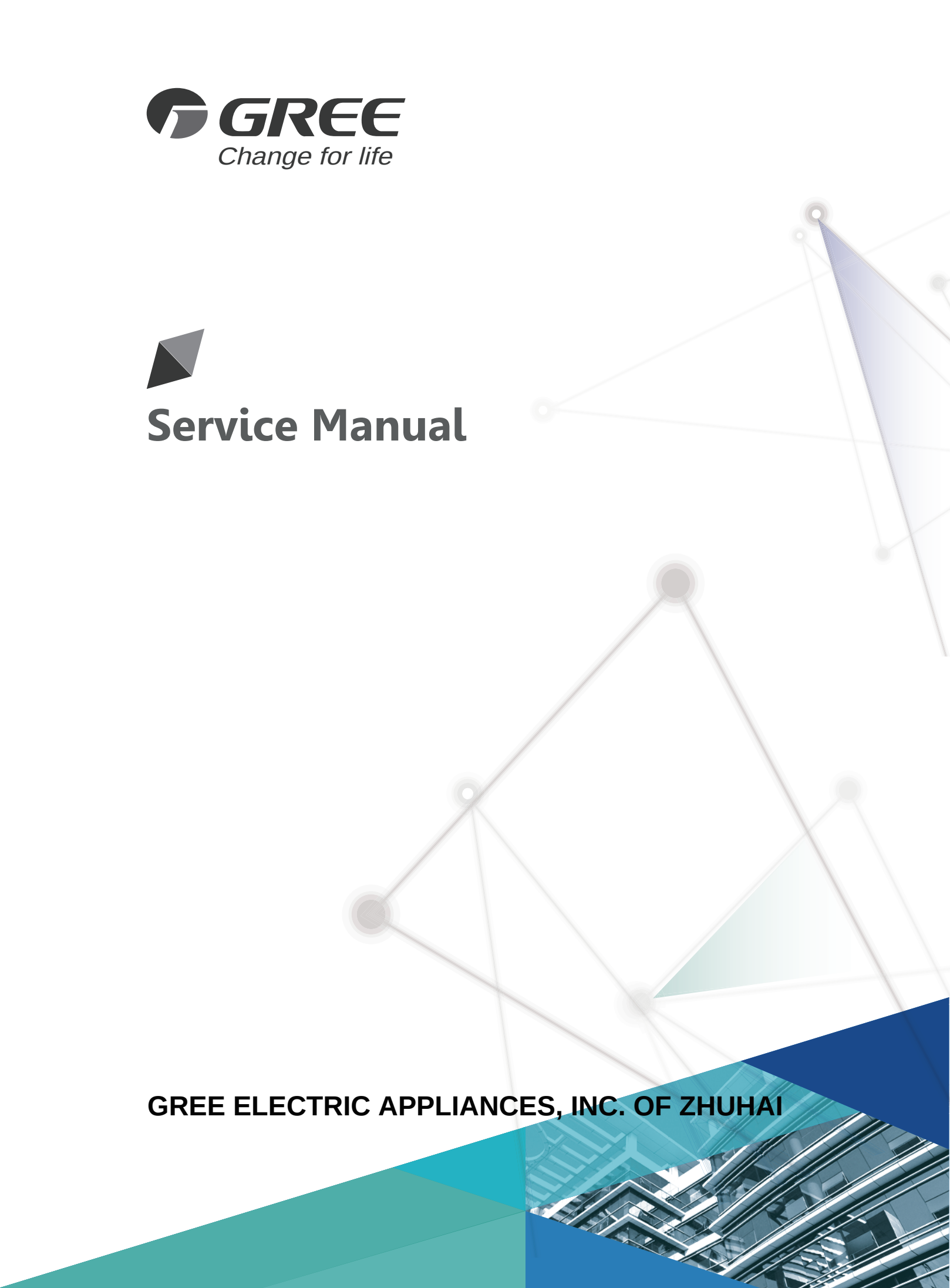
GREE
Change for life

Service Manual



GREE ELECTRIC APPLIANCES, INC. OF ZHUHAI

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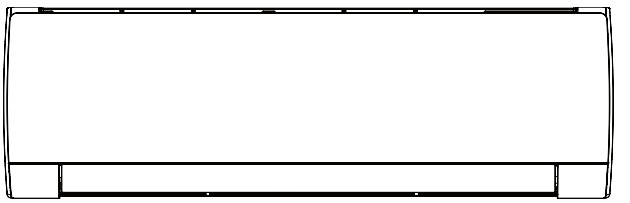
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Part Ⅰ : Technical Information

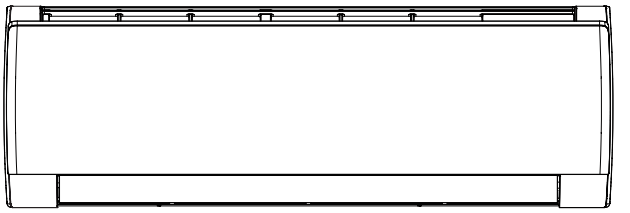
1. Summary

Indoor Unit:

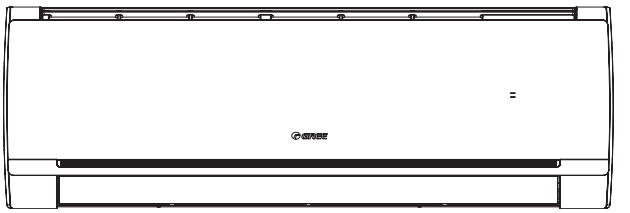
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GWH12ACC-K3NNA1E/I
GWH12ACB-K3NNA1A/I
GWH12ACC-K3NNA1A/I
GWH18ACC-K3NNA1A/I



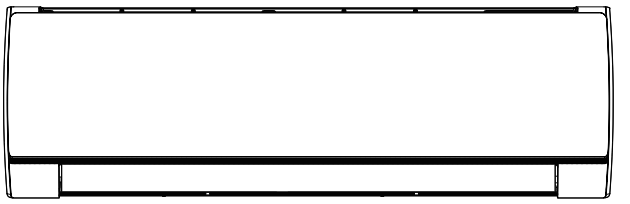
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GWH18ACC-K3NNA5A/I



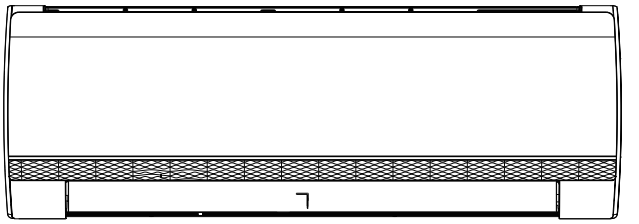
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GWH12ACB-K3NNA4A/I
GWH18ACC-K3NNA4A/I



GWH12ACB-K3NNA2A/I
GWH18ACC-K3NNA2A/I
GWH12ACC-K3NNA2A/I

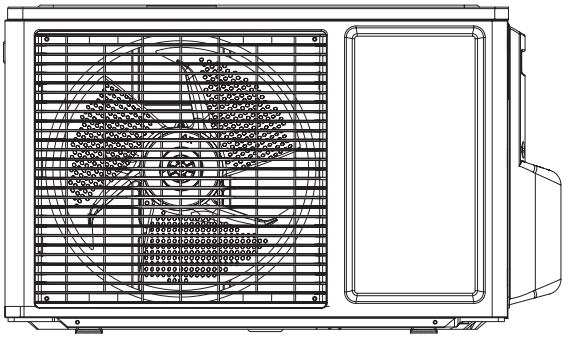


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GWH18ACC-K3NNA3A/I
GWH12ACC-K3NNA3A/I

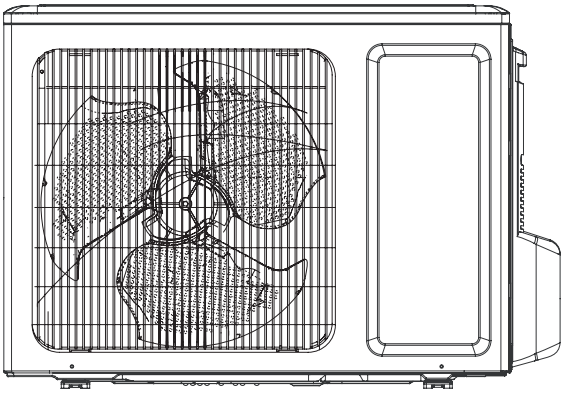


Outdoor Unit:

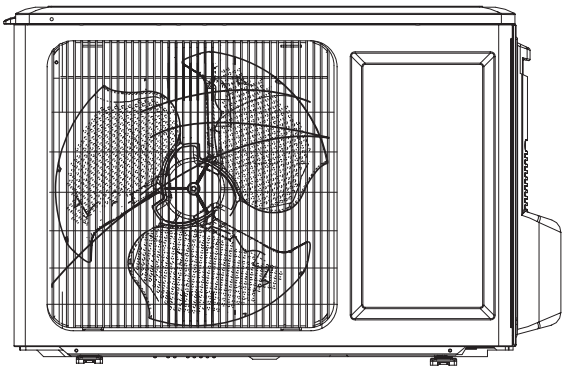
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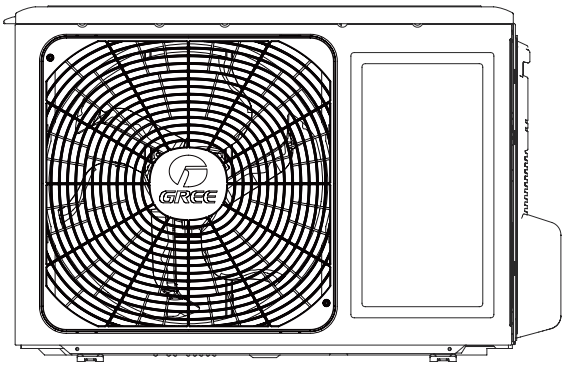
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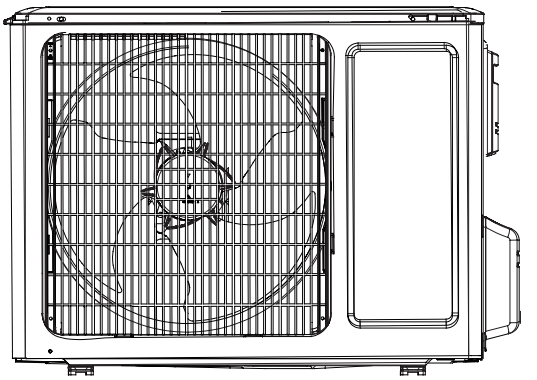
GWH12QC-K3NNA1A/O(CA419W00100)
GWH18AAC-K3NNA1A/O



GWH12QC-K3NNA1A/O(CA419W00101)



GWH12QC-K3NNB2E/O



Remote Controller:

YAW1F



YAN1F1



Models List:

No.	Model	Product Code	Model	Product Code	Model	Product Code	Remote Controller
1	GWH09ACB-K3NNA1A	CA497000200	GWH09ACB-K3NNA1A/I	CA497N00200	GWH09AAB-K3NNA1A/O	CA115W13700	YAW1F
2		CA497000201		CA497N00201			
3	GWH12ACC-K3NNA1A	CA497000100	GWH12ACC-K3NNA1A/I	CA497N00100	GWH12QC-K3NNA1A/O	CA419W00100	
4		CA497000101		CA497N00101			
5	GWH12ACC-K3NNA5A	CA341000401	GWH12ACC-K3NNA5A/I	CA341N00400	GWH12QC-K3NNA1A/O	CA419W00101	
6		CA341000402		CA341N00402			
7	GWH12ACC-K3NNA4A	CA344000502	GWH12ACC-K3NNA4A/I	CA344N00502			
8		CA344000501		CA344N00500			
9	GWH12ACC-K3NNA2A	CA342000201	GWH12ACC-K3NNA2A/I	CA342N00200			
10	GWH12ACC-K3NNA3A	CA343000501	GWH12ACC-K3NNA3A/I	CA343N00500			
11	GWH12ACB-K3NNA1A	CA497000500	GWH12ACB-K3NNA1A/I	CA497N00500	GWH12AAB-K3NNA2A/O	CA115W14100	
12		CA497000501		CA497N00501			
13		CA497000502		CA497N00502			
14		CA497000503		CA497N00503			
15	GWH12ACB-K3NNA5A	CA341001200	GWH12ACB-K3NNA5A/I	CA341N01200			
16	GWH12ACB-K3NNA4A	CA344000800	GWH12ACB-K3NNA4A/I	CA344N00800			
17	GWH12ACB-K3NNA2A	CA342000600	GWH12ACB-K3NNA2A/I	CA342N00600			
18		CA342000601		CA342N00601			
19	GWH12ACB-K3NNA3A	CA342000601	GWH12ACB-K3NNA3A/I	CA343N00800			
20	GWH18ACC-K3NNA2A	CA342000801	GWH18ACC-K3NNA2A/I	CA342N00801	GWH18AAC-K3NNA1A/O	CA115W14200	
21	GWH18ACC-K3NNA1A	CA497000700	GWH18ACC-K3NNA1A/I	CA497N00700			
22		CA497000701		CA497N00701			
23		CA497000702		CA497N00702			
24		CA497000703		CA497N00703			
25	GWH18ACC-K3NNA2A	CA342000800	GWH18ACC-K3NNA2A/I	CA342N00800			
26	GWH18ACC-K3NNA3A	CA343000600	GWH18ACC-K3NNA3A/I	CA343N00600			
27	GWH18ACC-K3NNA5A	CA341001100	GWH18ACC-K3NNA5A/I	CA341N01100			
28	GWH18ACC-K3NNA4A	CA344000900	GWH18ACC-K3NNA4A/I	CA344N00900			
29	GWH12ACC-K3NNA1E	CA497005800	GWH12ACC-K3NNA1E/I	CA497N05800	GWH12QC-K3NNB2E/O	CA432W06500	YAN1F1

2. Specifications

2.1 Specification Sheet

Model			GWH09ACB-K3NNA1A	GWH12ACC-K3NNA1E
Product Code			CA497000200/CA497000201	CA497005800
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	2638	3517
Heating Capacity		W	2755	3664
Cooling Power Input		W	821	1095
Heating Power Input		W	763	1014
Cooling Power Current		A	4.0	5.08
Heating Power Current		A	3.5	4.70
Rated Input		W	1150	1780
Rated Current		A	5.6	10
Air Flow Volume(SH/H/M/L/SL)		m^3/h	570/500/430/300/-	650/560/480/300/-
Dehumidifying Volume		L/h	0.8	1.4
EER		W/W	3.21	3.21
COP		W/W	3.61	3.61
SEER		W/W	/	/
HSPF		W/W	/	/
Application Area		m^2	12-18	16-24
Indoor Unit	Model of Indoor Unit		GWH09ACB-K3NNA1A/I	GWH12ACC-K3NNA1E/I
	Product Code of Indoor Unit		CA497N00200/CA497N00201	CA497N05800
	Fan Type		Cross-flow	Cross-flow
	Diameter Length(DXL)	mm	Φ93X580	Φ98X633.5
	Fan Motor Cooling Speed(SH/H/M/L/SL)	r/min	1300/1200/1100/850/-	1300/1100/1000/800/-
	Fan Motor Heating Speed(SH/H/M/L/SL)	r/min	1250/1150/1050/900/-	1200/1100/1000/900/-
	Output of Fan Motor	W	20	20
	Fan Motor RLA	A	0.215	0.25
	Fan Motor Capacitor	μF	1	1.5
	Input of Heater	W	/	/
	Evaporator Form		Aluminum Fin-copper Tube	Aluminum Fin-copper Tube
	Pipe Diameter	mm	Φ7.94	Φ5
	Row-fin Gap	mm	1-1.2	2-1.4
	Coil Length (LXDXW)	mm	583X19.05X264	635X22.8X304.8
	Swing Motor Model		MP24AN	MP24BA
	Output of Swing Motor	W	1.5	1.5
	Fuse	A	3.15	3.15
	Sound Pressure Level (SH/H/M/L/SL)	dB (A)	40/37/35/27/-	41/37/33/28/-
	Sound Power Level (SH/H/M/L/SL)	dB (A)	50/47/45/37/-	51/47/43/38/-
	Dimension (WXHXD)	mm	819X256X185	889X294X212
	Dimension of Carton Box (LXWXH)	mm	863X314X249	935X349X273
	Dimension of Package (LXWXH)	mm	868X330X260	940X365X284
	Net Weight	kg	8.5	10.5
	Gross Weight	kg	10	12.5

Outdoor Unit	Model of Outdoor Unit		GWH09AAB-K3NNA1A/O	GWH12QC-K3NNB2E/O
	Product Code of Outdoor Unit		CA115W13700	CA432W06500
	Compressor Manufacturer/Trademark		ZHUHAI LANDA COMPRESSOR CO.,LTD	ZHUHAI LANDA COMPRESSOR CO.,LTD
	Compressor Model		QXA-B102C130(Ball-shaped cover)	QXA-C129E030L
	Compressor Oil		RB68EP/FV50S	RB68EP/FVC68D/FV50S
	Compressor Type		Rotary	Rotary
	L.R.A.	A	17	37
	Compressor RLA	A	4	5.3
	Compressor Power Input	W	865	1130
	Overload Protector		UP3-00	USP-201
	Throttling Method		Capillary	Capillary
	Operation Temp	°C	16~30	16~30
	Ambient Temp (Cooling)	°C	18~43	18~43
	Ambient Temp (Heating)	°C	-7~24	-7~24
	Condenser Form		Aluminum Fin-copper Tube	Aluminum Fin-copper Tube
	Pipe Diameter	mm	Φ7.94	Φ7.94
	Rows-fin Gap	mm	1-1.4	1-1.4
	Coil Length (LXDXW)	mm	655X19.05X396	730X19.05X550
	Fan Motor Speed	rpm	950	850
	Output of Fan Motor	W	20	35
	Fan Motor RLA	A	0.25	0.3
	Fan Motor Capacitor	μF	1.5	2.5
	Air Flow Volume of Outdoor Unit	m^3/h	1200	2200
	Fan Type		Axial-flow	Axial-flow
	Fan Diameter	mm	Φ320	Φ438
	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)	48/-/-	52/-/-
	Sound Power Level (H/M/L)	dB (A)	58/-/-	62/-/-
	Dimension (WXHXD)	mm	720X428X310	848X596X320
	Dimension of Carton Box (LXWXH)	mm	765X350X475	878X360X630
	Dimension of Package (LXWXH)	mm	768X353X490	881X363X645
	Net Weight	kg	25.5	34
	Gross Weight	kg	27.5	37
	Refrigerant		R410A	R410A
	Refrigerant Charge	kg	0.63	0.82
Connection Pipe	Length	m	5	5
	Gas Additional Charge	g/m	15	15
	Outer Diameter Liquid Pipe	mm	Φ6	Φ6
	Outer Diameter Gas Pipe	mm	Φ9.52	Φ12
	Max Distance Height	m	10	10
	Max Distance Length	m	15	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			GWH12ACC-K3NNA1A	1.GWH18ACC-K3NNA1A 2.GWH18ACC-K3NNA2A 3.GWH18ACC-K3NNA3A 4.GWH18ACC-K3NNA4A 5.GWH18ACC-K3NNA5A
Product Code			CA497000100/CA497000101	1.CA497000700/CA497000701 CA497000702/CA497000703 2.CA342000801/CA342000800 3.CA343000600 4.CA344000900 5.CA341001100
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	4800
Heating Capacity		W	3700	5000
Cooling Power Input		W	1106	1495
Heating Power Input		W	1025	1500
Cooling Power Current		A	4.9	6.81
Heating Power Current		A	4.56	6.72
Rated Input		W	1500	2150
Rated Current		A	7.8	10.96
Air Flow Volume(SH/H/M/L/SL)		m^3/h	630/540/460/330/-	650/560/480/350/-
Dehumidifying Volume		L/h	1.4	1.8
EER		W/W	3.21	3.21
COP		W/W	3.61	3.61
SEER		W/W	/	/
HSPF		W/W	/	/
Application Area		m^2	16-24	21-31
Indoor Unit	Model of Indoor Unit		GWH12ACC-K3NNA1A/I	1.GWH18ACC-K3NNA1A/I 2.GWH18ACC-K3NNA2A/I 3.GWH18ACC-K3NNA3A/I 4.GWH18ACC-K3NNA4A/I 5.GWH18ACC-K3NNA5A/I
	Product Code of Indoor Unit		CA497N00100/CA497N00101	1.CA497N00700/CA497N00701 CA497N00702/CA497N00703 2.CA342N00801/CA342N00800 3.CA343N00600 4.CA344N00900 5.CA341N01100
	Fan Type		Cross-flow	Cross-flow
	Diameter Length(DXL)	mm	Φ98X633.5	Φ98X633
	Fan Motor Cooling Speed(SH/H/M/L/SL)	r/min	1350/1200/1050/850/-	1350/1200/1050/950/-
	Fan Motor Heating Speed(SH/H/M/L/SL)	r/min	1300/1150/1000/900/-	1300/1150/1000/900/-
	Output of Fan Motor	W	20	20
	Fan Motor RLA	A	0.31	0.31
	Fan Motor Capacitor	μF	1.5	1.5
	Input of Heater	W	/	/
	Evaporator Form		Aluminum Fin-copper Tube	Aluminum Fin-copper Tube
	Pipe Diameter	mm	Φ5	Φ7
	Row-fin Gap	mm	2-1.4	2-1.4
	Coil Length (LXDXW)	mm	635X22.8X306.3	715X25.4X304.8
	Swing Motor Model		MP24HF	MP24HF
	Output of Swing Motor	W	1.5	1.5
	Fuse	A	3.15	3.15
	Sound Pressure Level (SH/H/M/L/SL)	dB (A)	41/37/33/29/-	42/38/34/31/-
	Sound Power Level (SH/H/M/L/SL)	dB (A)	51/47/43/39/-	52/48/44/41/-
	Dimension (WXHXD)	mm	889X294X212	889X294X212
	Dimension of Carton Box (LXWXH)	mm	935X349X273	935X349X273
	Dimension of Package (LXWXH)	mm	940X365X284	940X365X284
	Net Weight	kg	11	11
	Gross Weight	kg	13	13

