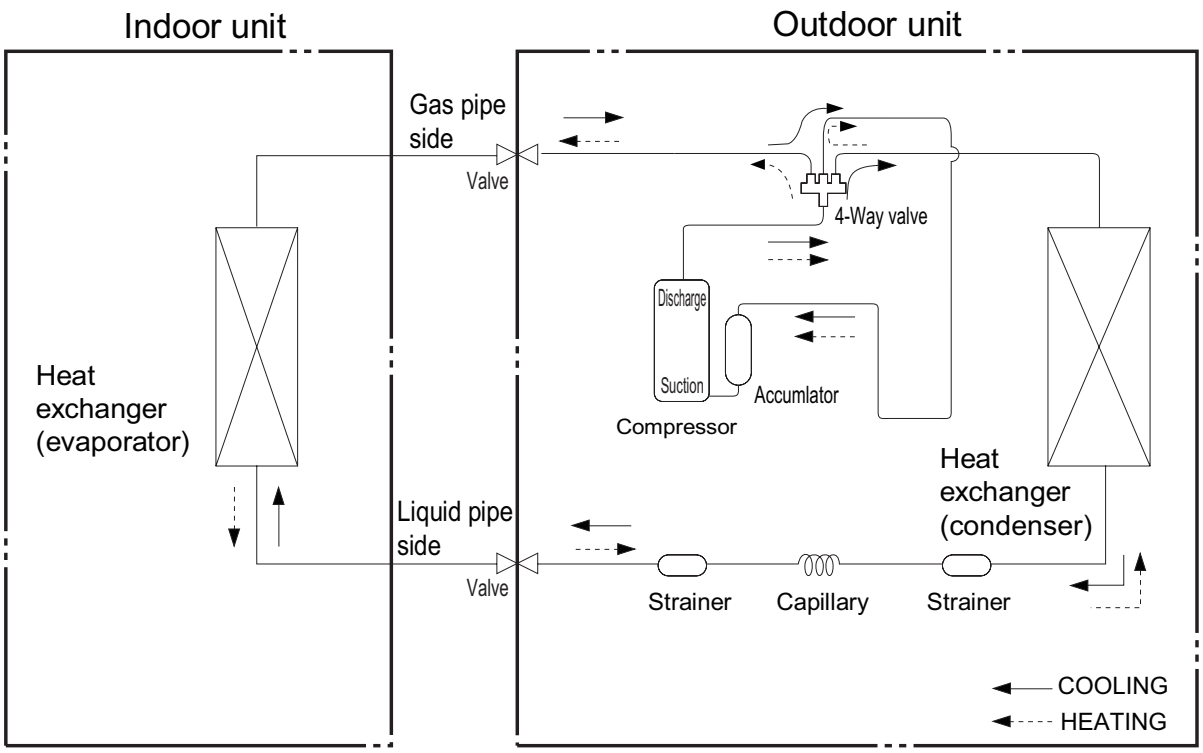
Unit:mm

GWH28AGEXF-K3NNA1A/O



Unit:mm

4. Refrigerant System Diagram



Connection pipe specification:
Liquid pipe:1/4"
Gas pipe:3/8" 07/09K
Gas pipe:1/2" 12/18/24K
Gas pipe:5/8" 28K

5. Electrical Part

5.1 Wiring Diagram

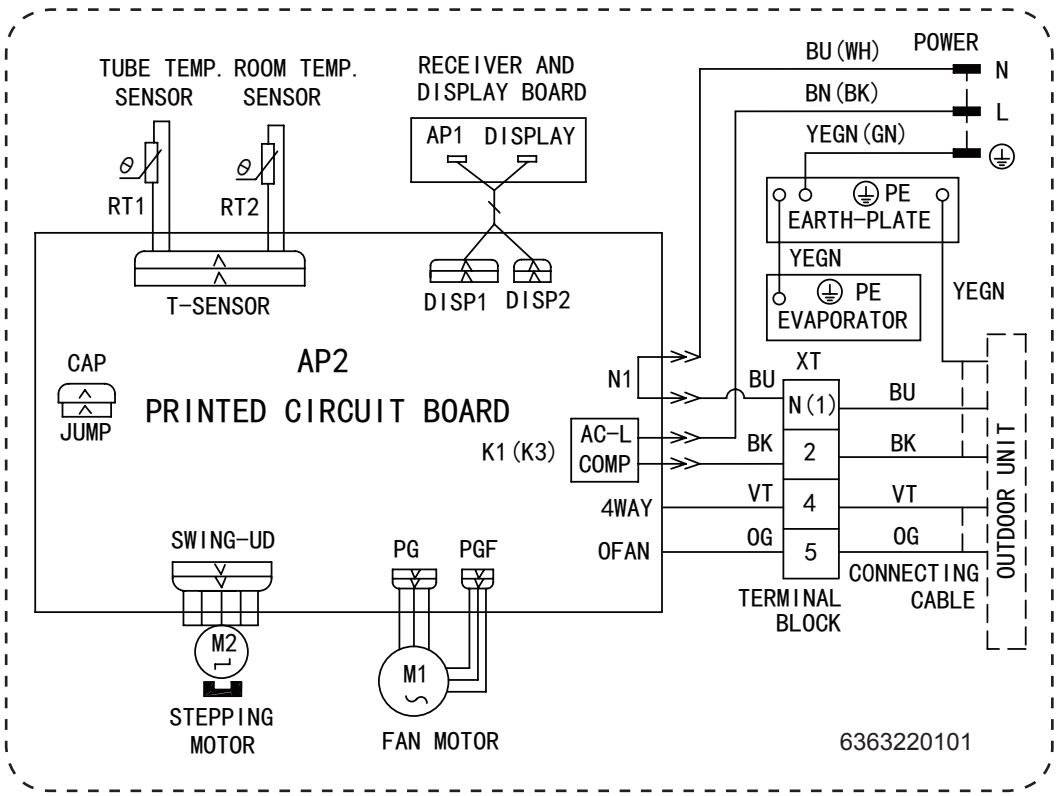
●Instruction

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	/	/

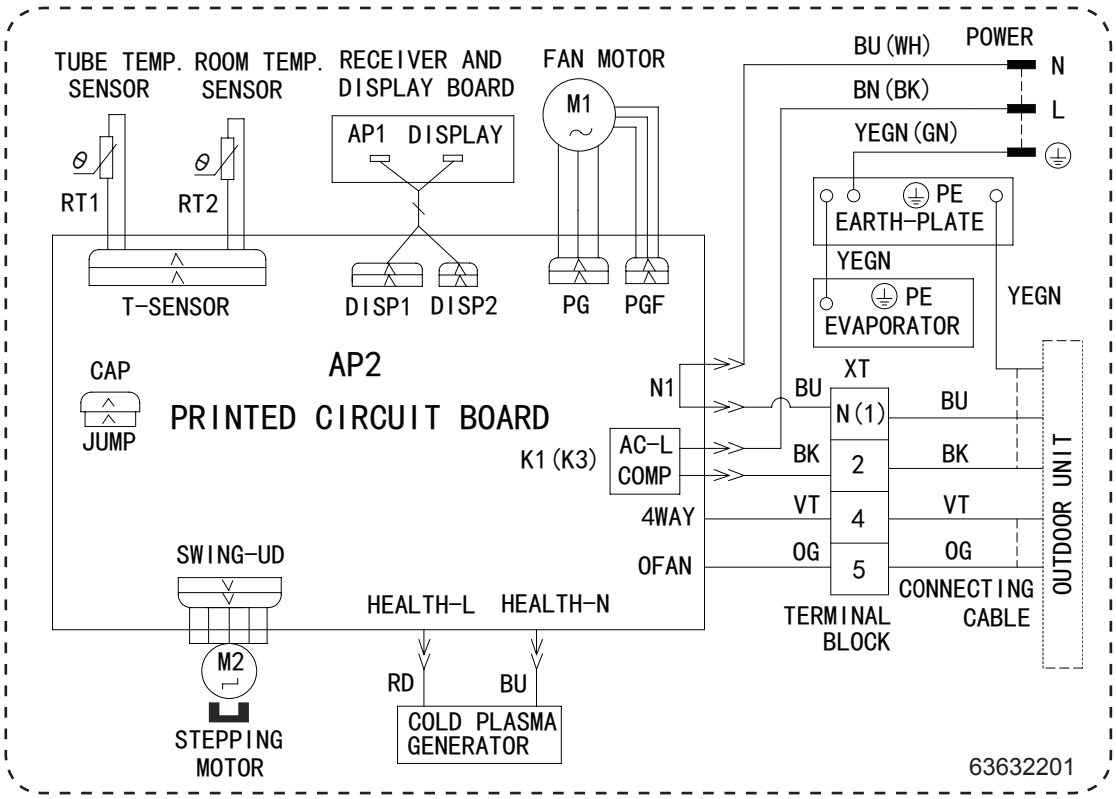
Note: Jumper cap is used to determine fan speed and the swing angle of horizontal lover for this model.

● Indoor Unit

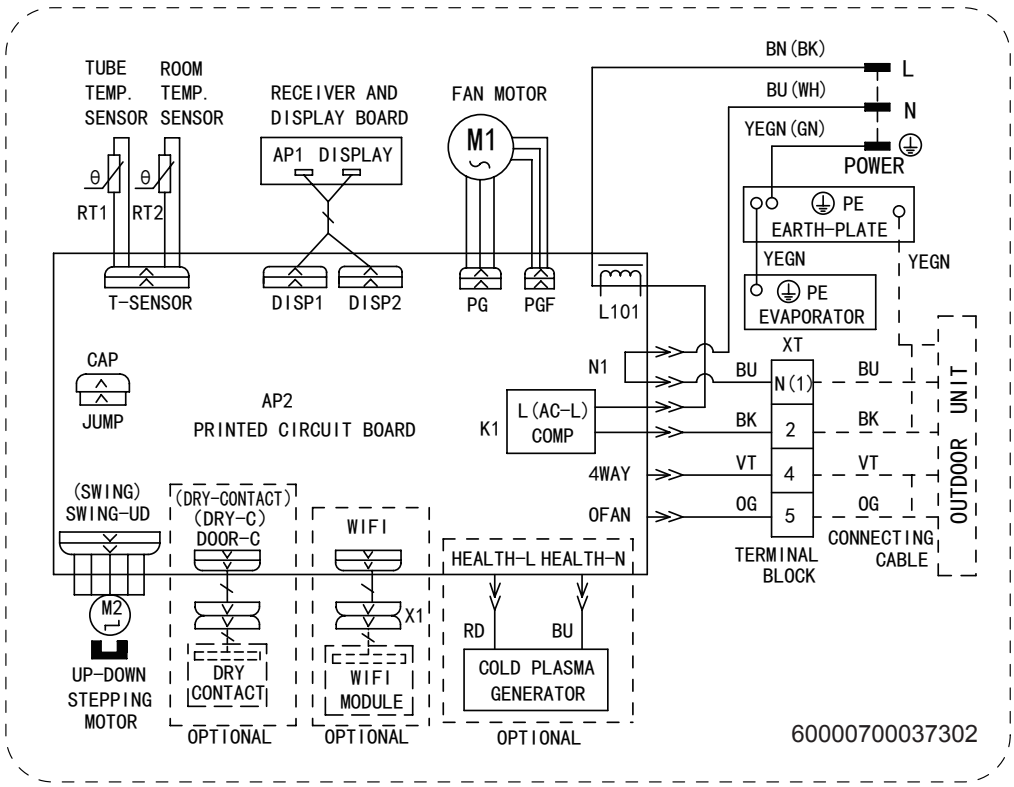
GWH07ACAXA-K3NNA3A/I GWH07ACAXA-K3NNA5A/I GWH09ACAXA-K3NNA5A/I(CA341N03400)
GWH09ACAXA-K3NNA3A/I GWH12ACCXB-K3NNA1A/I GWH12ACBXB-K3NNA5B/I(CA341N03100)
GWH12ACBXB-K3NNA3B/I GWH18ACCXD-K3NNA5B/I(CA341N03200) GWH18ACCXD-K3NNA3B/I



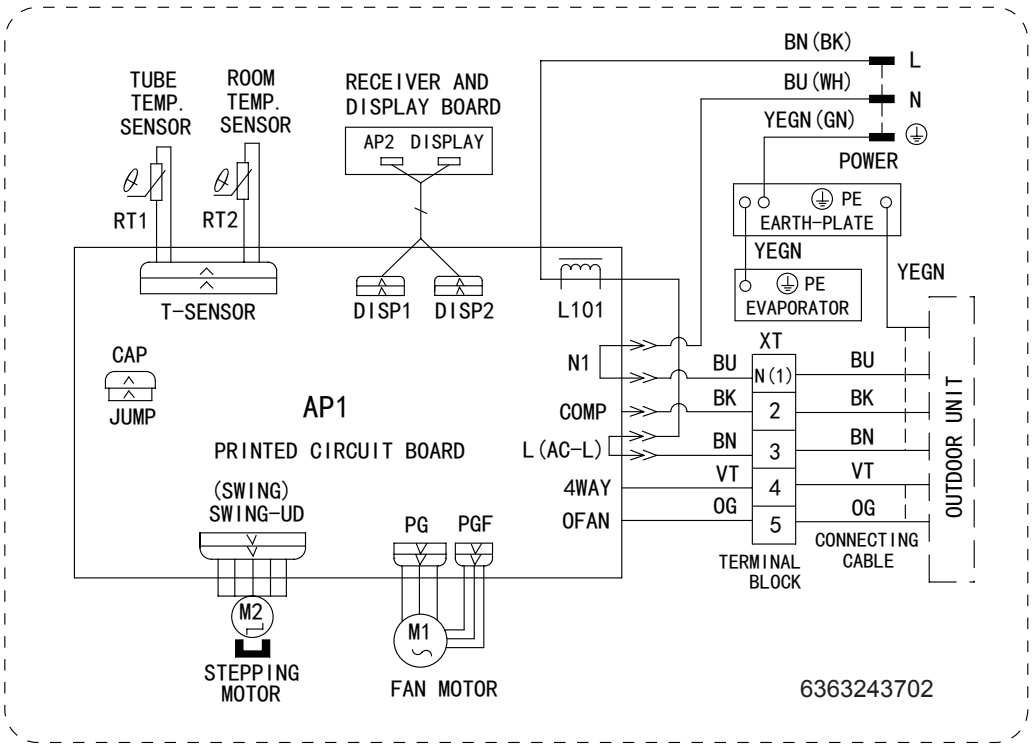
GWH07ACAXA-K3NNA1A/I GWH07ACAXA-K3NNA2A/I GWH09ACAXA-K3NNA2A/I GWH09ACAXA-K3NNA1A/I
GWH09ACAXA-K3NNA4A/I GWH12ACBXB-K3NNA5B/I GWH12ACBXB-K3NNA1B/I GWH12ACBXB-K3NNA4B/I
GWH18ACCXD-K3NNA1B/I GWH18ACCXD-K3NNA5B/I(CA341N03201) GWH18ACCXD-K3NNA2B/I
GWH18ACCXD-K3NNA4B/I GWH09ACAXA-K3NNA5A/I(CA341N03401) GWH12ACBXB-K3NNA5B/I(CA341N03101)
GWH12ACBXB-K3NNA2B/I



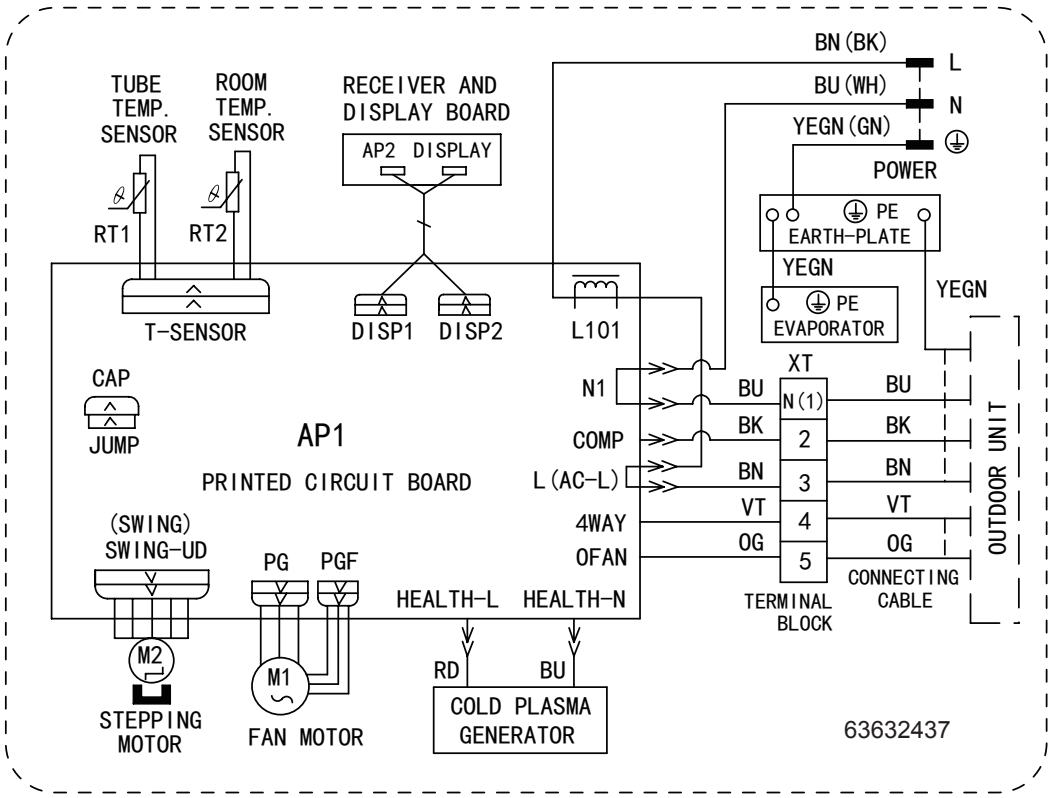
GWH18ACDXD-K3NNA1A/I GWH24ACDXE-K3NNA3A/I GWH24ACDXE-K3NNA5A/I(CA341N03000/CA341N03001)
GWH24ACDXE-K3NNA1A/I GWH24ACDXE-K3NNA2A/I GWH24ACDXE-K3NNA4A/I



GWH28ACEXF-K3NNA5A/I GWH28ACEXF-K3NNA3A/I

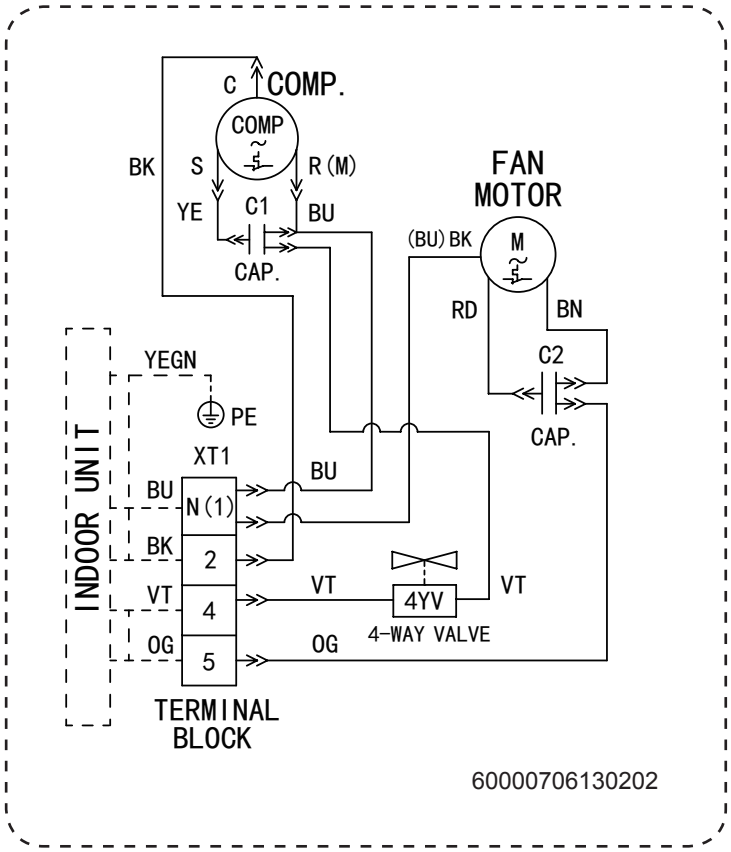


GWH28ACEXF-K3NNA1A/I

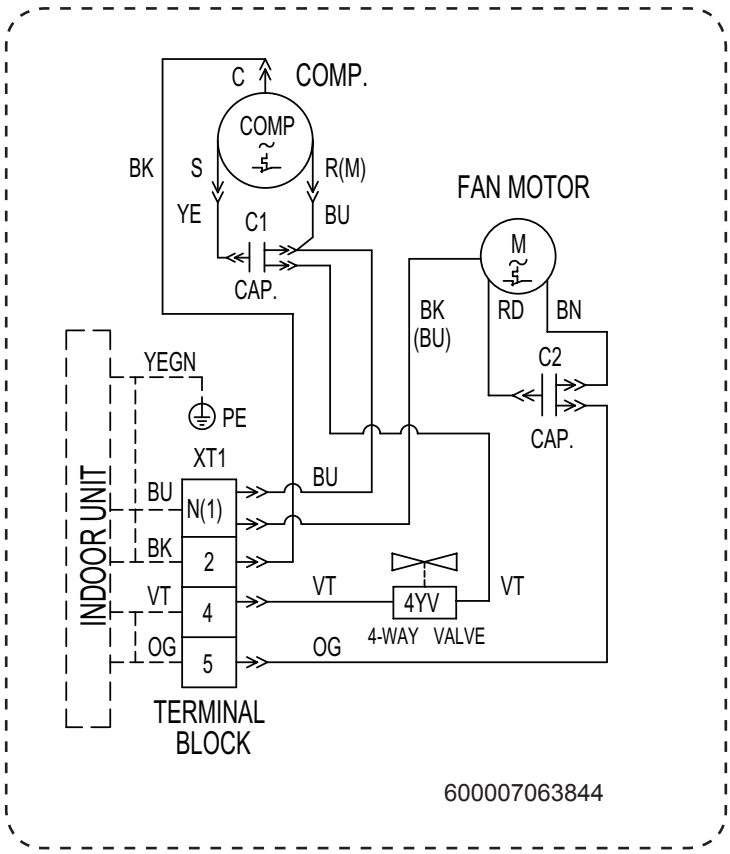


● Outdoor Unit

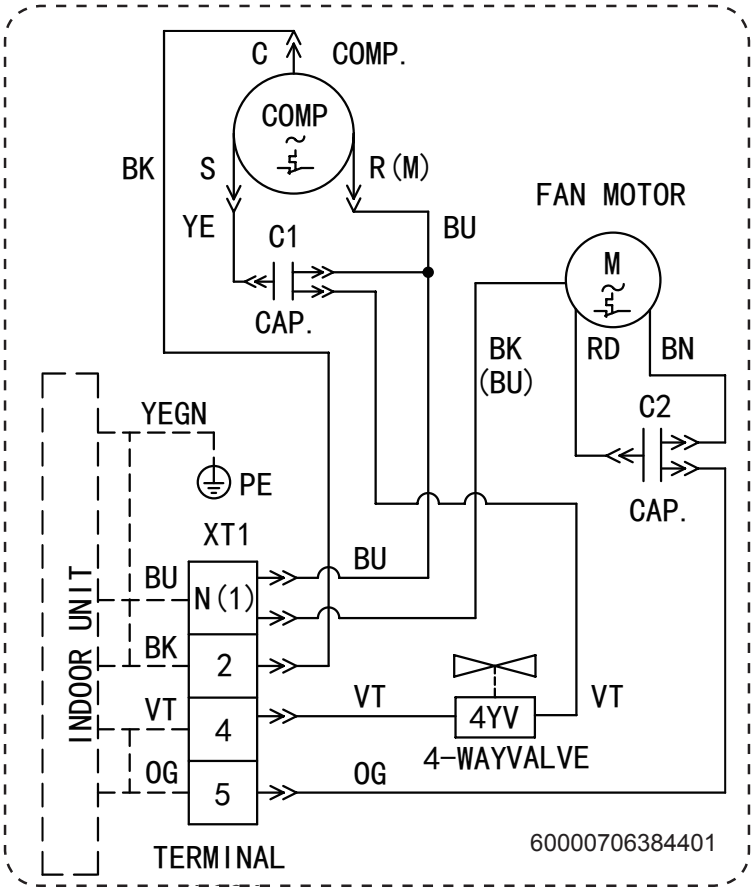
07/09/12K



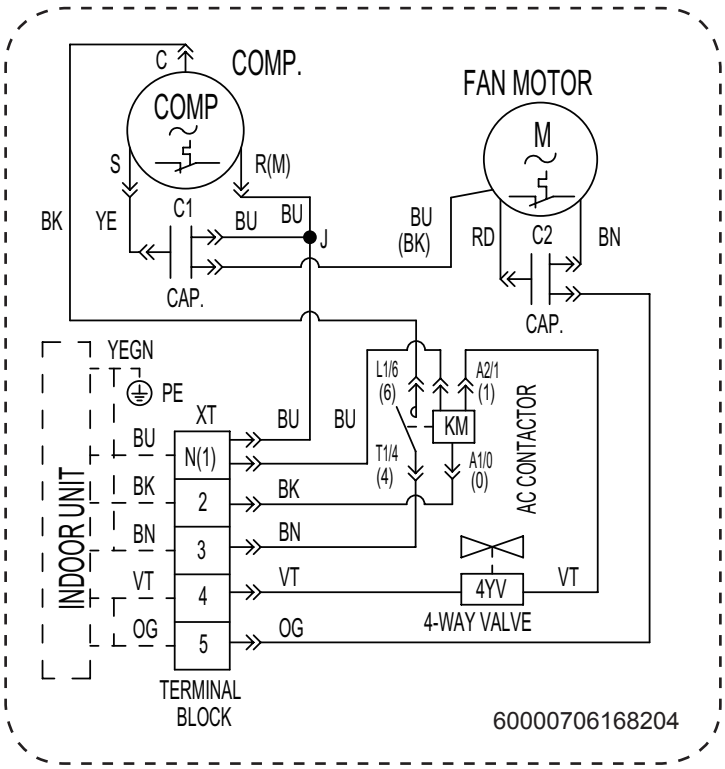
18K



24K



28K

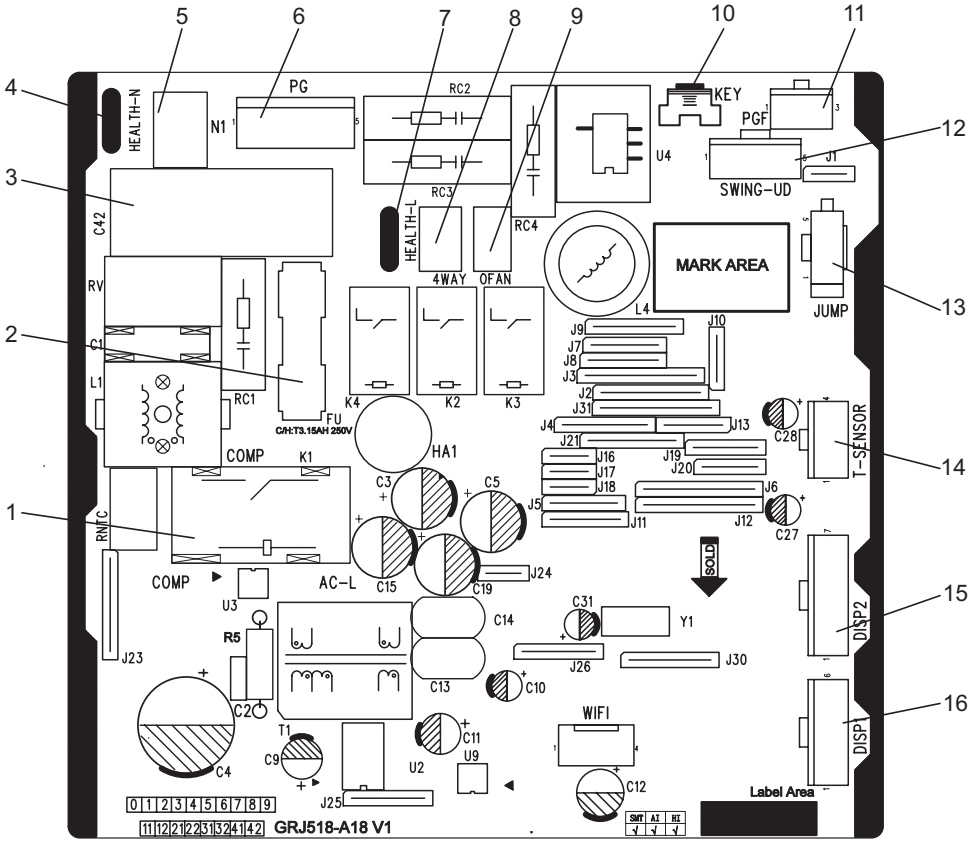


These wiring diagrams are subject to change without notice; please refer to the one supplied with the unit.