Outdoor Unit	Model of Outdoor Unit		GWH12QC-K3NNA1A/O	GWH18AAC-K3NNA1A/O
	Product Code of Outdoor Unit		CA419W00100	CA115W14200
	Compressor Manufacturer/Trademark		ZHUHAI LANDA COMPRESSOR CO., LTD	ZHUHAI LANDA COMPRESSOR CO., LTD
	Compressor Model		QXA-C133B030gA	QXA-D19F030
	Compressor Oil		RB68EP/FVC 68D	ATMOS-RB68EP or equivalent
	Compressor Type		Rotary	Rotary
	L.R.A.	A	25	38.00
	Compressor RLA	A	5.17	7.10
	Compressor Power Input	W	1120	1540
	Overload Protector		Internal	UP3-A6
	Throttling Method		Capillary	Capillary
	Operation Temp	°C	16~30	16~30
	Ambient Temp (Cooling)	°C	18~43	18~48
	Ambient Temp (Heating)	°C	-7~24	-7~24
	Condenser Form		Aluminum Fin-copper Tube	Aluminum Fin-copper Tube
	Pipe Diameter	mm	Φ7.94	Φ7.94
	Rows-fin Gap	mm	1-1.4	2-1.4
	Coil Length (LXDXW)	mm	757X19.05X506	735X38.1X508
	Fan Motor Speed	rpm	850	850
	Output of Fan Motor	W	30	35
	Fan Motor RLA	A	0.45	0.33
	Fan Motor Capacitor	μF	2	2.5
	Air Flow Volume of Outdoor Unit	m^3/h	1800	1800
	Fan Type		Axial-flow	Axial-flow
	Fan Diameter	mm	Φ400	Φ394.5
	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)	52/-/-	56/-/-
	Sound Power Level (H/M/L)	dB (A)	62/-/-	66/-/-
	Dimension (WXHXD)	mm	848X540X320	848X540X320
	Dimension of Carton Box (LXWXH)	mm	878X360X580	878X360X580
	Dimension of Package (LXWXH)	mm	881X363X595	881X363X595
	Net Weight	kg	33	39
	Gross Weight	kg	36	41.5
	Refrigerant		R410A	R410A
	Refrigerant Charge	kg	0.8	1.26
Connection Pipe	Length	m	5	5
	Gas Additional Charge	g/m	15	15
	Outer Diameter Liquid Pipe	mm	Φ6	Φ6
	Outer Diameter Gas Pipe	mm	Φ12	Φ12
	Max Distance Height	m	10	10
	Max Distance Length	m	20	25
	Note: The connection pipe applies metric diameter.			

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

Model			1.GWH12ACC-K3NNA5A 2.GWH12ACC-K3NNA4A 3.GWH12ACC-K3NNA2A 4.GWH12ACC-K3NNA3A
Product Code			1.CA341000401/CA341000402 2.CA344000501/CA344000502 3.CA342000201 4.CA343000501
Power Supply	Rated Voltage	V~	220-240
	Rated Frequency	Hz	50
	Phases		1
Power Supply Mode			Indoor
Cooling Capacity		W	3550
Heating Capacity		W	3700
Cooling Power Input		W	1106
Heating Power Input		W	1025
Cooling Power Current		A	4.9
Heating Power Current		A	4.56
Rated Input		W	1500
Rated Current		A	7.8
Air Flow Volume(SH/H/M/L/SL)		m^3/h	630/540/460/330/-
Dehumidifying Volume		L/h	1.4
EER		W/W	3.21
COP		W/W	3.61
SEER		W/W	/
HSPF		W/W	/
Application Area		m^2	16-24
Indoor Unit	Model of Indoor Unit		1.GWH12ACC-K3NNA5A/I 2.GWH12ACC-K3NNA4A/I 3.GWH12ACC-K3NNA2A/I 4.GWH12ACC-K3NNA3A/I
	Product Code of Indoor Unit		1.CA341N00400/CA341N00402 2.CA344N00500/CA344N00502 3.CA342N00200 4.CA343N00500
	Fan Type		Cross-flow
	Diameter Length(DXL)	mm	Φ98X633.5
	Fan Motor Cooling Speed(SH/H/M/L/SL)	r/min	1350/1200/1050/850/-
	Fan Motor Heating Speed(SH/H/M/L/SL)	r/min	1300/1150/1000/900/-
	Output of Fan Motor	W	20
	Fan Motor RLA	A	0.31
	Fan Motor Capacitor	μF	1.5
	Input of Heater	W	/
	Evaporator Form		Aluminum Fin-copper Tube
	Pipe Diameter	mm	Φ5
	Row-fin Gap	mm	2-1.4
	Coil Length (LXDXW)	mm	635X22.8X306.3
	Swing Motor Model		MP24HF
	Output of Swing Motor	W	1.5
	Fuse	A	3.15
	Sound Pressure Level (SH/H/M/L/SL)	dB (A)	41/38/33/29/-
	Sound Power Level (SH/H/M/L/SL)	dB (A)	51/47/43/39/-
	Dimension (WXHXD)	mm	889X294X212
	Dimension of Carton Box (LXWXH)	mm	935X349X273
	Dimension of Package (LXWXH)	mm	940X365X284
	Net Weight	kg	11
	Gross Weight	kg	13

Outdoor Unit	Model of Outdoor Unit		GWH12QC-K3NNA1A/O
	Product Code of Outdoor Unit		CA419W00101
	Compressor Manufacturer/Trademark		ZHUHAI LANDA COMPRESSOR CO., LTD
	Compressor Model		QXA-C133B030gA
	Compressor Oil		RB68EP/FVC 68D
	Compressor Type		Rotary
	L.R.A.	A	25
	Compressor RLA	A	5.17
	Compressor Power Input	W	1120
	Overload Protector		Internal
	Throttling Method		Capillary
	Operation Temp	°C	16~30
	Ambient Temp (Cooling)	°C	18~43
	Ambient Temp (Heating)	°C	-7~24
	Condenser Form		Aluminum Fin-copper Tube
	Pipe Diameter	mm	Φ7.94
	Rows-fin Gap	mm	1-1.4
	Coil Length (LXDXW)	mm	757X19.05X506
	Fan Motor Speed	rpm	850
	Output of Fan Motor	W	30
	Fan Motor RLA	A	0.45
	Fan Motor Capacitor	μF	2
	Air Flow Volume of Outdoor Unit	m^3/h	1800
	Fan Type		Axial-flow
	Fan Diameter	mm	Φ400
	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)	52/-/-
	Sound Power Level (H/M/L)	dB (A)	62/-/-
	Dimension (WXHXD)	mm	848X540X320
	Dimension of Carton Box (LXWXH)	mm	878X360X580
	Dimension of Package (LXWXH)	mm	881X363X595
	Net Weight	kg	33
	Gross Weight	kg	35.5
	Refrigerant		R410A
	Refrigerant Charge	kg	0.8
Connection Pipe	Length	m	5
	Gas Additional Charge	g/m	15
	Outer Diameter Liquid Pipe	mm	Φ6
	Outer Diameter Gas Pipe	mm	Φ12
	Max Distance Height	m	10
	Max Distance Length	m	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.

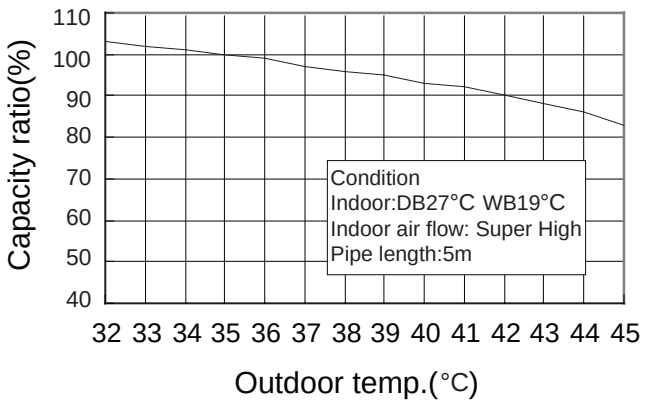
Model			1.GWH12ACB-K3NNA1A 2.GWH12ACB-K3NNA5A 3.GWH12ACB-K3NNA4A 4.GWH12ACB-K3NNA2A 5.GWH12ACB-K3NNA3A
Product Code			1.CA497000500/CA497000501/CA497000502/CA497000503 2.CA341001200 3.CA344000800 4.CA342000600/CA342000601 5.CA343000800
Power Supply	Rated Voltage	V~	220-240
	Rated Frequency	Hz	50
	Phases		1
Power Supply Mode			Indoor
Cooling Capacity		W	3250
Heating Capacity		W	3400
Cooling Power Input		W	1012
Heating Power Input		W	941
Cooling Power Current		A	4.32
Heating Power Current		A	4.40
Rated Input		W	1230
Rated Current		A	6.3
Air Flow Volume(SH/H/M/L/SL)		m^3/h	550/500/430/330/-
Dehumidifying Volume		L/h	1.2
EER		W/W	3.21
COP		W/W	3.61
SEER		W/W	/
HSPF		W/W	/
Application Area		m^2	15-22
Indoor Unit	Model of Indoor Unit		1.GWH12ACB-K3NNA1A/I 2.GWH12ACB-K3NNA5A/I 3.GWH12ACB-K3NNA4A/I 4.GWH12ACB-K3NNA2A/I 5.GWH12ACB-K3NNA3A/I
	Product Code of Indoor Unit		1.CA497N00500/CA497N00501/CA497N00502/CA497N00503 2.CA341N01200 3.CA344N00800 4. CA342N00600/CA342N00601 5.CA343N00800
	Fan Type		Cross-flow
	Diameter Length(DXL)	mm	Φ93X580
	Fan Motor Cooling Speed(SH/H/M/L/SL)	r/min	1350/1200/1100/850/-
	Fan Motor Heating Speed(SH/H/M/L/SL)	r/min	1350/1200/1100/900/-
	Output of Fan Motor	W	20
	Fan Motor RLA	A	0.215
	Fan Motor Capacitor	μF	1
	Input of Heater	W	/
	Evaporator Form		Aluminum Fin-copper Tube
	Pipe Diameter	mm	Φ7.94
	Row-fin Gap	mm	1-1.2
	Coil Length (LXDXW)	mm	583X19.05X264
	Swing Motor Model		MP24AN
	Output of Swing Motor	W	1.5
	Fuse	A	3.15
	Sound Pressure Level (SH/H/M/L/SL)	dB (A)	42/39/36/33/-
	Sound Power Level (SH/H/M/L/SL)	dB (A)	52/49/46/43/-
	Dimension (WXHXD)	mm	819X256X185
	Dimension of Carton Box (LXWXH)	mm	863X314X249
	Dimension of Package (LXWXH)	mm	868X330X260
	Net Weight	kg	8.5
	Gross Weight	kg	10

Outdoor Unit	Model of Outdoor Unit		GWH12AAB-K3NNA2A/O
	Product Code of Outdoor Unit		CA115W14100
	Compressor Manufacturer/Trademark		ZHUHAI LANDA COMPRESSOR CO., LTD
	Compressor Model		QXA-B120C150A
	Compressor Oil		RB68EP
	Compressor Type		Rotary
	L.R.A.	A	26
	Compressor RLA	A	4.4
	Compressor Power Input	W	970
	Overload Protector		INTERNAL (UP3-02)
	Throttling Method		Capillary
	Operation Temp	°C	16~30
	Ambient Temp (Cooling)	°C	18~43
	Ambient Temp (Heating)	°C	-7~24
	Condenser Form		Aluminum Fin-copper Tube
	Pipe Diameter	mm	Φ7.94
	Rows-fin Gap	mm	1-1.4
	Coil Length (LXDXW)	mm	697X19.05X506
	Fan Motor Speed	rpm	850
	Output of Fan Motor	W	35
	Fan Motor RLA	A	0.33
	Fan Motor Capacitor	μF	2.5
	Air Flow Volume of Outdoor Unit	m^3/h	1600
	Fan Type		Axial-flow
	Fan Diameter	mm	Φ394
	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)	52/-/-
	Sound Power Level (H/M/L)	dB (A)	62/-/-
	Dimension (WXHXD)	mm	782X540X320
	Dimension of Carton Box (LXWXH)	mm	820X355X580
	Dimension of Package (LXWXH)	mm	823X358X595
	Net Weight	kg	30
	Gross Weight	kg	32.5
	Refrigerant		R410A
	Refrigerant Charge	kg	0.72
Connection Pipe	Length	m	5
	Gas Additional Charge	g/m	15
	Outer Diameter Liquid Pipe	mm	Φ6
	Outer Diameter Gas Pipe	mm	Φ12
	Max Distance Height	m	10
	Max Distance Length	m	15
	Note: The connection pipe applies metric diameter.		

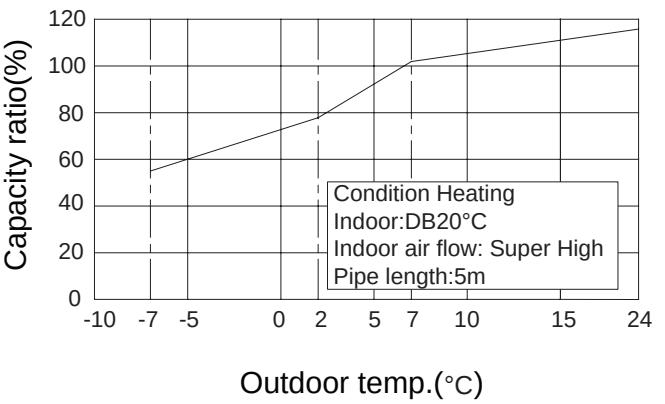
The above data is subject to change without notice; please refer to the nameplate of the unit.

2.2 Capacity Curve in Different Outdoor Temperature

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	09K	0.85~1.0	in:8~11 out:11~14	in:75~85 out:37~43	Super High	High
		12K	0.9~1.1	in:10~14 out:11~14	in:69~74 out:38~45		
		18K	0.85~1.0	in:8~11 out:11~14	in:75~85 out:37~43		

Heating

Rated heatling 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	09K	3.5~3.8	in:75~85 out:37~43	in:1~3 out:2~5	Super High	High
		12K	2.8~3.2	in:55~65 out:25~32	in:1~3 out:2~5		
		18K	3.5~3.8	in:75~85 out:37~43	in:1~3 out:2~5		

Instruction:

T1: Inlet and outlet pipe temperature of evaporator

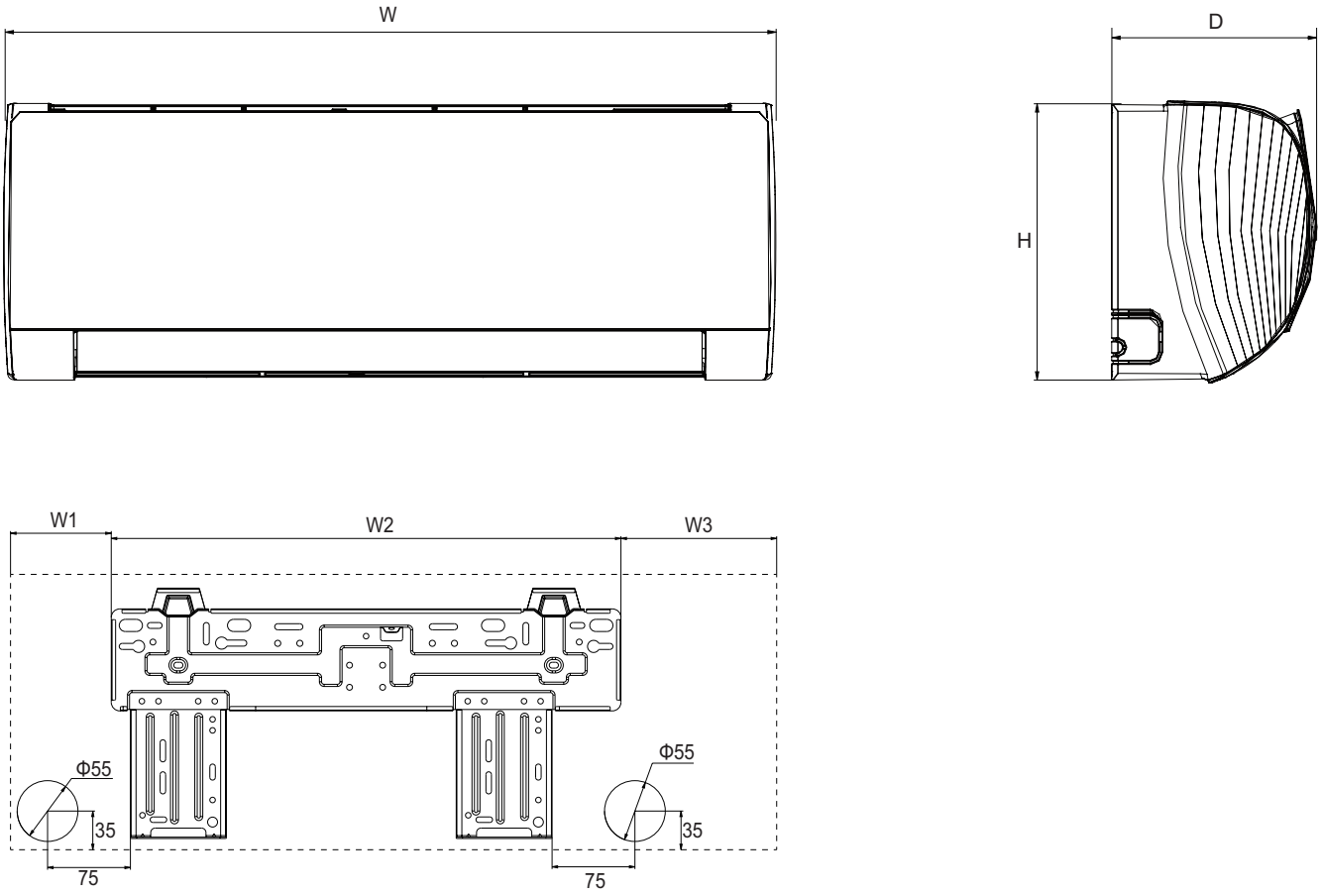
T2: Inlet and outlet pipe temperature of condenser

P: Pressure at the side of big valve

Connection pipe length: 5m.

3. Outline Dimension Diagram

3.1 Indoor Unit

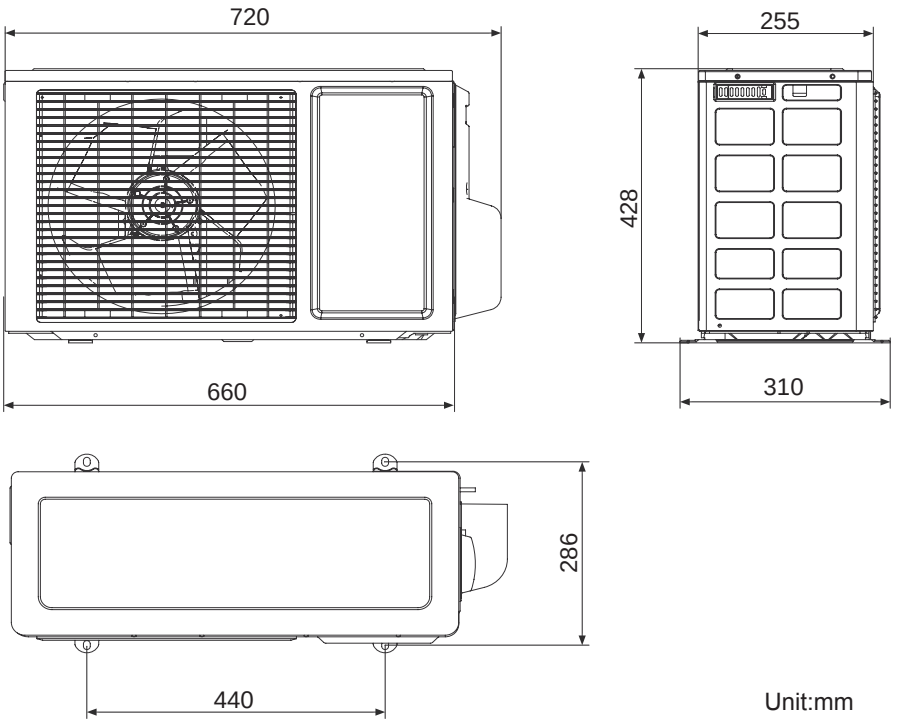


Unit:mm

Models	W	H	D	W1	W2	W3
ACB	819	256	185	154	462	203
ACC	889	294	212	201	541.6	145.5

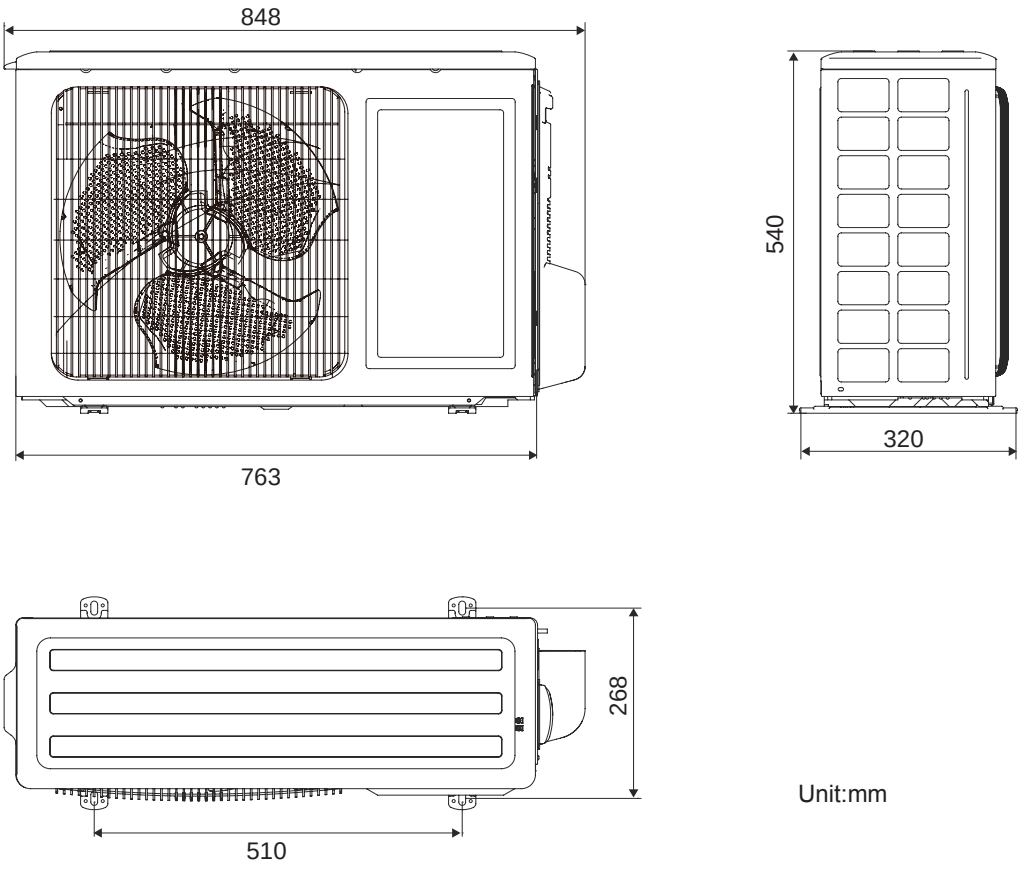
3.2 Outdoor Unit

09K



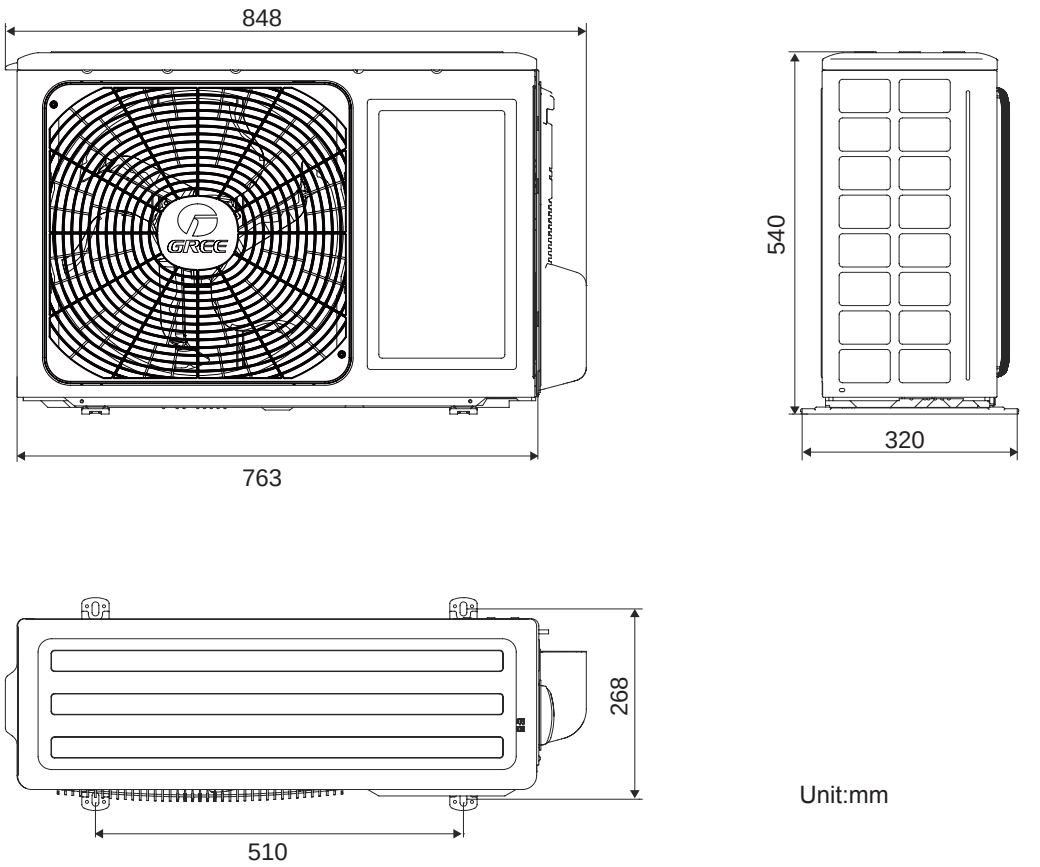
Unit:mm

GWH12QC-K3NNA1A/O(CA419W00100)
GWH18AAC-K3NNA1A/O



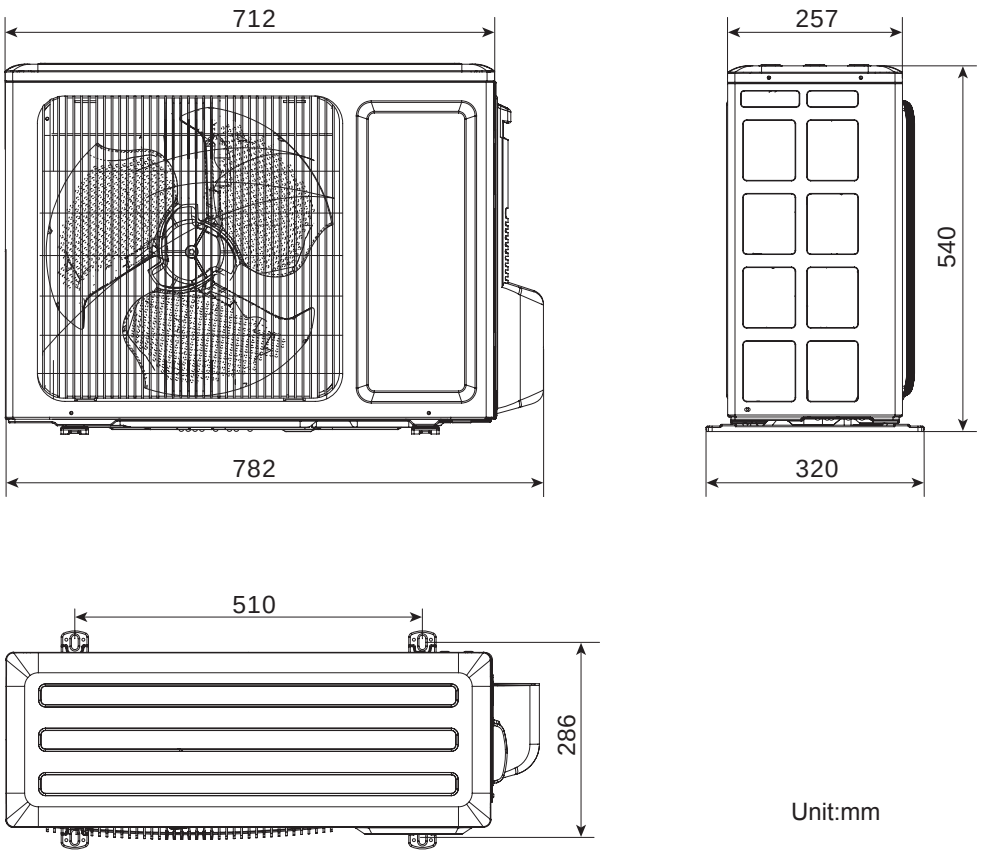
Unit:mm

GWH12QC-K3NNA1A/O(CA419W00101)



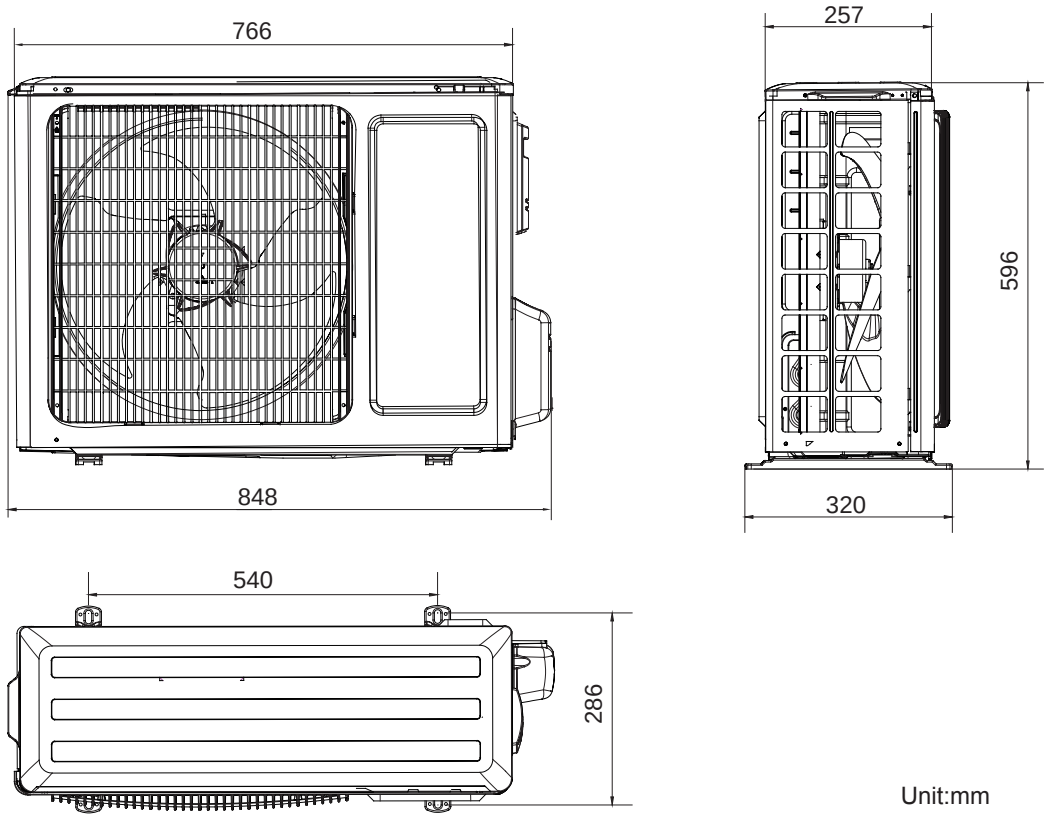
Unit:mm

GWH12AAB-K3NNA2A/O



Unit:mm

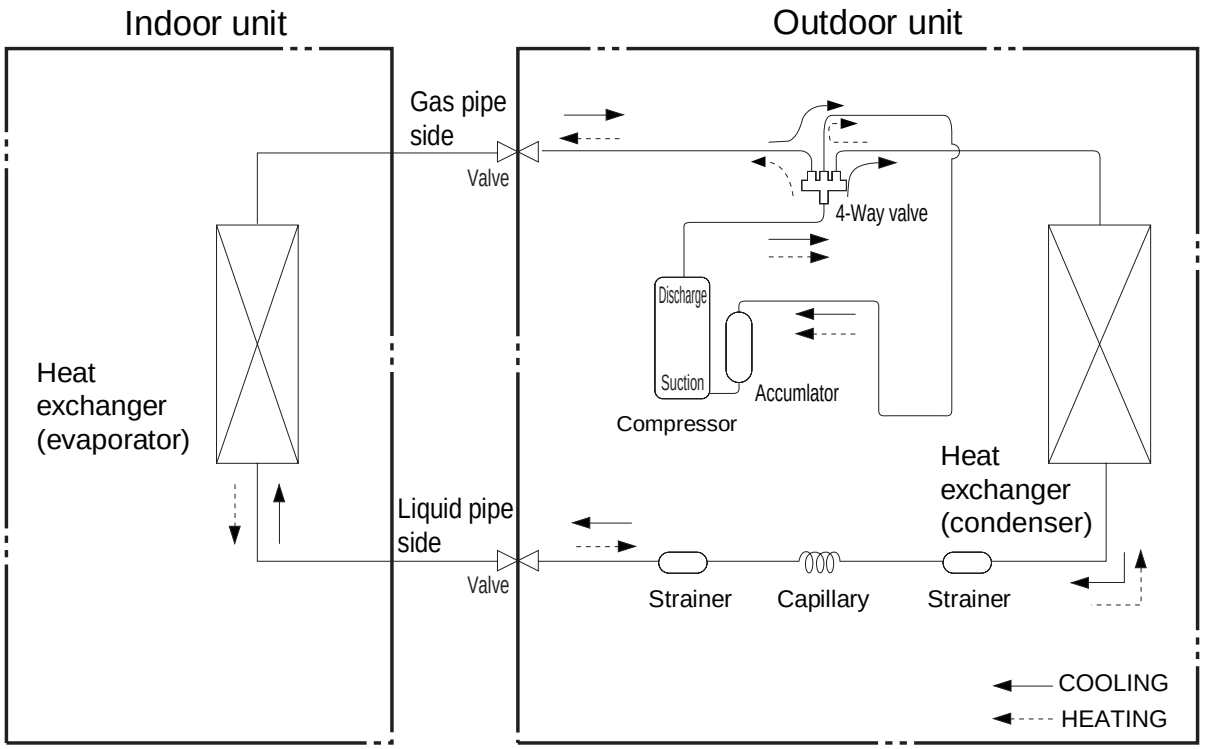
GWH12QC-K3NNB2E/O



Unit:mm

4. Refrigerant System Diagram

Cooling and heating model



Connection pipe specification:
Liquid pipe:1/4" (6mm)
Gas pipe:3/8" (9.52mm) 09K
Gas : 1/2" (12 mm) 12/18K

5. Electrical Part

5.1 Wiring Diagram

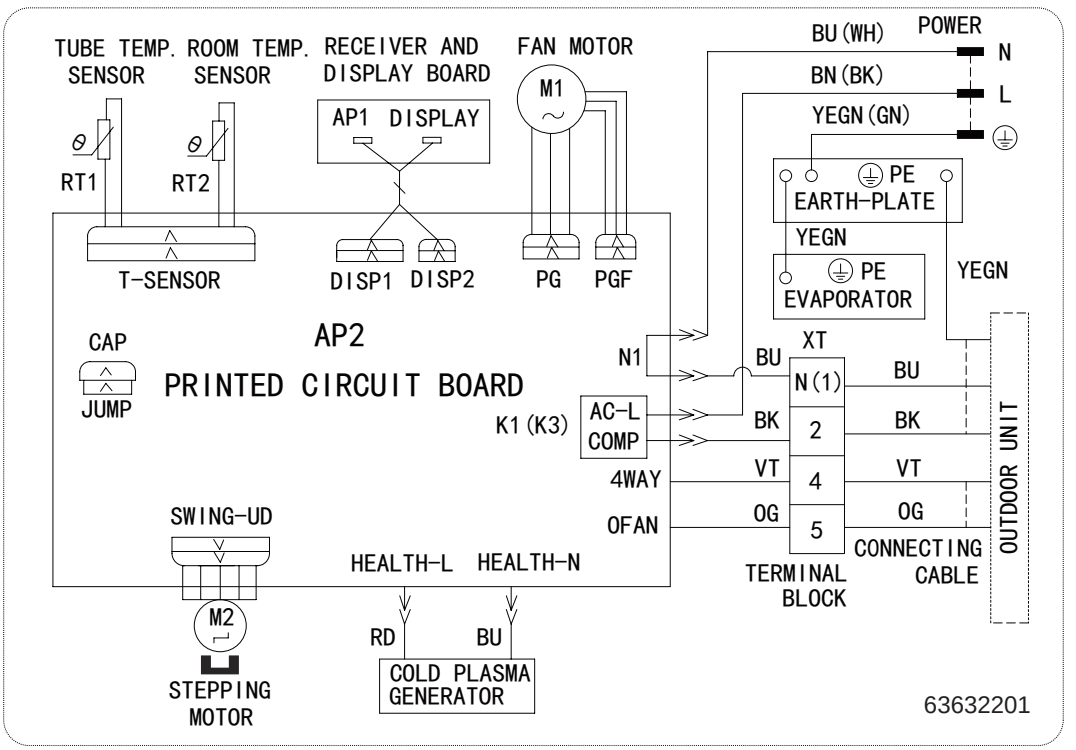
●Instruction

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	/	/

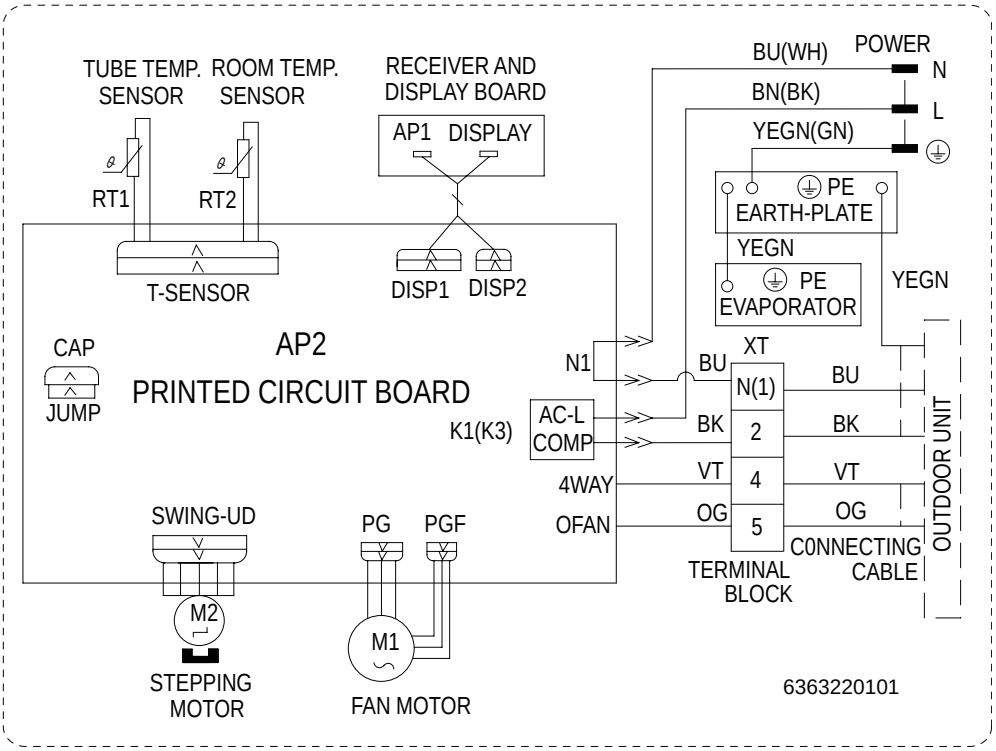
Note: Jumper cap is used to determine fan speed and the swing angle of horizontal lover for this model.