5.2 PCB Printed Diagram

Indoor Unit

07/09K
GWH12ACBXB-K3NNA5B/I GWH12ACBXB-K3NNA3B/I GWH12ACBXB-K3NNA1B/I GWH12ACBXB-K3NNA4B/I
GWH12ACBXB-K3NNA2B/I



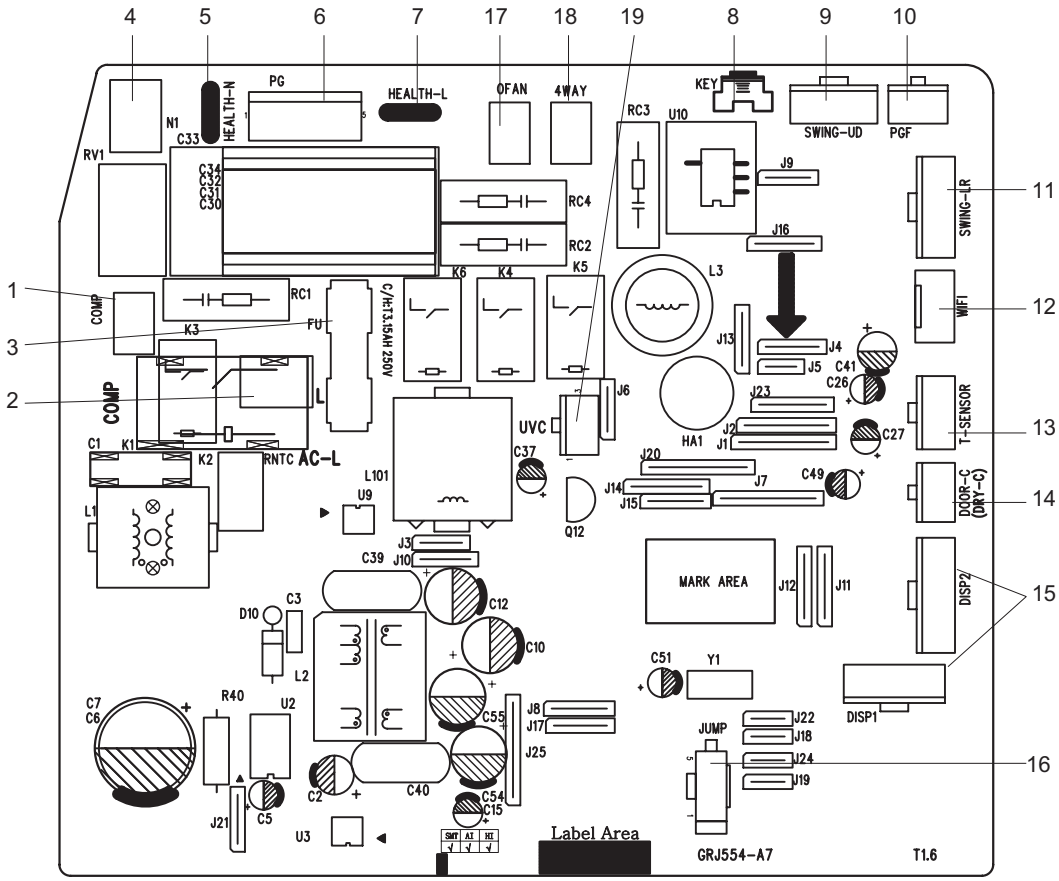
No.	Name
1	Wiring terminal of compressor
2	Terminal of live wire
3	Fuse
4	Fan capacitor
5	Neutral wire terminal of cold plasma
6	Terminal of neutral wire
7	Wiring terminal of PG motor
8	Live wire terminal for cold plasma
9	Wiring terminal of outdoor fan (heat pump unit)
10	Wiring terminal of 4-way valve (heat pump unit)

No.	Name
11	Auto button
12	Feedback wiring terminal of PG motor
13	Wiring terminal of up&down swing motor
14	Jumper cap
15	Wiring terminal of outer tube temperature sensor
16	Wiring terminal of indoor unit temperature sensor
17	Wiring terminal 2 for display receiving board
18	Wiring terminal 1 of display receiving board

24/28K

GWH12ACCXB-K3NNA1A/I

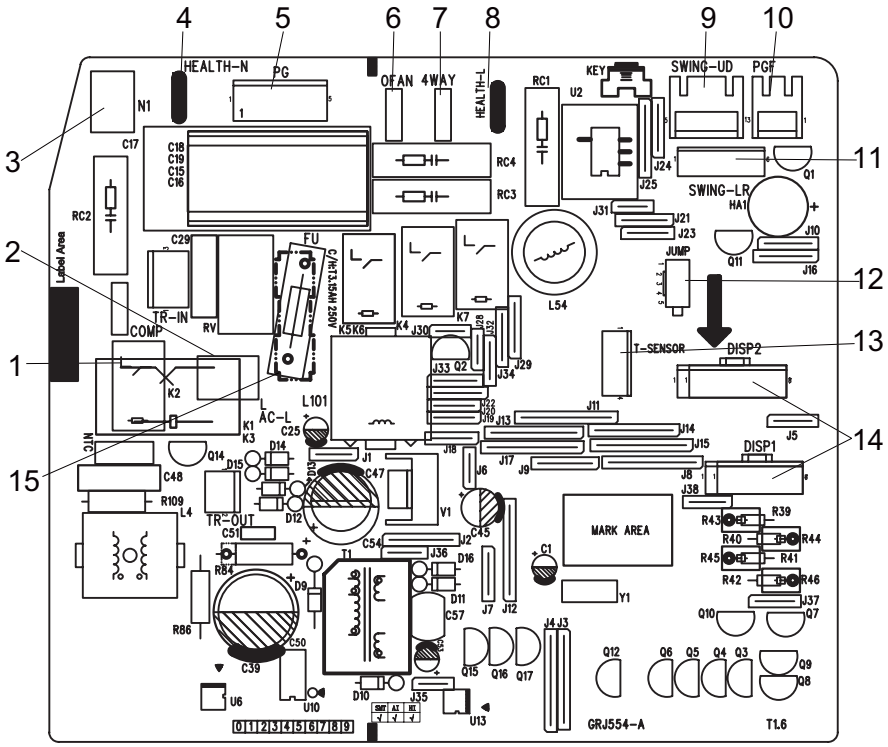
GWH18ACDXD-K3NNA1A/I



No.	Name
1	Compressor interface
2	Interface of live wire
3	Fuse
4	Neutral wire
5	Interface of health function neutral wire (only for the mode with this function)
6	Interface of PG motor
7	Interface of live wire of cold plasma (only for the mode with this function)
8	Auto button
9	Interface of up&down swing
10	Feedback interface of PG motor

No.	Name
11	Left&right swing interface
12	Needle stand for WiFi
13	Interface of temperature sensor
14	Interface of gate control
15	Interface of display board
16	Jumper cap
17	Interface of outdoor fan
18	Interface of 4-way valve
19	Interface of ultraviolet clean

GWH18ACCXD-K3NNA5B/I GWH18ACCXD-K3NNA3B/I GWH18ACCXD-K3NNA4B/I
GWH18ACCXD-K3NNA2B/I GWH18ACCXD-K3NNA1B/I



No.	Name
1	Compressor interface
2	Interface of power cord live wire
3	Interface of power cord neutral wire
4	Interface of cold plasma neutral wire (only for the mode with this function)
5	PG motor interface
6	Terminal of outdoor fan
7	Interface of 4-way valve (only for the mode with this function)
8	Interface of cold plasma live wire (only for the mode with this function)

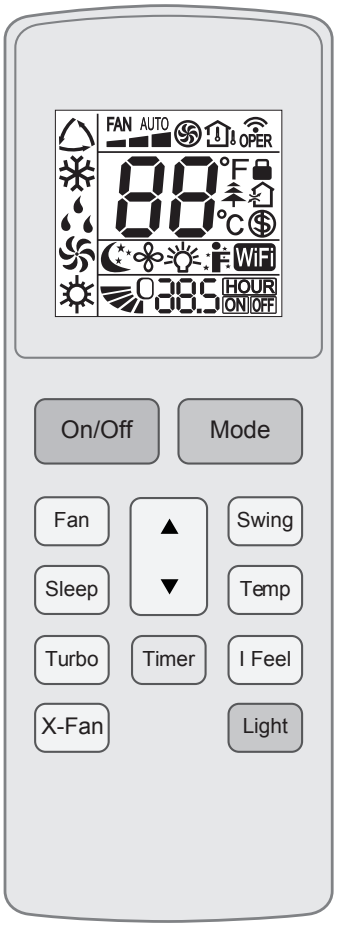
No.	Name
9	Up&down swing interface
10	PG motor feedback interface
11	Left&right swing interface
12	Jumper cap
13	Temperature sensor interface
14	Display board interface
15	Fuse

6. Function and Control

6.1 Remote Controller Introduction

Buttons on remote controller

YAW1F



Introduction for icons on display screen

	I feel
FAN AUTO	Set fan speed
	Turbo mode
	Send signal
Operation mode	Auto mode
	Cool mode
	Dry mode
	Fan mode
	Heat mode
	Sleep mode
	8℃ heating function
	Health mode
	Scavenging function
	X-FAN function
Temp. display type	Set temp.
	Indoor ambient temp.
	Outdoor ambient temp.
88	Set temperature
WiFi	WiFi function
88:5	Set time
ON OFF	TIMER ON / TIMER OFF
	Light
	Up & down swing
	Child lock

Introduction for buttons on remote controller

Notice:

● This is a general use remote controller. It could be used for the air conditioner with multifunction. For the functions which the model doesn't have, if press the corresponding button on the remote controller, the unit will keep the original running status.

● After putting through the power, the air conditioner will give out a sound. Power indicator " ⏻ " is ON. After that, you can operate the air conditioner by using remote controller.

● Under on status, pressing the button on the remote controller, the signal icon " ((•)) " on the display of remote controller will blink once and the air condition-er will give out a "di" sound, which means the signal has been sent to the air conditioner.

On/Off button

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

Mode button

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



Notice:

● Heat mode: Only for models with heating function.

Fan button

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

Notice:

● 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 andthe indoor fan will continue operation for a few minutesin order to dry the indoor unit even though you haveturned off the unit. After energization, X-FAN OFF isdefaulted. X-FAN is not available in AUTO, FAN or HEAT mode.
This function indicates that moisture on evaporator of indoor unit will be blowed 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.

▲▼ button

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

When setting Timer On or Timer Off, press "▲" or "▼" button to adjust the time.

Swing button

Press this button to set up & down swing angle.

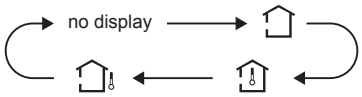
Sleep button

Under Cool, Dry or Heat mode, press this button to turn on Sleep function.

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

Temp button

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



Notice:

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

Turbo button

Under cool or heat mode, press this button to turnto quick cool or quick heat mode. " " icon isdisplayed on remote controller. Press this button again to exit turbo function and " " icon will disappear.

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.

Please put the remote controller near user when this function is set. Do not put the remote controller near the object of high temperature or low temperature in order to avoid detecting inaccurate ambient temperature. 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.

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~ 24 hours. 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 confirmer, press this button again to cancel timer.

X-Fan button

Press this button in COOL or DRY mode to turn on X-fan function.

When this function is started up, indoor fan will still operate at low fan speed for a while after turning off the unit by remote controller.

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 child lock

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

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

At unit OFF, press "Mode" and "▼" buttons sim-ultaneously to switch between °C and °F.

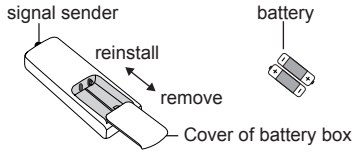
Combination of "TEMP" and "TIMER" buttons: About Energy-saving Function

Press "Temp" and "Timer" simultaneously in COOLmode 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 " " 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.

Notice:

● During operation, point the remote control signal sender at the receiving window on indoor unit.

● The distance between signal sender and receiving window should be no more than 8m, and there should be no obstacles between them.

● Signal may be interfered easily in the room where there is fluorescent lamp or wireless telephone; remote controller should be close to indoor unit during operation.

● Replace new batteries of the same model when replacement is required.

● When you 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.

6.2 Brief Description of Models and Functions

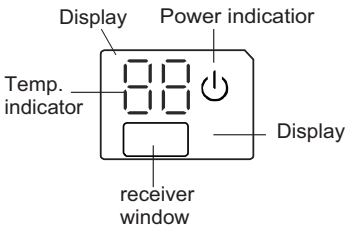
1. Summary

(1) Buzzer

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

(2) Display

◆ After energization, all icons will be displayed once. Operation icon is in red under standby status. After turning on the unit by remote controller, operation icon is bright and corresponding set operation mode icon will be displayed (Mode icon include: cooling, heating, drying).(These indicators is not available for some models.)



(3) Temperature parameter

◆ Indoor set temperature (Tpreset)

◆ Indoor ambient temperature (Tamb.)

◆ Inner tube temperature of indoor evaporator (Ttube)

2. Introduction of Basic Mode Function

◆ Once the compressor is energized, there should be a minimum interval of 3 mins between two start-ups.

◆ If the unit is with memory function and is off before power failure, the compressor can be restarted without an interval of 3 mins; if the

◆ unit is on before power failure, the compressor will be restarted with an interval of 3 mins.

Once compressor is started, it won't stop within 6 mins according to the change of room temp.

(1) Auto mode

① Operation condition and process for auto mode

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

◆ When Tamb≥26℃ , unit will be in cooling mode Ex-factory set temperature is 25℃

◆ Cooling and heating unit: When Tamb≤(19℃ +Tcompensation), unit will be in heating mode Tpreset=20℃ .

◆ Cooling only unit: When Tamb≤22℃ (or 72 ℉), unit will be in fan mode Tpreset=25℃ .

◆ For cooling and heating unit under condition that (19℃ +Tcompensation) ＜ Tamb ＜ 26℃ (For cooling only unit under condition that 22℃＜ Tamb ＜ 26℃), when unit is initially turned on in auto mode, it will operate according to auto fan mode. When unit is changed to auto mode from other modes, it will maintain its previous working status (If auto mode is turned on from drying mode, unit will operate according to auto fan mode).

② Protection function is same as that under each mode.

(2) Cooling mode

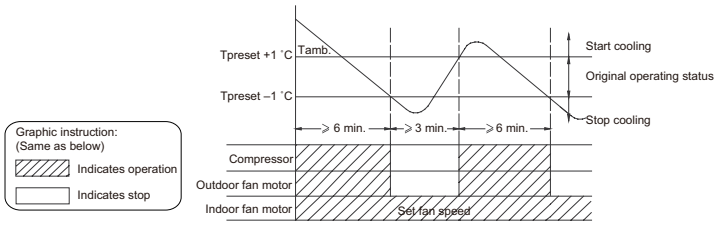
① Operation condition and process for cooling mode

◆ When Tamb. ≥Tset+1℃ , the system operates under cooling mode. In this case, the compressor, the ODU fan motor and the IDU fan motor operates at set speed.

◆ When Tamb. ≤Tset-1℃ , the compressor and the ODU fan motor stop, while the IDU fan motor operates at set speed.

◆ When Tset-1℃ <Tamb. <Tset+1℃ , the system will maintain its previous operation status.

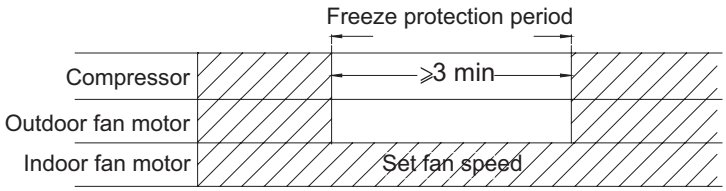
In cooling mode, the 4-way valve is de-energized (4-way valve is not available for cooling only unit). Temperature setting range is 16~30℃ .



② Protection function

◆ Freeze protection

During operation, when controller detected that Ttube≤0℃ for a consecutive period of time, the system enters into freeze protection. In that case, the compressor and the ODU fan stop operation, while the IDU operates at set fan speed. If freeze protection is released and the compressor has been out of operation for 3 mins, the unit will resume its previous operation status.



◆ Overcurrent protection (this protection function is not available for those models whose cooling capacity ≤12000Btu/h)

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

If overcurrent protection occurs for 6 times consecutively, and resume operation time won't exceed 6min every time, overcurrent protection information will be displayed. After turning off the unit, display won't be displayed.

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

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

◆ Locked protection to IDU fan motor

During operation of IDU fan motor, if controller detected that the rotation speed of IDU fan motor less than 300/min or stop rotation, the motor operates abnormally. In order to prevent damage to motor, controller will protect automatically, the system stops operation and blocked information of IDU fan motor will be displayed. After turning off the unit, display won't be displayed.

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

Please refer to maintenance part for display information and

disposal method for details.

(3) Drying mode

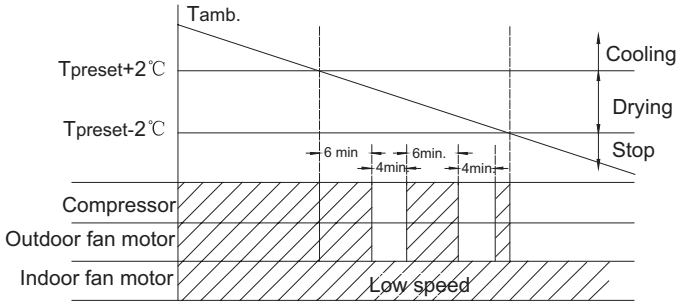
① Operation condition and process for drying mode

◆ When Tamb. >Tset+2℃ , the system starts drying and cooling. In this case, the compressor and the ODU fan motor operate, and the IDU fan motor operates at low speed.

◆ When Tset-2℃ ≤Tamb. ≤Tset+2℃ , the system will start drying. In this case, the IDU fan motor operates at low speed; the compressor and the ODU fan motor operate for 6 minutes and stop for 4 minutes in cycle.

◆ When Tamb.<Tset-2℃ , the compressor and the ODU fan motor stop, while the IDU fan motor runs at low speed.

In drying mode, the 4-way valve is de-energized (4-way valve is not available for cooling only unit); Temperature setting range is 16~30℃ . Fan speed can't be adjusted.



② Protection function

◆ Freeze protection

During dying and cooling operation, when the controller detected that Ttube≤0℃ for a period of time consecutively, the system will enter into freeze protection. In that case, the compressor and the ODU fan motor stops operation, while the IDU fan motor operates at low speed. When freeze protection is release and the compressor has stopped for 3min, the system will resume original operation.

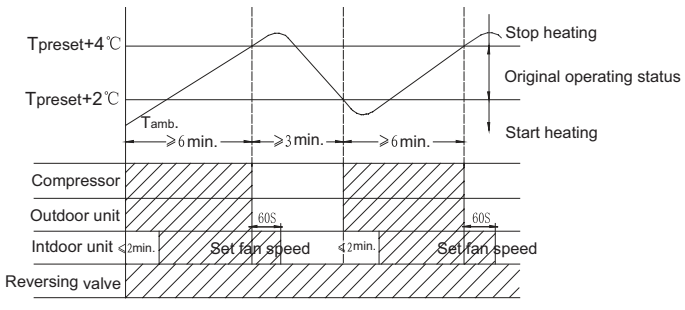
During drying operation, when the controller detected that Ttube≤0℃ for a period of time consecutively, the system enters into freeze protection. In that case, the compressor, the ODU fan motor stops operation, while the IDU fan motor operates at low speed. When freeze protection is release and the compressor has stopped for 4min, the system will resume original operation.

◆ Other protection is same as that under cooling mode.

(4) Fan mode

① Operation condition and process for fan mode

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



Temperature setting range is 16~30℃ .

② Protection function

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

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

① Operation conditioner and process for heating mode

◆ When Tamb.-Tcompensation≤Tpreset-1℃ , the unit operates under heating mode. Meanwhile, 4-way valve is energized, and compressor and outdoor fan start operation simultaneously. Indoor fan will be started up after delay for a while.

◆ When Tamb.-Tcompensation≥Tpreset+1℃ , compressor and outdoor fan stop operation. 4-way valve is energized all the time. Indoor fan will operate at set speed for a while and then blow residual heat to prevent overheating.

◆ When Tpreset-1℃ <Tamb.-Tcompensation<Tpreset+1℃ , the system will keep previous operation status.

② Defrosting condition and process

For ensusing heating effect, air conditioner will defrost automatically according to defrosting status on outdoor unit.When defrosting, heating icon will be on for a while and then off.

③ Protection function

◆ Overheating prevention protection

During operation, if controller detects that Ttube≥55℃ , outdoor fan will stop operation; When Ttube is resumed normally, the ODU fan motor resumes operation.

◆ Noise silencing protection

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

◆ Overcurrent protection (this protection function is not available for those models whose cooling capacity ≤12000Btu/h)

During operation process, if controller detected that system current exceeds the limit value for 3s consecutively(overcurrent), the system stops operation. About 3mins later, if overcurrent is released, the system will resume original operation. If overcurrent protection occurs for 6 times consecutively, and resume operation time won't exceed 6min every time, overcurrent protection information will be displayed. After turning off the unit, display won't be displayed.

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

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

◆ Locked protection to IDU fan motor

During operation of IDU fan motor, if controller detected that the rotation speed of IDU fan motor less than 300/min or stop rotation, the motor operates abnormally. In order to prevent damage to motor, controller will protect automatically, the system stops operation and blocked information of IDU fan motor will be displayed. After turning off the unit, display won't be displayed.

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

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

3. Other Control Function Introduction

(1)Timer function

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

① General timer: The precision of general timer is 0.5hour. 24hours circulated timer can't be set.

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

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

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

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

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

◆ Timer change:

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

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

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

(2) Emergency operation switch

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



(3) Sleep function

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

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

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

(4) Turbo function

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

(5) Dry function

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

(6) Auto fan speed control

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

(7) Up&down swing control

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

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

Horizontal louver has 7 swing statuses:

◆ Stay at position L: control by remote controller:

◆ Stay at position A: control by remote controller:

◆ Stay at position B: control by remote controller:

◆ Stay at position C: control by remote controller:

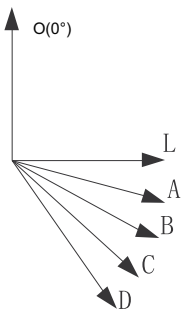
◆ Stay at position D: control by remote controller:

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

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

③ When turning off the unit, horizontal louver will close at position O.

④ Swing action is valid only when set swing command and the IDU fan motor is operating.



(8) Left&Right swing control(This function is only available for some model)

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

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

Vertical louver has 7 swing statuses:

◆ Stay at position L: control by remote controller:

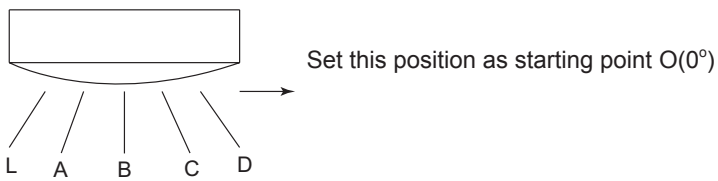
◆ Stay at position A: control by remote controller:

◆ Stay at position B: control by remote controller:

◆ Stay at position C: control by remote controller:

◆ Stay at position D: control by remote controller:

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



◆ Stop at any position between L and D (angles between L and D are equiangular), control by remote controller: OFF

③ When turning off the unit, vertical louver will close at position O.

④ Swing action is valid only when swing command has been set and the IDU fan motor is operating.

(9) Dual-8 nixie tube display

◆ When the air conditioner is turned on for the first time, dual-8 nixie tube defaulted to display current set temperature.

◆ When controller receives signal of display set temperature, dual-8 nixie tube displays set temperature. When received remote control signal is switched to indoor ambient temperature display status signal from other display status, dual-8 nixie tube will display indoor ambient temperature for 3-5s, and then turn back to display set temperature. If remote control to set other status, the display keeps the same.

◆ When air conditioner has a malfunction,dual-8 nixie tube will show relevant error code.

F1	Indoor ambient temperature sensor is open/short-circuited
F2	Indoor evaporator temperature sensor is open/short-circuited
F3	Outdoor ambient temperature sensor is open/short-circuited
F4	Outdoor condenser temperature sensor is open/short-circuited
F5	Outdoor discharge temperature sensor is open/short-circuited
H3	Overload protection for compressor
H6	Blocked protection of IDU fan motor
C5	Malfunction protection of jumper cap
E1	High pressure protection
E3	Low pressure protection of compressor
E4	High discharge temperature protection of compressor
E6	Communication malfunction
H4	Overload malfunction
E5	Overcurrent protection
U8	Zero-crossing inspection circuit malfunction of the IDU fan motor
E8	Overload protection
F0	Insufficient fluorine protection

◆ During auto defrosting of air conditioner, heating icon will ON for a while and then OFF, which is the normal phenomenon.

◆ If turn off light button, all display will be turned off.

(10) Memory function

① Power failure when turning on the unit

◆ Memory content: ON status, mode, up&down swing, light, set temperature, set fan speed, general timer, Fahrenheit/ Celsius

◆ General timer can be memorized. Time of timer is calculated again from energization.

◆ Clock timer can't be memorized.

② Power failure when turning off the unit

◆ Memory content: OFF status, mode, up&down swing, light, set temperature, set fan speed, general timer, Fahrenheit/ Celsius

◆ General timer can be memorized. Time of timer is calculated again from energization.

◆ Clock timer can't be memorized.

4. Special Function

(1) Healthy function (only for the mode with this function)

When the indoor fan is working, healthy function can be turned on or turned off by remote controller. When the controller has received the healthy order, the cold plasma generator will generate negative ions and positive ions and those ions will be released into the air in room. The healthy function is defaulted to be off.

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

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

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 Can't 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 Can't 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. When refrigerant leaks or requires discharge during installation, maintenance, or disassembly, it should be handled by certified professionals or otherwise in compliance with local laws and regulations.
2.Avoid contact between refrigerant and fire as it generates poisonous gas; Prohibit prolong the connection pipe by welding.
3. 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.
4. Make sure no refrigerant gas is leaking out when installation is completed.
5. If there is refrigerant leakage, please take sufficient measure to minimize the density of refrigerant.
6. 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.

Main Tools for Installation and Maintenance



Level meter



Measuring tape



Screw driver



Impact drill



Drill head



Electric drill



Electroprobe



Universal meter



Torque wrench



Open-end wrench



Inner hexagon spanner



Electronic leakage detector



Vacuum pump



Pressure meter



Pipe pliers



Pipe pliers



Pipe cutter



Pipe expander



Pipe bender



Soldering appliance



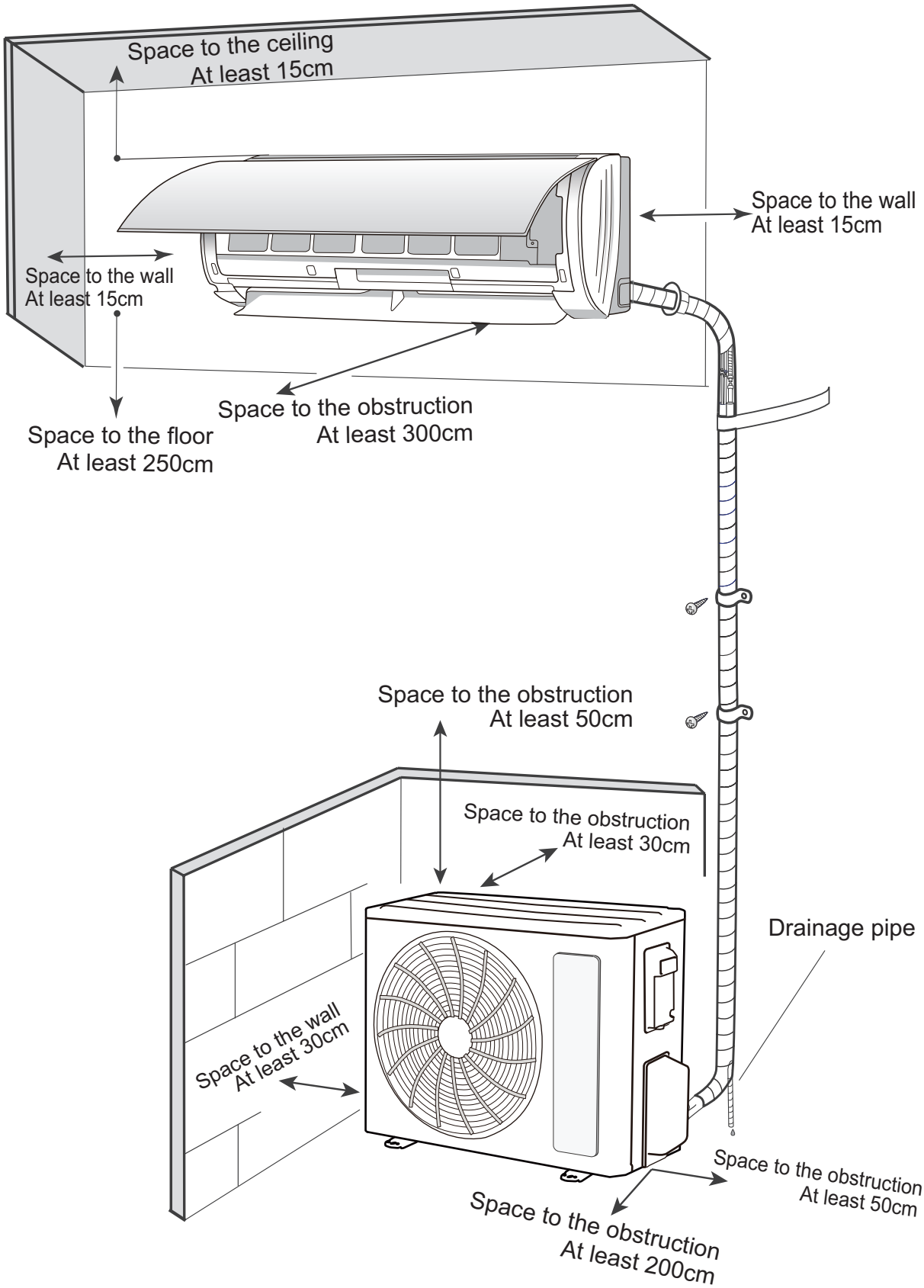
Refrigerant container



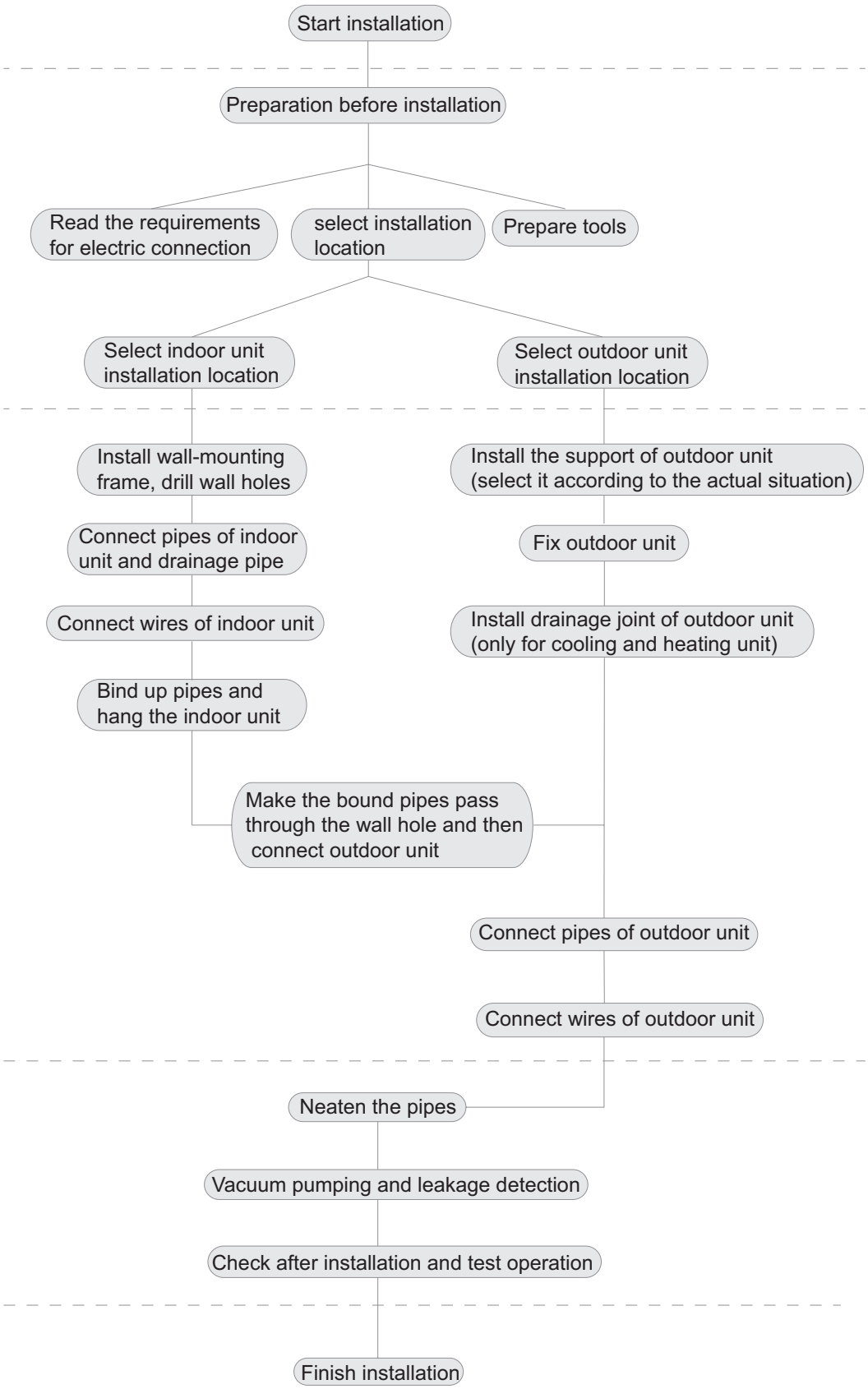
Electronic scale

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
1	Indoor unit
2	Outdoor unit
3	Connection pipe
4	Drainage pipe
5	Wall-mounting frame
6	Connecting cable(power cord)
7	Wall pipe
8	Sealing gum
9	Wrapping tape
10	Support of outdoor unit
11	Fixing screw
12	Drainage plug(cooling and heating unit)
13	Owners manual, remote controller

⚠ **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 nost be installed in the laundry.
(8) It's not allowed to be installed on the unstable or motive base structure(such as truck) or in the corrosive environment (such as chemical factory).

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 andwont 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 Electric Connection Requirement

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

2. Grounding Requirement:
(1) The air conditioner is the 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 Can't 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)

Model	Air switch capacity	Power cord
07/09/12K	10A	3G1.0
18K	16A	3G1.5
24/28K	25A	3G2.5

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 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,shown as below.(As show in Fig.1)

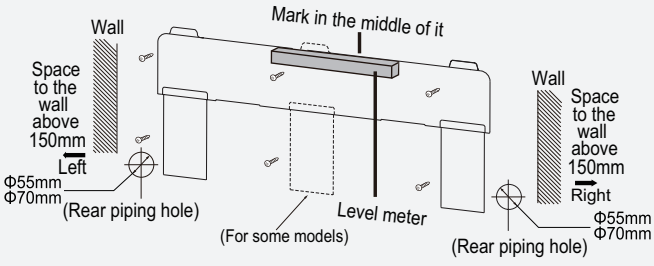


Fig.1

(2) Open a piping hole with the diameter of Φ55mm or Φ70mm 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 5-10°.(As show in Fig.2)

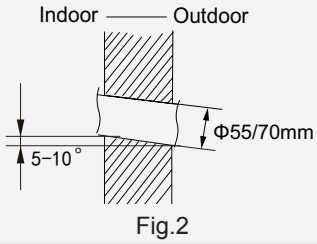


Fig.2

⚠ Note:

Pay attention to dust prevention and take relevant safety measures when opening the hole.

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)

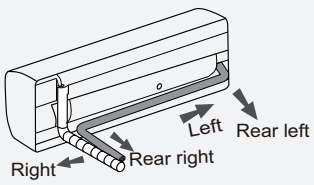


Fig.3

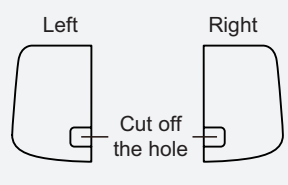


Fig.4

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)

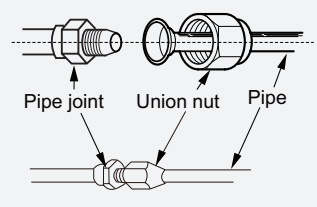


Fig.5

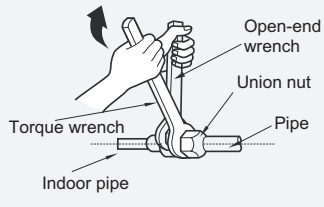


Fig.6

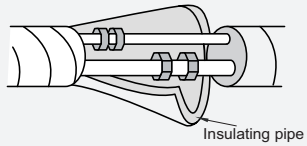


Fig.7

Refer to the following table for wrench moment of force:

Piping size	Tightening torque(N·m)
1/4"	15~20
3/8"	30~40
1/2"	45~55
5/8"	60~65
3/4"	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)

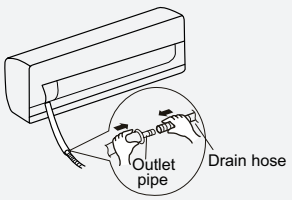


Fig.8

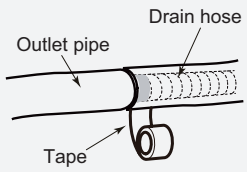


Fig.9

⚠ 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)

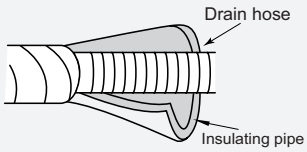


Fig.10

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)

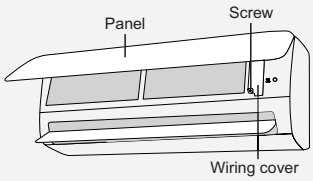


Fig.11

(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)

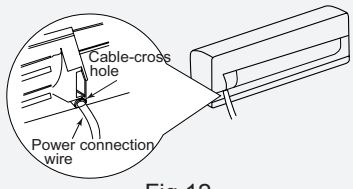


Fig.12

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

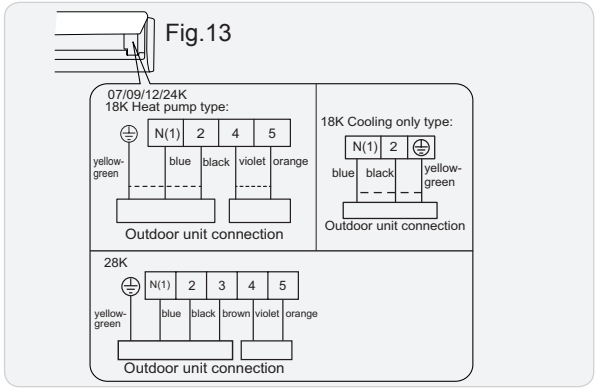


Fig.13

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.

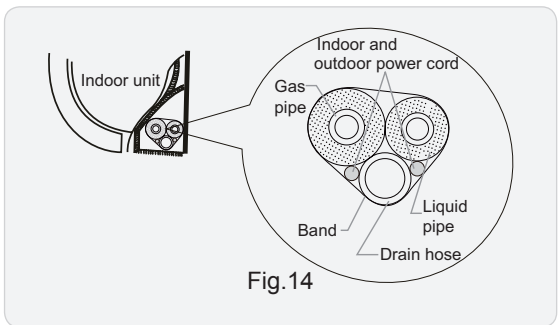


Fig.14

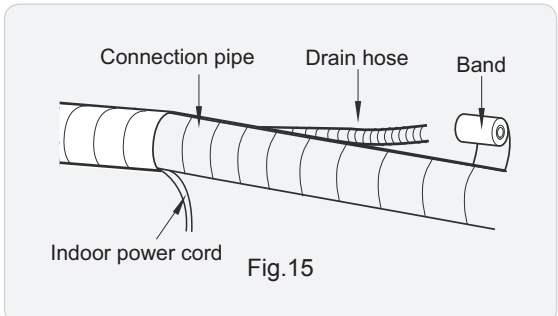


Fig.15

⚠ Note:

(1) The power cord and control wire Can't be crossed or winding.
(2) The drain hose should be bound at the bottom.

9. Hang the Indoor Unit

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

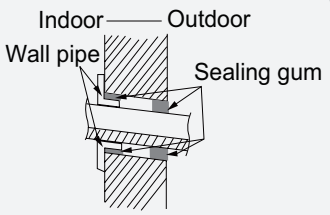


Fig.16

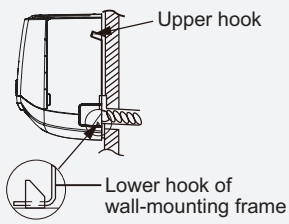


Fig.17

⚠ Note:

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

8.6 Installation of Outdoor unit

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

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

⚠ Note:

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

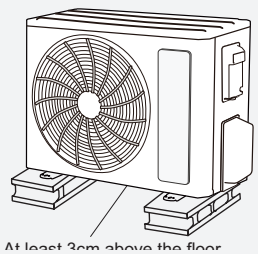


Fig.18

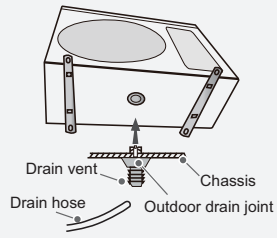


Fig.19

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)

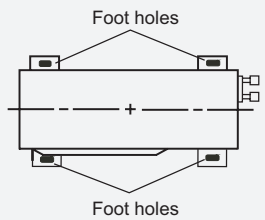


Fig.20

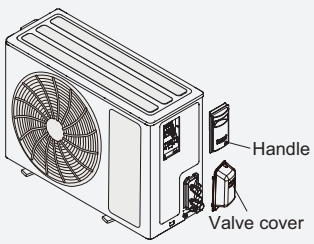


Fig.21

4. Connect Indoor and Outdoor Pipes

(1) Remove the screws on the big handle and valve cover of outdoor unit, then remove them.(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)

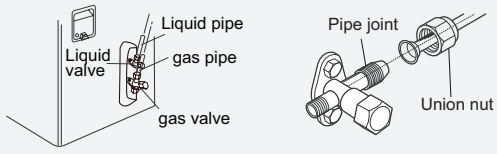


Fig.22

(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:

Piping size	Tightening torque(N·m)
1/4"	15~20
3/8"	30~40
1/2"	45~55
5/8"	60~65
3/4"	70~75

5. Connect Outdoor Electric Wire

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

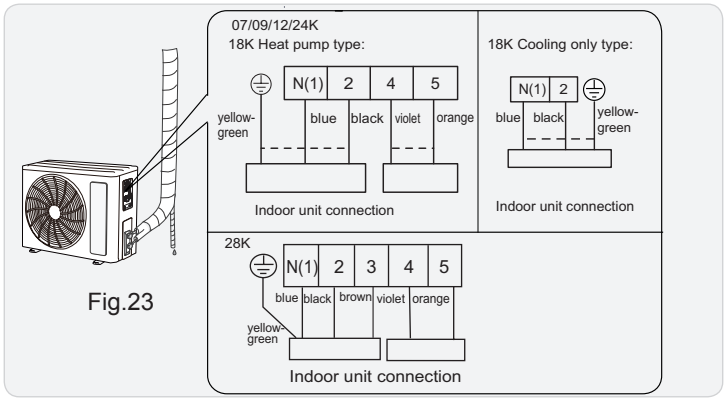


Fig.23

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

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

⚠ Note:

(1) After tightening the screw, pull the power cord slightly to check if it is firm.

(2) Never cut the power connection wire to prolong or shorten the distance.

6. Neaten the Pipes

(1) The pipes should be placed along the wall, bent reasonably and hidden possibly. Min. semidiameter of bending the pipe is 10cm.

(2) If the outdoor unit is higher than the wall hole, you must set a U-shaped curve in the pipe before pipe goes into the room, in order to prevent rain from getting into the room.(As show in Fig.24)

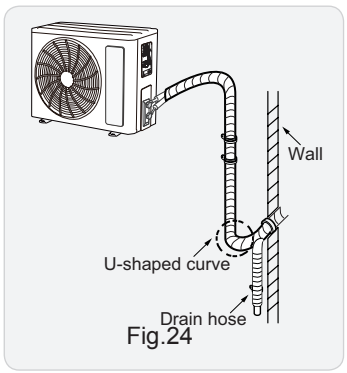


Fig.24

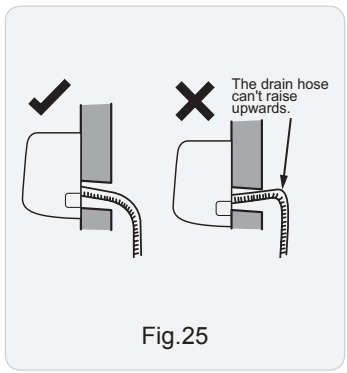


Fig.25

⚠ Note:

(1) The through-wall height of drain hose shouldnt be higher than the outlet pipe hole of indoor unit.(As show in Fig.25)

(2) Slant the drain hose slightly downwards. The drain hose Can't be curved, raised and fluctuant, etc.(As show in Fig.26)

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

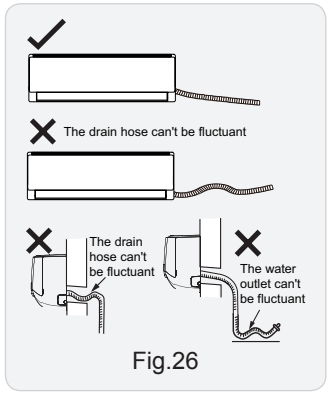


Fig.26

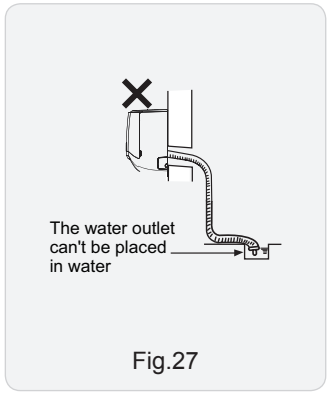


Fig.27

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)

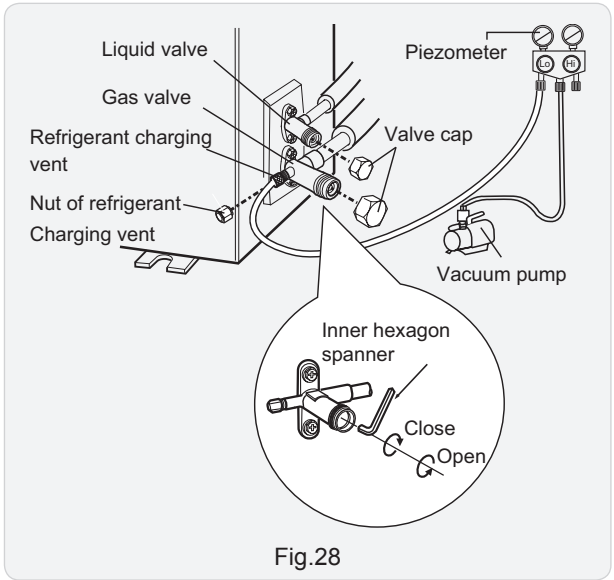


Fig.28

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, there's a leakage.

8.8 Check after Installation and Test operation

1. Check after Installation

Check according to the following requirement after finishing installation.

NO.	Items to be checked	Possible malfunction
1	Has the unit been installed firmly?	The unit may drop, shake or emit noise.
2	Have you done the refrigerant leakage test?	It may cause insufficient cooling (heating) capacity.
3	Is heat insulation of pipeline sufficient?	It may cause condensation and water dripping.
4	Is water drained well?	It may cause condensation and water dripping.
5	Is the voltage of power supply according to the voltage marked on the nameplate?	It may cause malfunction or damage the parts.
6	Is electric wiring and pipeline installed correctly?	It may cause malfunction or damage the parts.
7	Is the unit grounded securely?	It may cause electric leakage.
8	Does the power cord follow the specification?	It may cause malfunction or damage the parts.
9	Is there any obstruction in air inlet and air outlet?	It may cause insufficient cooling (heating) 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 Can't start cooling.

9. Maintenance

9.1 Error Code List

No.	Malfunction Name	Display Method of Indoor Unit Dual-8 Code Display	A/C status	Possible Causes
1	Indoor ambient temperature sensor is open/short- circuited	F1	The unit will stop operation as it reaches the temperature point. During cooling and drying operation, except indoor fan operates, other loads （such as compressor, outdoor fan, 4-way valve） stop operation; During heating operation, the complete unit stops operation.	1. The wiring terminal between indoor ambient temperature sensor and controller is loosened or poorly contacted; 2. There's short circuit due to trip-over of the parts on controller; 3.Indoor ambient temperature sensor is damaged (Please check it by referring to the resistance table for temperature sensor) 4. Main board is broken.
2	Indoor evaporator temperature sensor is open/short-circuited	F2	The unit will stop operation as it reaches the temperature point. During cooling and drying operation, except indoor fan operates, other loads stop operation; During heating operation, the complete unit stops operation.	1. The wiring terminal between indoor evaporator temperature sensor and controller is loosened or poorly contacted; 2. There's short circuit due to the trip-over of the parts on controller; 3.Indoor evaporator temperature sensor is damaged (Please check it by referring to the resistance table for temperature sensor) 4. Main board is broken.
3	Blocked protection of IDU fan motor	H6	IDU fan, ODU fan, compressor and electric heat tube stop operation. Horizontal louver stops at the current position.	1. The feedback terminal of PG motor is not connected tightly. 2. The control terminal of PG motor is not connected tightly. 3. Fan blade rotates unsmoothly. 4. Malfunction of motor 5. Main board is broken.
4	Malfunction protection of jumper cap	C5	Operation of remote controller or control panel is available, but the unit won't act.	1. There's not jumper cap on the main board. 2. Jumper cap is not inserted properly and tightly. 3. Jumper cap is damaged. 4. Controller is damaged.
5	Zero-crossing inspection circuit malfunction of the IDU fan motor	U8	Operation of remote controller or control panel is available, but the unit won't act.	1. Quick de-energization and energization. Wrong judgement by the controller because the electric-discharging of capacitor is slow. 2. Zero-crossing inspection circuit of main board for controller is abnormal.
6	Outdoor ambient temperature sensor is open/short-circuited	F3	The unit will stop operation as it reaches the temperature point. During cooling and drying operation, compressor stops and indoor fan operates; During heating operation, the complete unit stops operation.	1. The wiring terminal between outdoor ambient temperature sensor and controller is loosened or poorly contacted; 2. There's short circuit due to the trip-over of the parts on controller; 3.Outdoor ambient temperature sensor is damaged (Please check it by referring to the resistance table for temperature sensor) 4. Main board is broken.
7	Outdoor condenser temperature sensor is open/short-circuited	F4	The unit will stop operation as it reaches the temperature point. During cooling and drying operation, compressor stops and indoor fan operates; During heating operation, the complete unit stops operation.	1. The wiring terminal between outdoor condenser temperature sensor and controller is loosened or poorly contacted; 2. There's short circuit due to the trip-over of the parts on controller; 3.Outdoor condenser temperature sensor is damaged (Please check it by referring to the resistance table for temperature sensor) 4. Main board is broken.

No.	Malfunction Name	Display Method of Indoor Unit	A/C status	Possible Causes
		Dual-8 Code Display		
8	Outdoor discharge temperature sensor is open/ short-circuited	F5	The unit will stop operation as it reaches the temperature point. During cooling and drying operation, the compressor stops operation while IDU fan motor operates; During heating operation, the heating fan motor operates according to the conditions of blowing residual heat.	1. The wiring terminal between outdoor condenser temperature sensor and maiboard is loosened or poorly contacted. 2. There's short circuit due to trip-over of the parts on maiboard. 3. Outdoor condenser temperature sensor is damaged (Please check it by referring to the resistance table for temperature sensor). 4. Mainboard is broken.
9	High pressure protection	E1	During cooling and drying operation, except indoor fan operates, all loads stop operation. During heating operation, if it is inverter unit, the complete unit stops; if it is floor standing unit, the complete unit stops and operation of remote controller or controller is unavailable.	1. The main board and the display panel are not connected well. 2. The OVC terminal on main board is not connected well with the high pressure switch on the complete unit. 3. The wiring of high pressure switch is loosened. 4. Refrigerant is superabundant; 5. Poor heat exchange (including blocked heat exchanger and bad radiating environment); 6. Ambient temperature is too high; (if it is 3-phase unit, the high pressure protection may be caused by overcurrent protection due to this reason) 7. The supply voltage is abnormal (if it is 3-phase unit, the high pressure protection may be caused by overcurrent protection due to this reason) 8. The air intake and air discharge at indoor / outdoor heat exchanger are not smooth. The air cycle is short circuited. 9. Filter and heat exchange fins of indoor/ outdoor units are blocked. 10. The system pipeline is blocked. 11. The gas valve and liquid valve for outdoor unit are not completely opened. 12. The OVC input is at high level.
10	Low pressure protection of compressor	E3	The complete unit stops	1. The main board and display panel are not connected well. 2. The LPP terminal on the main board is not connected well with the high pressure switch on the complete unit. 3. The wiring of the high pressure switch is loosened. High pressure switch is damaged or poorly contacted. 4. Insufficient or leaking out refrigerant. 5. The LPP input is at high level.
11	High discharge temperature protection of compressor	E4	During cooling and drying operation, compressor and outdoor fan stop while indoor fan operates. During heating operation,all loads stop.	1. Abnormal system (e.g.: blockage, etc) 2. Abnormal rotation speed of outdoor motor (cooling) 3. Abnormal air intake (cooling) 4. System is normal, but the compressor discharge temperature sensor is abnormal or poorly contacted.

No.	Malfunction Name	Display Method of Indoor Unit Dual-8 Code Display	A/C status	Possible Causes
13	Communi-cation malfunction	E6	During cooling operation, compressor stops while indoor fan motor operates. During heating operation, the complete unit stops.	1. The communication line is not connected tightly or poorly contacted. Poor contact of any line may cause communication malfunction. 2. The match between main board and display panel is incorrect. Indoor and outdoor unit boards are matched incorrectly. 3. Incorrect wire connection. 4. Controller is damaged.
14	Overload malfunction	E8	The entire unit stops.	1. Indoor and outdoor heat exchanger is too dirty? Or air inlet/outlet is blocked? 2. Fan motor doesn't work at a normal fan speed; fan speed is too low or the fan doesn't run. 3. Compressor operates normally or not? Is there any abnormal noise or oil leak? Casing is too hot? 4. System is blocked inside? (Dirt blockage? Ice blockage? Oil blockage? Y-valve is not fully open?) 5. Main board temperature sensor detects wrongly.
15	Overload protection for compressor	H3	The entire unit stops.	1. Outdoor and indoor heat exchangers are too dirty or the air inlet/outlet is blocked. 2. Fan motor doesn't work at a normal fan speed; fan speed is too low or the fan doesn't run. 3. Compressor doesn't work normally. Strange noise or leakage occurs. Temperature of the shell is too high. 4. System is blocked inside(dirt block, ice block, oil block, Y-valve not fully open). 5. High pressure switch is abnormal 6. The refrigerant is leaking and cause overheating protection to compressor
16	Defrosting	Heating indicator off for 0.5s and then blinks for 10s	Not the error code. It’s the status code for the operation.	

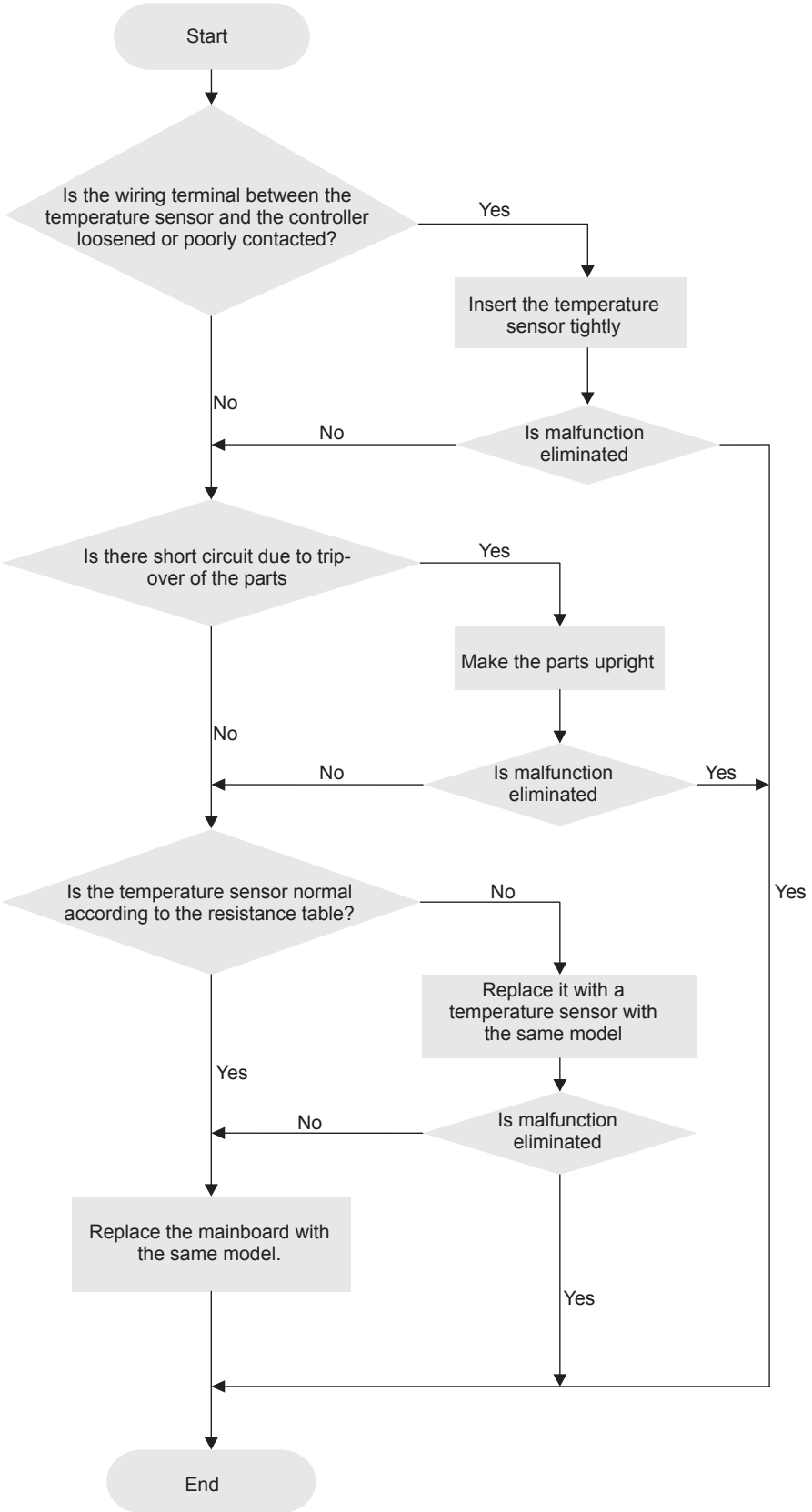
9.2 Procedure of Troubleshooting

1. Malfunction of Temperature Sensor F1, F2

Main detection points:

(1) connection terminal (2) temperature sensor (3) main board

Malfunction diagnosis process:

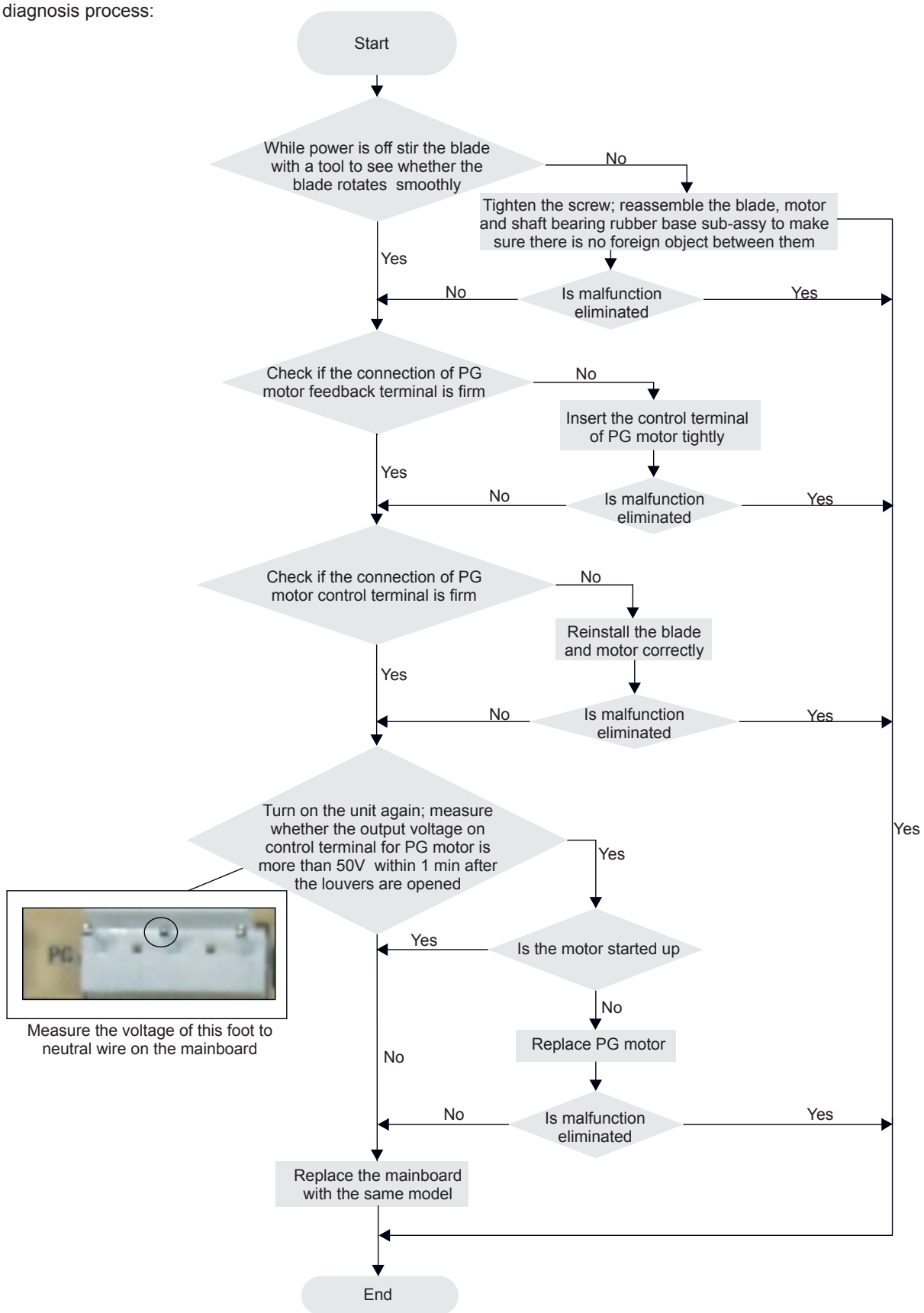


2. Malfunction of Blocked Protection of IDU Fan Motor H6

Main detection points:

- Smoothlyls the control terminal of PG motor connected tightly?
- Smoothlyls the feedback interface of PG motor connected tightly?
- The fan motor can't operate?
- The motor is broken?
- Detectioncircuit of the mainboard is defined abnormal?

Malfunction diagnosis process:

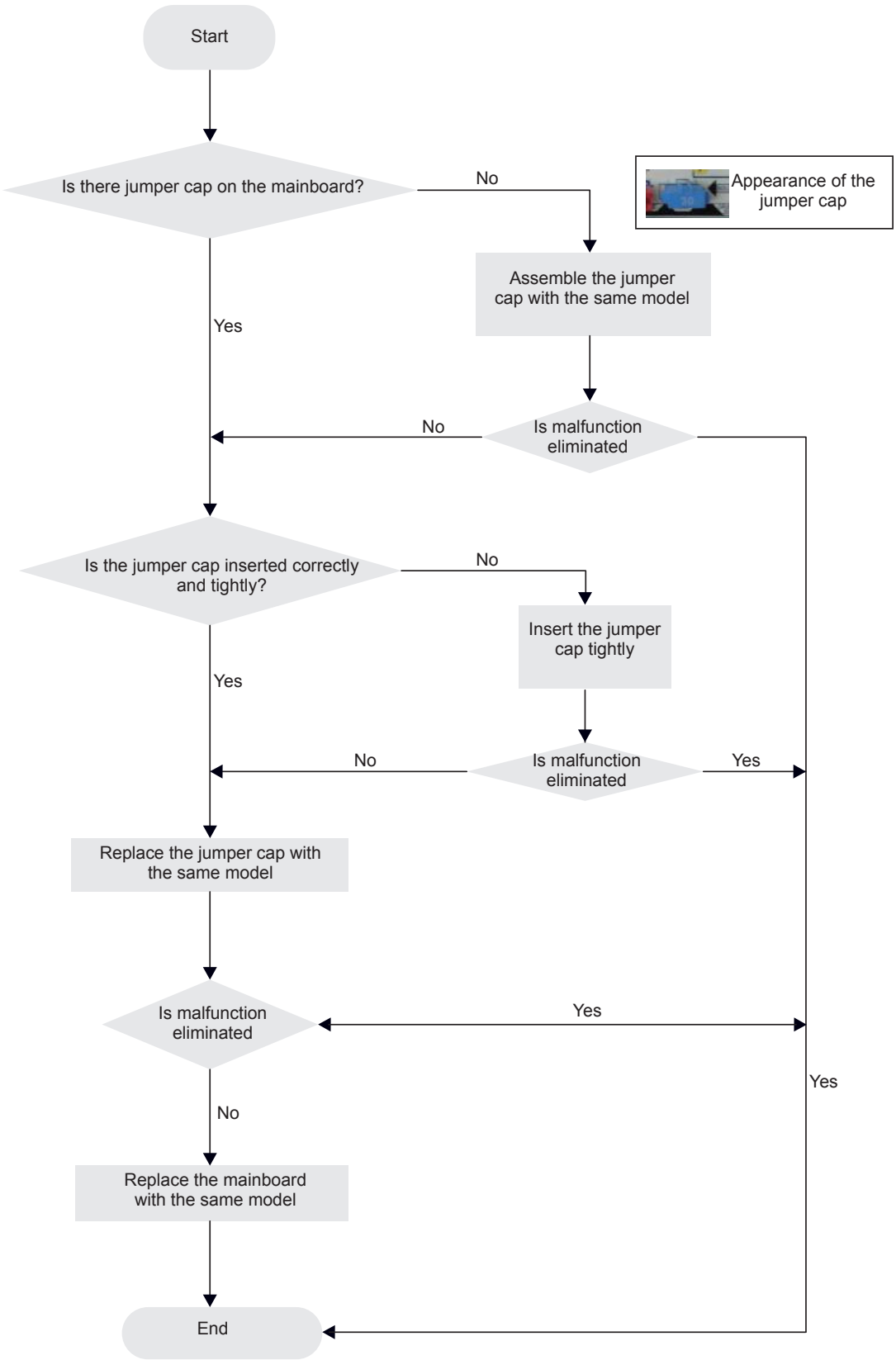


3. Malfunction of Protection of Jumper Cap C5

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:

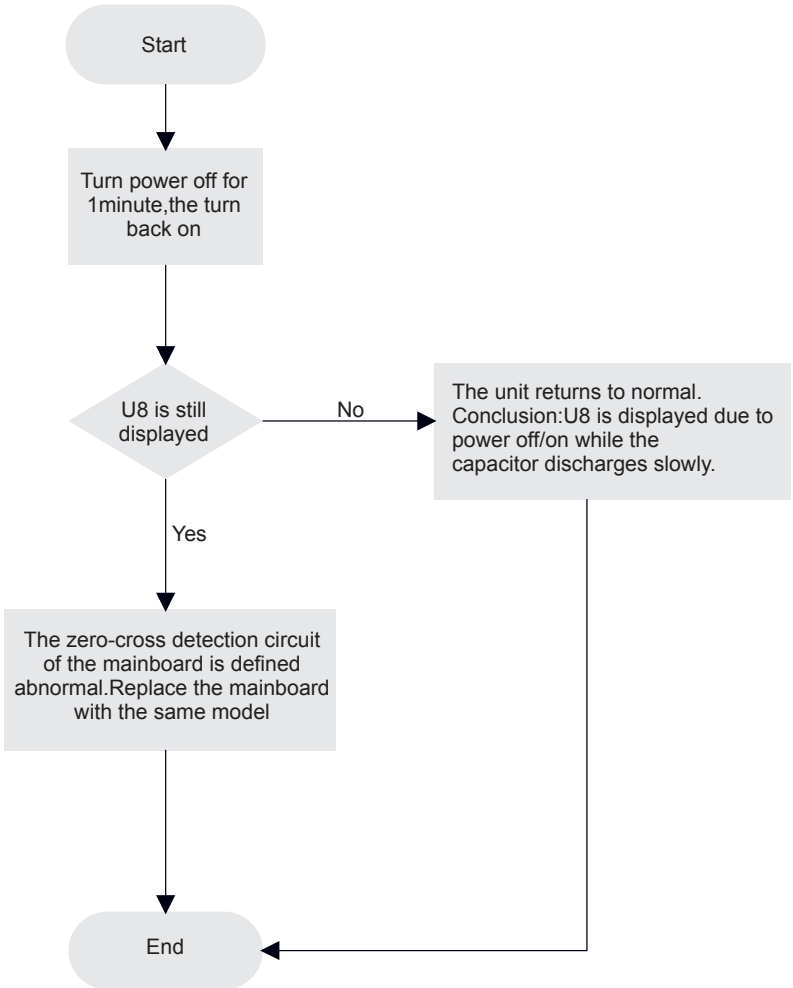


4. Malfunction of Zero-crossing Inspection Circuit Malfunction of the IDU Fan Motor U8

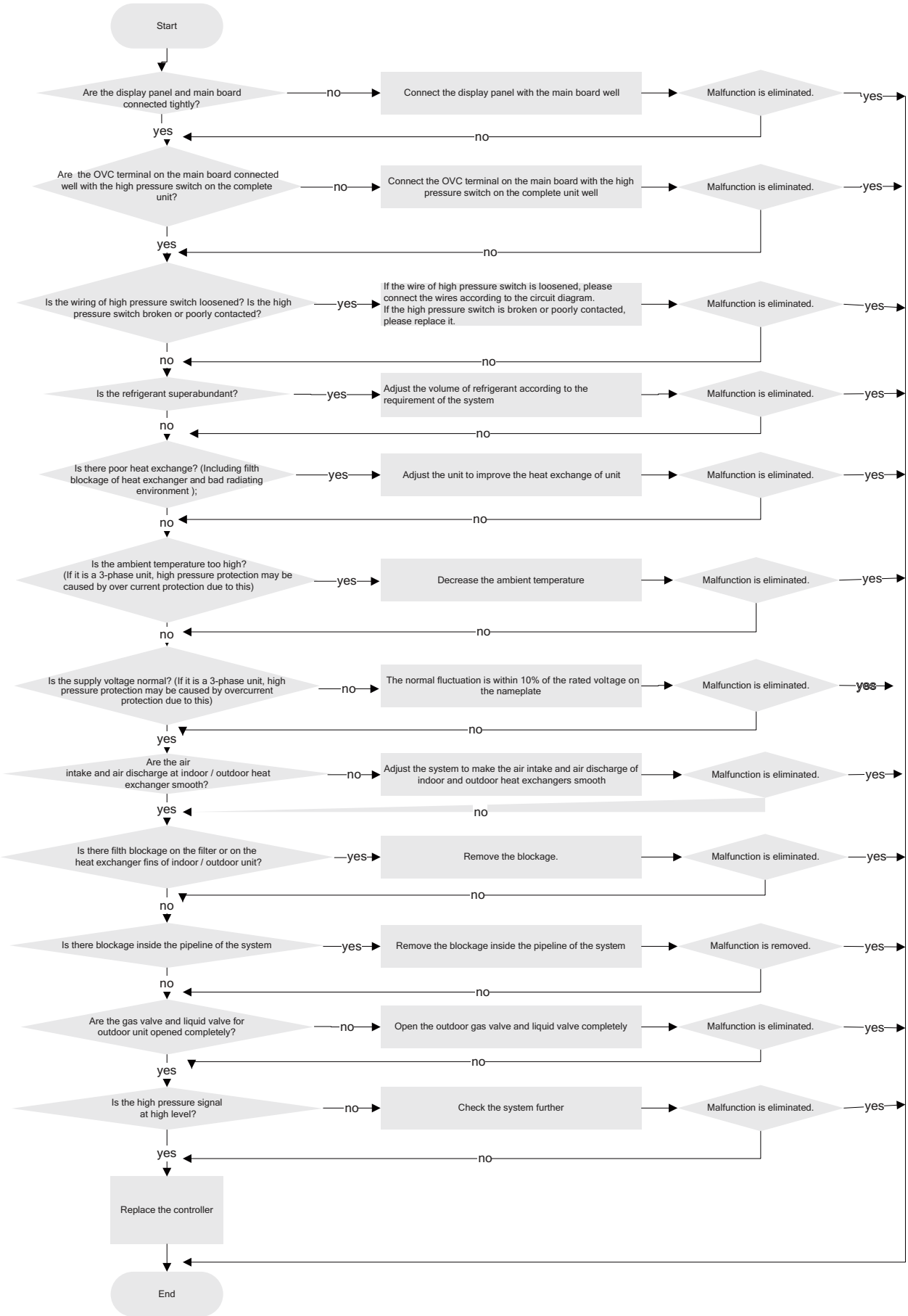
Main detection points:

- Instant energization afte de-energization while the capacitordischarges slowly?
- The zero-cross detectioncircuit of the mainboard is defined abnormal?

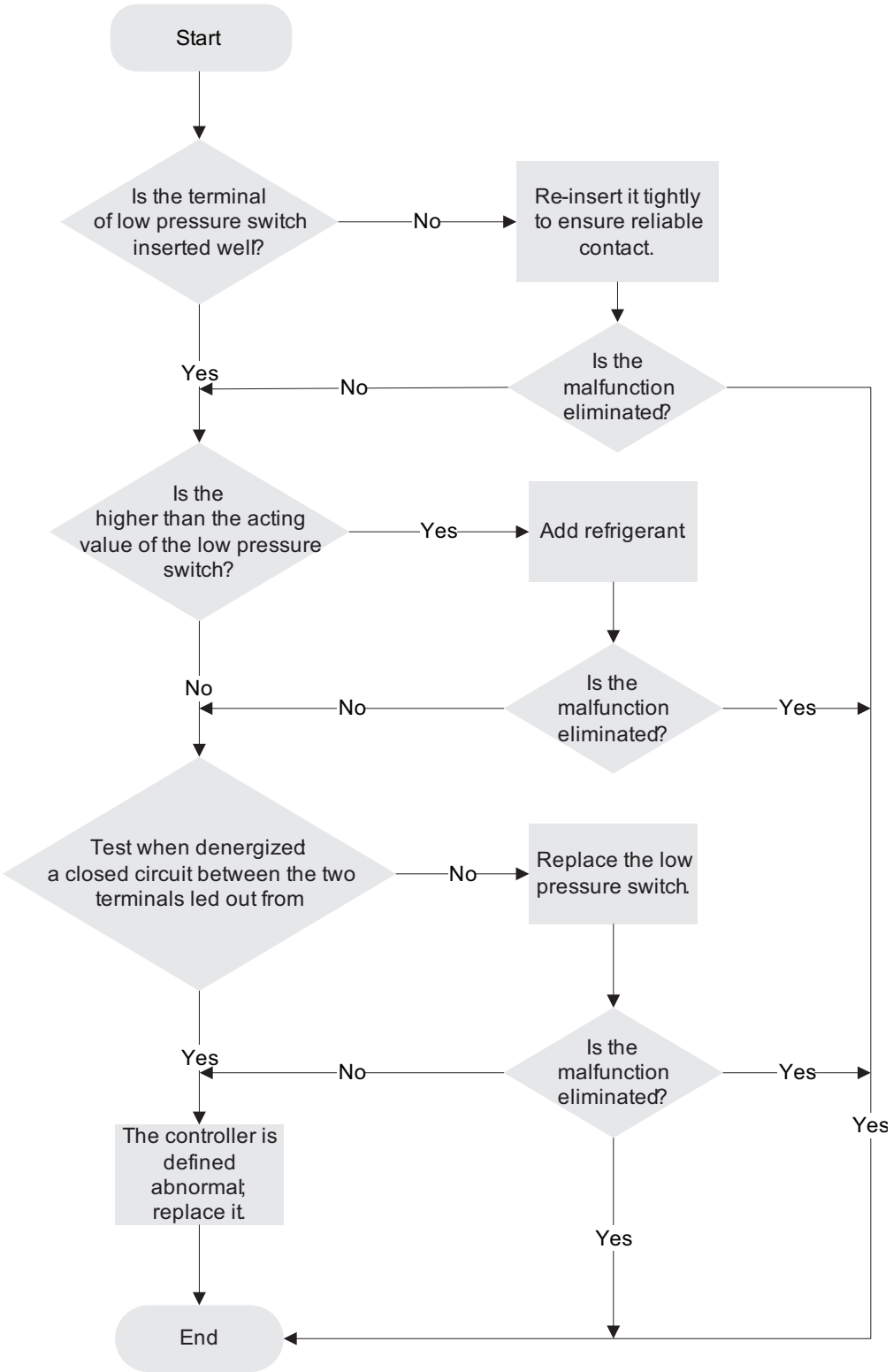
Malfunction diagnosis process:



5. High pressure protection (E1)



6. Low pressure protection of compressor (E3)

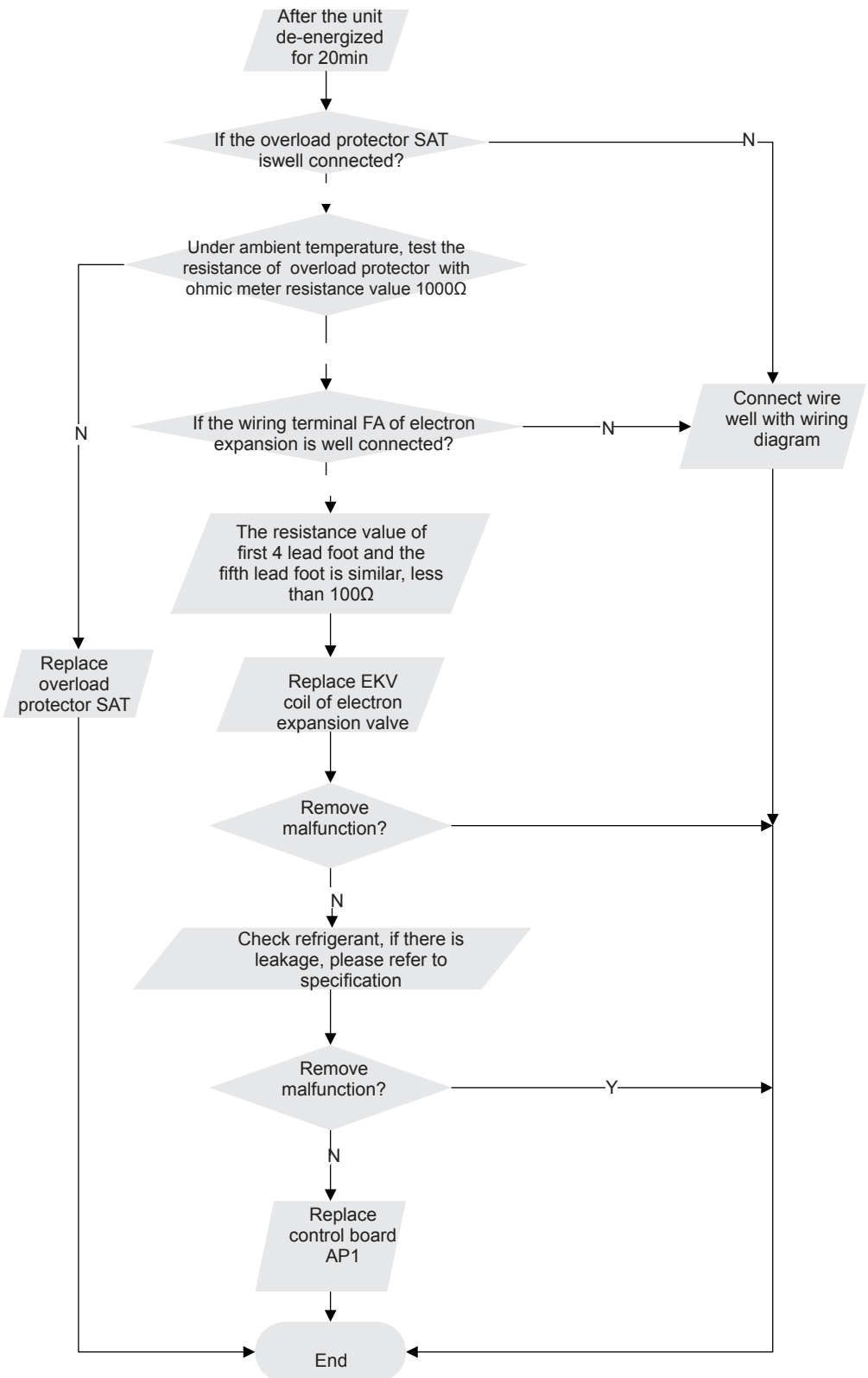


7. Overload protection of compressor H3, high discharge temperature protection of compressor E4 (AP1 hereinafter refers to the control board of the outdoor unit)

Main detection points:

(1) electronic expansion valve (2) expansion valve terminal (3) charging amount of refrigerant (4) overload protector

Malfunction diagnosis process:

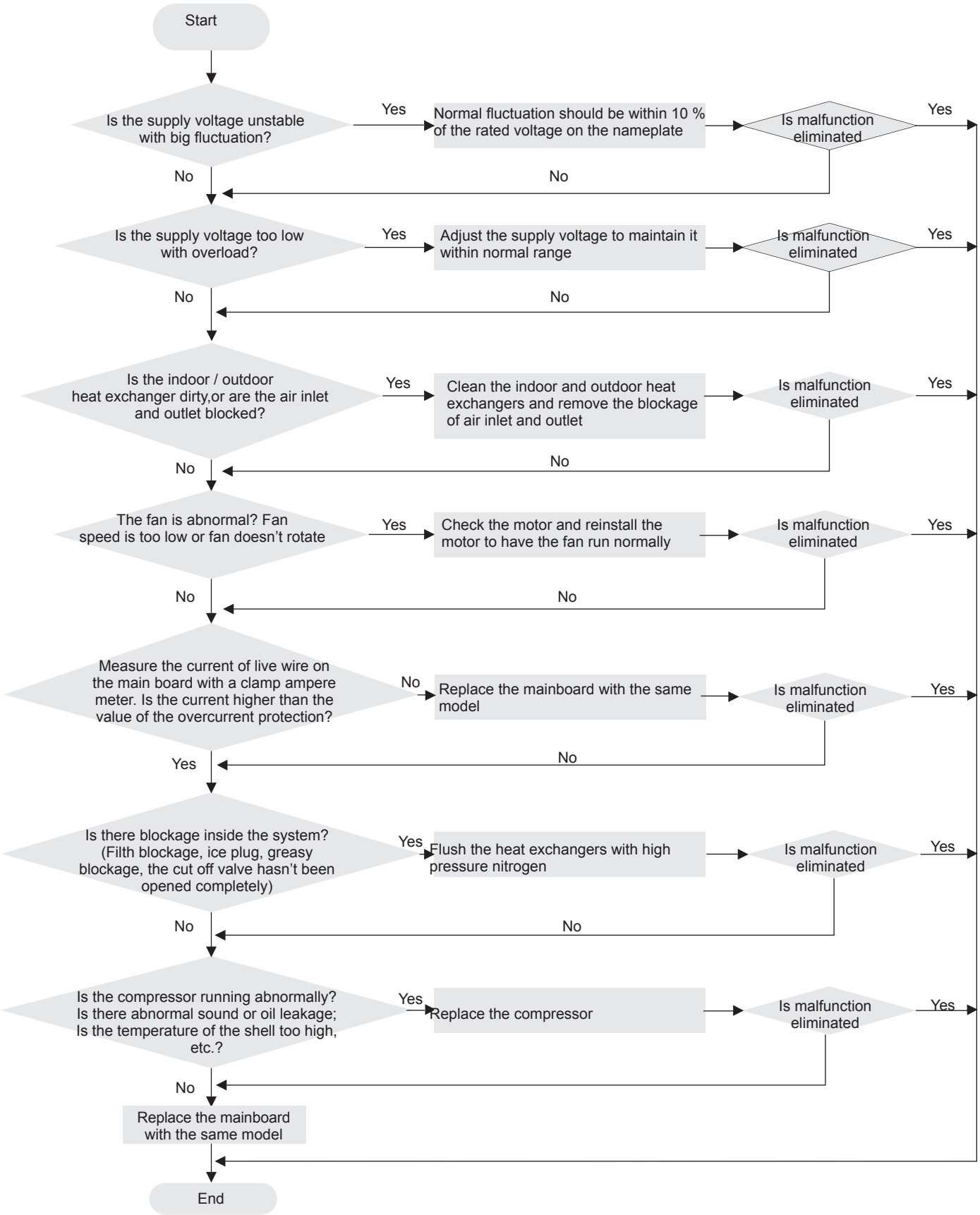


8. Malfunction of Overcurrent Protection E5

Main detection points:

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

Malfunction diagnosis process:



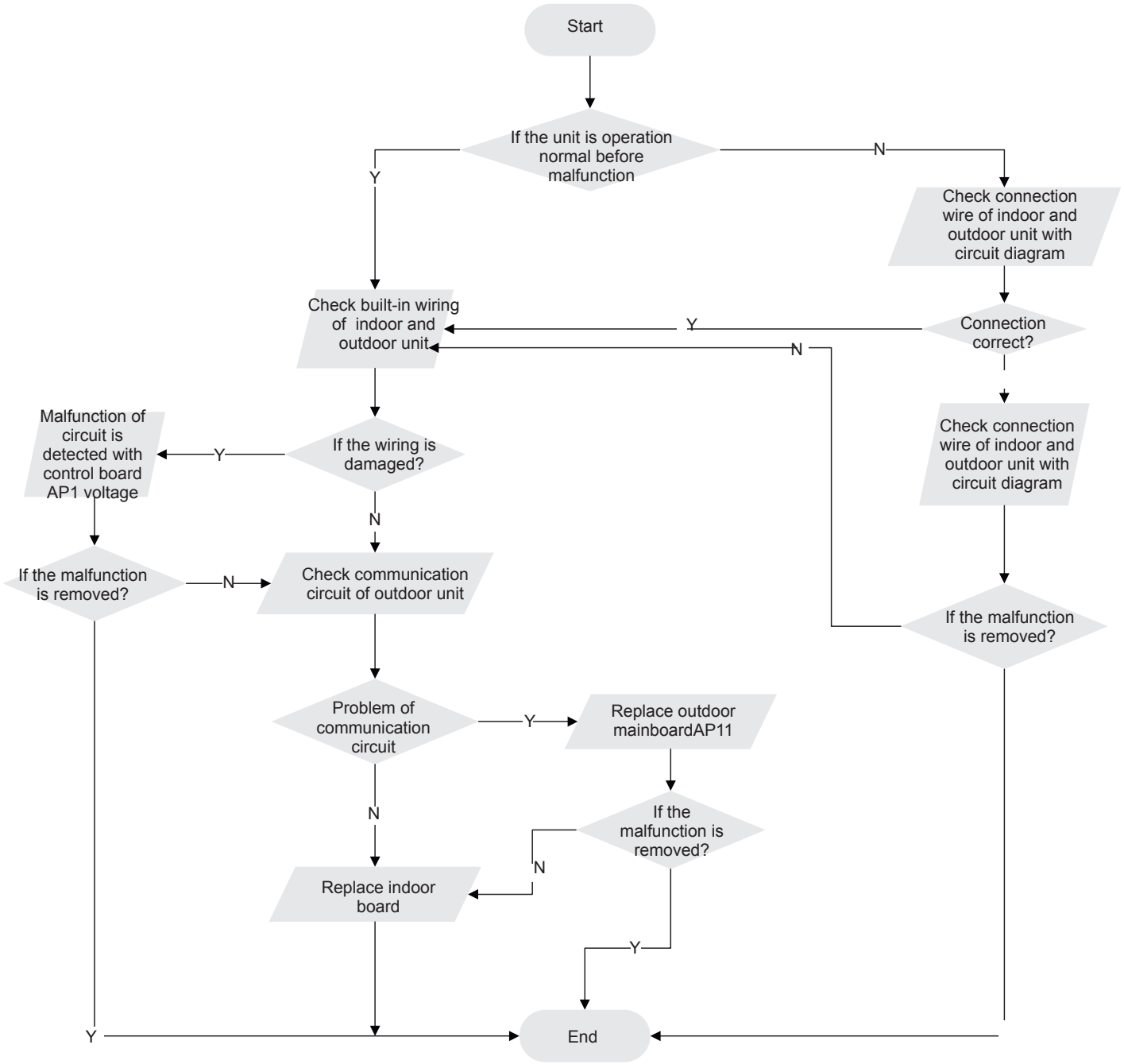
9. Communication malfunction E6

Main detection points:

● Check if the connection wire and the built-in wiring of indoor and outdoor unit are connected well and without damage;

● If the communication circuit of indoor mainboard is damaged? If the communication circuit of outdoor mainboard (AP1) is damaged?

Malfunction diagnosis process:



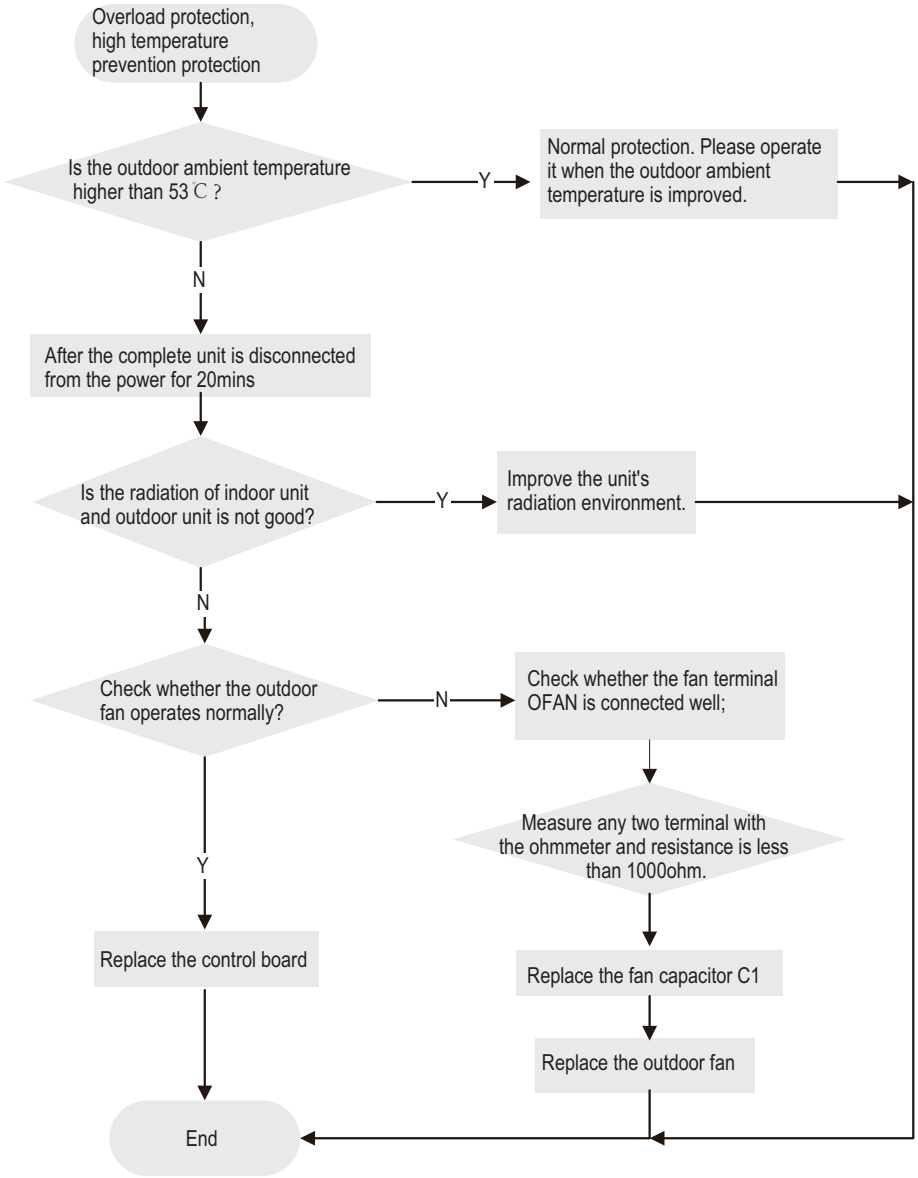
Note: method for checking the communication circuit of outdoor unit: cut off the communication wires of indoor/outdoor unit, and then measure the voltage between COM and N of the control board of outdoor unit (DC notch, about 56V)

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

Main detection points:

(1) outdoor temperature (2) fan (3)air inlet and air outlet of indoor/outdoor unit

Malfunction diagnosis process:



9.3 Troubleshooting for Normal Malfunction

1. Air Conditioner Can't 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 Can't 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 postion 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; Unitt 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 Can't swing	Refer to point 3 of maintenance method for details
Malfunction of the IDU fan motor	The IDU fan motor Can't operate	Refer to troubleshooting for H6 for maintenance method in details
Malfunction of the ODU fan motor	The ODU fan motor Can't operate	Refer to point 4 of maintenance method for details
Malfunction of compressor	Compressor Can't operate	Refer to point 5 of maintenance method for details

3. Horizontal Louver Can't 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 Can't operate	Repair or replace stepping motor
Main board is damaged	Others are all normal, while horizontal louver Can't operate	Replace the main board with the same model

4. ODU Fan Motor Can't 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 Can't 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 Can't 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

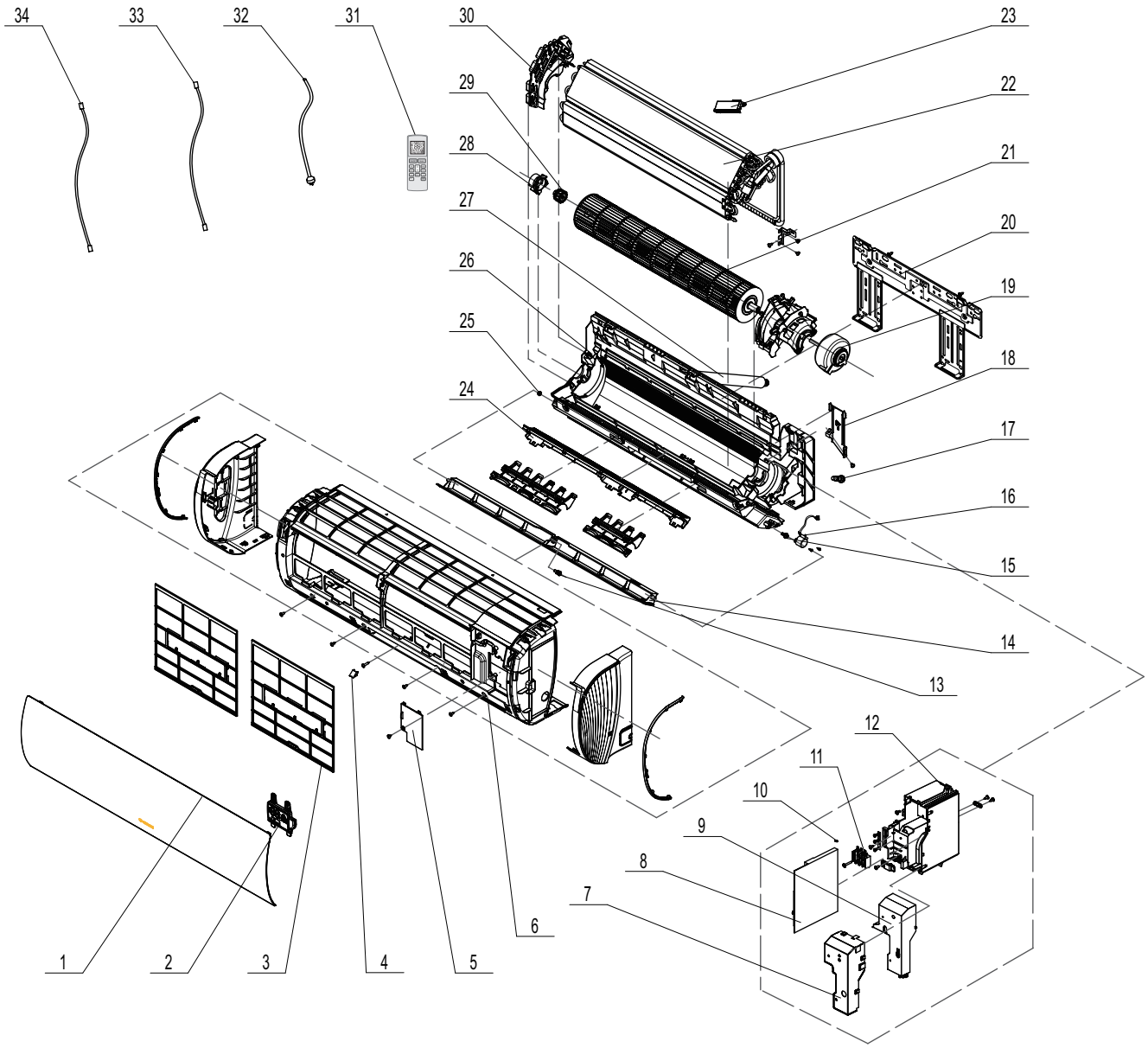
7. Abnormal Sound and Vibration

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.

10. Exploded View and Parts List

10.1 Indoor Unit

ACC

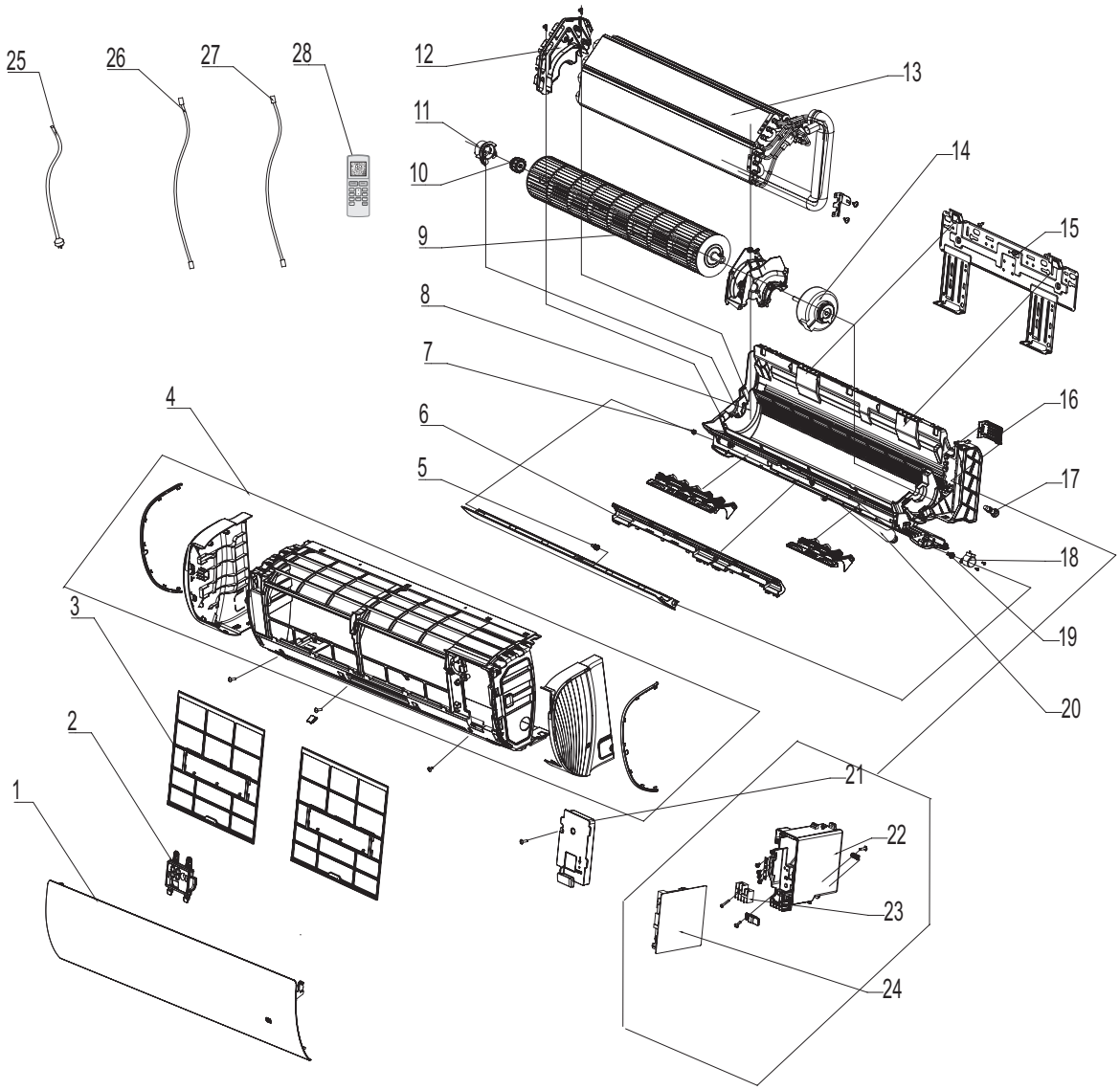


The component picture is only for reference; please refer to the actual product.