● Indoor Unit

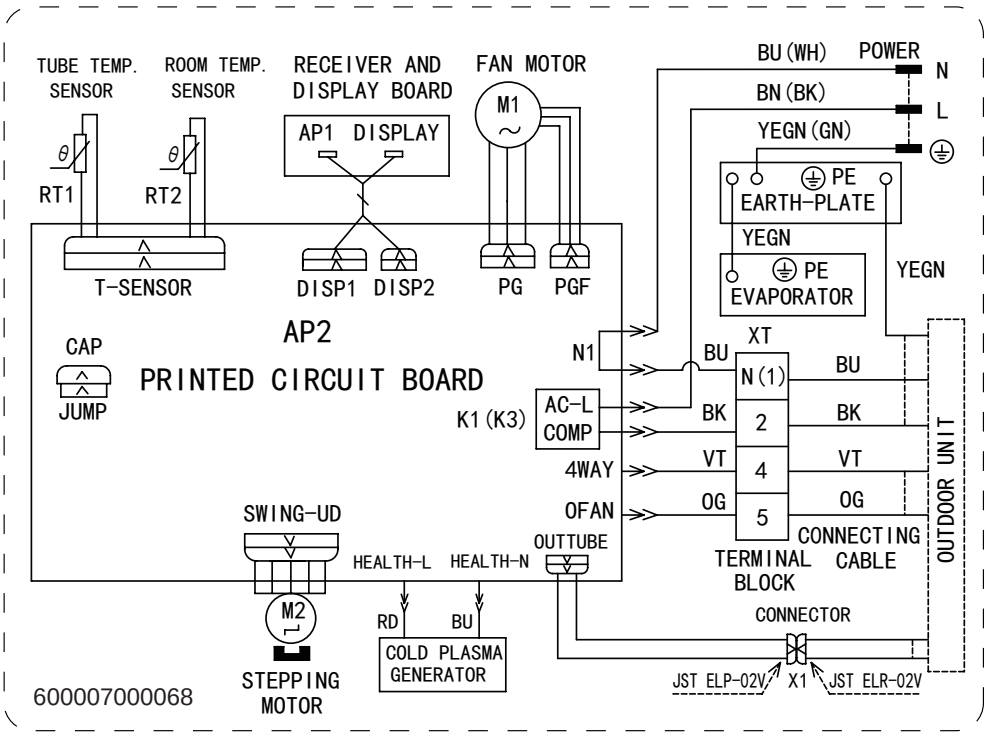
GWH09ACB-K3NNA1A/I(CA497N00200/CA497N00201) GWH12ACC-K3NNA2A/I(CA342N00200)
GWH12ACC-K3NNA1A/I(CA497N00100/CA497N00101) GWH12ACB-K3NNA1A/I(CA497N00500/CA497N00501)
GWH18ACC-K3NNA1A/I(CA497N00700/CA497N00701) GWH12ACC-K3NNA5A/I(CA341N00400)
GWH12ACC-K3NNA4A/I(CA344N00500) GWH12ACB-K3NNA2A/I(CA342N00600)
GWH18ACC-K3NNA2A/I (CA342N00800) GWH12ACC-K3NNA3A/I(CA343N00500)



GWH12ACB-K3NNA1A/I(CA497N00502/CA497N00503) GWH18ACC-K3NNA1A/I(CA497N00702/CA497N00703)
GWH12ACB-K3NNA5A/I(CA341N01200) GWH12ACB-K3NNA4A/I(CA344N00800) GWH12ACB-K3NNA2A/I(CA342N00601)
GWH18ACC-K3NNA2A/I(CA342N00801) GWH18ACC-K3NNA5A/I(CA341N01100) GWH18ACC-K3NNA4A/I(CA344N00900)
GWH18ACC-K3NNA3A/I(CA343N00600) GWH12ACC-K3NNA5A/I(CA341N00402) GWH12ACC-K3NNA4A/I(CA344N00502)
GWH12ACB-K3NNA3A/I(CA343N00800)

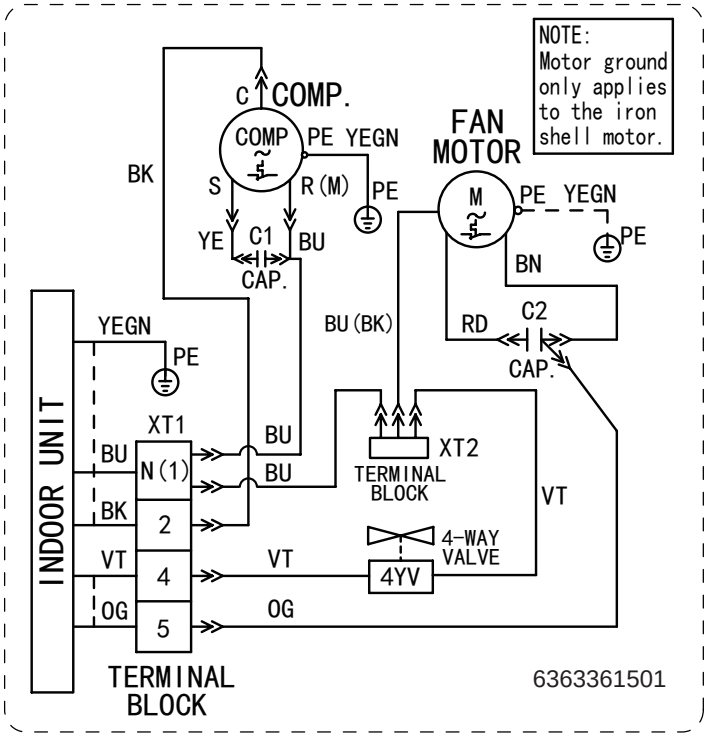


GWH12ACC-K3NNA1E/I

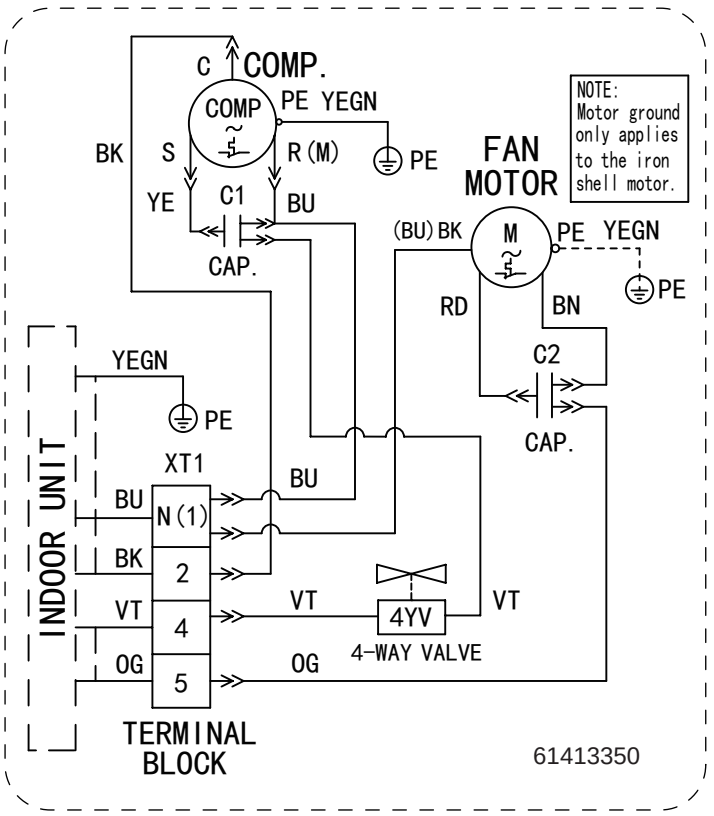


● Outdoor Unit

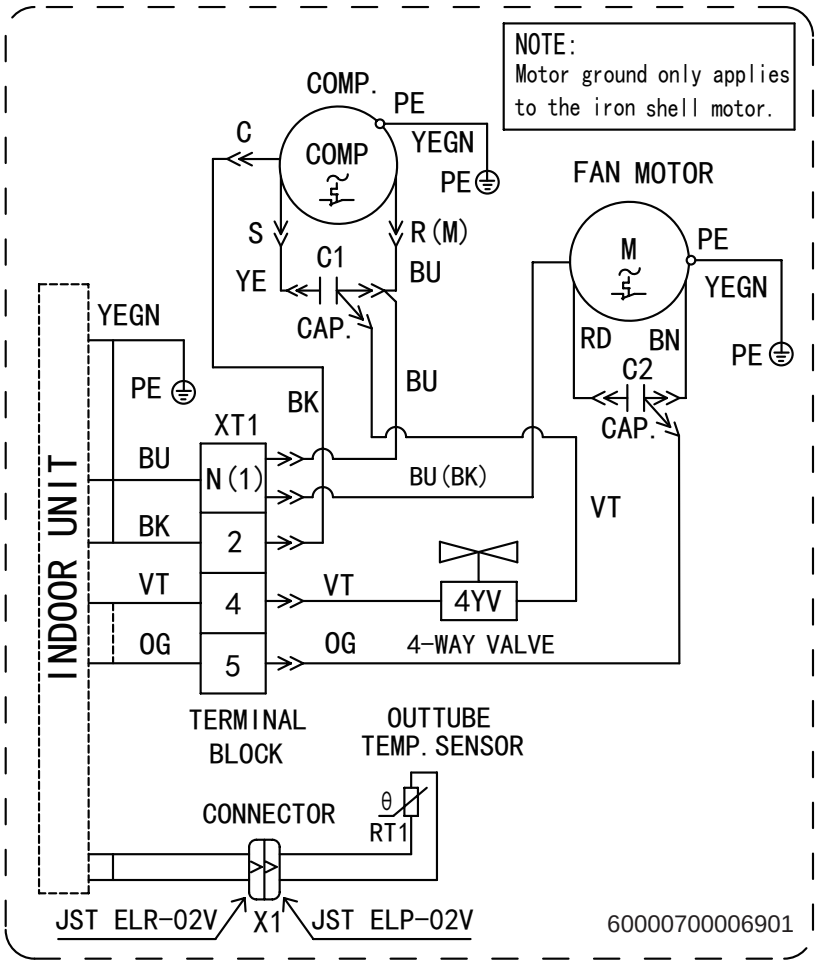
GWH12AAB-K3NNA2A/O(CA115W14100)



GWH09AAB-K3NNA1A/O(CA115W13700) GWH12QC-K3NNA1A/O(CA419W00100/CA419W00101)
GWH18AAC-K3NNA1A/O(CA115W14200)



GWH12QC-K3NNB2E/O

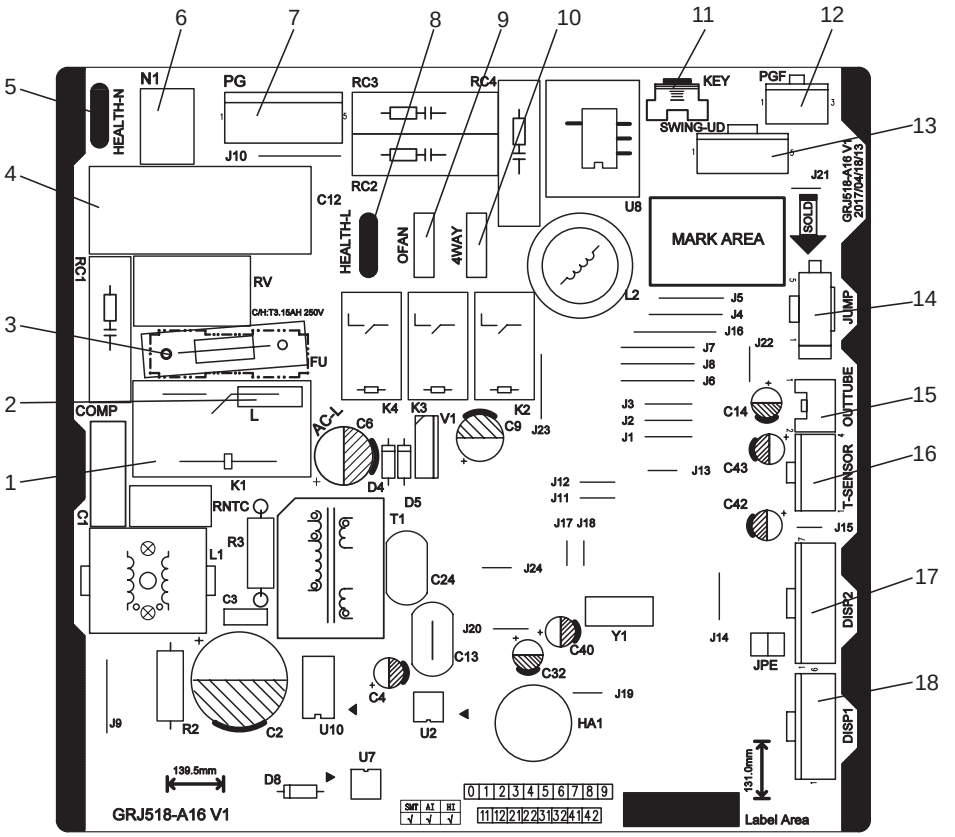


These wiring diagrams are subject to change without notice; please refer to the one supplied with the unit.

5.2 PCB Printed Diagram

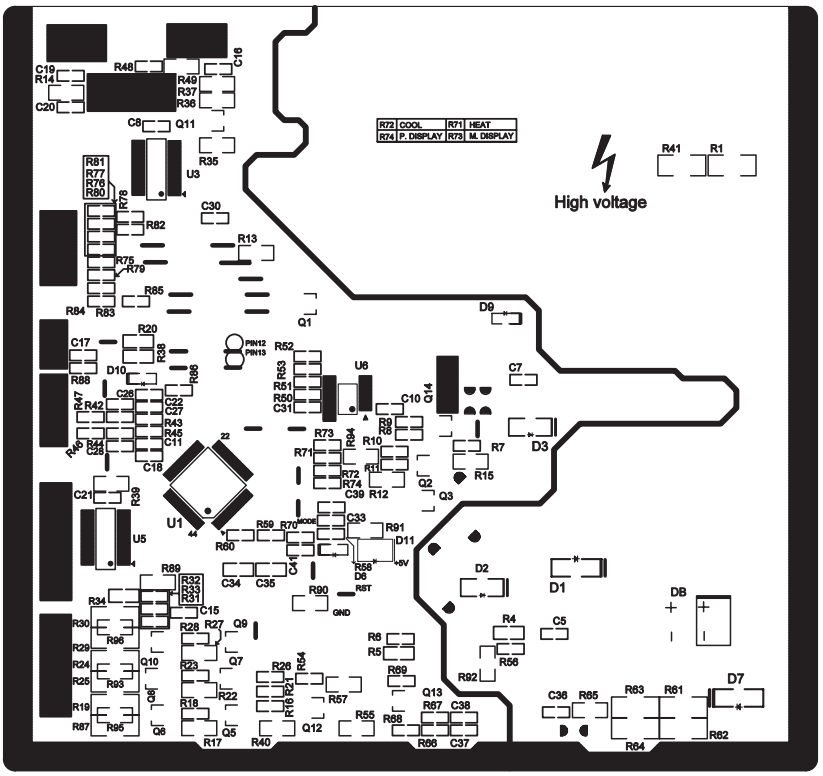
09K

● Top view



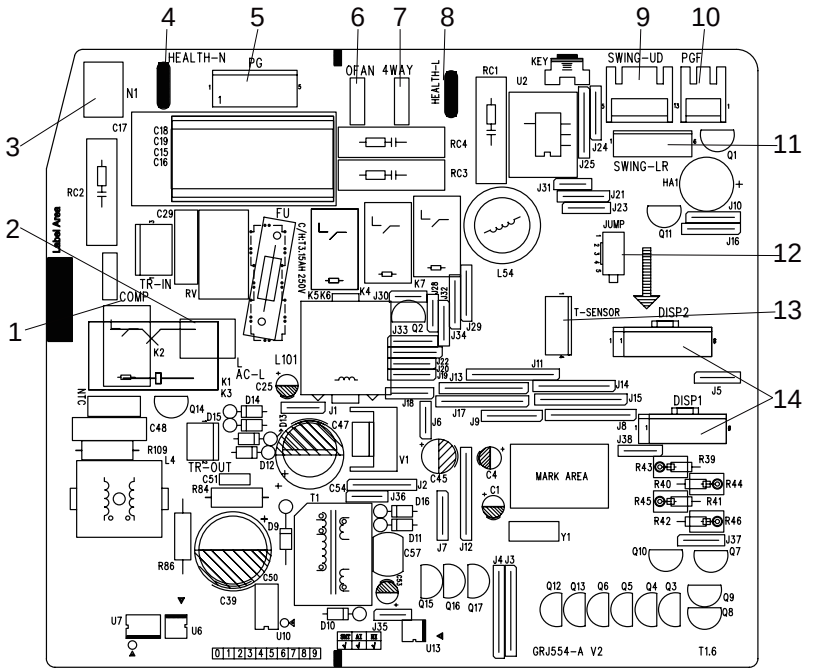
No.	Name
1	Wiring terminal of compressor
2	Terminal of live wire
3	Fuse
4	Fan capacitor
5	Neutral wire terminal of cold plasma
6	Terminal of neutral wire
7	Wiring terminal of PG motor
8	Live wire terminal for cold plasma
9	Wiring terminal of outdoor fan (heat pump unit)
10	Wiring terminal of 4-way valve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

● Bottom view



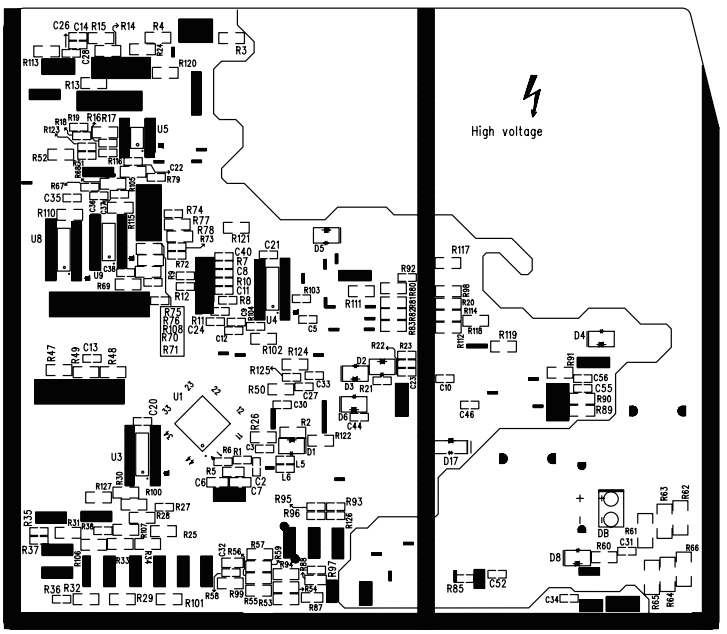
12/18K except GWH12ACC-K3NNA1E/I

● **Top view**



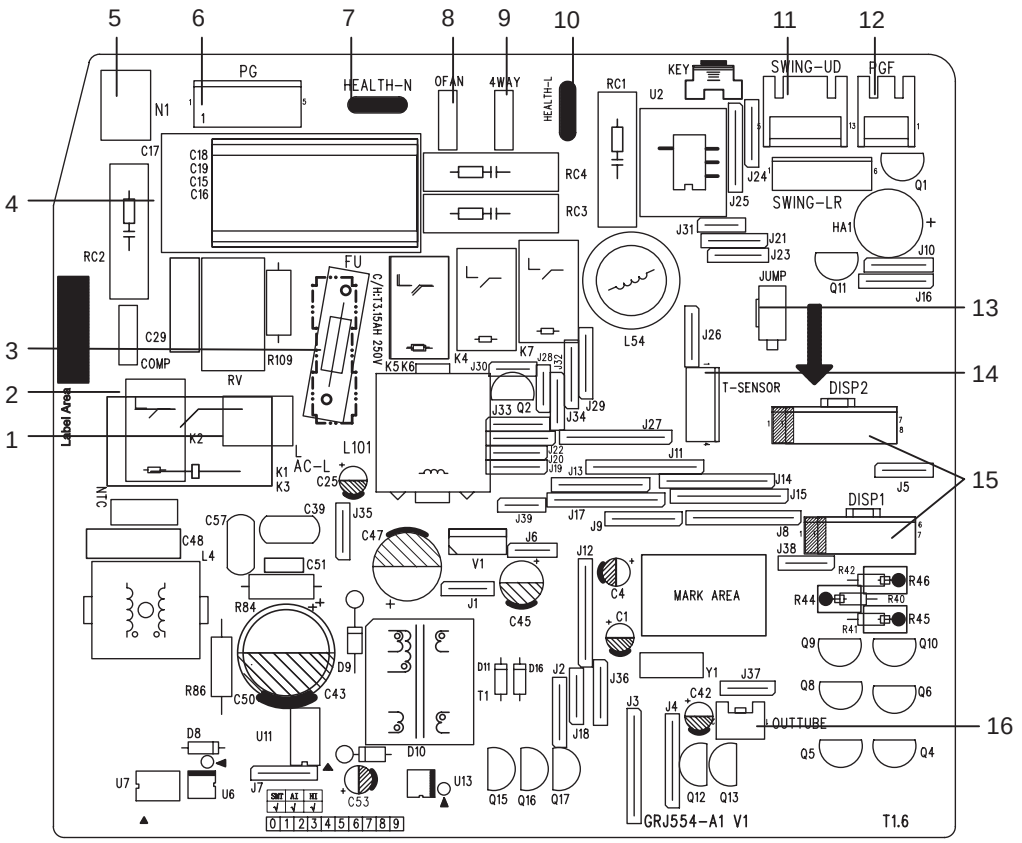
No.	Name
1	Compressor interface
2	Interface of power cord live wire
3	Interface of power cord neutral wire
4	Interface of cold plasma neutral wire
5	PG motor interface
6	Outdoor fan interface
7	4-way valve interface
8	Interface of cold plasma live wire
9	Up&down swing interface
10	PG motor feedback interface
11	Left&right swing interface
12	Jumper cap
13	Temperature sensor interface
14	Display board interface

● **Bottom view**



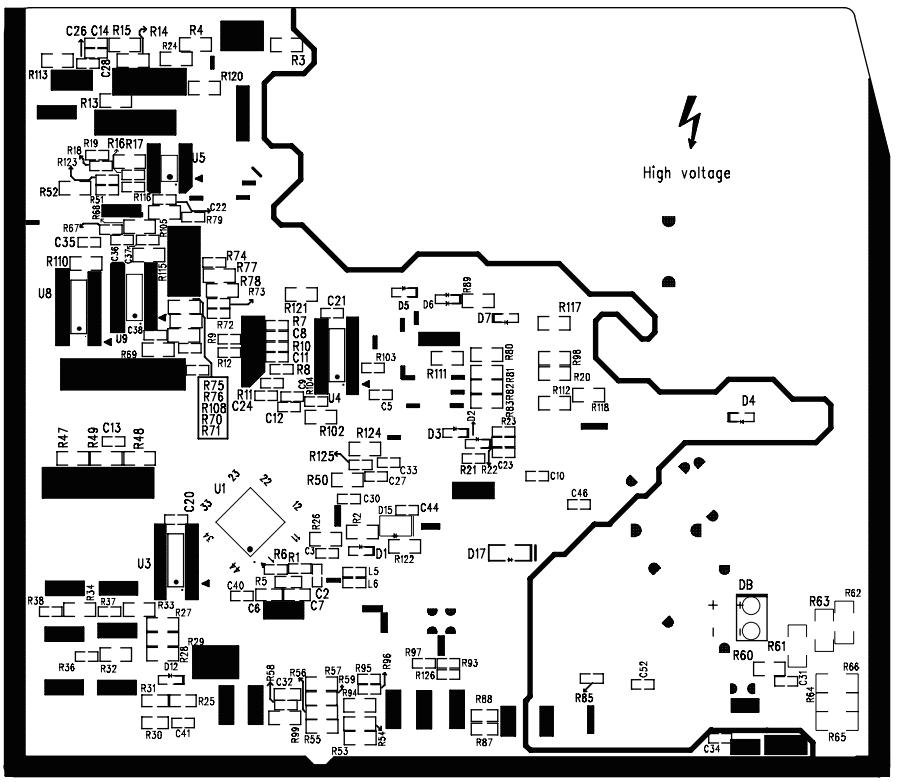
GWH12ACC-K3NNA1E/I

• Top view



No.	Name
1	Live wire
2	Interface of compressor
3	Fuse
4	Capacitor of indoor fan
5	Neutral wire
6	Interface of PG motor
7	Neutral wire interface of cold plasma
8	Interface of outdoor motor
9	Interface of 4-way valve
10	Live wire interface of cold plasma
11	Up&down swing motor
12	Interface of PG motor feedback
13	Jumper cap
14	Interface of temperature sensor
15	Display interface
16	External tube temperature sensor

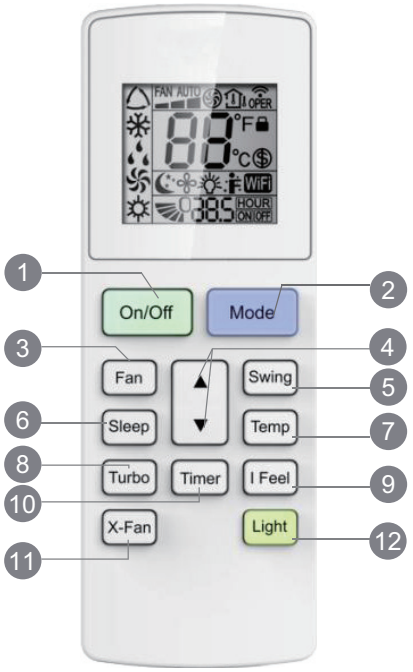
• Bottom view



6. Function and Control

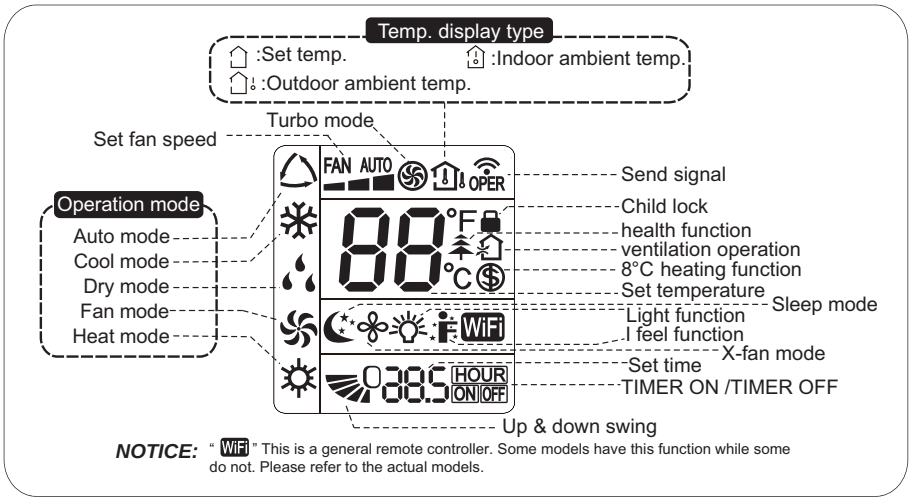
6.1 Remote Controller Introduction of YAN1F1

Buttons on Remote Controller



1. On/Off button
2. Mode button
3. Fan button
4. ▲/ ▼ button
5. Swing button
6. Sleep button
7. Temp button
8. Turbo button
9. I Feel button
10. Timer button
11. X-Fan button
12. Light button

Icon Display on Remote Controller



Note:

- This is a general use remote controller, it could be used for the air conditionerswith multifunction; For some function, which the model doesnt have, if pressthe corresponding button on the remote controller that the unit will keep the original running status.
- After putting through the power, the air conditioner will give out a sound.Operation indicator " ⏻ " is ON (red indicator,the colour is different for different). After that, you can operate the air conditioner by using remote controller.
- When power is connected(stand by condition), you can operate the air conditioner through the remote controller.
- Under on status, pressing the button on the remote controller, the signal icon " ((•)) " on the display of remote controller will blink once and the air conditioner will give out a “de” sound, which means the signal has been sent to the air conditioner.
- Under off status, set temperature and clock icon will be displayed on the display of remote controller (If timer on, timer off and light functions are set, the corresponding icons will be displayed on the display of remote controller at the same time); Under on status, the display will show the corresponding set function icons.

1. ON/OFF button

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

2. MODE button

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

AUTO ▶ COOL ▶ DRY ▶ FAN ▶ HEAT(Only for models with heating function.)

3. FAN Button

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

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

4. ▲ / ▼ button

Press ▲ / ▼ button to increase/decreaseset temperature. In AUTO mode,set temperature is not adjustable.
When setting Timer On or Timer Off, press "▲" or "▼" button to adjust the time.

5.SWING button

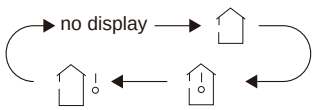
Press this button to set up & down swing angle.

6. SLEEP Button

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

7. TIMER Button

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



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

8.Turbo button

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

Note:

Not applicable for this unit.

9. **I FEEL button**

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

10.Timer button

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

11.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.

12.Light button

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

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

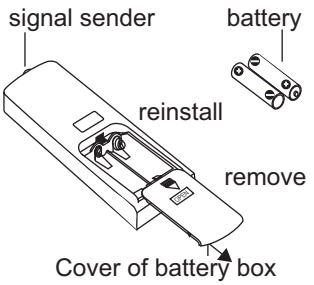
Press " ▲ " and " ▼ " buttons simultaneously 3s to lock or unlock the keypad. If the remote controller is locked, 🔒 is displayed. In this case, pressing any button, 🔒 blinks three times.

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

At unit OFF, press " MODE " and " ▼ " buttons simultaneously to switch between ℃ and ℉.

Replacement of Batteries in Remote Controller

1. Press the back side of remote controller marked with "OPEN", as shown in the fig, and then push out the cover of battery box along the arrow direction.
2. Replace two 7# (AAA 1.5V) dry batteries, and make sure the position of "+" polar and "-" polar are correct.
3. Reinstall the cover of battery box.



Note:

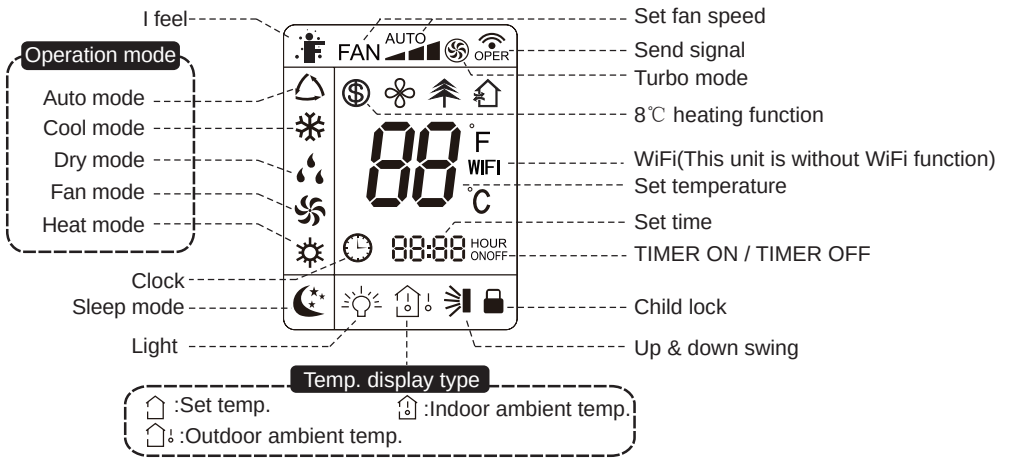
● During operation, point the remote control signal sender at the receiving window on indoor unit.
● The distance between signal sender and receiving window should be no more than 6m, and there should be no obstacles between them.
● Signal may be interfered easily in the room where there is fluorescent 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.

YAN1F1



1. ON/OFF button
2. MODE button
3. FAN button
4. SWING button
5. TURBO button
6. ▲/ ▼button
7. SLEEP button
8. TEMP button
9. I FEEL button
10. LIGHT button
11. CLOCK button
12. TIMER ON / TIMER OFF button

Introduction for icons on display screen



Introduction for buttons on remote controller

Note:

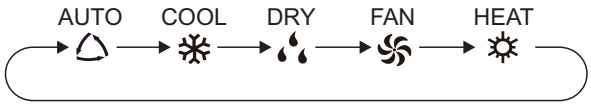
- This is a general use remote controller, it could be used for the air conditioners with multifunction; For some function, which the model doesn't have, if press the corresponding button on the remote controller that the unit will keep the original running status.
- After putting through the power,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

1. ON/OFF button

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

2. MODE button

Press this button to select your required operation mode.



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

Press "SWING" button to adjust fan blowing angle. (Cooling only unit won't receive heating mode signal. If setting heat mode with remote controller, press ON/OFF button can't start up the unit).

Note:

- For preventing cold air, after starting up heating mode, indoor unit will delay 1~5 minutes to blow air (actual delay time is depend on indoor ambient temperature).
- Set temperature range from remote controller: 16~30℃ (60.8~86.0°F); Fan speed: auto, low speed, medium speed, high speed.

3. FAN button

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

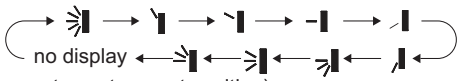


Caution:

- Under AUTO speed, air conditioner will select proper fan speed automatically according to factory setting.
- Fan speed under dry mode is low speed.

4. SWING button

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



(horizontal louvers stops at current position)

- When selecting " ", air conditioner is blowing fan automatically. Horizontal louver will automatically swing up & down at maximum angle.
- When selecting " ", air conditioner is blowing fan at fixed position. Horizontal louver will stop at the fixed position.
- When selecting " " , air conditioner is blowing fan at fixed angle. Horizontal louver will send air at the fixed angle.
- Hold " "button above 2s to set your required swing angle. When reaching your required angle, release the button.

Note:

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

5. TURBO button

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

6. ▲/▼ button

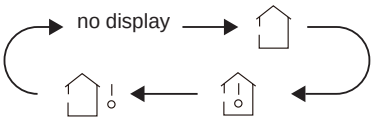
- Press "▲" or "▼" button once increase or decrease set temperature 1°C(1°F). Holding "▲" or "▼" button, 2s later, set temperature on remote controller will change quickly. On releasing button after setting is finished, temperature indicator on indoor unit will change accordingly. (Temperature can't be adjusted under auto mode)
- When setting TIMER ON, TIMER OFF or CLOCK, press "▲" or "▲" button to adjust time. (Refer to CLOCK, TIMER ON, TIMER OFF buttons) When setting TIMER ON, TIMER OFF or CLOCK, press "▲" or "▲" button to adjust time. (Refer to CLOCK, TIMER ON, TIMER OFF buttons)

7. SLEEP button

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

8. TEMP button

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



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

Note:

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

9. 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.

10. LIGHT button

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

11. CLOCK button

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

Note:

- Clock time adopts 24-hour mode.
- The interval between two operation can't exceeds 5s. Otherwise, remote controller will quit setting status. Operation for TIMER ON/TIMER OFF is the same.

12. TIMER ON / TIMER OFF button

- TIMER ON button

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

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

Note:

- Under on and off status, you can set TIMER OFF or TIMER ON simultaneously.
- Before setting TIMER ON or TIMER OFF, please adjust the clock time.
- After starting up TIMER ON or TIMER OFF, set the constant circulating valid. After that, air conditioner will be turned on or turned off according to setting time. ON/OFF button has no effect on setting. If you don't need this function, please use remote controller to cancel it.

Function introduction for combination buttons

1. Energy-saving function

Under cooling mode, press "TEMP" and " CLOCK" buttons simultaneously to start up or turn off energy-saving function. When energy-saving function is started up, "SE" will be shown on remote controller, and air conditioner will adjust the set temperature automatically according to factory setting to reach to the best energy-saving effect. Press "TEMP" and "CLOCK"buttons simultaneously again to exit energy-saving function.

Note:

- Under energy-saving function, fan speed is defaulted at auto speed and it can't be adjusted.
- Under energy-saving function, set temperature can't be adjusted. Press "TURBO" button and the remote controller won't send signal.
- Sleep function and energy-saving function can't operate at the same time. If energy-saving function has been set under cooling mode, press sleep button will cancel energy-saving function. If sleep function has been set under cooling mode, start up the energy-saving function will cancel sleep function.

2. 8 ℃ heating function

Under heating mode, press "TEMP" and "CLOCK" buttons simultaneously to start up or turn off 8℃ heating function. When this function is started up, " Ⓢ " and "8℃ " will be shown on remote controller, and the air conditioner keep the heating status at 8℃ . Press "TEMP" and "CLOCK" buttons simultaneously again to exit 8℃ heating function.

Note:

- Under 8℃ heating function, fan speed is defaulted at auto speed and it can't be adjusted.
- Under 8℃ heating function, set temperature can't be adjusted. Press "TURBO" button and the remote controller won't send signal.
- Sleep function and 8℃ heating function can't operate at the same time. If 8℃ heating function has been set under cooling mode, press sleep button will cancel 8℃ heating function. If sleep function has been set under cooling mode, start up the 8℃ heating function will cancel sleep function.
- Under ℉ temperature display, the remote controller will display 46 ℉ heating.

3. Child lock function

Press "▲" and "▼" simultaneously to turn on or turn off child lock function. When child lock function is on, " 🔒 " icon is displayed on remote controller. If you operate the remote controller, the " 🔒 " icon will blink three times without sending signal to the unit.

4. Temperature display switchover function

Under OFF status, press " ▼" and "MODE" buttons simultaneously to switch temperature display between ℃ and ℉ .

5. About WIFI function(This unit is without WiFi function)

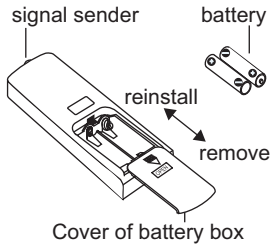
Press "MODE" and "TURBO" button simultaneously to turn on or turn off WIFI function. When WIFI function is turned on, the " **WIFI** " icon will be displayed on remote controller; Long press "MODE" and "TURBO" buttons simultaneously for 10s, remote controller will send WIFI reset code and then the WIFI function will be turned on. WIFI function is defaulted ON after energization of the remote controller.

Operation guide

1. After putting through the power, press "ON/OFF" button on remote controller to turn on the air conditioner.
2. Press "MODE" button to select your required mode: AUTO, COOL, DRY, FAN, HEAT.
3. Press "▲" or " ▼" button to set your required temperature. (Temperature can't be adjusted under auto mode).
4. Press "FAN" button to set your required fan speed: auto, low, medium and high speed.
5. Press "SWING" button to select fan blowing angle.