NO.	Description
1	Front Panel
2	Display Board
3	Filter Sub-Assy
4	Screw Cover
5	Electric Box Cover Sub-Assy
6	Front Case Assy
7	Shield Cover of Electric Box Cover
8	Main Board
9	Electric Box Cover
10	Jumper
11	Terminal Board
12	Electric Box Assy
13	Axile Bush
14	Guide Louver
15	Crank
16	Stepping Motor
17	Rubber Plug (Water Tray)
18	Connecting pipe clamp
19	Fan Motor
20	Wall Mounting Frame
21	Cross Flow Fan
22	Evaporator Assy
23	Cold Plasma Generator
24	Helicoid Tongue
25	Left Axile Bush
26	Rear Case assy
27	Drainage Hose
28	Ring of Bearing
29	O-Gasket sub-assy of Bearing
30	Evaporator Support 2
31	Remote Controller
32	Power Cord
33	Connecting Cable
34	Connecting Cable

Some models may not contain some parts, please refer to the actual product.

ACA /ACB

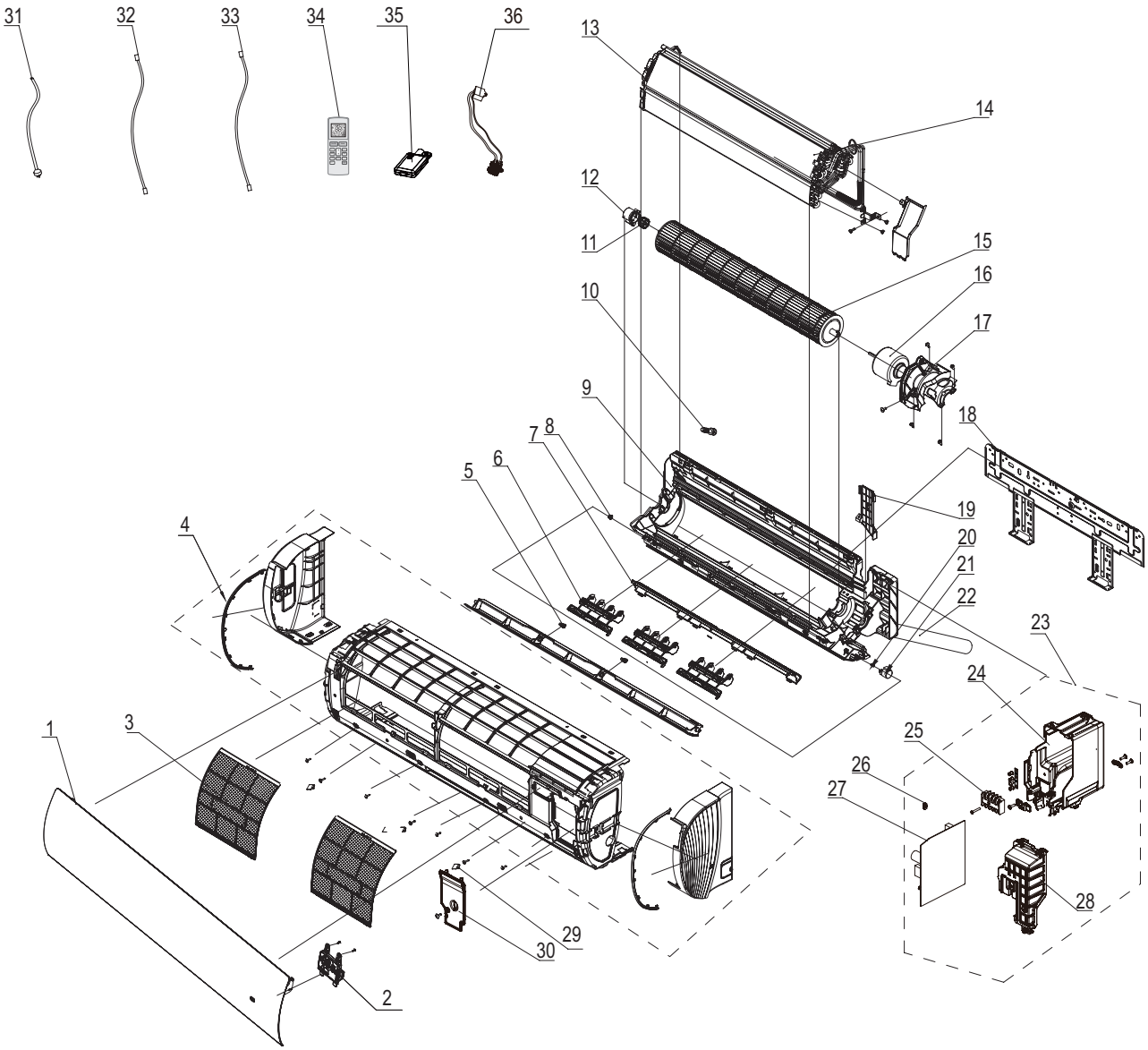


The component picture is only for reference; please refer to the actual product.

NO.	Description
1	Front Panel
2	Display Board
3	Filter Sub-Assy
4	Front Case Assy
5	Axile Bush
6	Helicoid Tongue
7	Left Axile Bush
8	Rear Case assy
9	Cross Flow Fan
10	O-Gasket sub-assy of Bearing
11	Ring of Bearing
12	Evaporator Support
13	Evaporator Assy
14	Fan Motor
15	Wall Mounting Frame Sub-assy
16	Connecting pipe clamp
17	Rubber Plug (Water Tray)
18	Stepping Motor
19	Crank
20	Drainage Hose
21	Electric Box Cover2
22	Electric Box Assy
23	Terminal Board
24	Main Board
25	Power Cord
26	Connecting Cable
27	Connecting Cable
28	Remote Controller

Some models may not contain some parts, please refer to the actual product.

ACD

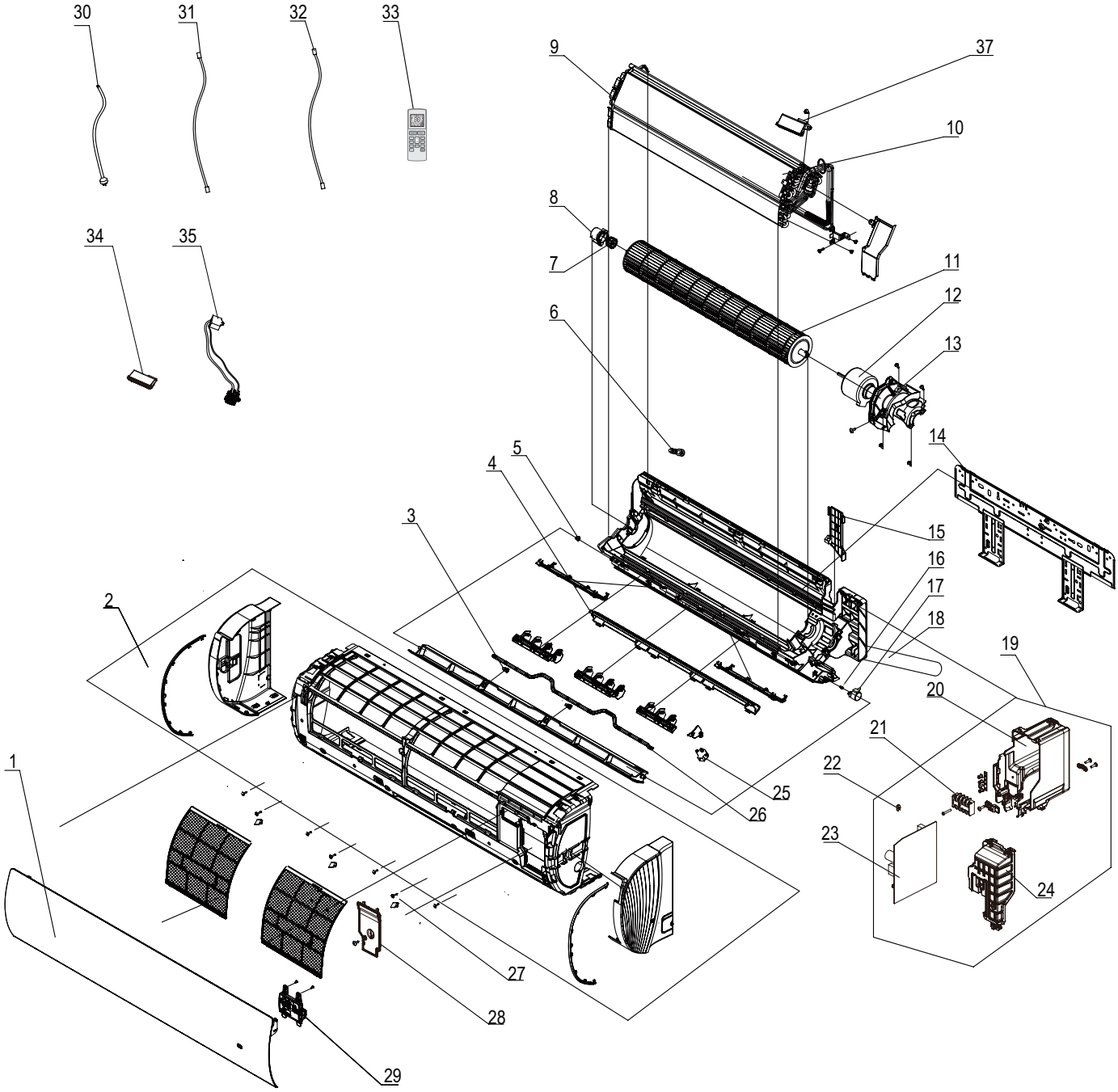


The component picture is only for reference; please refer to the actual product.

NO.	Description
1	Front Panel
2	Display Board
3	Filter Sub-Assy
4	Front Case Assy
5	Axile Bush
6	Air Louver(Manual)
7	Helicoid tongue
8	Left Axile Bush
9	Rear Case assy
10	Rubber Plug (Water Tray)
11	O-Gasket sub-assy of Bearing
12	Ring of Bearing
13	Evaporator Support
14	Evaporator Assy
15	Cross Flow Fan
16	Fan Motor
17	Motor Press Plate
18	Wall Mounting Frame
19	Connecting pipe clamp
20	Crank
21	Stepping Motor
22	Drainage hose
23	Electric Box Assy
24	Electric Box
25	Terminal Board
26	Jumper
27	Main Board
28	Electric Box Cover
29	Screw Cover
30	Electric Box Cover2
31	Power Cord
32	Connecting Cable
33	Connecting Cable
34	Remote Controller
35	Detecting Plate
36	Cold Plasma Generator

Some models may not contain some parts, please refer to the actual product.

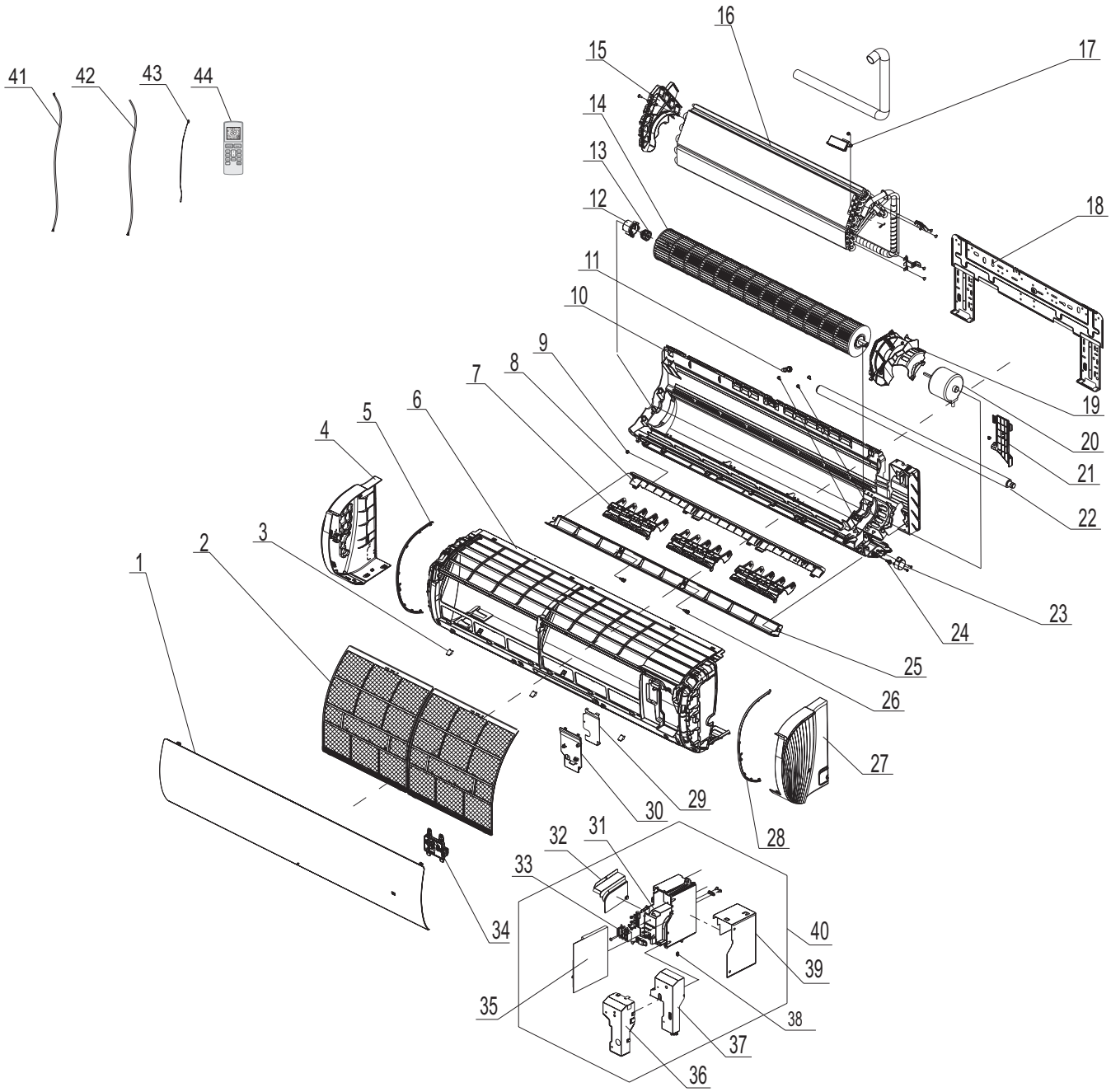
ACD:4-way airflow



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

NO.	Description
1	Front Panel
2	Front Case
3	Axile Bush
4	Helicoid Tongue
5	Left Axile Bush
6	Rubber Plug (Water Tray)
7	O-Gasket sub-assy of Bearing
8	Ring of Bearing
9	Evaporator Support
10	Evaporator Assy
11	Cross Flow Fan
12	Fan Motor
13	Motor Press Plate
14	Wall Mounting Frame
15	Connecting pipe clamp
16	Crank
17	Stepping Motor
18	Drainage hose
19	Electric Box Assy
20	Electric Box
21	Jumper
22	Terminal Board
23	Main Board
24	Electric Box Cover
25	Stepping Motor
26	Swing Lever
27	Screw Cover
28	Electric Box Cover2
29	Display Board
30	Power Cord
31	Connecting Cable
32	Connecting Cable
33	Remote Controller
34	Detecting Plate
35	Cold Plasma Generator

Some models may not contain some parts, please refer to the actual product.



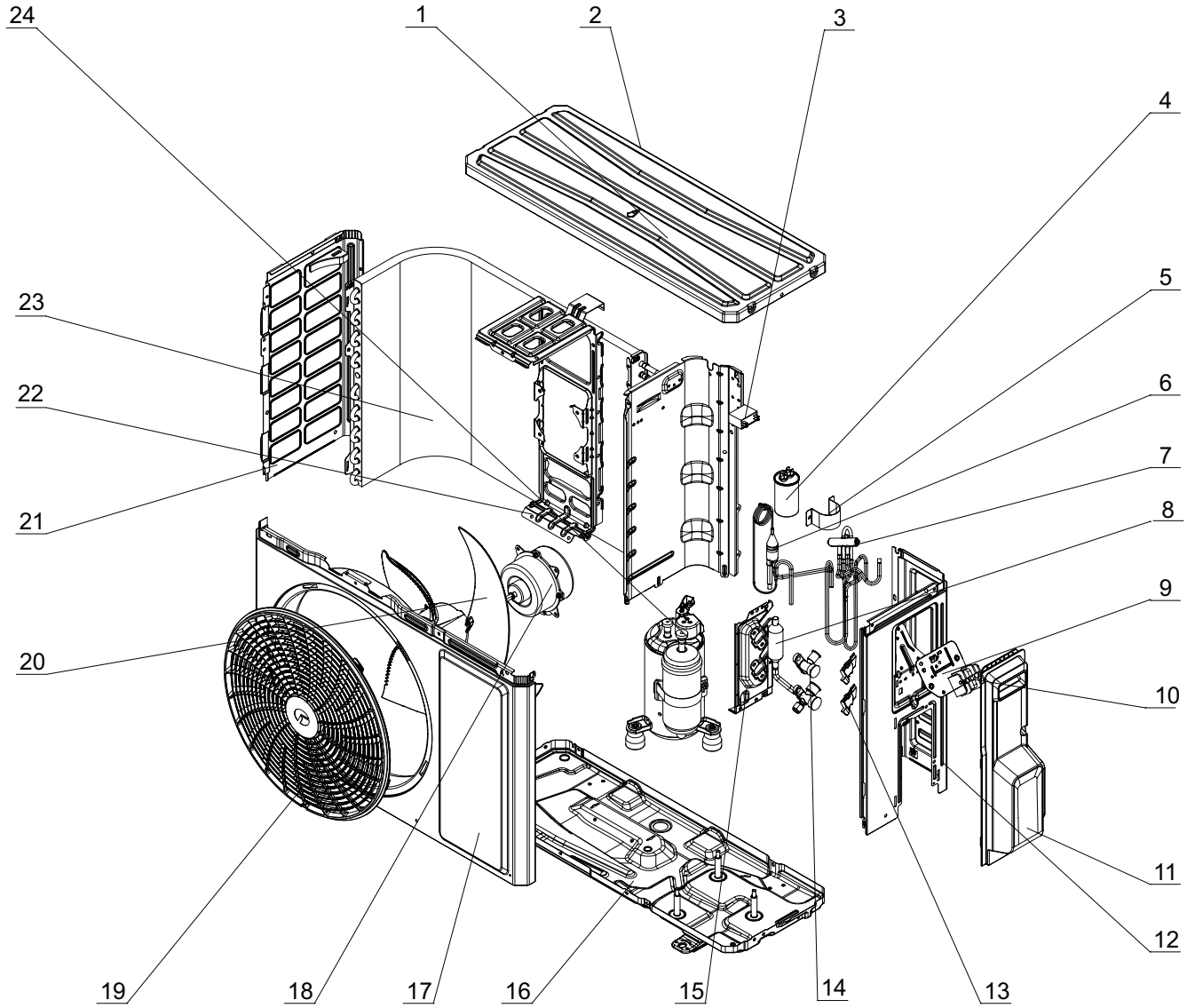
The component picture is only for reference; please refer to the actual product.

NO.	Description
1	Front Panel
2	Filter Sub-Assy
3	Screw Cover
4	Left Side Plate
5	Decorative Strip(Left)
6	Front Case
7	Air Louver(Manual)
8	Helicoid Tongue
9	Left Axile Bush
10	Rear Case assy
11	Rubber Plug (Water Tray)
12	Ring of Bearing
13	O-Gasket sub-assy of Bearing
14	Cross Flow Fan
15	Evaporator Support
16	Evaporator Assy
17	Cold Plasma Generator
18	Wall Mounting Frame
19	Motor Press Plate
20	Fan Motor
21	Connecting pipe clamp
22	Drainage Hose
23	Stepping Motor
24	Crank
25	Guide Louver
26	Axile Bush
27	Right Side Plate
28	Decorative Strip(Right)
29	Shield Cover of Electric Box Cover 2
30	Electric Box Cover2
31	Electric Box
32	Side plate (electric box)
33	Terminal Board
34	Display Board
35	Main Board
36	Shield Cover of Electric Box Cover
37	Electric Box Cover
38	Jumper
39	Lower Shield of Electric Box
40	Electric Box Assy
41	Connecting Cable
42	Connecting Cable
43	Temperature Sensor
44	Remote Controller

Some models may not contain some parts, please refer to the actual product.

10.2 Outdoor Unit

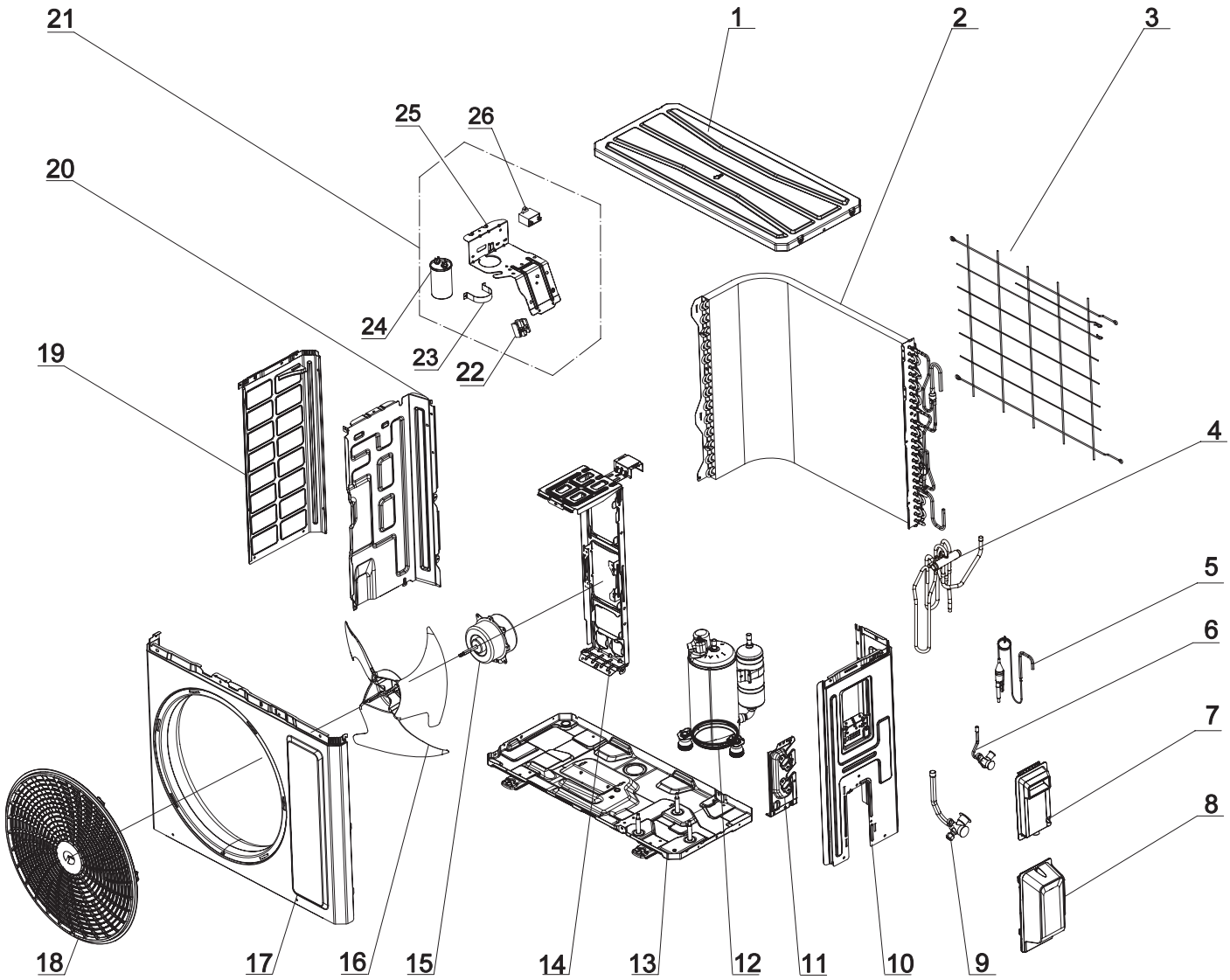
07/09K



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

NO.	Description
1	Top Cover Sub-Assy
2	Top cover
3	Capacitor CBB61S
4	Capacitor CBB65
5	Capacitor Clamp
6	Strainer (fork shape)
7	4-Way Valve Assy
8	Silencer
9	Earthing Plate Sub-assy
10	Terminal Board
11	Handle
12	Right Side Plate
13	Valve Support Block
14	Cut-off valve 1/4(N)
15	Valve Support
16	Chassis Sub-assy
17	Cabinet
18	Fan Motor
19	Front Grill
20	Axial Flow Fan
21	Left Side Plate
22	Motor Support
23	Condenser Assy
24	Compressor and Fittings

Some models may not contain some parts, please refer to the actual product.

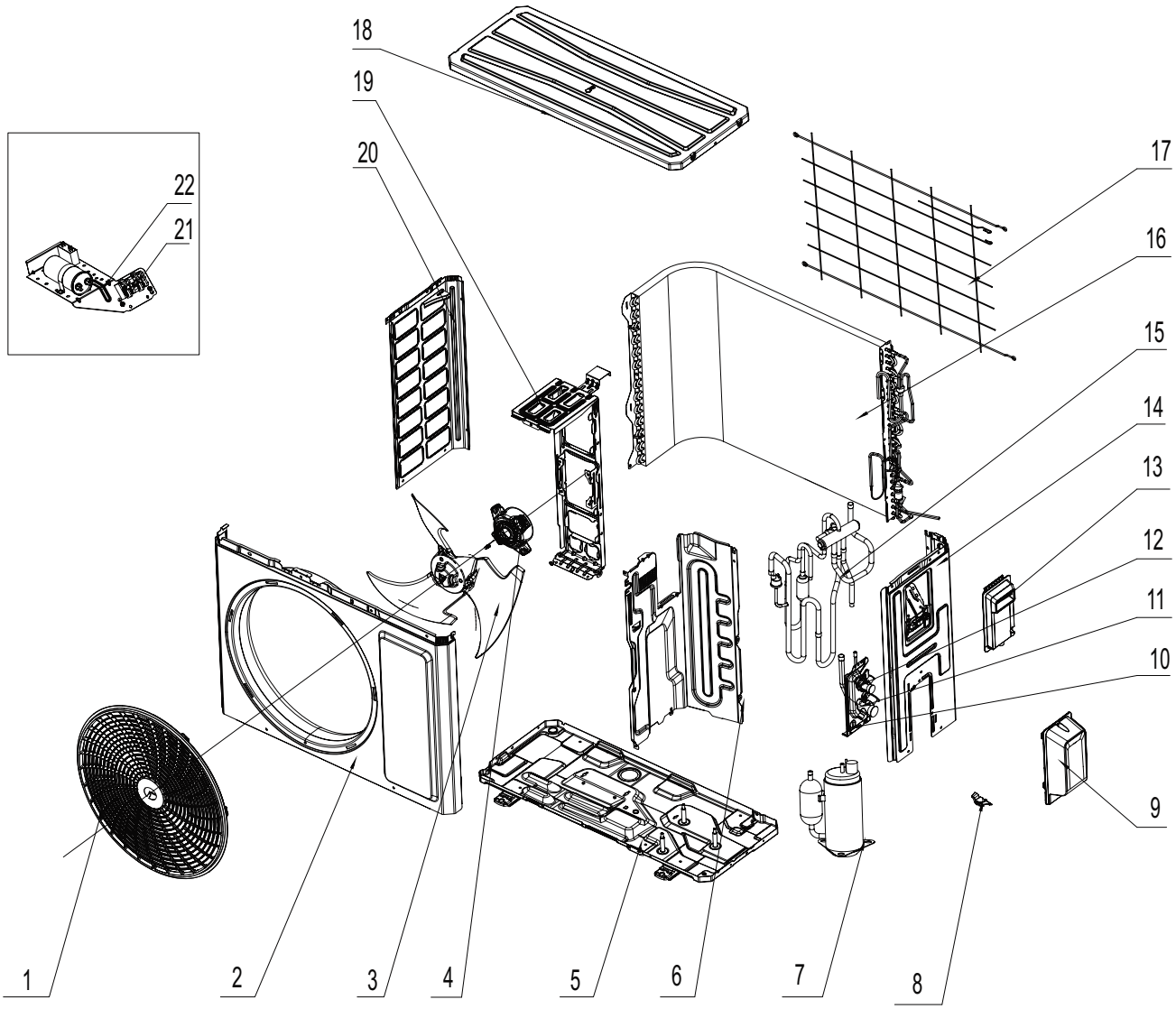


The component picture is only for reference; please refer to the actual product.

NO.	Description
1	Top Cover Assy
2	Condenser Assy
3	Rear Grill
4	4-way Valve Assy
5	Capillary Sub-Assy
6	Cut-off Valve
7	small Handle
8	Valve cover
9	Cut-off Valve
10	Right Side Plate
11	Valve Support
12	Compressor and Fittings
13	Chassis Sub-assy
14	Motor Support
15	Fan Motor
16	Axial Flow Fan
17	Cabinet
18	Front Grill
19	Lelt Side Plate
20	Clapboard
21	Electric Box Assy
22	Terminal Board
23	Capacitor Clamp
24	Capacitor CBB65
25	Electric Box
26	Capacitor CBB61

Some models may not contain some parts, please refer to the actual product.

18K

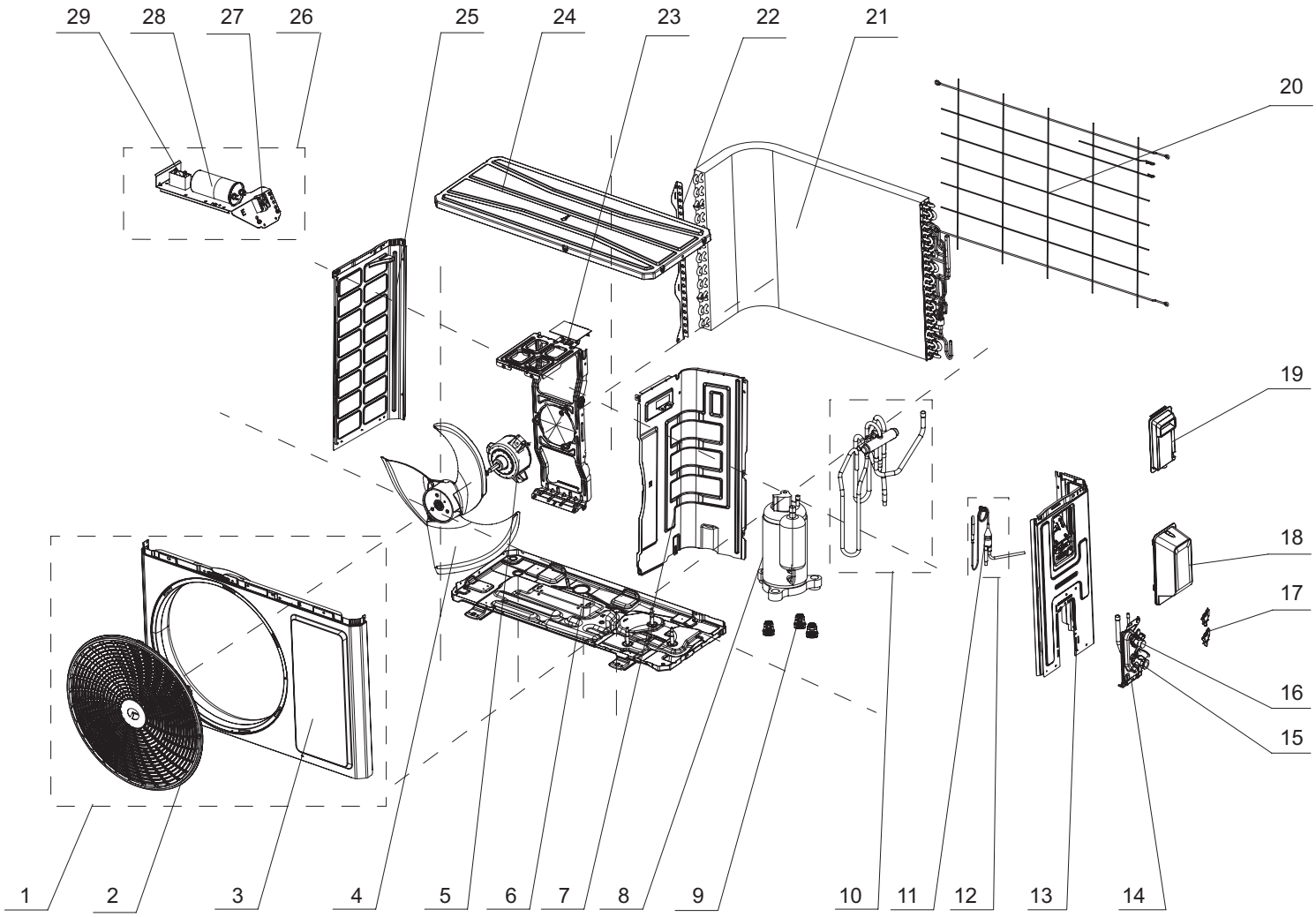


The component picture is only for reference; please refer to the actual product.