Replacement of batteries in remote controller

1. Press the back side of remote controller marked with " OPEN ", as shown in the fig, and then push out the cover of battery box along the arrow direction.
2. Replace two 7# (AAA 1.5V) dry batteries, and make sure the position of "+" polar and "-" polar are correct.
3. Reinstall the cover of battery box.



Note:

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

6.2 Brief Description of Modes and Functions

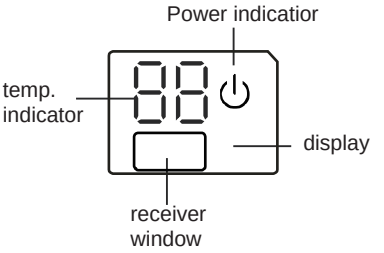
1. Summary

(1) Buzzer

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

(2) Display

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



(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℃ , the system operates under cooling mode; Ex-factory set temperature is 20℃ .
◆ Heat pump unit: when Tamb. ≥22℃ , the system operates under heating mode; Ex-factory set temperature is 25℃ .
◆ 22℃ <Tamb.<26℃ : The system operates under fan mode if turn on the unit to enter into auto mode for the first time; If switch to auto mode from cooling, heating or fan mode, the system keeps previous operation mode; If switch to auto mode from drying mode, the system operates under fan mode.

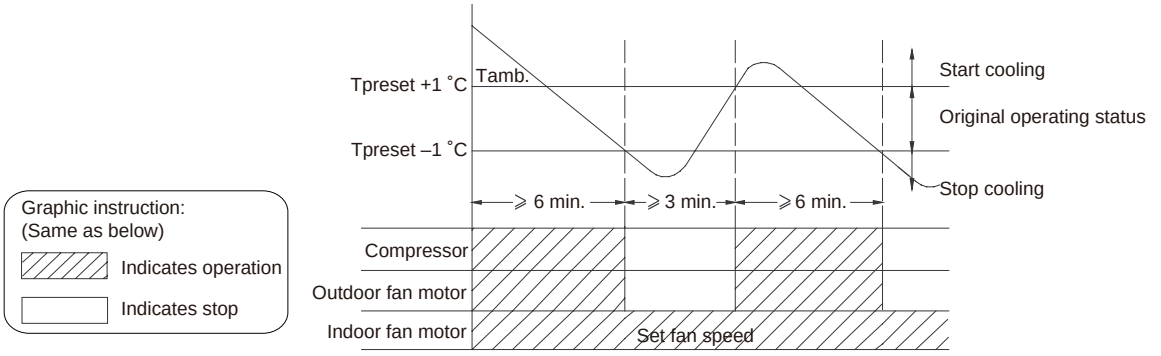
② Display: Operation icon, actual operation mode icon, set temperature (that's the display content of dual-8 nixie tube)
③ Protection function is same as that under each mode.

(2) Cooling mode

① Operation condition and process for cooling mode

◆ When 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.

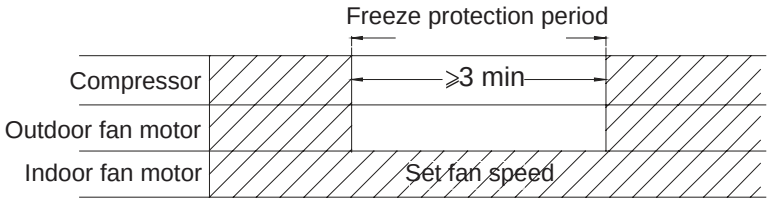
In cooling mode, the 4-way valve is de-energized (4-way valve is not available for cooling only unit). Temperature setting range is 16~30℃ .



② Display: Operation icon, cooling icon, set temperature.
③ 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

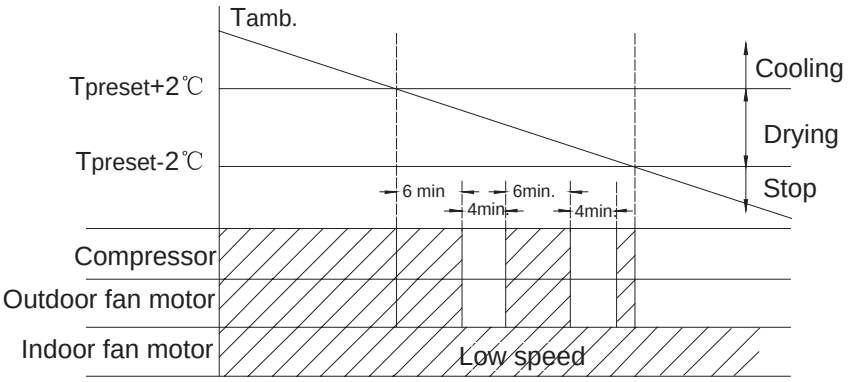
the compressor has been out of operation for 3 mins, the unit will resume its previous operation status.



◆ 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.

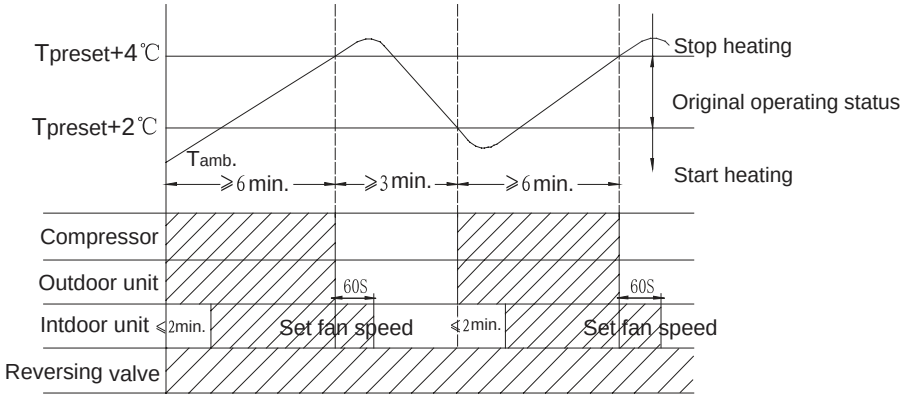


② Display: Operation icon, drying icon, set temperature.
③ Protection function
◆ Freeze protection
During dying and cooling operation, when the controller detected that Ttube≤0℃ for a period of time consecutively, the system will enter into freeze protection. In that case, the compressor and the ODU 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 Display: Operation icon, set temperature.
③ Protection function
In fan mode, there are overcurrent protection and blocked protection of IDU fan motor. Please refer to corresponding protection function under cooling mode for details.

(5) Heating mode(no heating mode is not available for cooling only unit)
① Operation conditioner and process for heating mode
◆ When Tamb.-Tsupplementary≤Tset-1℃, the unit starts heating operation. In this case, the 4-way valve, compressor and ODU fan motor run simultaneously; the IDU fan motor will run after a while to prevent blowing cold air.
◆ When Tamb.-Tsupplementary≥Tset+1℃, the compressor and ODU fan motor stop; the 4-way valve remains energized; the IDU fan motor blows residual heat for a while in set speed.
◆ When Tset-1℃＜Tamb.-Tsupplementary＜Tset +1℃, the unit will maintain its previous running status.

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



② Display: Operation icon, heating icon, set temperature.
③ Defrosting condition and process
For ensusing heating effect, air conditioner will defrost automatically according to defrosting status on outdoor unit. During defrosting, the heating icon is on for a while and then extinguish.
④ Protection function
◆ Overheating prevention protection
During operation, if the controller detects that Ttube≥55℃or 56℃,the ODU fan motor stops operation; When Ttube returns to normal, 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 0.5hour. 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:

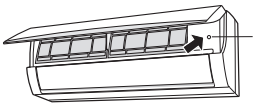
Although timer has been set, the unit still can be turned on/off by pressing ON/OFF button on the remote controller. You can also reset the timer.

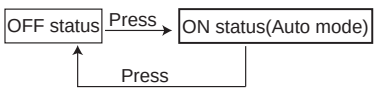
If timer ON and timer OFF are set at the same time during operation of the unit, the unit will keep running at current status till OFF time reaches. Upon ON time reached, the system will be turned on automatically. The unit will operate circularly like that every 24hours.

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

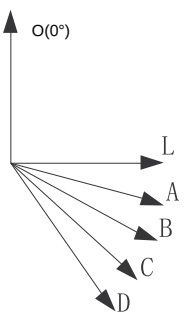
Auto fan speed control can be set under cooling, heating and fan mode. During operation of auto fan speed control, the IDU fan motor will adjust the fan speed (high, medium or low speed) according to ambient temperature.

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

F1	Indoor ambient temperature sensor is open/short-circuited
F2	Indoor evaporator temperature sensor is open/short-circuited
H6	Blocked protection of IDU fan motor
C5	Malfunction protection of jumper cap
U8	Zero-crossing inspection circuit malfunction of the IDU fan motor
F0	Lack of refrigerant or block protection for the system
E8	Overload malfunction
E5	Overcurrent protection
H3	Overload of compressor
E1	High pressure protection

◆ When air conditioner is in auto defrosting,the heating icon will be on for a while and then extinguish. No display for some models without mode indicator.
◆ If turn off light button, all display will be turned off.

(9) Memory function
① Power failure when turning on the unit
◆ Memory content: ON status, mode, up&down swing, light, set temperature, set fan speed, general timer, Fahrenheit/ Celsius
◆ General timer can be memorized. Time of timer is calculated again from energization.
◆ Clock timer 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) Health function (for the model with health function)
During operation of the IDU fan motor, press health button on the remote controller to start health function (If there is not health button on the remote controller, the unit defaults health function ON).
(2) I Feel function (for all models, but it needs the remote controller which can set this function)
When I FEEL command is received, the controller will operate according to the ambient temperature sent by the remote controller (For defrosting and cold air prevention, the unit operates according to the ambient temperature sensed by the air conditioner). The remote controller will regularly send ambient temperature data to the controller. When the data has not been received for a long time, the unit will operate according to the temperature sensed by the air conditioner. If I FEEL function is not set, the ambient temperature will be that sensed by the air conditioner.

Part Ⅱ : Installation and Maintenance

7. Notes for Installation and Maintenance

Safety Precautions: Important!

Please read the safety precautions carefully before installation and maintenance.
The following contents are very important for installation and maintenance.

Please follow the instructions below.

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

Warnings

Electrical Safety Precautions:

1. Cut off the power supply of air conditioner before checking and maintenance.
2. The air condition must apply specialized circuit and prohibit share the same circuit with other appliances.
3. The air conditioner should be installed in suitable location and ensure the power plug is touchable.
4. Make sure each wiring terminal is connected firmly during installation and maintenance.
5. Have the unit adequately grounded. The grounding wire cant be used for other purposes.
6. Must apply protective accessories such as protective boards, cable-cross loop and wire clip.
7. The live wire, neutral wire and grounding wire of power supply must be corresponding to the live wire, neutral wire and grounding wire of the air conditioner.
8. The power cord and power connection wires cant be pressed by hard objects.
9. If power cord or connection wire is broken, it must be replaced by a qualified person.
10. If the power cord or connection wire is not long enough, please get the specialized power cord or connection wire from the manufacture or distributor. Prohibit prolong the wire by yourself.
11. For the air conditioner without plug, an air switch must be installed in the circuit. The air switch should be all-pole parting and the contact parting distance should be more than 3mm.
12. Make sure all wires and pipes are connected properly and the valves are opened before energizing.
13. Check if there is electric leakage on the unit body. If yes, please eliminate the electric leakage.
14. Replace the fuse with a new one of the same specification if it is burnt down; dont replace it with a cooper wire or conducting wire.
15. If the unit is to be installed in a humid place, the circuit breaker must be installed.

Installation Safety Precautions:

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

Refrigerant Safety Precautions:

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

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

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

●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.

●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.

●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.

●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.

●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.

●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.

●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.

●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.

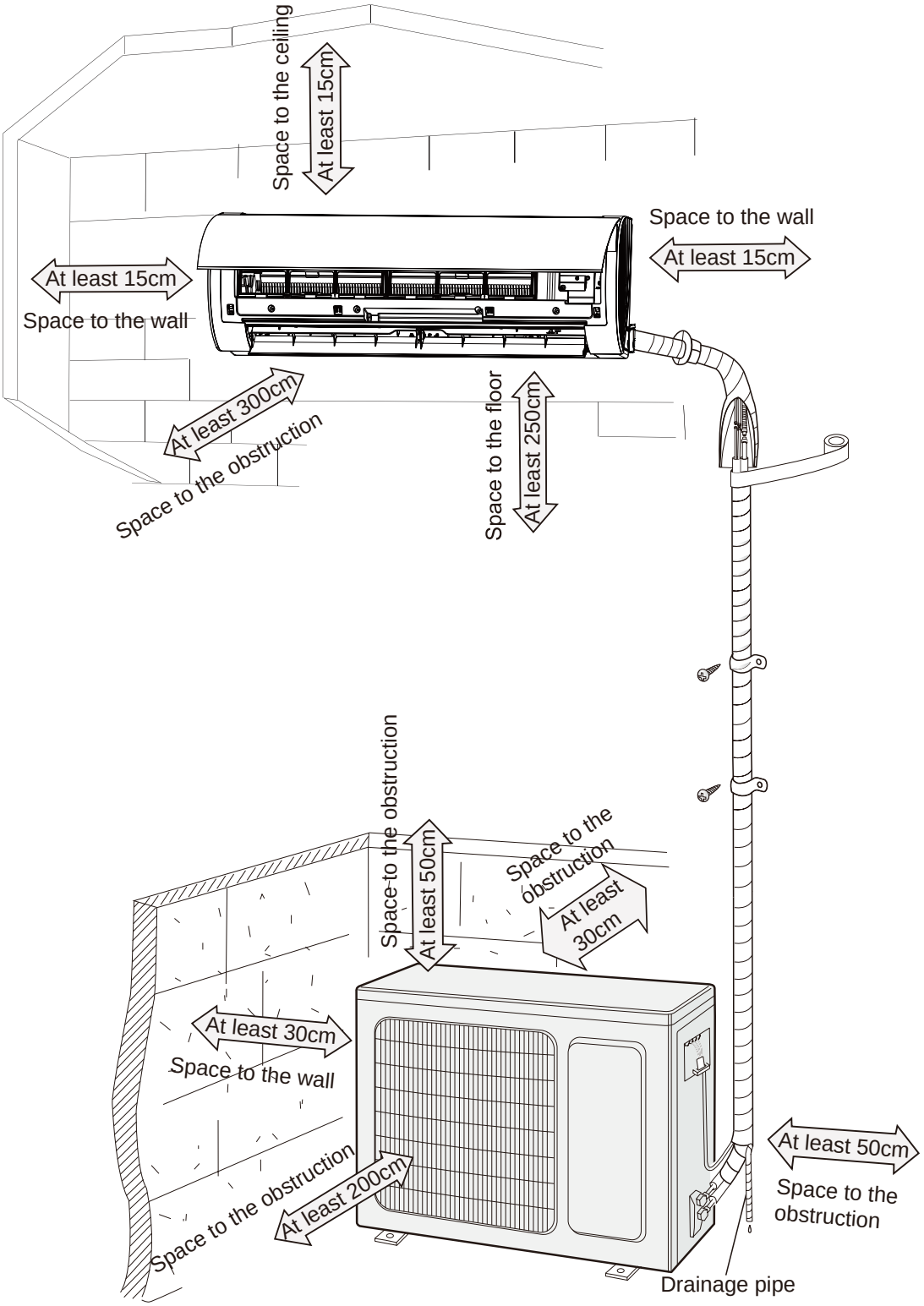
Electric wires with insufficient capacity, wrong wire connections and insecure wire terminals may cause electric shock or fire.

Main Tools for Installation and Maintenance

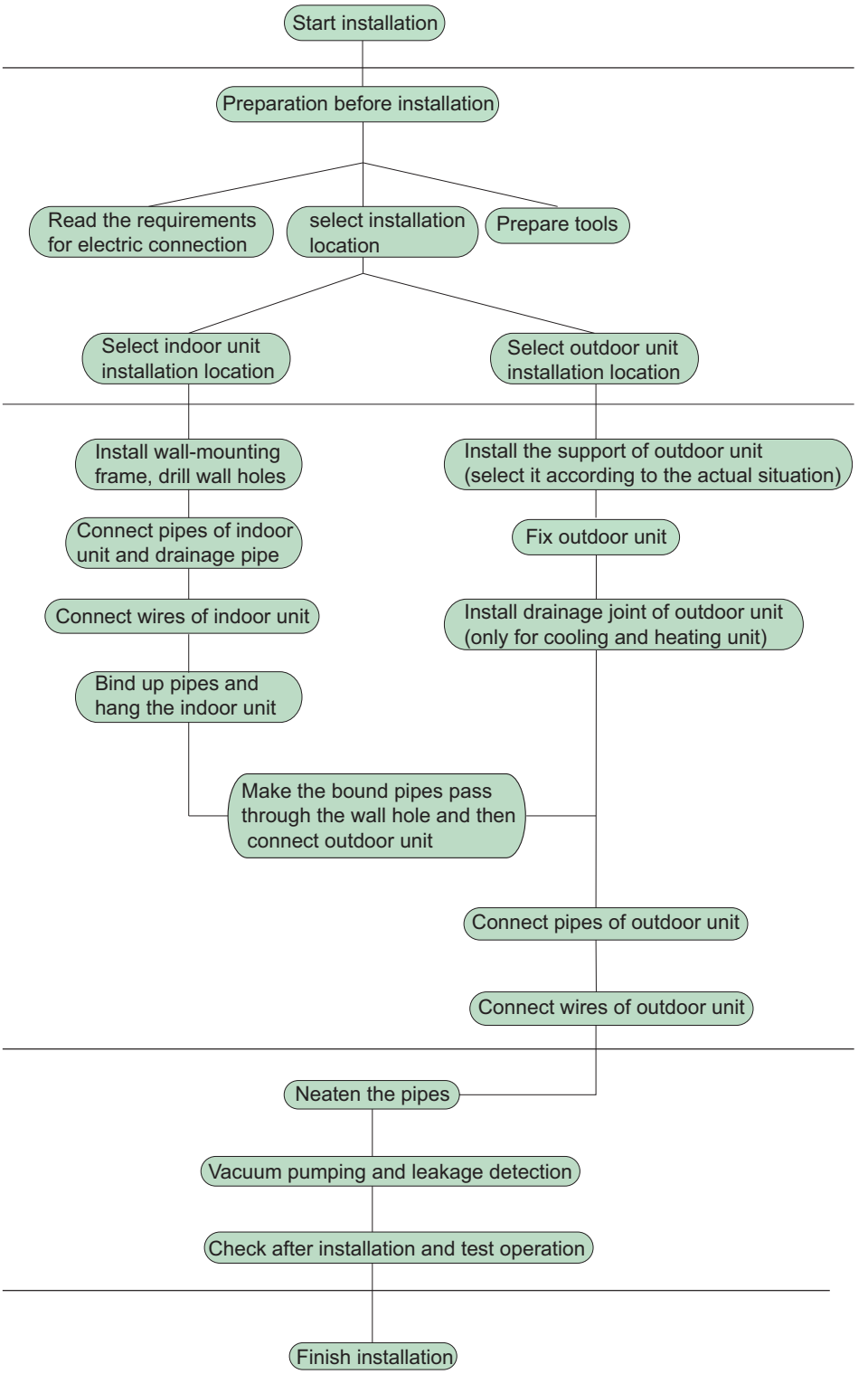
1. Level meter, measuring tape 	**2. Screw driver** 	**3. Impact drill, drill head, electric drill** 
4. Electroprobe 	**5. Universal meter** 	**6. Torque wrench, open-end wrench, inner hexagon spanner** 
7. Electronic leakage detector 	**8. Vacuum pump** 	**9. Pressure meter** 
10. Pipe pliers, pipe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

8. Installation

8.1 Installation Dimension Diagram



Installation procedures



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

8.2 Installation Parts-Checking

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

⚠ **Note:**
1.Please contact the local agent for installation.
2.Dont use unqualified power cord.