NO.	Description
1	Front Grill
2	Cabinet
3	Axial Flow Fan
4	Fan Motor
5	Chassis Sub-assy
6	Clapboard Assy
7	Compressor and Fittings
8	Valve Support Block
9	Valve Cover
10	Valve Support
11	Cut-off valve 1/2(N)
12	Cut-off valve 1/4(N)
13	Handle (Right)
14	Right Side Assy
15	4-Way Valve Assy
16	Condenser Assy
17	Rear Grill
18	Top Cover Assy
19	Motor Support Sub-Assy
20	Left Side Plate
21	Terminal Board
22	Electric Box Assy

Some models may not contain some parts, please refer to the actual product.

24K

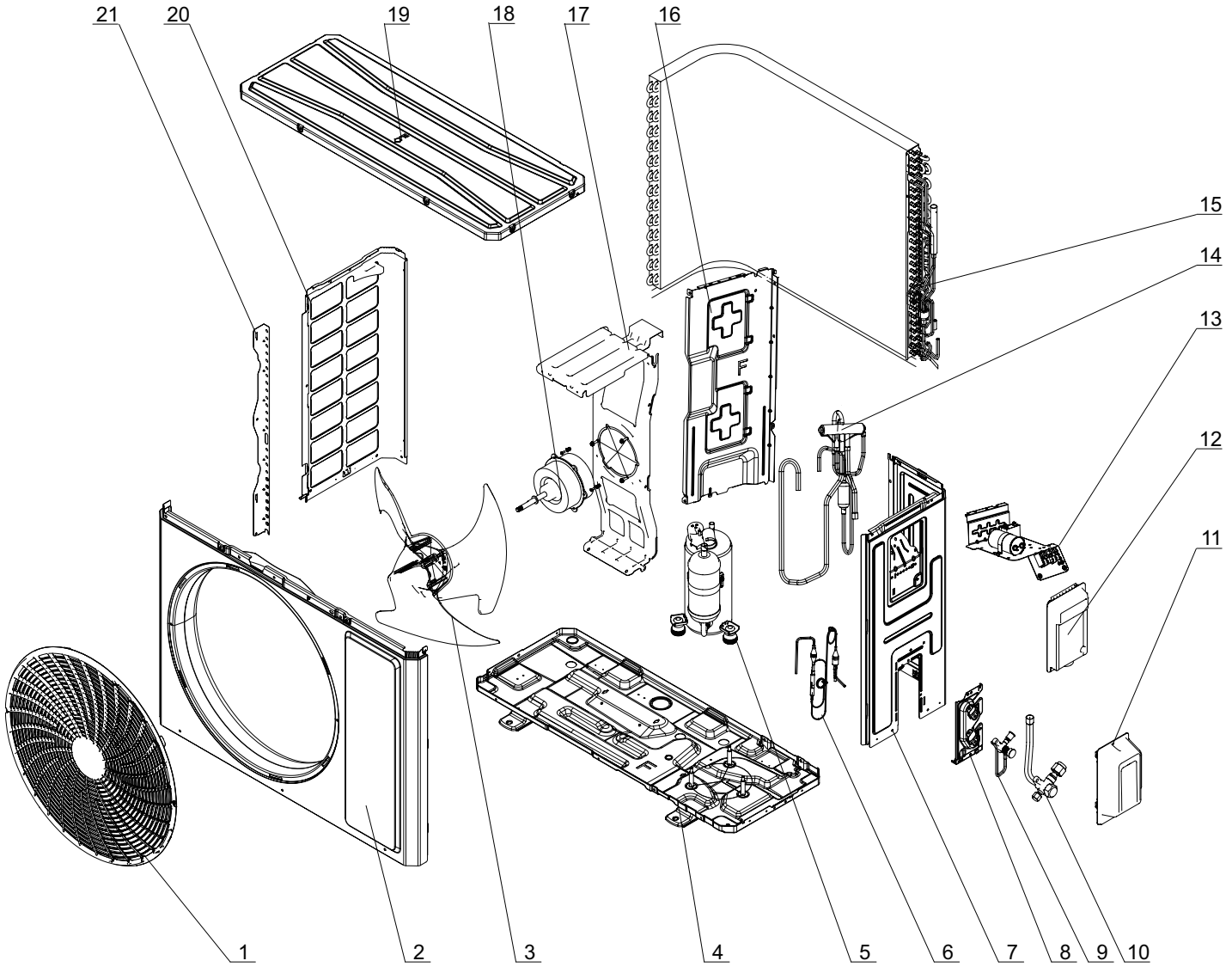


The component picture is only for reference; please refer to the actual product.

NO.	Description
1	Front Panel Assy
2	Front grill
3	Front Panel
4	Axial Flow Fan
5	Fan Motor
6	Chassis Sub-assy
7	Clapboard Sub-Assy
8	Compressor and Fittings
9	Compressor Gasket
10	4-Way Valve Assy
11	Strainer (fork shape)
12	Capillary assembly
13	Right Side Plate Assy
14	Valve Support
15	Cut-off valve 1/2(N)
16	Cut-off valve 1/4(N)
17	Valve Support Block
18	Valve Cover
19	Handle
20	Rear Grill
21	Condenser Assy
22	Condenser right side panel
23	Motor Support
24	Coping
25	Left Side Plate
26	Electric Box Assy
27	Terminal Board
28	Capacitor CBB65
29	Capacitor CBB61S

Some models may not contain some parts, please refer to the actual product.

28K



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

NO.	Description
1	Front Grill
2	Front Panel
3	Axial Flow Fan
4	Chassis Sub-assy
5	Compressor and Fittings
6	Capillary Sub-assy
7	Right Side Plate
8	Valve Support
9	Cut-off valve 1/4(N)
10	Cut-off valve 1/2(N)
11	Valve Cover
12	Handle
13	Electric Box Assy
14	4-Way Valve Assy
15	Condenser Assy
16	Clapboard Assy
17	Motor Support
18	Motor
19	Top Cover Assy
20	Left Side Plate
21	Condenser Left Border Plate

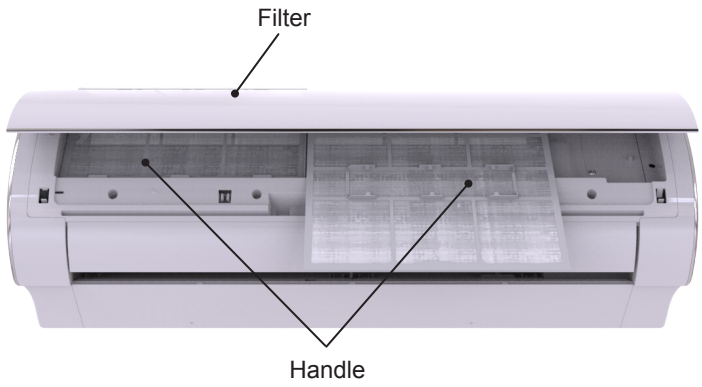
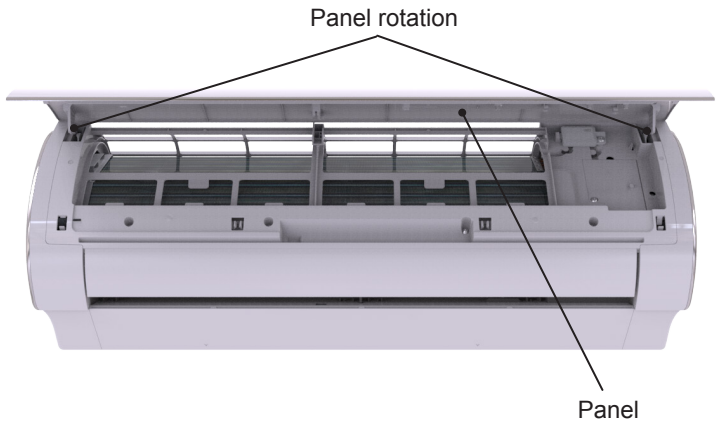
Some models may not contain some parts, please refer to the actual product.

11. Removal Procedure

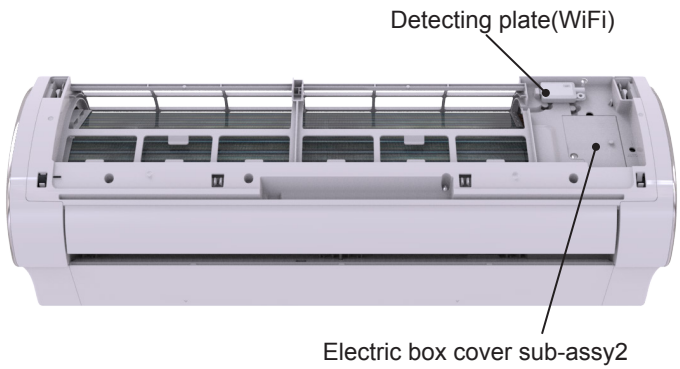
11.1 Removal Procedure of Indoor Unit

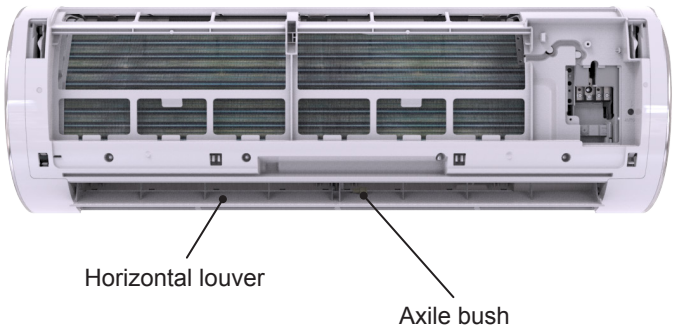
⚠ Caution: discharge the refrigerant completely before removal.

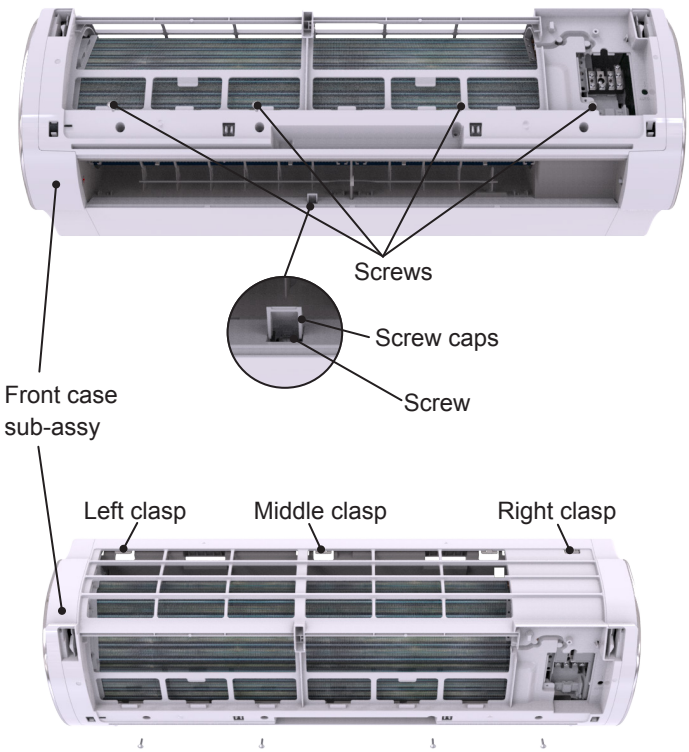
ACA/ACB/ACC

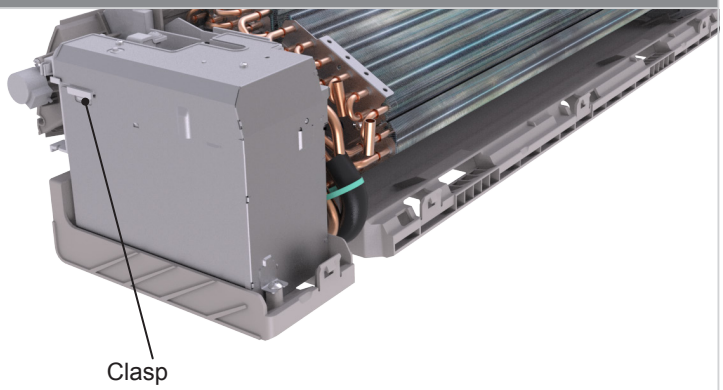
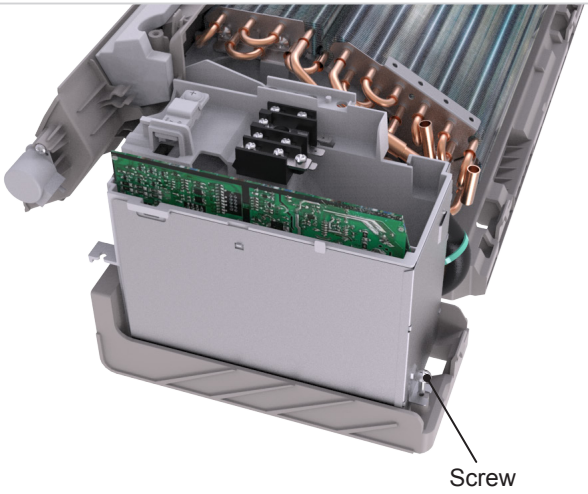
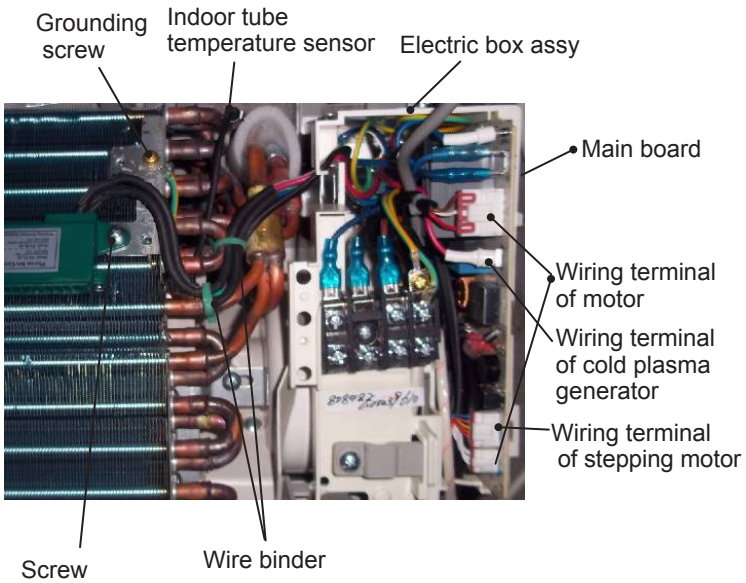
Step	Procedure
Before disassemble	
Turn off the air conditioner and disconnect the power before disassemble the air conditioner.	
1. Remove filter	
Open the front panel; Push the filter upwards to loosen the clasp and then pull the left filter and right filter outwards to remove them.	
2.Remove front panel	
Separate the panel rotation shaft from the groove fixing the front panel and then removes the front panel. Note: The display of some models is fixed on the panel; unscrew the screws fixing the display on the panel before removing the panel.	

Step	Procedure
3.Remove electric box cover sub-assy2 and detecting plate(wifi)	
	Remove the screws on the electric box cover sub-assy2 and detecting plate(WIFI), to remove the electric box cover 2 and detecting plate(WIFI).
4.Remove horizontal louver	
	Push out the axile bush on horizontal louver. Bend the horizontal louver with hand and then separate the horizontal louver from the crankshaft of step motor to remove it.
5.Remove front case sub-assy	
a	Remove the screws fixing front case. Note: (1) Open the screw caps before removing the screws around the air outlet. (2) The quantity of screws fixing the front case sub-assy is different for different models.
b	Loosen the clasps at left, middle and right sides of front case. Life the front case sub-assy upwards to remove it.

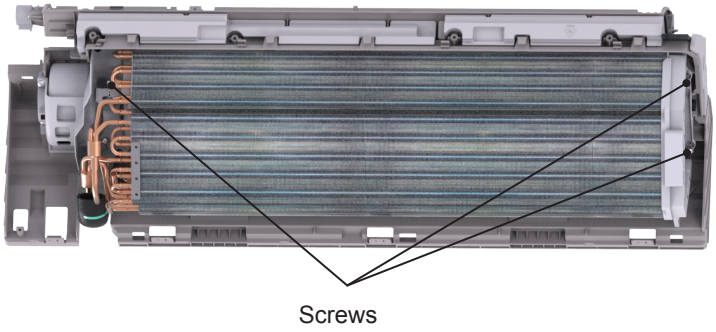


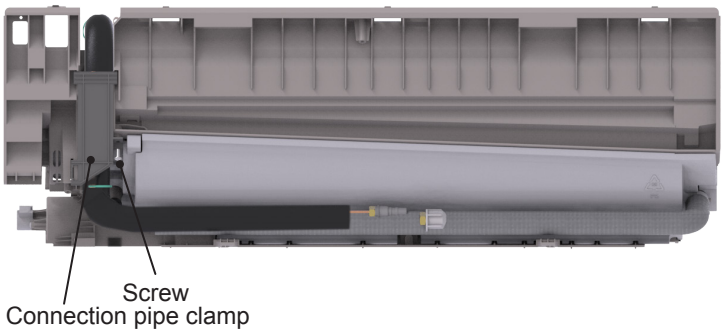


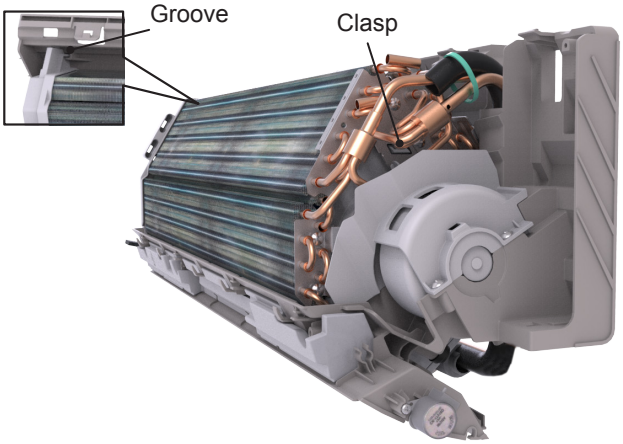


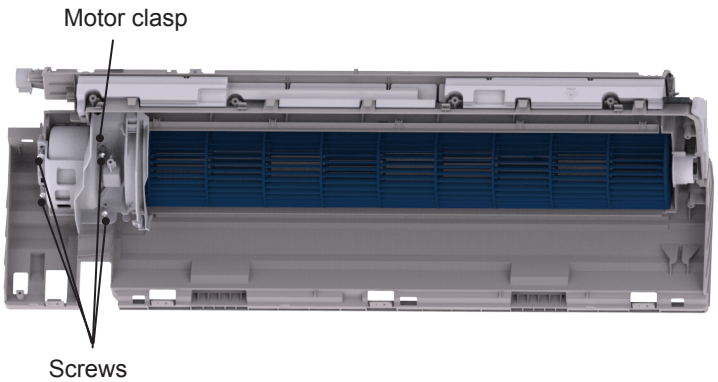
Step	Procedure
6.Remove electric box cover sub-assy	
Loosen the clasps and remove the electric box cover sub-assy.	
7.Remove electric box assy	
a Remove the screw fixing electric box assy.	
b ① Cut off the wire binder and pull out the indoor tube temperature sensor. ② Screw off one grounding screw. ③ Remove the wiring terminals of motor, cold plasma generator and stepping motor. ④ Remove the electric box assy. ⑤ Screw off the screws that are locking each.	
C Remove the wiring terminal of power cord. Lift up the main board and take it off. Instruction:Some wiring terminal of this products is with lock catch and other devices.The pulling method is as below: 1.Remove the soft sheath for some terminals at first, hold the circlip and then pull out the terminals, 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.	

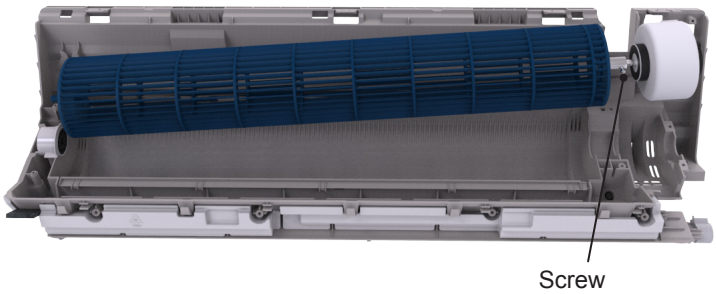
Step	Procedure
8.Remove evaporator assy	
a	Remove 3 screws fixing evaporator assy.
b	At the back of the unit, remove the screw of the connection pipe clamp and then remove the connection pipe clamp.
c	First remove the left side of evaporator from the groove of bottom shell and then remove the right side from the clasp on the bottom shell. Adjust the position of connection pipe on evaporator slightly and then lift the evaporator upwards to remove it.
9.Remove motor and cross flow blade	
a	Remove the screws fixing motor clamp and then remove the motor clamp.

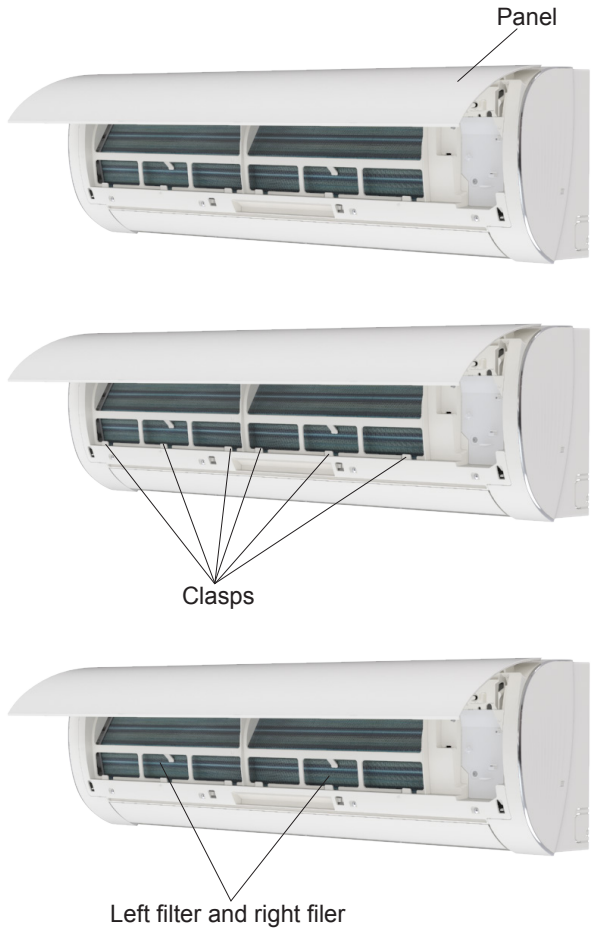
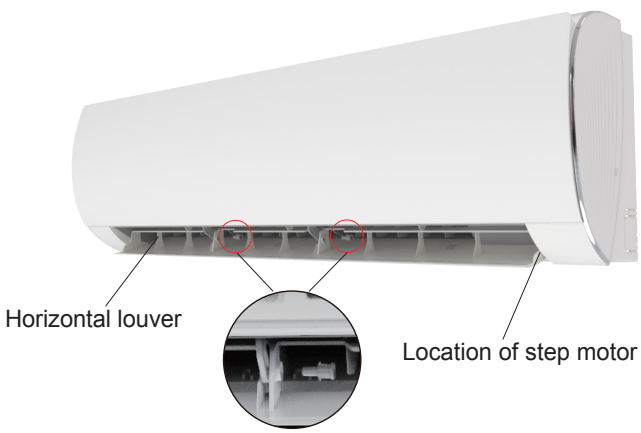




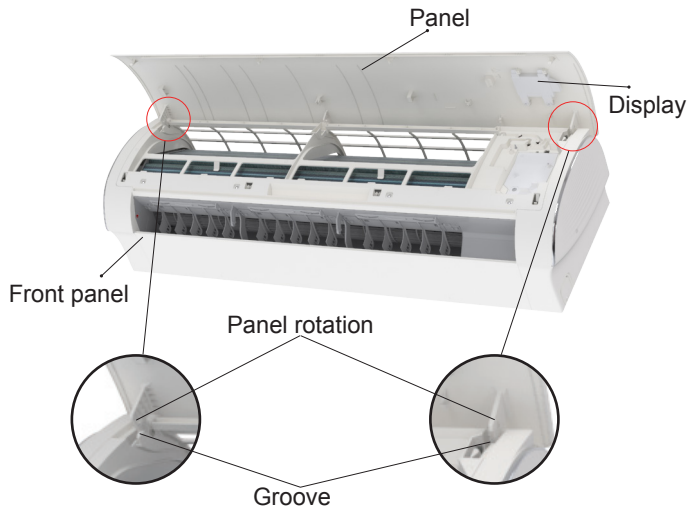


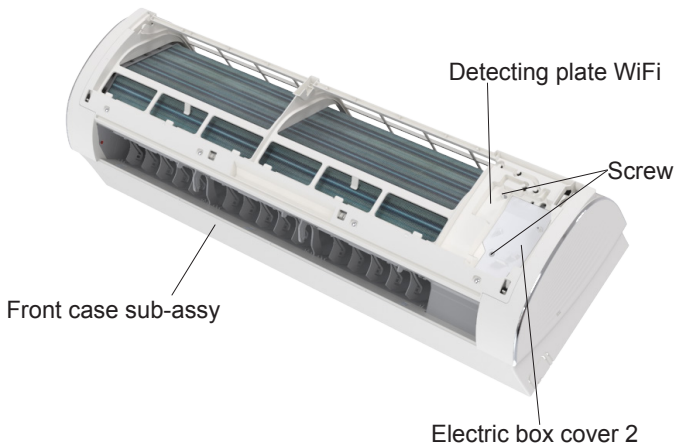


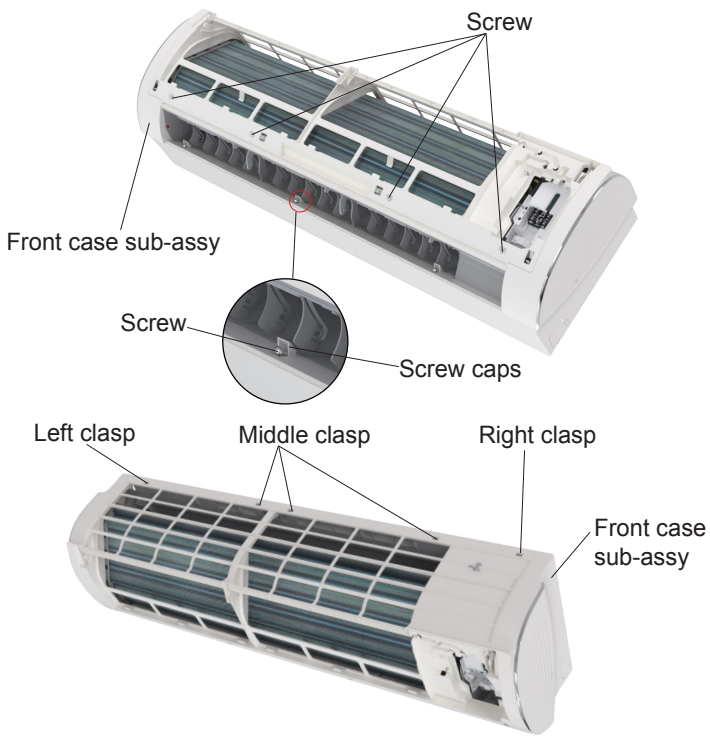
Step	Procedure	
b	Loose the screws (2-3 circles) used for fixing the cross flow fan, pull right to pull out the motor.	

Step	Procedure
1.Remove filter	
a	Open the panel.
b	Loosen the clasp shown in the fig and then pull the left filter and right filer outwards to remove them.
2.Remove horizontal louver	
	Push out the axile bush on horizontal louver. Bend the horizontal louver with hand and then separate the horizontal louver from the crankshaft of step motor to remove it.

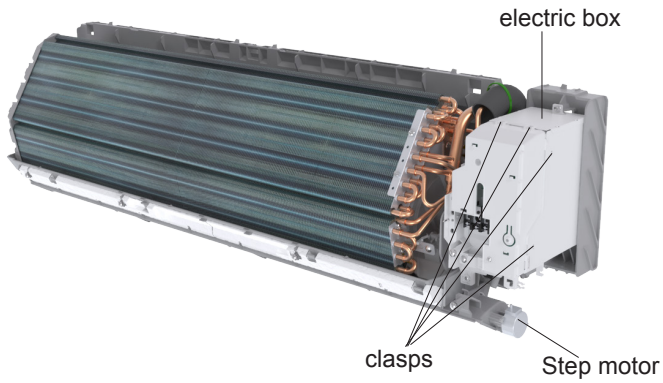
Step	Procedure
3.Remove panel	
	Open the front panel; separate the panel rotation shaft from the groove fixing the front panel and then removes the front panel. Note: The display of some models is fixed on the panel; unscrew the screws fixing the display on the panel before removing the panel.
4.Remove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

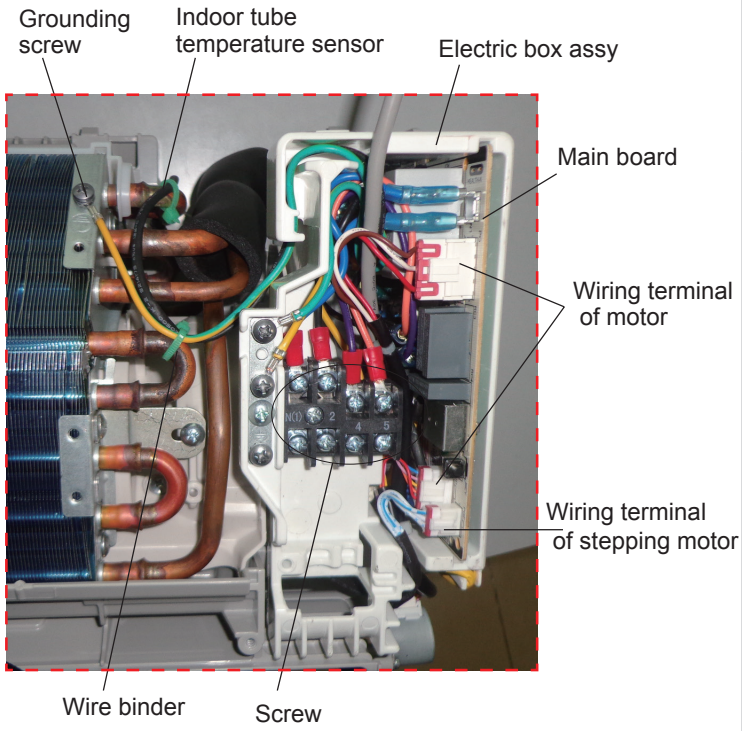


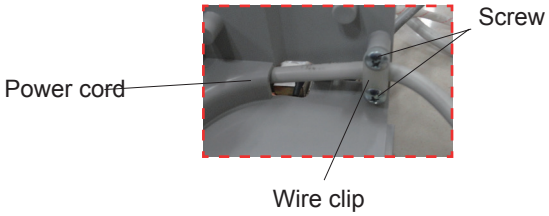


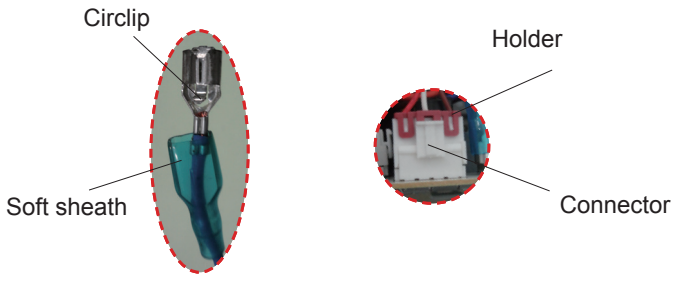


Step	Procedure
6.Remove electric box assy	
a	Remove the screw fixing electric box assy.
b	① Cut off the wire binder and pull out the indoor tube temperature sensor. ② Screw off one grounding screw. ③ Remove the wiring terminals of motor, cold plasma generator and stepping motor. ④ Remove the electric box assy. ⑤ Screw off the screws that are locking each.
C	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.
	Instruction:Some wiring terminal of this products is with lock catch and other devices.The pulling method is as below: 1.Remove the soft sheath for some terminals at first, hold the circlip and then pull out the terminals, 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.

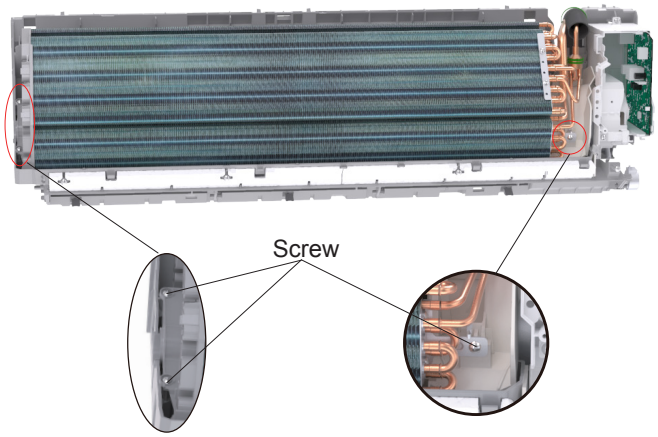


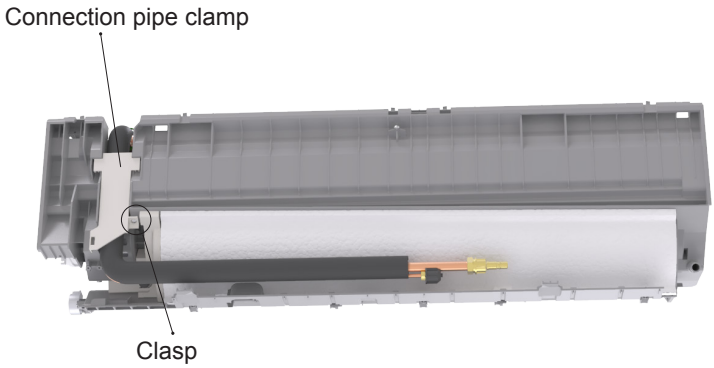


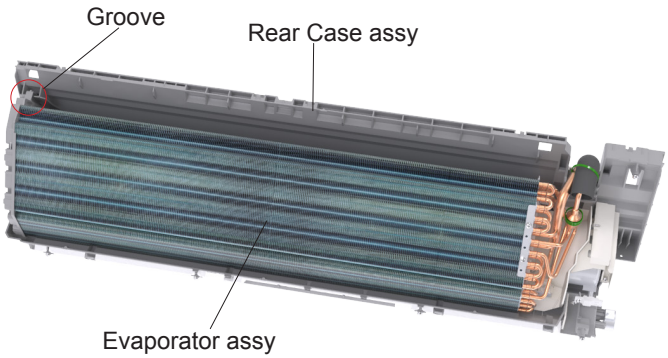


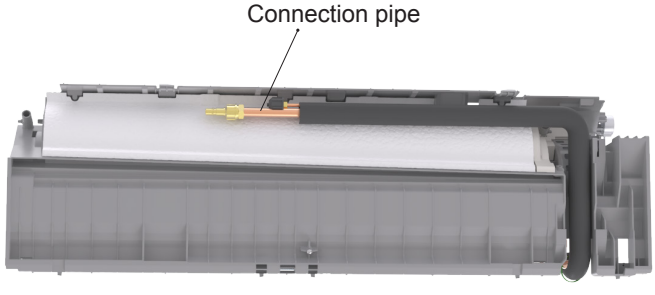


Step	Procedure
7.Remove evaporator assy	
a	Remove 3 screws fixing evaporator assy.
b	At the back of the unit, Loosen the clasp,connection pipe clamp and then remove the connection pipe clamp.
c	First remove the left side of evaporator from the groove of bottom shell and then remove the right side from the clasp on the bottom shell.
d	Adjust the position of connection pipe on evaporator slightly and then lift the evaporator upwards to remove it.

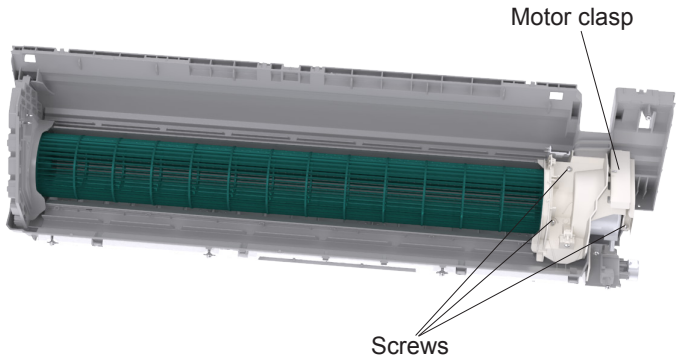


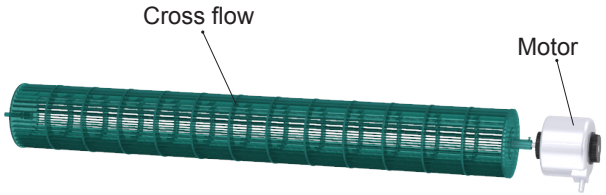


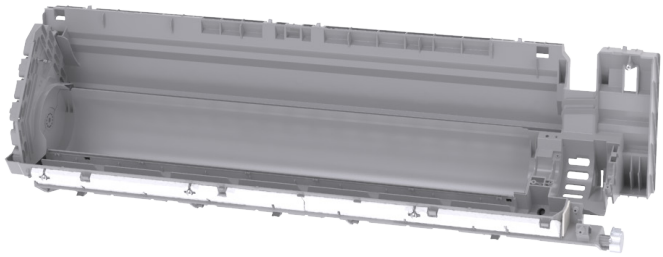


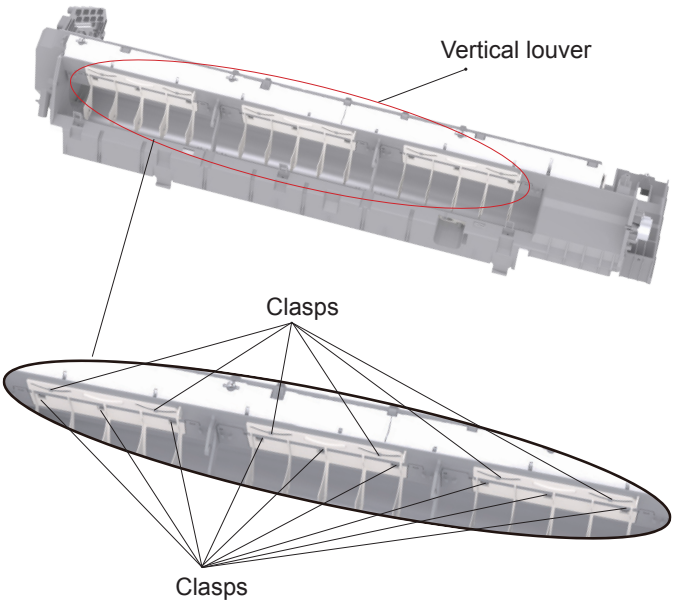


Step	Procedure
8.Remove motor and cross flow blade	
a	Remove 3 screws fixing motor clamp and then remove the motor clamp.
b	Remove the at the connection place of cross flow blade and motor; lift the motor and cross flow blade upwards to remove them.
9.Remove vertical louver	
	Loosen the connection clasps between vertical louver and bottom case to remove vertical louver.







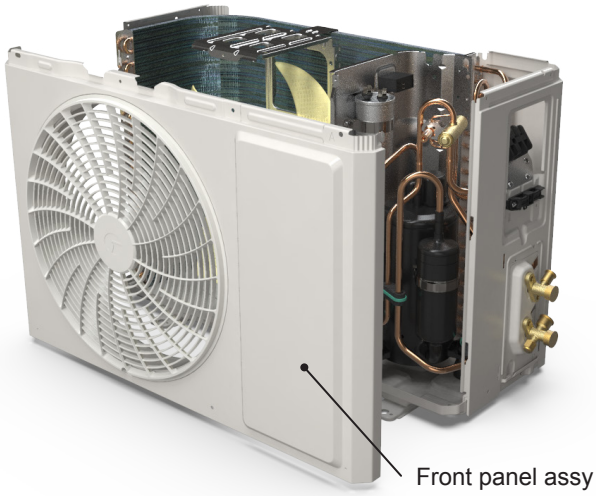
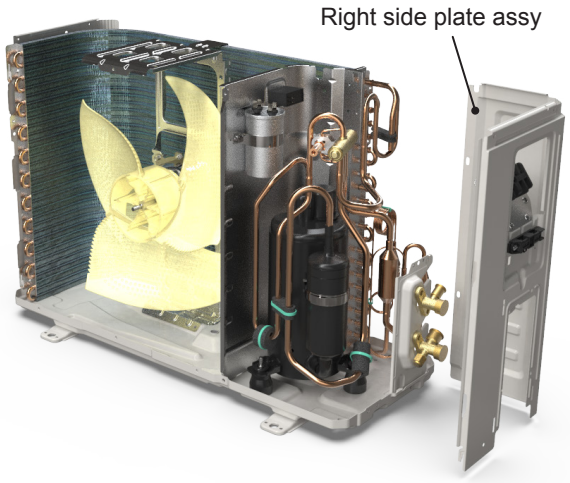
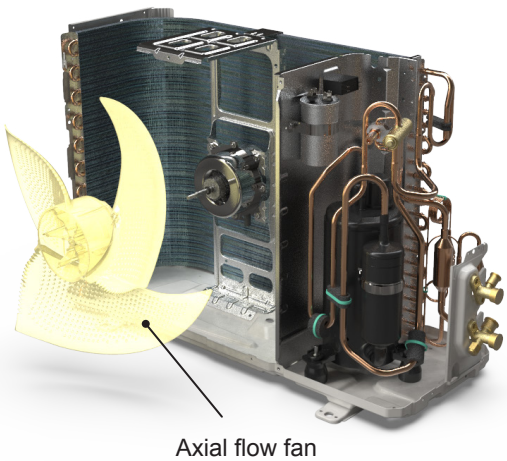


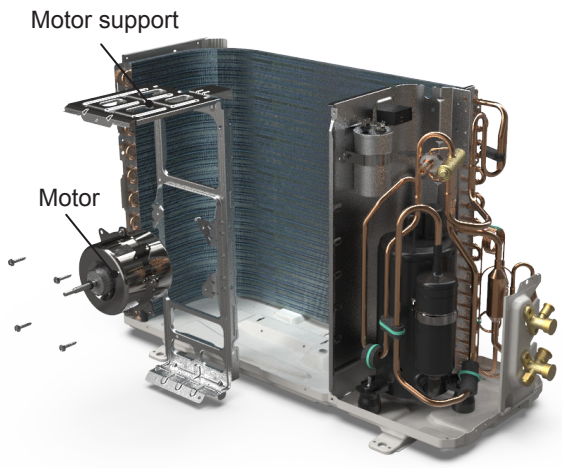
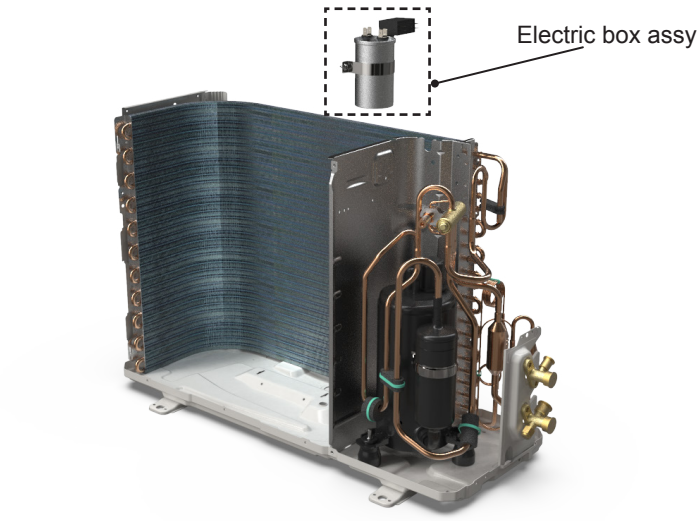
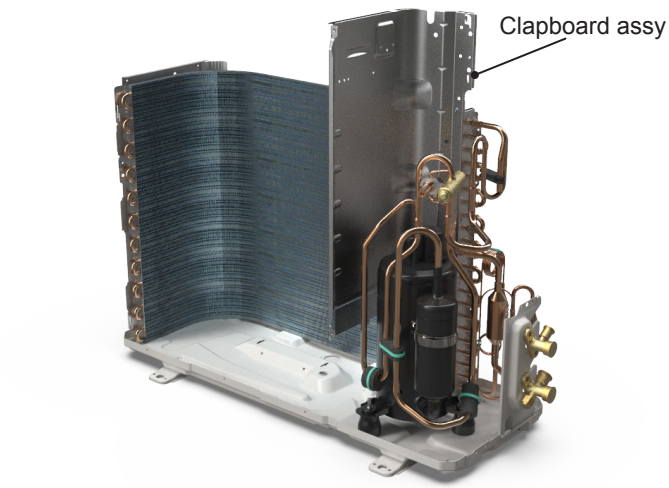
11.2 Removal Procedure of Outdoor Unit

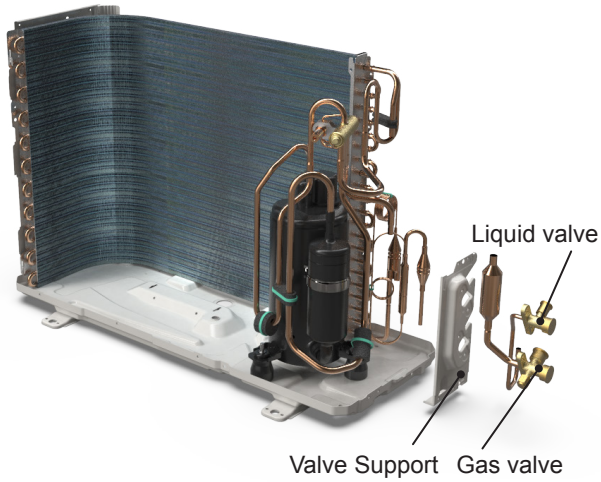
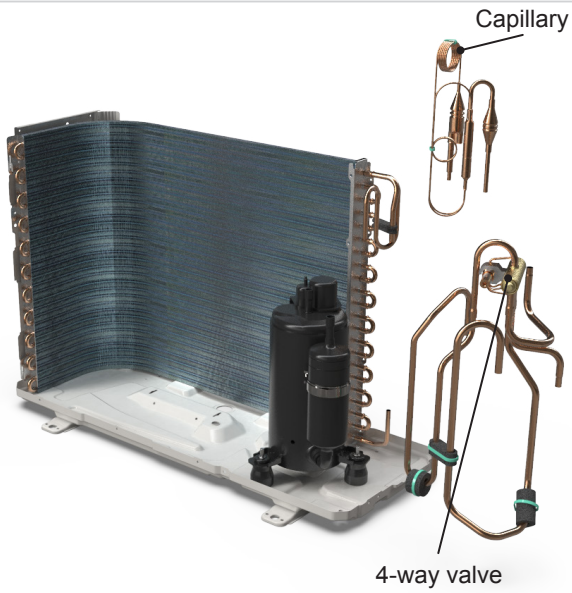
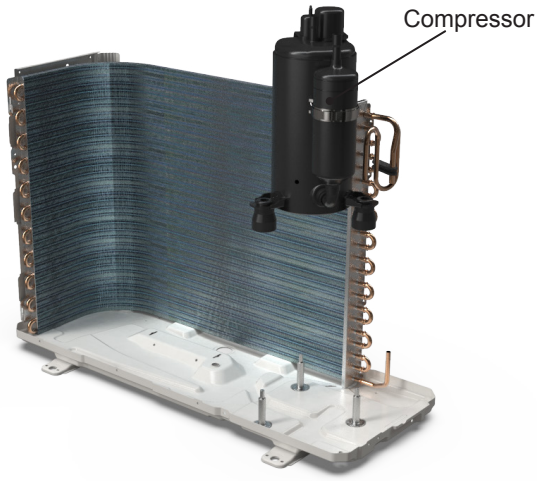
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⚠ **Caution: discharge the refrigerant completely before removal.**

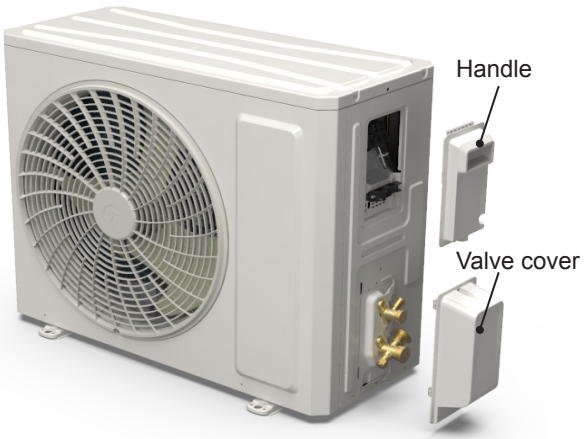
Step	Procedure
1. Before disassembly	
2. Remove handle Remove the screws fixing handle and then remove them.	
3. Remove top cover Remove the screws fixing top panel and then remove the top panel.	

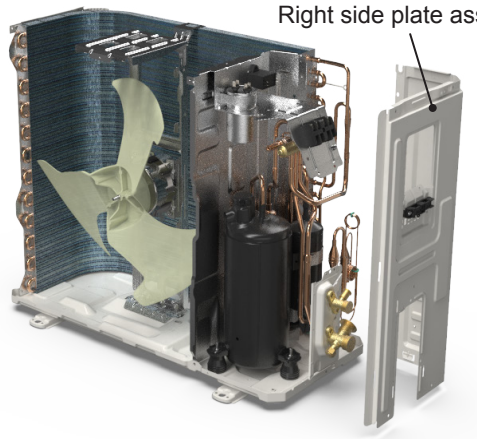
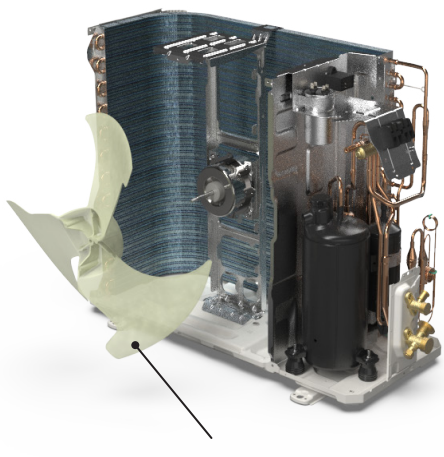
Step	Procedure
4. Remove front panel assy	
Remove connection screws connecting the front panel assy with the chassis and the motor support, and then remove the front panel assy.	
5. Remove right side plate assy	
Rescrew the ground screws, remove the ground wires, loosen the screws fixing terminal board, remove the terminal board, rescrew the screws fixing the right plate, and remove the right side plate assy.	
6. Remove axial flow fan	
Remove the nut on the fan and then remove the axial flow fan.	

Step	Procedure
7. Remove motor support and motor	
	Remove the screws fixing the motor support and lift the motor support to remove it. Remove the screws fixing the motor and then remove the motor.
	
8. Remove electric box assy	
	Remove the terminals, lift up and rotate the electrical box assy to the right so that the snaps on the clapboard are removed and the electrical box assy are removed.
	
9. Remove clapboard assy	
	Remove the screws fixing the clapboard assy and then remove the clapboard assy.
	

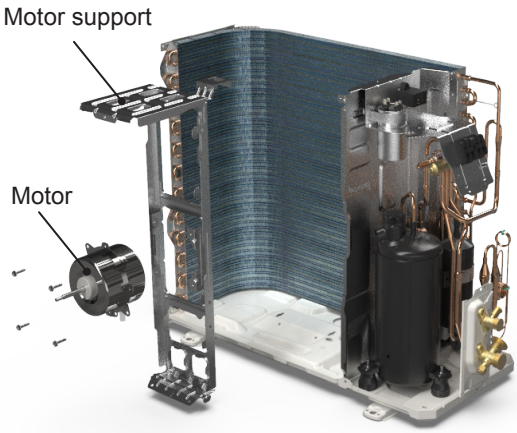
Step	Procedure
10. Remove gas valve and liquid valve	
	Remove the valve support bolck, remove the screws fixing the gas valve and the liquid valve,unsolder the welding joint connecting the gas valve and the liquid valve, remove them. Note: Discharge the refrigerant completely befor unsoldering; when unsoldering, wrap the gas valve with a wet cloth completely to avoid damage to the valve caused by high temperature.
	
11. Remove 4-way valve and capillary	
	Unsolder the welding joints connecting capillary, and then remove it. Unsolder the welding joints connecting the 4-way valve assy with capillary sub-assy, compressor and condenser; remove the 4-way valve.Cooling only unit removes Discharge Tube and Inhalation Tube. Note: 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.
	
12. Remove compressor	
	Remove the 3 foot nuts on the compressor and then remove the compressor.
	

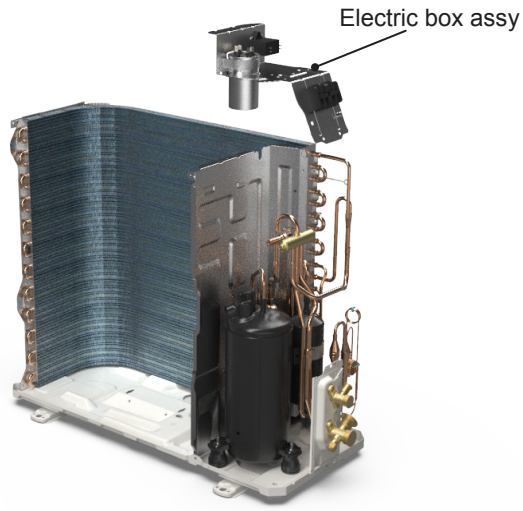
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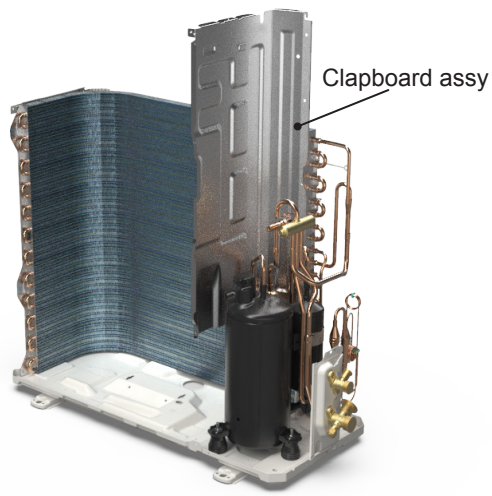
Step	Procedure
1. Before disassembly	
2. Remove handle and valve cover Remove the screws fixing handle, valve cover and then remove them.	
3. Remove top cover Remove the screws fixing top panel and then remove the top panel.	

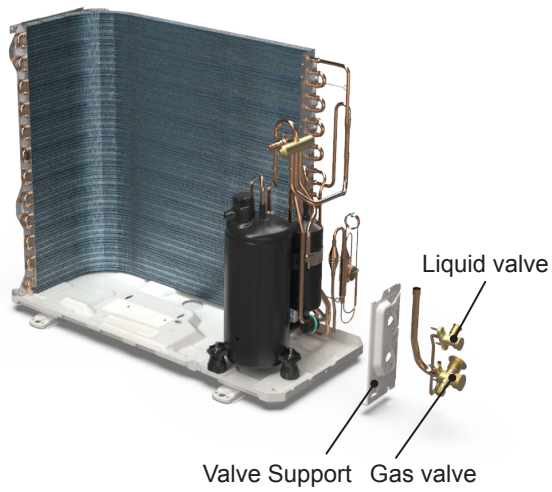
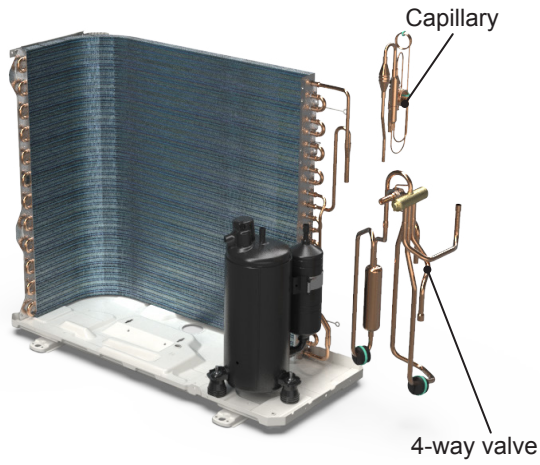
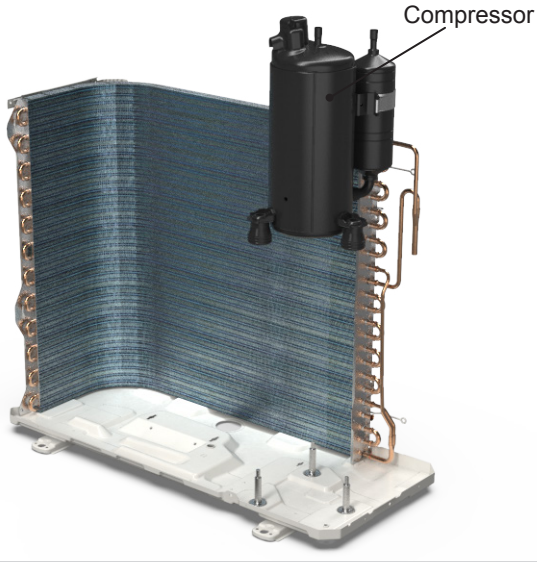
Step	Procedure
4. Remove front panel assy	
Remove connection screws connecting the front panel assy with the chassis and the motor support, and then remove the front panel assy.	
5. Remove right side plate assy	
Rescrew the ground screws, remove the ground wires, loosen the screws fixing terminal board, remove the terminal board, rescrew the screws fixing the right plate, and remove the right side plate assy.	
6. Remove axial flow fan	
Remove the nut on the fan and then remove the axial flow fan.	

Step	Procedure
7. Remove motor support and motor	Remove the screws fixing the motor support and lift the motor support to remove it. Remove the screws fixing the motor and then remove the motor.
8. Remove electric box assy	Remove the terminals, lift up and rotate the electrical box assy to the right so that the snaps on the clapboard are removed and the electrical box assy are removed.
9. Remove clapboard assy	Remove the screws fixing the clapboard assy and then remove the clapboard assy.



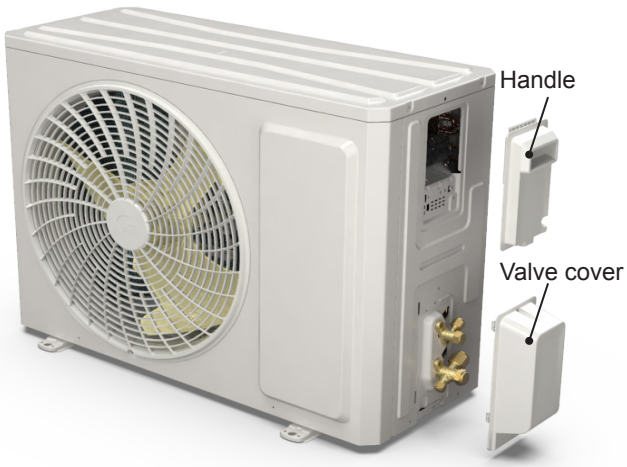


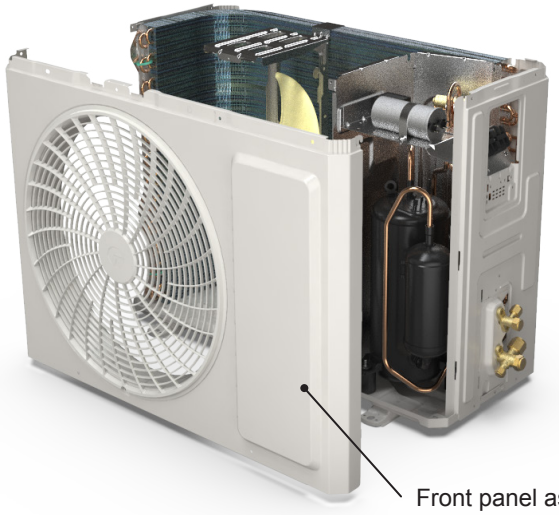
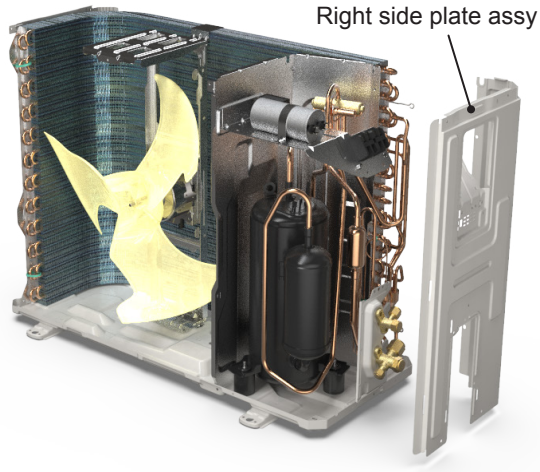
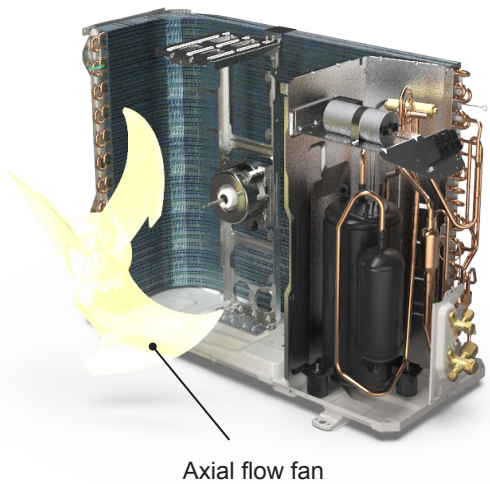


Step	Procedure
10. Remove gas valve and liquid valve	
Remove the valve support bolck, remove the screws fixing the gas valve and the liquid valve,unsolder the welding joint connecting the gas valve and the liquid valve, remove them. Note: Discharge the refrigerant completely befor unsoldering; when unsoldering, wrap the gas valve with a wet cloth completely to avoid damage to the valve caused by high temperature.	
11. Remove 4-way valve and capillary	
Unsolder the welding joints connecting capillary, and then remove it. Unsolder the welding joints connecting the 4-way valve assy with capillary sub-assy, compressor and condenser; remove the 4-way valve.Cooling only unit removes Discharge Tube and Inhalation Tube. Note: 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.	
12. Remove compressor	
Remove the 3 foot nuts on the compressor and then remove the compressor.	

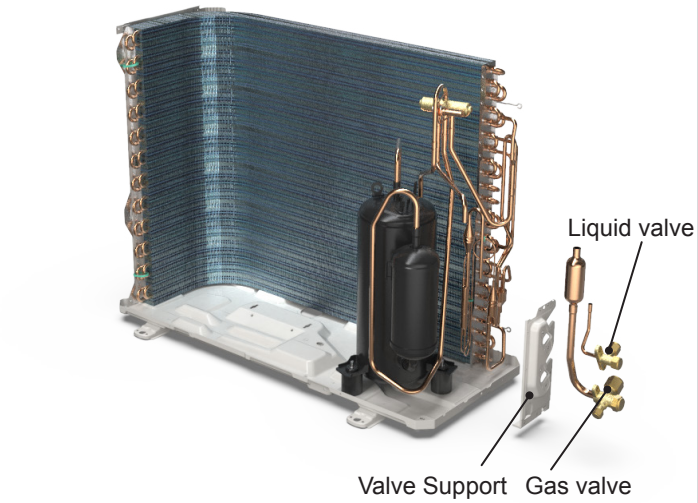
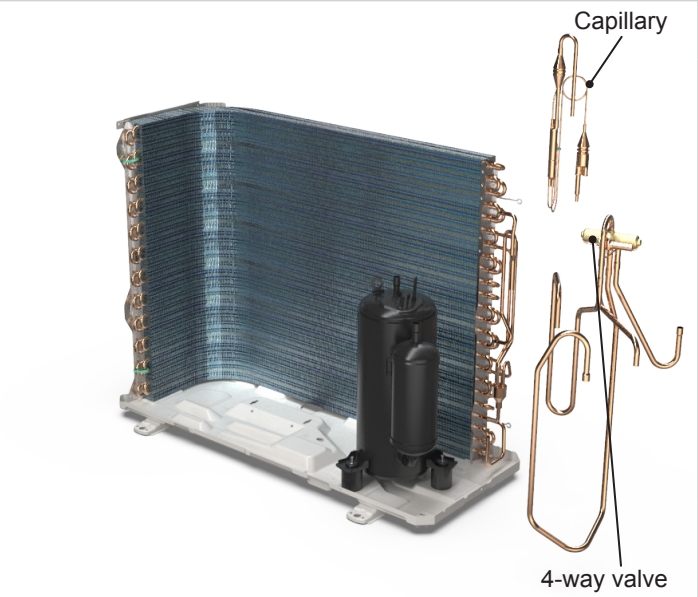
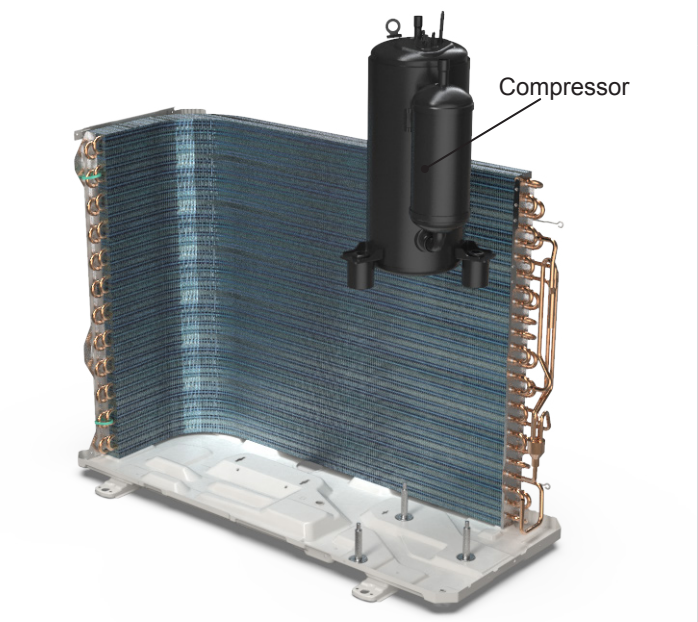
Caution: discharge the refrigerant completely before removal.

GWH18AGCXD-K3NNA1B/O
GWH18QDXD-K3NNA6A/O

Step	Procedure
1. Before disassembly	
2. Remove handle and valve cover Remove the screws fixing handle, valve cover and then remove them.	
3. Remove top cover Remove the screws fixing top panel and then remove the top panel.	

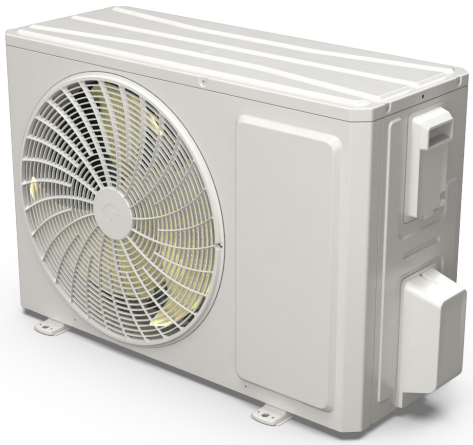
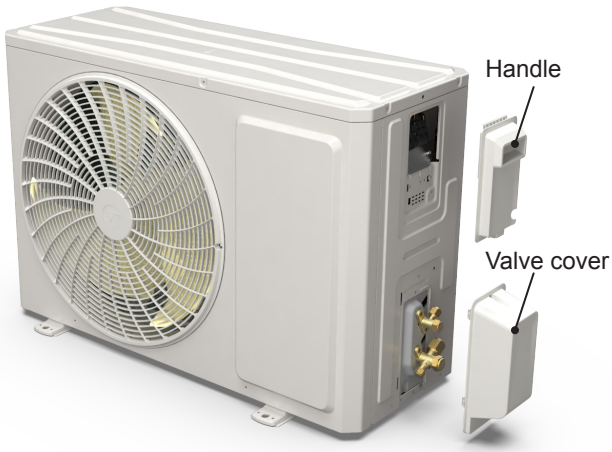
Step	Procedure
4. Remove front panel assy	
	Remove connection screws connecting the front panel assy with the chassis and the motor support, and then remove the front panel assy.
	
5. Remove right side plate assy	
	Rescrew the ground screws, remove the ground wires, loosen the screws fixing terminal board, remove the terminal board, rescrew the screws fixing the right plate, and remove the right side plate assy.
	
6. Remove axial flow fan	
	Remove the nut on the fan and then remove the axial flow fan.
	

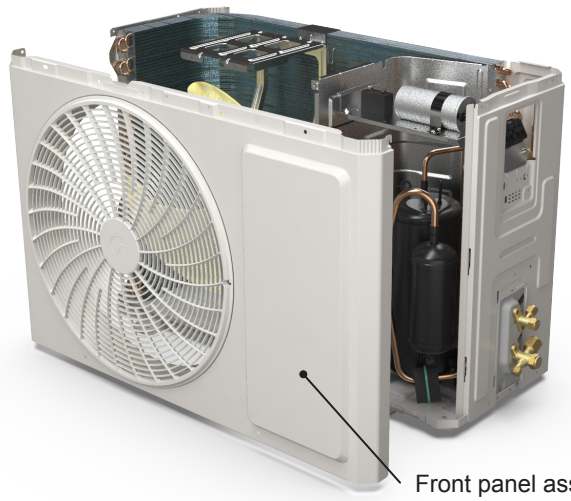
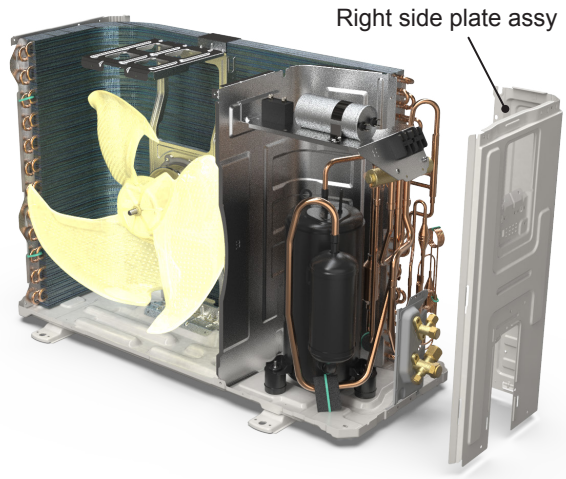
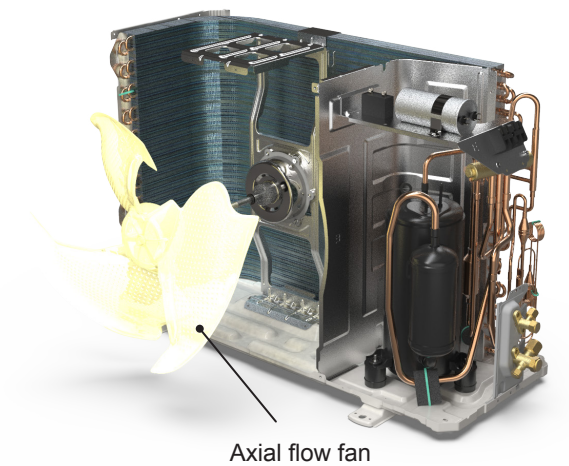
Step	Procedure
7. Remove motor support and motor	Motor support Motor
Remove the screws fixing the motor support and lift the motor support to remove it. Remove the screws fixing the motor and then remove the motor.	
8. Remove electric box assy	Electric box assy
Remove the terminals, lift up and rotate the electrical box assy to the right so that the snaps on the clapboard are removed and the electrical box assy are removed.	
9. Remove clapboard assy	Clapboard assy
Remove the screws fixing the clapboard assy and then remove the clapboard assy.	

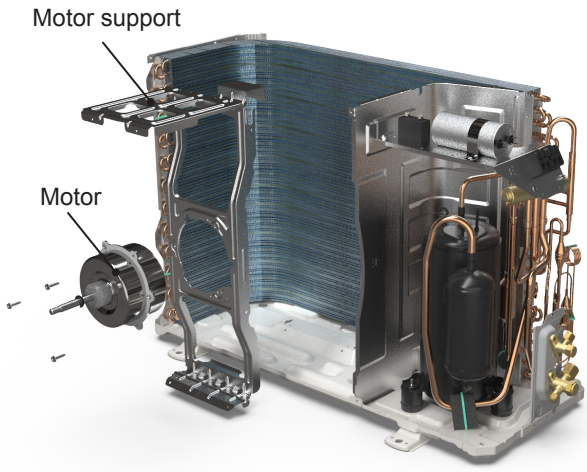
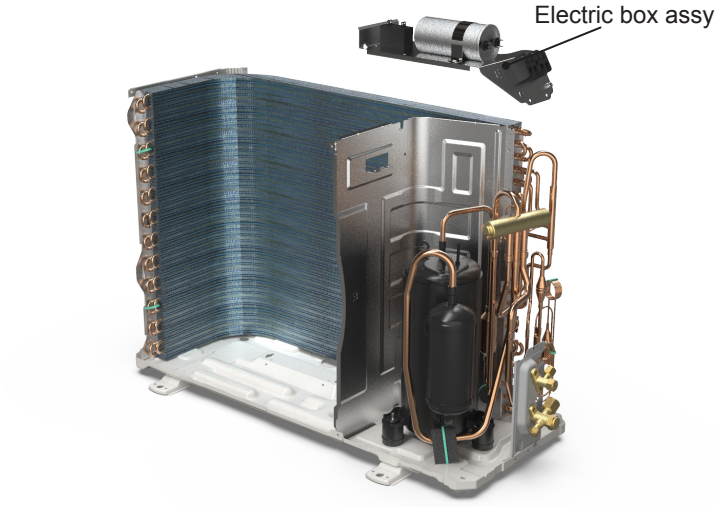
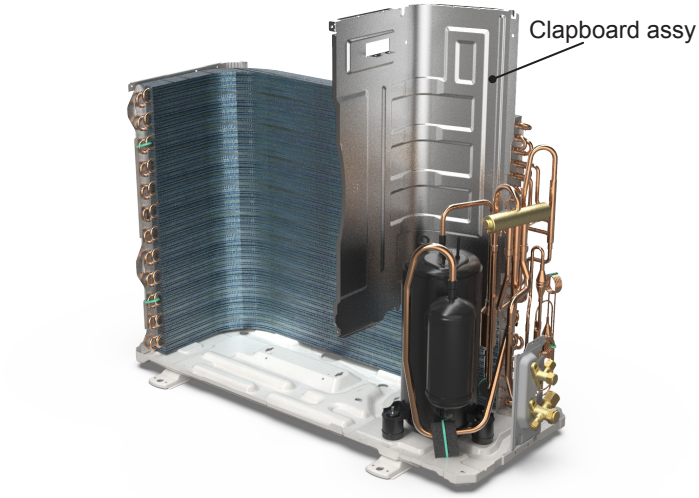
Step	Procedure
10. Remove gas valve and liquid valve	
Remove the valve support bolck, remove the screws fixing the gas valve and the liquid valve,unsolder the welding joint connecting the gas valve and the liquid valve, remove them. Note: Discharge the refrigerant completely befor unsoldering; when unsoldering, wrap the gas valve with a wet cloth completely to avoid damage to the valve caused by high temperature.	
11. Remove 4-way valve and capillary	
Unsolder the welding joints connecting capillary, and then remove it. Unsolder the welding joints connecting the 4-way valve assy with capillary sub-assy, compressor and condenser; remove the 4-way valve.Cooling only unit removes Discharge Tube and Inhalation Tube. Note: 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.	
12. Remove compressor	
Remove the 3 foot nuts on the compressor and then remove the compressor.	

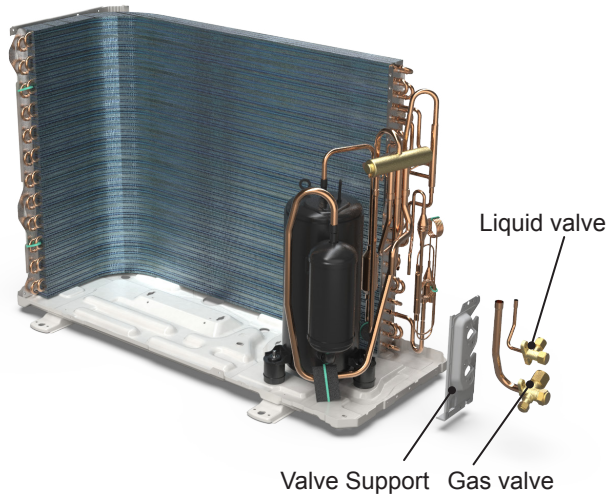
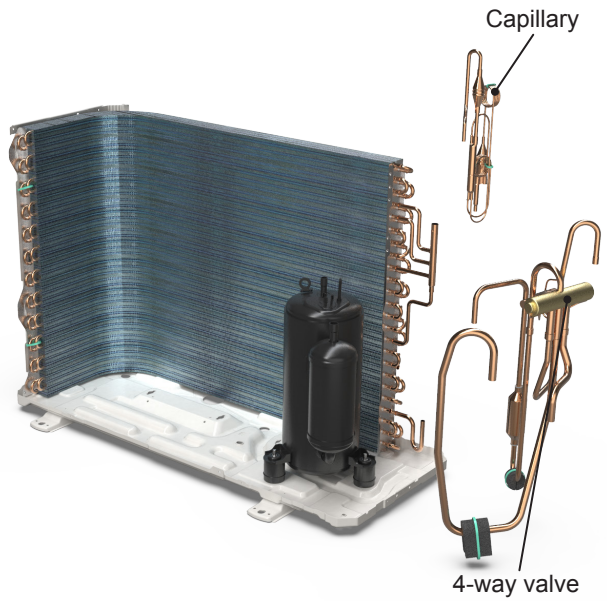
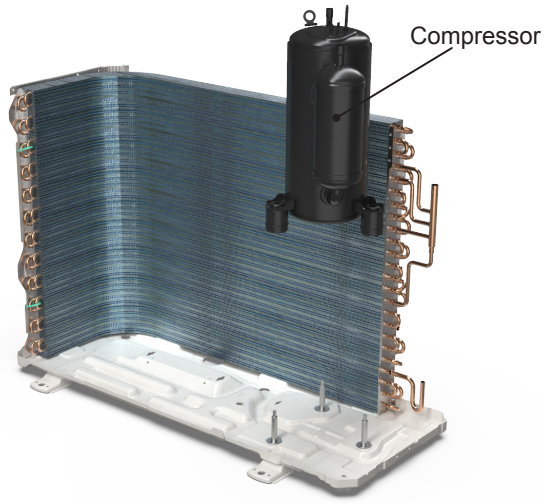
GWH24AADXE-K3NNA1A/O
NOTE:Take heat pump for example.

Caution: discharge the refrigerant completely before removal.

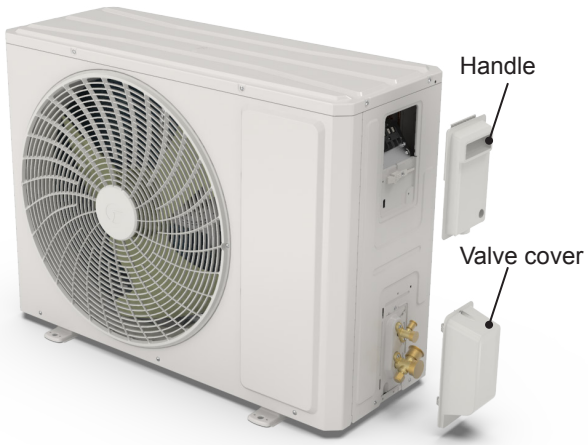
Step	Procedure
1. Before disassembly	
2. Remove handle and valve cover Remove the screws fixing handle, valve cover and then remove them.	
3. Remove top cover Remove the screws fixing top panel and then remove the top panel.	

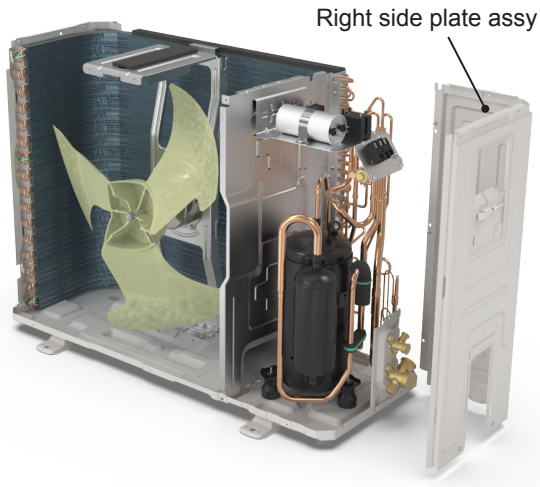
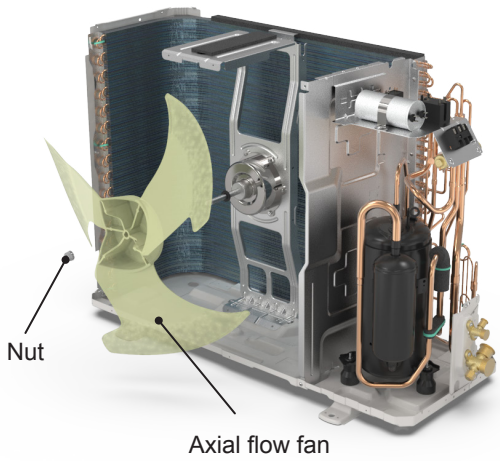
Step	Procedure
4. Remove front panel assy	
	Remove connection screws connecting the front panel assy with the chassis and the motor support, and then remove the front panel assy.
	
5. Remove right side plate assy	
	Rescrew the ground screws, remove the ground wires, loosen the screws fixing terminal board, remove the terminal board, rescrew the screws fixing the right plate, and remove the right side plate assy.
	
6. Remove axial flow fan	
	Remove the nut on the fan and then remove the axial flow fan.
	

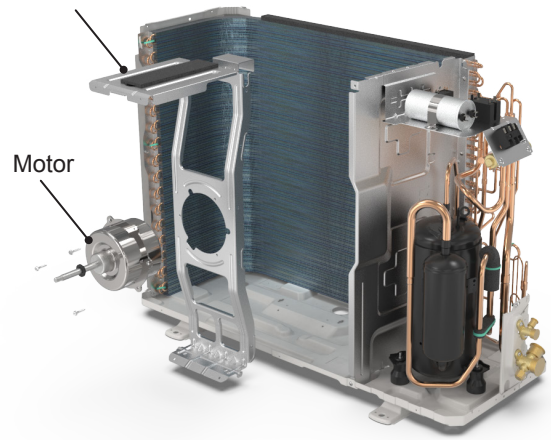
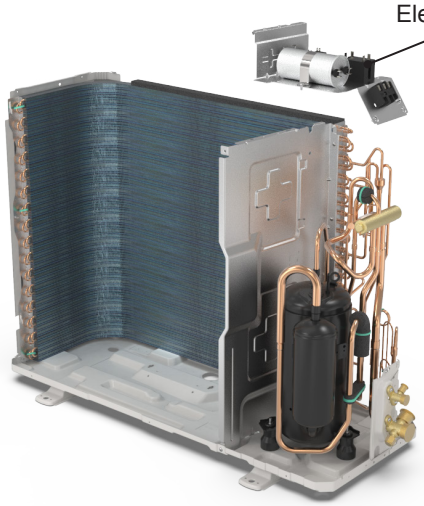
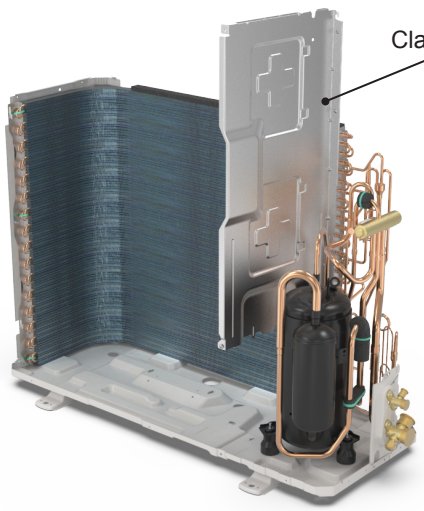
Step	Procedure
7. Remove motor support and motor	
Remove the screws fixing the motor support and lift the motor support to remove it. Remove the screws fixing the motor and then remove the motor.	
8. Remove electric box assy	
Remove the terminals, lift up and rotate the electrical box assy to the right so that the snaps on the clapboard are removed and the electrical box assy are removed.	
9. Remove clapboard assy	
Remove the screws fixing the clapboard assy and then remove the clapboard assy.	

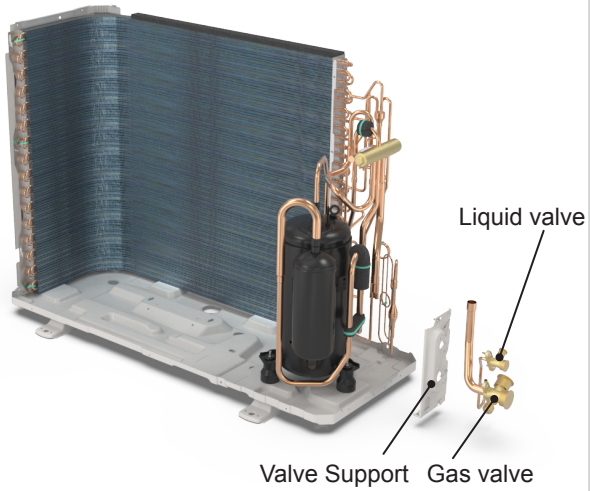
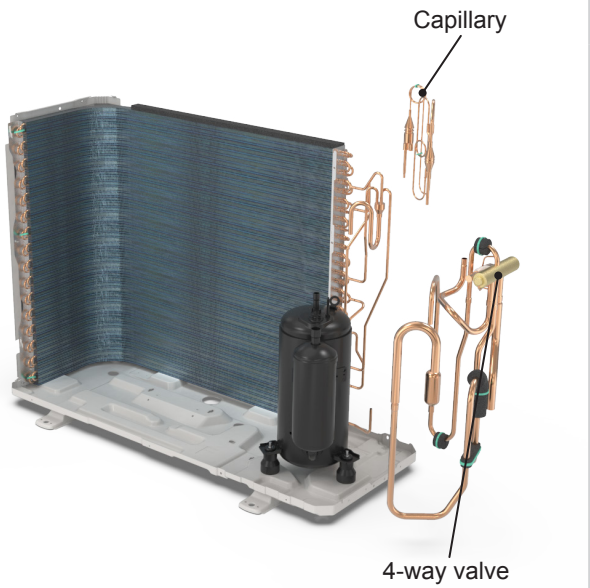
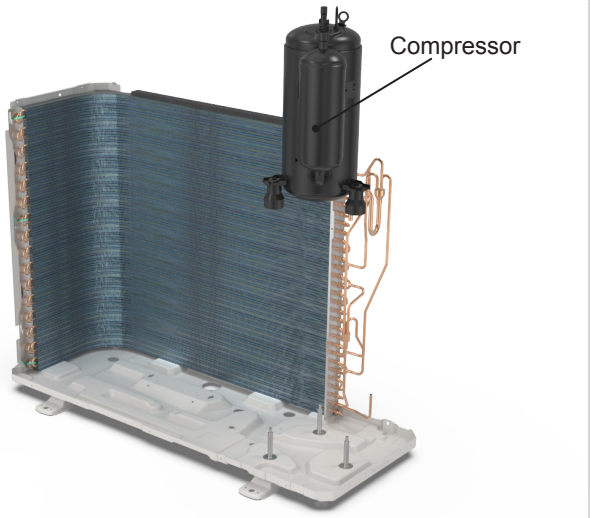
Step	Procedure
10. Remove gas valve and liquid valve	
	Remove the valve support bolck, remove the screws fixing the gas valve and the liquid valve,unsolder the welding joint connecting the gas valve and the liquid valve, remove them. Note: Discharge the refrigerant completely befor unsoldering; when unsoldering, wrap the gas valve with a wet cloth completely to avoid damage to the valve caused by high temperature.
	
11. Remove 4-way valve and capillary	
	Unsolder the welding joints connecting capillary, and then remove it. Unsolder the welding joints connecting the 4-way valve assy with capillary sub-assy, compressor and condenser; remove the 4-way valve.Cooling only unit removes Discharge Tube and Inhalation Tube. Note: 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.
	
12. Remove compressor	
	Remove the 3 foot nuts on the compressor and then remove the compressor.
	

Caution: discharge the refrigerant completely before removal.

Step	Procedure
1. Before disassembly	
2. Remove handle and valve cover Remove the screws fixing handle, valve cover and then remove them.	
3. Remove top cover Remove the screws fixing top panel and then remove the top panel.	

Step	Procedure
4. Remove front panel assy	
Remove connection screws connecting the front panel assy with the chassis and the motor support, and then remove the front panel assy.	
5. Remove right side plate assy	
Rescrew the ground screws, remove the ground wires, loosen the screws fixing terminal board, remove the terminal board, rescrew the screws fixing the right plate, and remove the right side plate assy.	
6. Remove axial flow fan	
Remove the nut on the fan and then remove the axial flow fan.	

Step	Procedure
7. Remove motor support and motor	Motor support Motor 
Remove the screws fixing the motor support and lift the motor support to remove it. Remove the screws fixing the motor and then remove the motor.	
8. Remove electric box assy	Electric box assy 
Remove the terminals, lift up and rotate the electrical box assy to the right so that the snaps on the clapboard are removed and the electrical box assy are removed.	
9. Remove clapboard assy	Clapboard assy 
Remove the screws fixing the clapboard assy and then remove the clapboard assy.	

Step	Procedure
10. Remove gas valve and liquid valve	
	Remove the valve support bolck, remove the screws fixing the gas valve and the liquid valve,unsolder the welding joint connecting the gas valve and the liquid valve, remove them. Note: Discharge the refrigerant completely befor unsoldering; when unsoldering, wrap the gas valve with a wet cloth completely to avoid damage to the valve caused by high temperature.
	
11. Remove 4-way valve and capillary	
	Unsolder the welding joints connecting capillary, and then remove it. Unsolder the welding joints connecting the 4-way valve assy with capillary sub-assy, compressor and condenser; remove the 4-way valve.Cooling only unit removes Discharge Tube and Inhalation Tube. Note: 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.
	
12. Remove compressor	
	Remove the 3 foot nuts on the compressor and then remove the compressor.
	

Appendix

Appendix 1: Reference Sheet of Celsius and Fahrenheit

Conversion formula for Fahrenheit degree and Celsius degree: Tf=Tcx1.8+32

Set temperature

Fahrenheit display temperature (℉)	Fahrenheit (℉)	Celsius (℃)	Fahrenheit display temperature (℉)	Fahrenheit (℉)	Celsius (℃)	Fahrenheit display temperature (℉)	Fahrenheit (℉)	Celsius (℃)
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 (℉)	Fahrenheit (℉)	Celsius (℃)	Fahrenheit display temperature (℉)	Fahrenheit (℉)	Celsius (℃)	Fahrenheit display temperature (℉)	Fahrenheit (℉)	Celsius (℃)
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(More details please refer to the specifications.)
2.Min length of connection pipeFor the unit with standard connection pipe of 5m, there is no limitation for themin 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 and max. high difference.(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 the following sheet.

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

Additional refrigerant charging amount for R22, R407C, R410A and R134a			
Diameter of connection pipe		Outdoor unit throttle	
Liquid pipe	Gas pipe	Cooling only(g/m)	Cooling and heating(g/m)
1/4"	3/8" or 1/2"	15	20
1/4" or 3/8"	5/8" or 3/4"	15	30
1/2"	3/4" or 7/8"	30	120
5/8"	1" or 1 1/4"	60	120
3/4"	/	250	250
7/8"	/	350	350

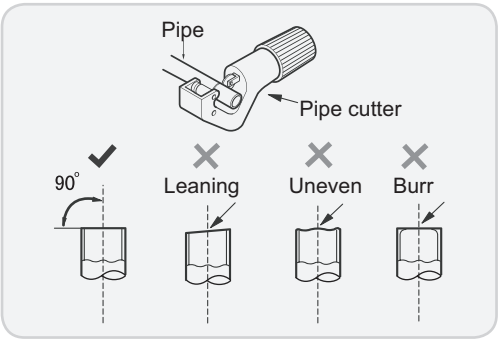
Appendix 3: Pipe Expanding Method

⚠ **Note:**

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

A:Cut the pip

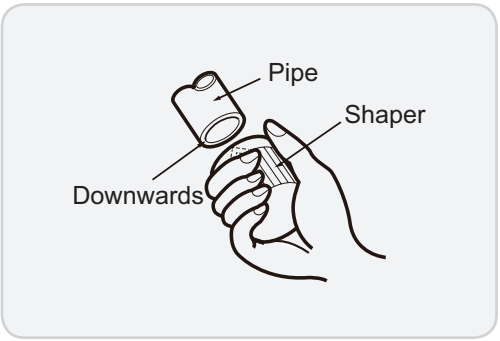
- Confirm the pipe length according to the distance of indoor unit and outdoor unit.
- Cut the required pipe with pipe cutter.



B:Remove the burrs

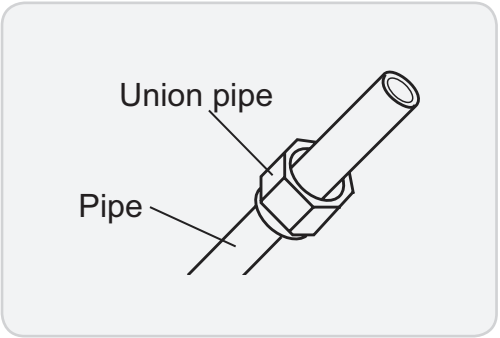
- Remove the burrs with shaper and prevent the burrs from getting into the pipe.

C:Put on suitable insulating pipe.



D:Put on the union nut

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



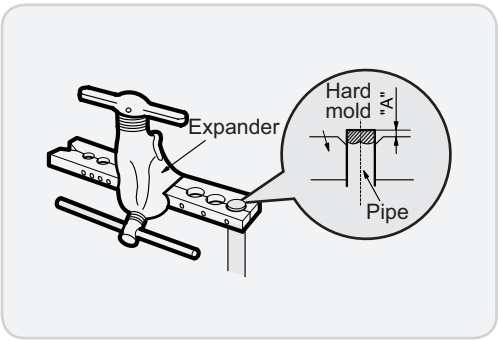
E:Expand the port

- Expand the port with expander.

⚠ **Note:**

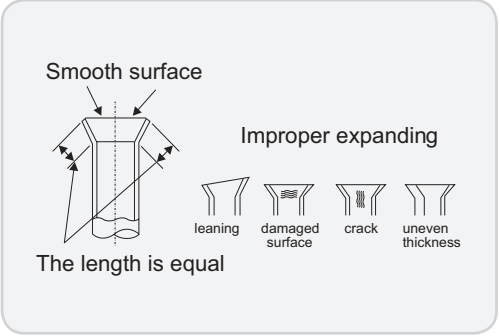
- "A" is different according to the diameter, please refer to the sheet below:

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



F:Inspection

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



Appendix 4: List of Resistance for Temperature Sensor

Resistance Table of Ambient Temperature Sensor for Indoor and Outdoor Units(15K)

Temp(°C)	Resistance(kΩ)	Temp(°C)	Resistance(kΩ)	Temp(°C)	Resistance(kΩ)	Temp(°C)	Resistance(kΩ)
-19	138.10	0	49.02	20	18.75	40	7.97
-18	128.60	2	44.31	22	17.14	42	7.35
-16	115.00	4	40.09	24	15.68	44	6.79
-14	102.90	6	36.32	26	14.36	46	6.28
-12	92.22	8	32.94	28	13.16	48	5.81
-10	82.75	10	29.90	30	12.07	50	5.38
-8	74.35	12	27.18	32	11.09	52	4.99
-6	66.88	14	24.73	34	10.20	54	4.63
-4	60.23	16	22.53	36	9.38	56	4.29
-2	54.31	18	20.54	38	8.64	58	3.99

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	181.40	20	25.01	60	4.95	100	1.35
-15	145.00	25	20.00	65	4.14	105	1.16
-10	110.30	30	16.10	70	3.48	110	1.01
-5	84.61	35	13.04	75	2.94	115	0.88
0	65.37	40	10.62	80	2.50	120	0.77
5	50.87	45	8.71	85	2.13	125	0.67
10	39.87	50	7.17	90	1.82	130	0.59
15	31.47	55	5.94	95	1.56	135	0.52

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)
-30	911.400	10	98	50	17.65	90	4.469
-25	660.8	15	77.35	55	14.62	95	3.841
-20	486.5	20	61.48	60	12.17	100	3.315
-15	362.9	25	49.19	65	10.18	105	2.872
-10	274	30	39.61	70	8.555	110	2.498
-5	209	35	32.09	75	7.224	115	2.182
0	161	40	26.15	80	6.129	120	1.912
5	125.1	45	21.43	85	5.222	125	1.682



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