8.3 Selection of Installation Location

1. Basic Requirement:
Installing the unit in the following places may cause malfunction. If it is unavoidable, please consult the local dealer:
(1) The place with strong heat sources, vapors, flammable or explosive gas, or volatile objects spread in the air.
(2) The place with high-frequency devices (such as welding machine, medical equipment).
(3) The place near coast area.
(4) The place with oil or fumes in the air.
(5) The place with sulfureted gas.
(6) Other places with special circumstances.
(7) The appliance shall not be installed in the laundry.

2. Indoor Unit:
(1) There should be no obstruction near air inlet and air outlet.
(2) Select a location where the condensation water can be dispersed easily and wont affect other people.
(3) Select a location which is convenient to connect the outdoor unit and near the power socket.
(4) Select a location which is out of reach for children.
(5) The location should be able to withstand the weight of indoor unit and wont increase noise and vibration.
(6) The appliance must be installed 2.5m above floor.
(7) Dont install the indoor unit right above the electric appliance.
(8) Please try your best to keep way from fluorescent lamp.

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

8.4 Requirements for electric connection

1. Safety Precaution
(1) Must follow the electric safety regulations when installing the unit.
(2) According to the local safety regulations, use qualified power supply circuit and air switch.
(3) Make sure the power supply matches with the requirement of air conditioner. Unstable power supply or incorrect wiring may result in electric shock,fire hazard or malfunction. Please install proper power supply cables before using the air conditioner.
(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 first class electric appliance. It must be properly grounding with specialized grounding device by a professional. Please make sure it is always grounded effectively, otherwise it may cause electric shock.
(2) The yellow-green wire in air conditioner is grounding wire, which cant be used for other purposes.
(3) The grounding resistance should comply with national electric safety regulations.
(4) The appliance must be positioned so that the plug is accessible.
(5) An all-pole disconnection switch having a contact separation of at least 3mm in all poles should be connected in fixed wiring.
(6) Including an air switch with suitable capacity, please note the following table. Air switch should be included magnet buckle and heating buckle function, it can protect the circuit-short and overload. (Caution: please do not use the fuse only for protect the circuit)

Air-conditioner	Air switch capacity
09K	10A
12/18K	16A

8.5 Installation of Indoor Unit

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

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

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

3. Install Wall-mounting Frame

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

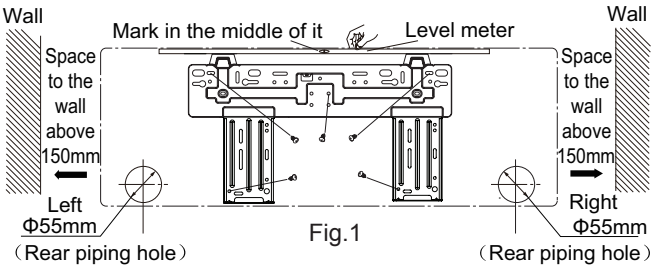


Fig.1

(2) Open a piping hole with the diameter of Φ55mm 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)

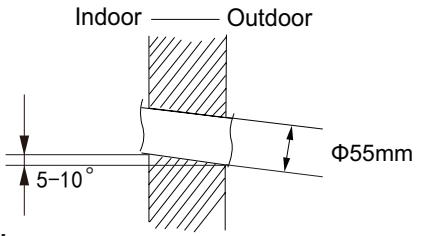


Fig.2

⚠ **Note:**

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

(2) The plastic expansion particles are not provided and should be bought locally.

4. Outlet Pipe

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

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

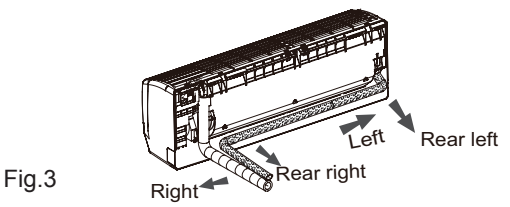


Fig.3

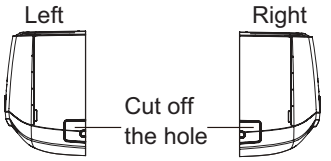


Fig.4

5. Connect the Pipe of Indoor Unit

(1) Aim the pipe joint at the corresponding bellmouth.(As show in Fig.5)

(2) Pretightening the union nut with hand.

(3) Adjust the torque force by referring to the following sheet. Place the open-end wrench on the pipe joint and place the torque wrench on the union nut. Tighten the union nut with torque wrench.(As show in Fig.6)

(4) Wrap the indoor pipe and joint of connection pipe with insulating pipe, and then wrap it with tape.(As show in Fig.7)

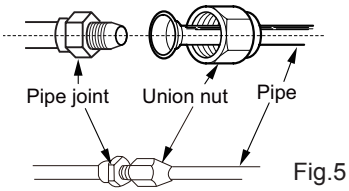


Fig.5

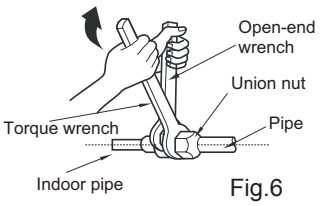


Fig.6

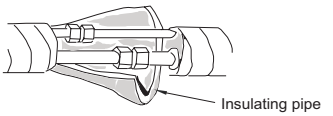


Fig.7

Refer to the following table for wrench moment of force:

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

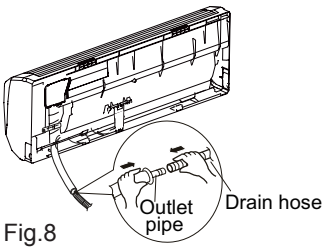


Fig.8

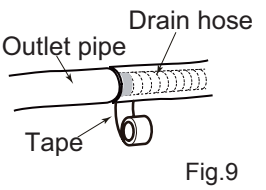


Fig.9

⚠ **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)

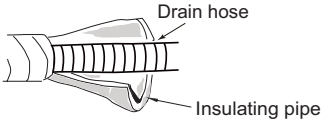


Fig.10

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)

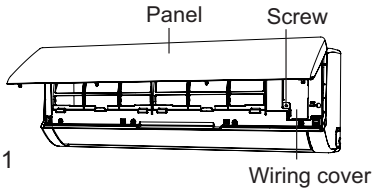


Fig.11

(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)

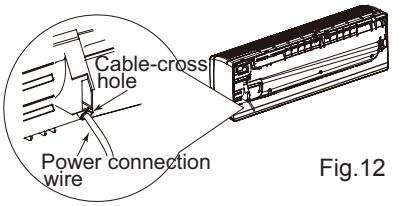


Fig.12

(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. After connecting the wires of temperature sensor, the 2-core connecting cable should be fixed in the bottom case via wire clamp. If the connection wire of temperature sensor is prepared by the user, the model of connector terminal shall be ELR-02V of JST (J.S.T.MFG. CO., LTD.)(As show in Fig.13)

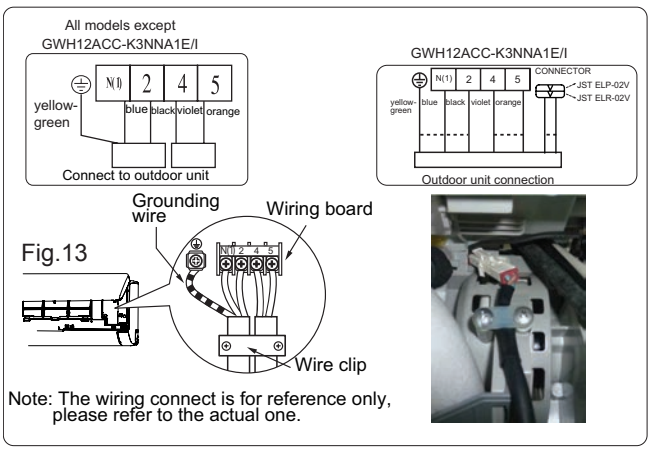


Fig.13

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

⚠ **Note:**

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

8. Bind up Pipe

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

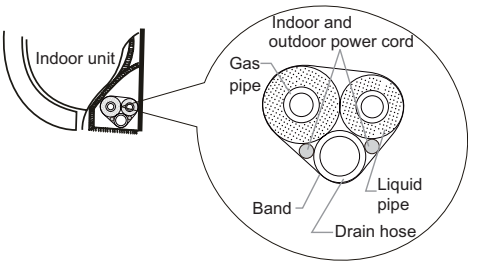


Fig.14

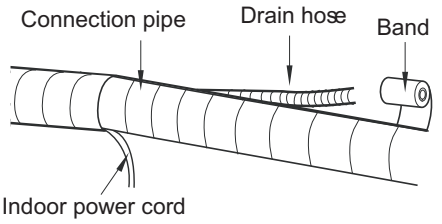


Fig.15

⚠ **Note:**

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

9. Hang the Indoor Unit

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

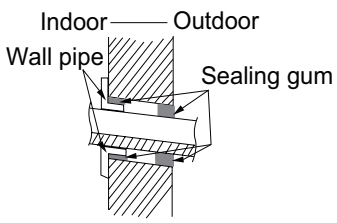
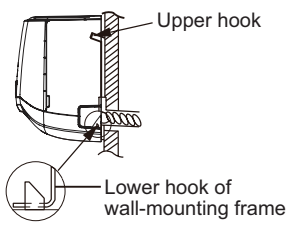


Fig.16

Fig.17



⚠ **Note:**

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

8.6 Installation of Outdoor unit

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

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

⚠ **Note:**

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

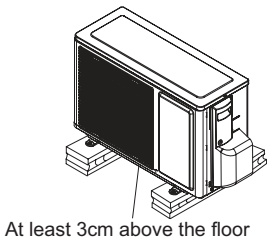


Fig.18

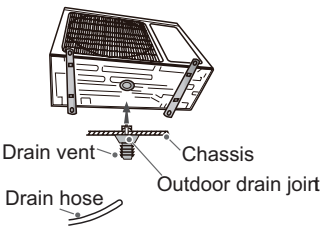


Fig.19

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

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

3. Fix Outdoor Unit

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

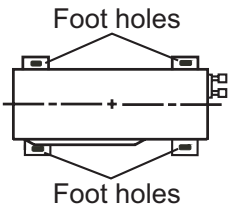


Fig.20

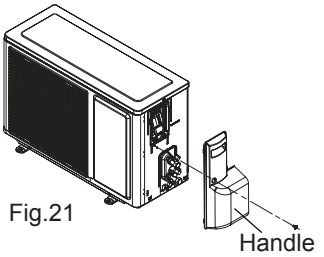


Fig.21

4. Connect Indoor and Outdoor Pipes

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

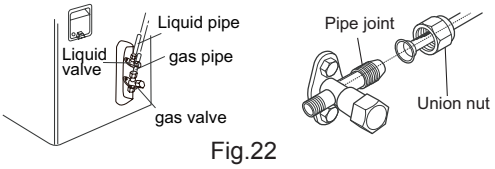


Fig.22

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

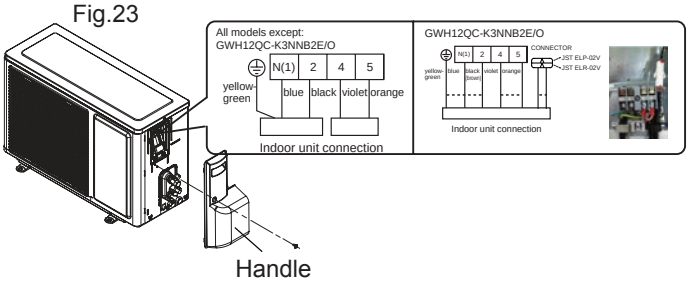
Refer to the following table for wrench moment of force:

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

5. Connect Outdoor Electric Wire

(1) Remove the wire clip; connect the power connection wire and signal control wire (only for cooling and heating unit) to the wiring terminal according to the color; fix them with screws. After connecting the wires of temperature sensor,the 2-core connecting cable should be fixed in the bottom case via wire clamp.If theconnection wire of temperature sensor is prepared by the user, the model of connector terminal shall be ELR-02V of JST (J.S.T.MFG. CO., LTD.)(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)

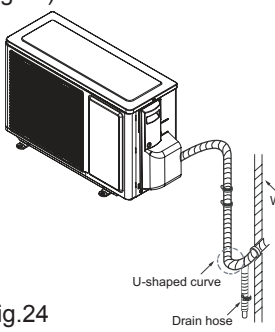


Fig.24

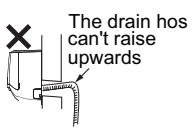


Fig.25

⚠ **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 cant be curved, raised and fluctuant, etc.(As show in Fig.26)

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

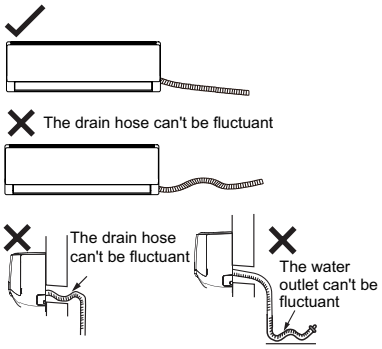


Fig.26

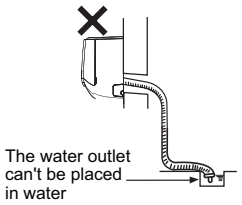


Fig.27

8.7 Vacuum Pumping and Leak Detection

1. Use Vacuum Pump

(1) Remove the valve caps on the liquid valve and gas valve and the nut of refrigerant charging vent.

(2) Connect the charging hose of piezometer to the refrigerant charging vent of gas valve and then connect the other charging hose to the vacuum pump.

(3) Open the piezometer completely and operate for 10-15min to check if the pressure of piezometer remains in -0.1MPa.

(4) Close the vacuum pump and maintain this status for 1-2min to check if the pressure of piezometer remains in -0.1MPa. If the pressure decreases, there may be leakage.

(5) Remove the piezometer, open the valve core of liquid valve and gas valve completely with inner hexagon spanner.

(6) Tighten the screw caps of valves and refrigerant charging vent.(As show in Fig.28)

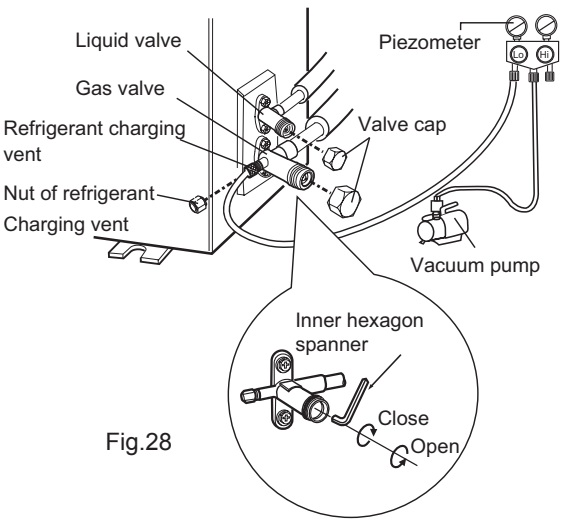


Fig.28

2. Leakage Detection

(1) With leakage detector:

Check if there is leakage with leakage detector.

(2) With soap water:

If leakage detector is not available, please use soap water for leakage detection. Apply soap water at the suspected position and keep the soap water for more than 3min. If there are air bubbles coming out of this position, theres a leakage.

8.8 Check after Installation and Test operation

1. Check after Installation

Check according to the following requirement after finishing installation.

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

2. Test Operation

(1) Preparation of test operation

● The client approves the air conditioner installation.

● Specify the important notes for air conditioner to the client.

(2) Method of test operation

● Put through the power, press ON/OFF button on the remote controller to start operation.

● Press MODE button to select AUTO, COOL, DRY, FAN and HEAT to check whether the operation is normal or not.

● If the ambient temperature is lower than 16℃ , the air conditioner cant start cooling.

9. Maintenance

9.1 Error code

No.	Malfunction Name	Display Method of Indoor Unit (Error Code)	A/C Status	Possible Causes(For specific maintenance method, please refer to the following procedure of troubleshooting)
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 IDU fan motor operates, other loads stop operation; During heating operation, the system stops operation.	1.The wiring terminal between indoor ambient temperature sensor and main board is loosened or poorly contacted; 2.There's short circuit due to trip-over of the parts on controller; 3.Indoor ambient temperature sensor is damaged (Please check it by referring to the resistance table for temperature sensor) 4. Main board is broken.
2	Indoor evaporator temperature sensor is open/short-circuited	F2	The unit will stop operation as it reaches the temperature point. During cooling and drying operation, except IDU fan operates, other loads stop operation; During heating operation, the complete unit stops operation.	1.The wiring terminal between indoor evaporator temperature sensor and main board is loosened or poorly contacted; 2.There's short circuit due to the trip-over of the parts on controller; 3.Indoor evaporator temperature sensor is damaged (Please check it by referring to the resistance table for temperature sensor) 4. Main board is broken.
3	Blocked protection of IDU fan motor	H6	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	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 is not working. Abnormal 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.
6	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.

7	Lack of refrigerant or block protection for the system or Overload protection compressor	F0	The Dual-8 Code Display will show F0 and the complete unit stops.	1.Refrigerant leakage; 2.Indoor evaporator temperature sensor works abnormally; 3.The unit has been plugged up somewhere; 4.The compressor can't be started up normally. Because the power voltage for the complete unit is too low, and the outdoor working condition is too high.
8	Overcurrent protection(This protection function is not available for those models whose cooling capacity ≤12000Btu/h)	E5	During cooling and drying operation, except IDU fan motor operates, other loads stop operation; During heating operation, the system stops operation.	1.Unstable supply voltage. Normal fl uctuation shall be within 10% of the rated voltage on the nameplate. 2.Supply voltage is too low and load is too high. 3.Measure the current of live wire on main board. If the current isn't higher than the overcurrent protection value, please check the controller. 4.The indoor and outdoor heat exchangers are too dirty, or the air inlet and air outlet are blocked. 5.The fan motor is not running. Abnormal fan speed: fan speed is too low or the fan doesn't run 6.The compressor is not running normally. There is abnormal sound, oil leakage or the temperature of the shell is too high, etc. 7.There's blockage in the system (filth blockage, ice plug, greasy blockage, Y-valve hasn't been opened completely)
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 floorstanding 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 HPP 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 areblocked. 10. The system pipeline is blocked. 1 11. The gas valve and liquid valve for outdoor unit are not completely opened. 12. The HPP input is at high level.
10	Overload of 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 is not working Abnormal 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

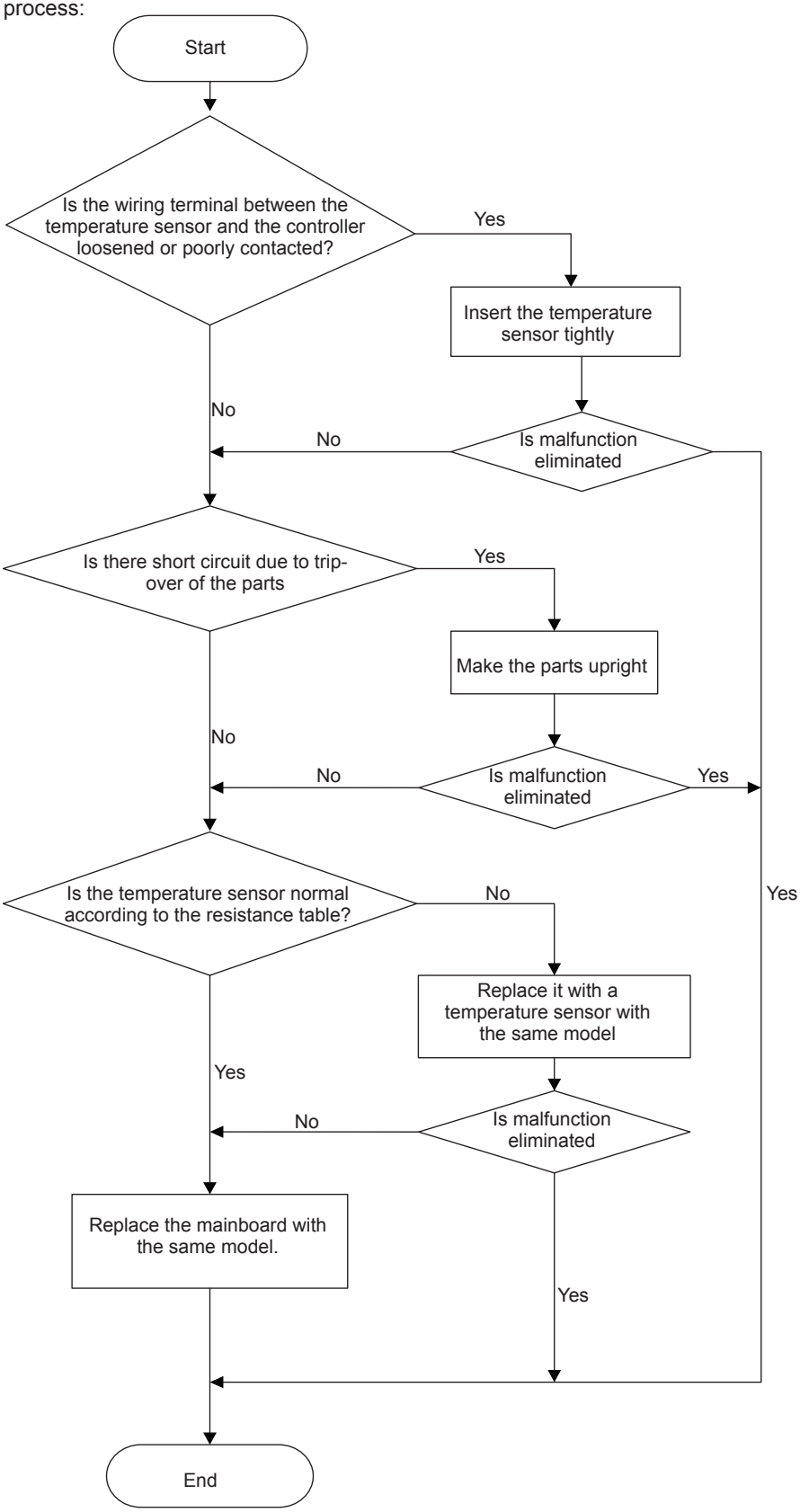
9.2 Procedure of Troubleshooting

1. Malfunction of Temperature Sensor F1, F2

Main detection points:

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

Malfunction diagnosis process:

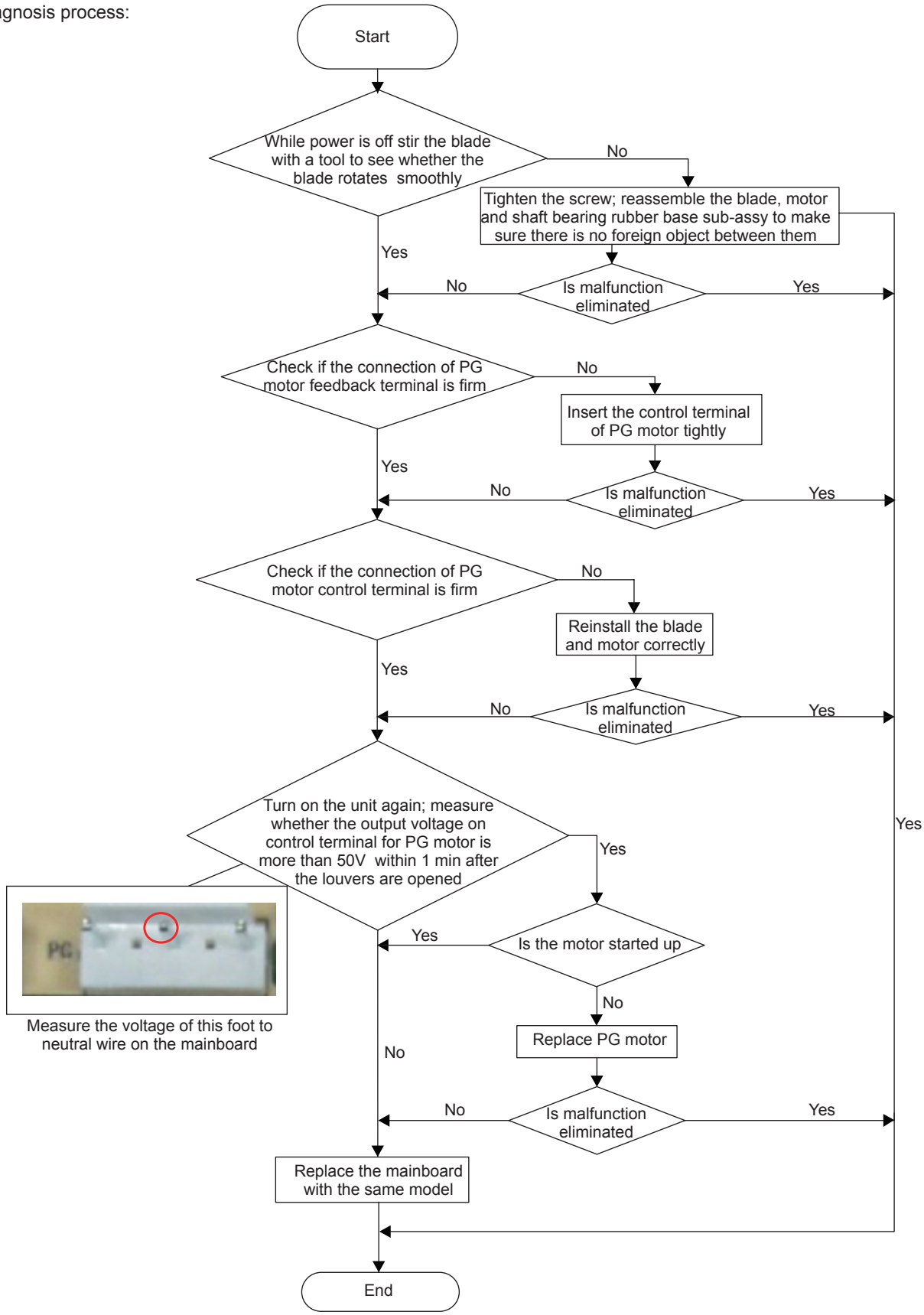


2. Malfunction of Blocked Protection of IDU Fan Motor H6

Main detection points:

- SmoothlyIs the control terminal of PG motor connected tightly?
- SmoothlyIs 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:

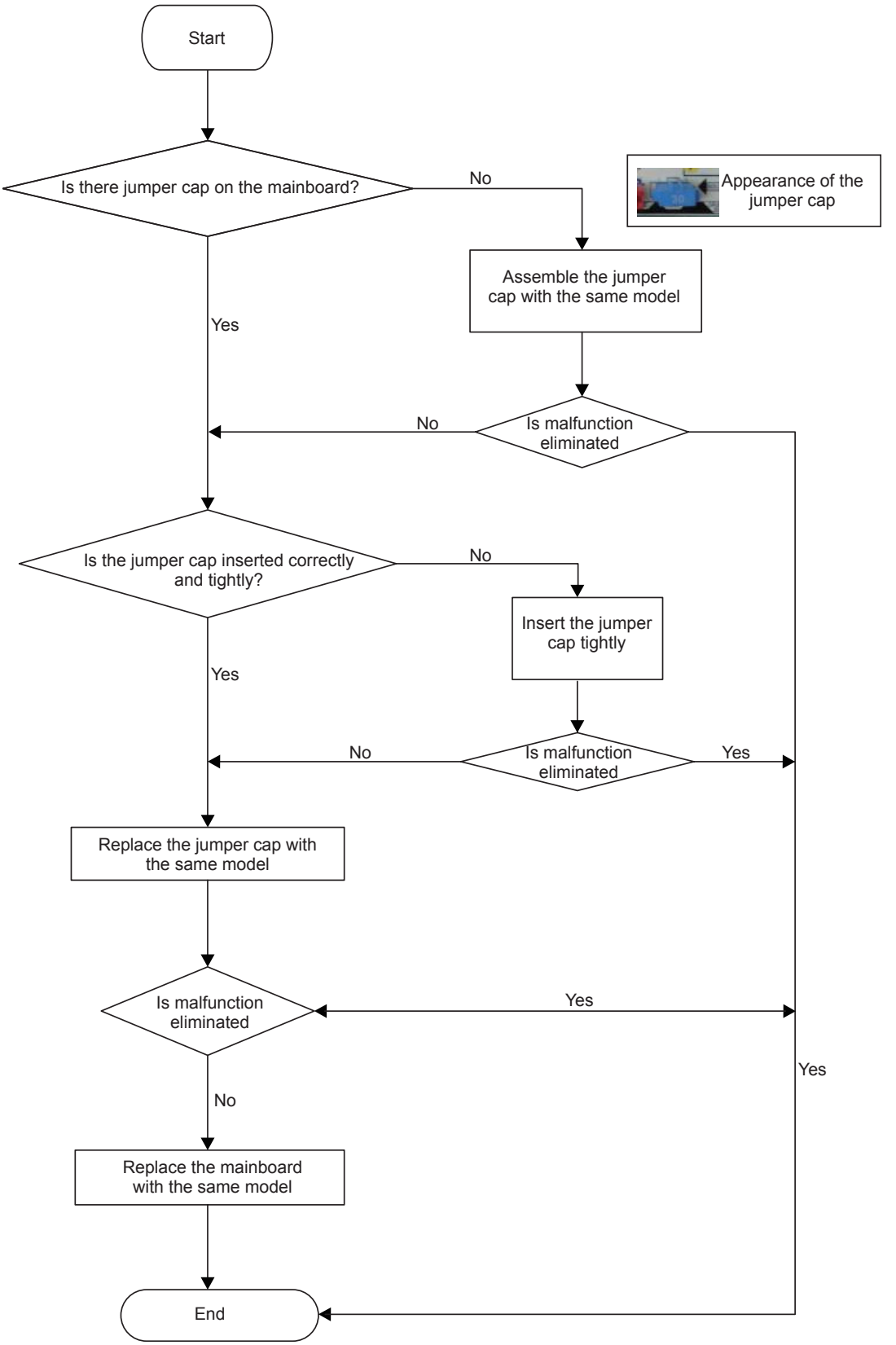


3. Malfunction of Protection of Jumper Cap C5

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:



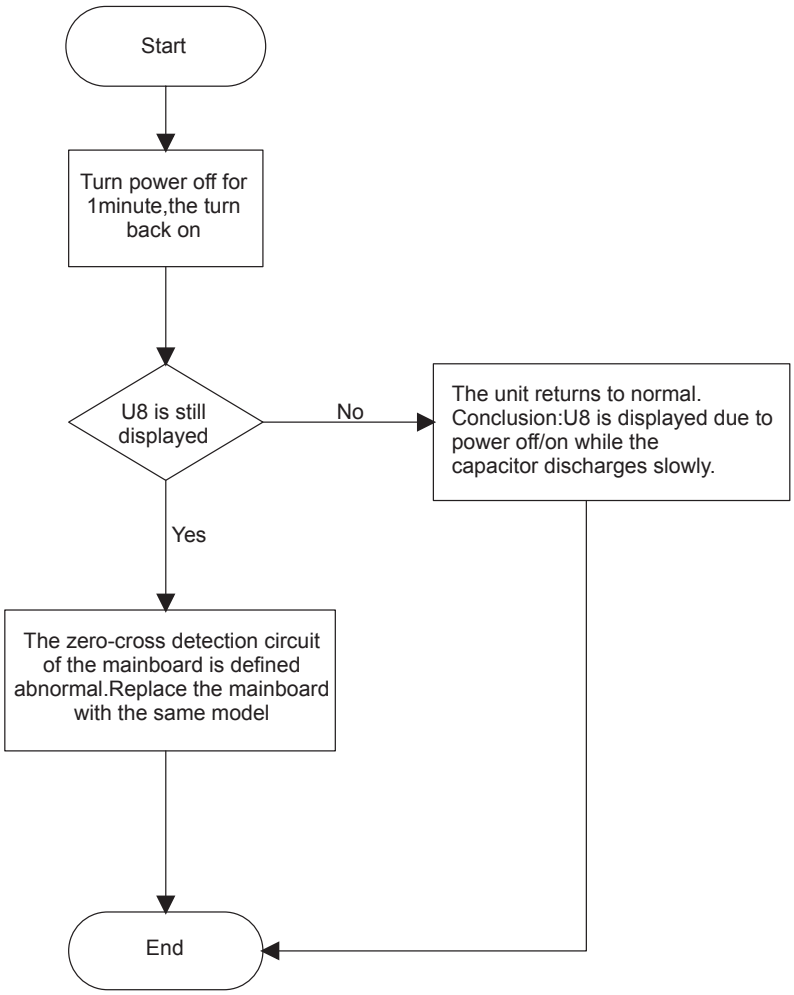
4. Malfunction of Zero-crossing Inspection Circuit Malfunction of the IDU Fan Motor U8

Main detection points:

● Instant energization afte de-energization while the capacitordischarges slowly?

● The zero-cross detectioncircuit of the mainboard is defined abnormal?

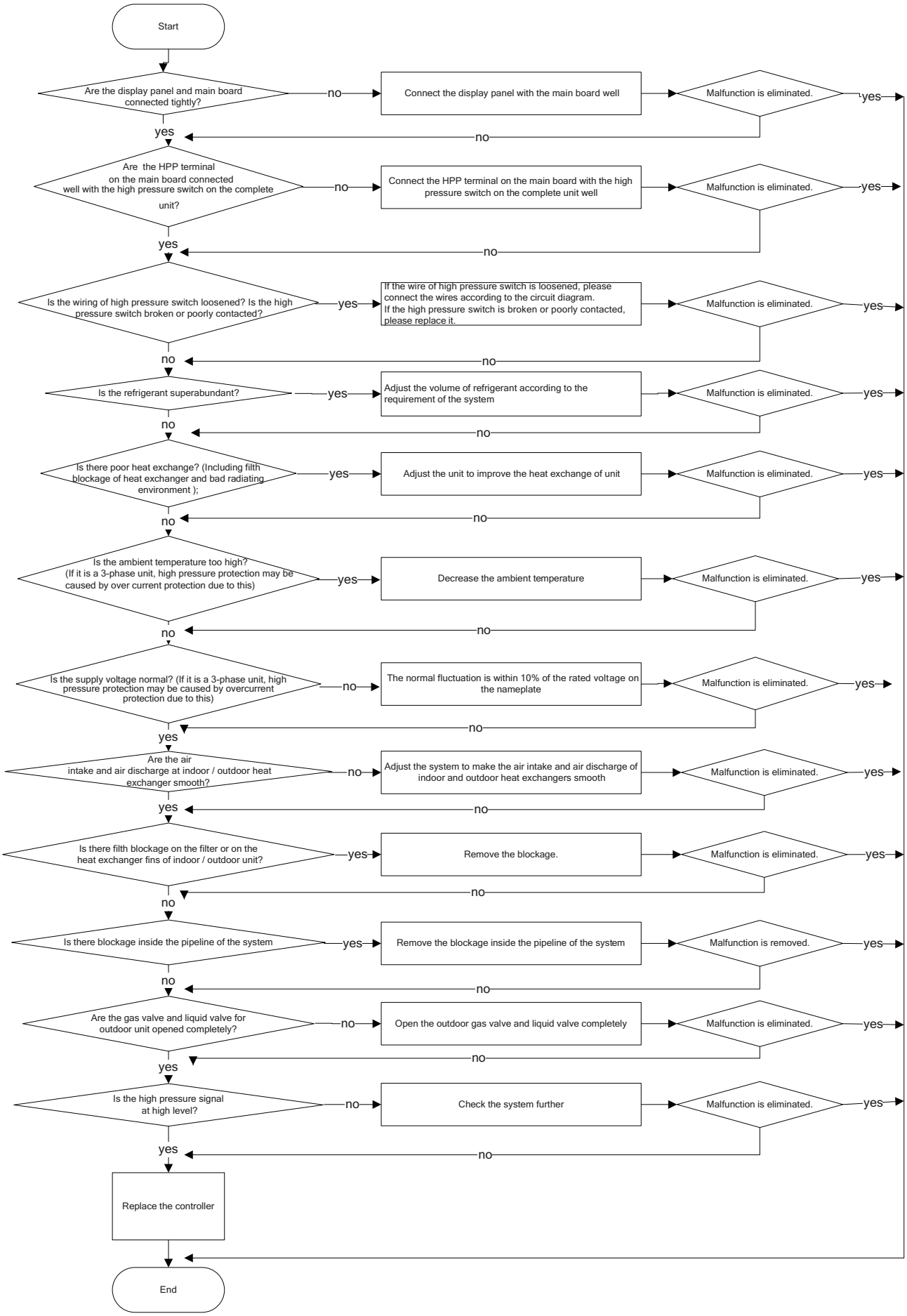
Malfunction diagnosis process:



5. High Temperature and Overload Protection (AP1 below means control board of outdoor unit) E8



6. High pressure protection (E1)

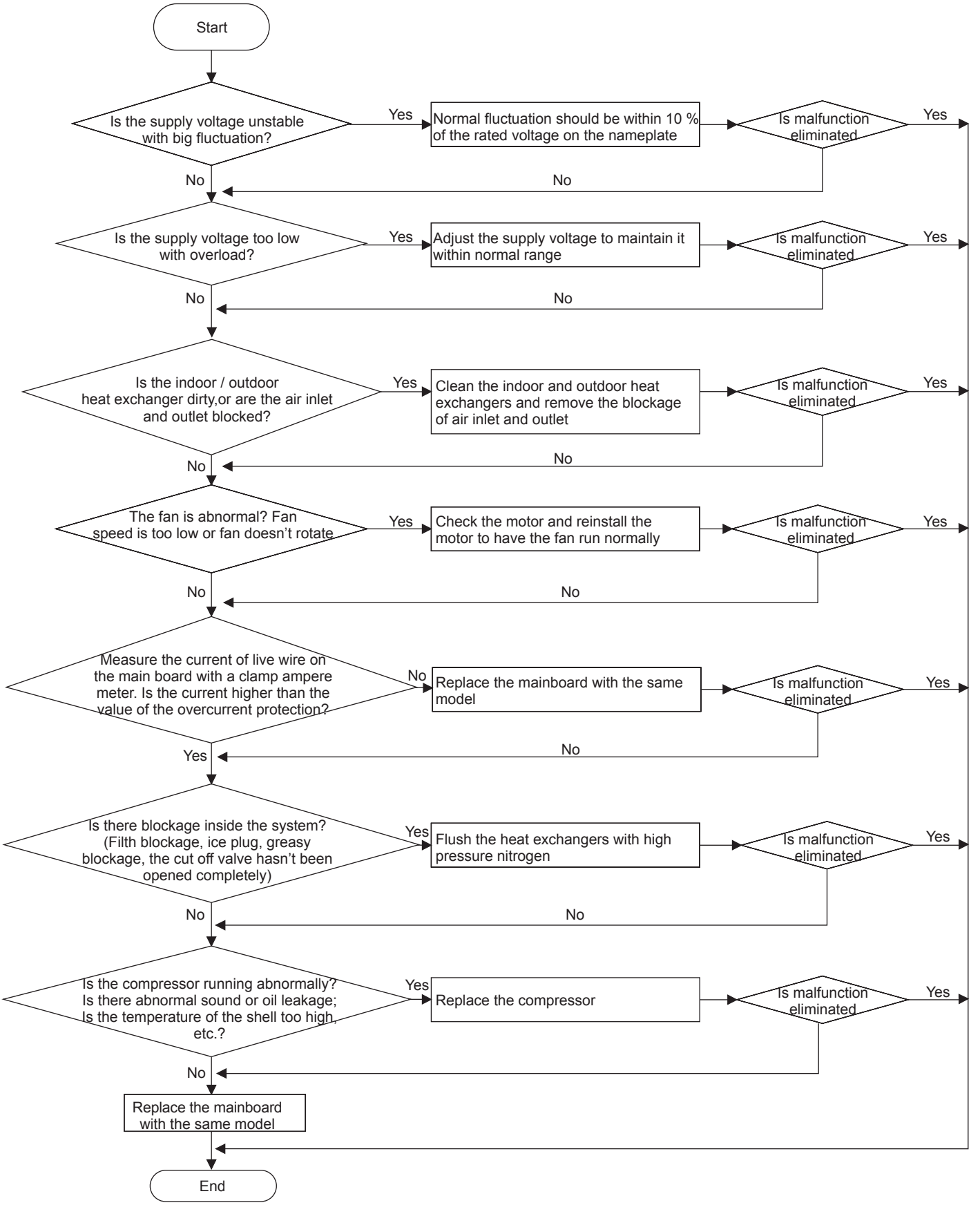


7. Malfunction of Overcurrent Protection E5

Main detection points:

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

Malfunction diagnosis process:

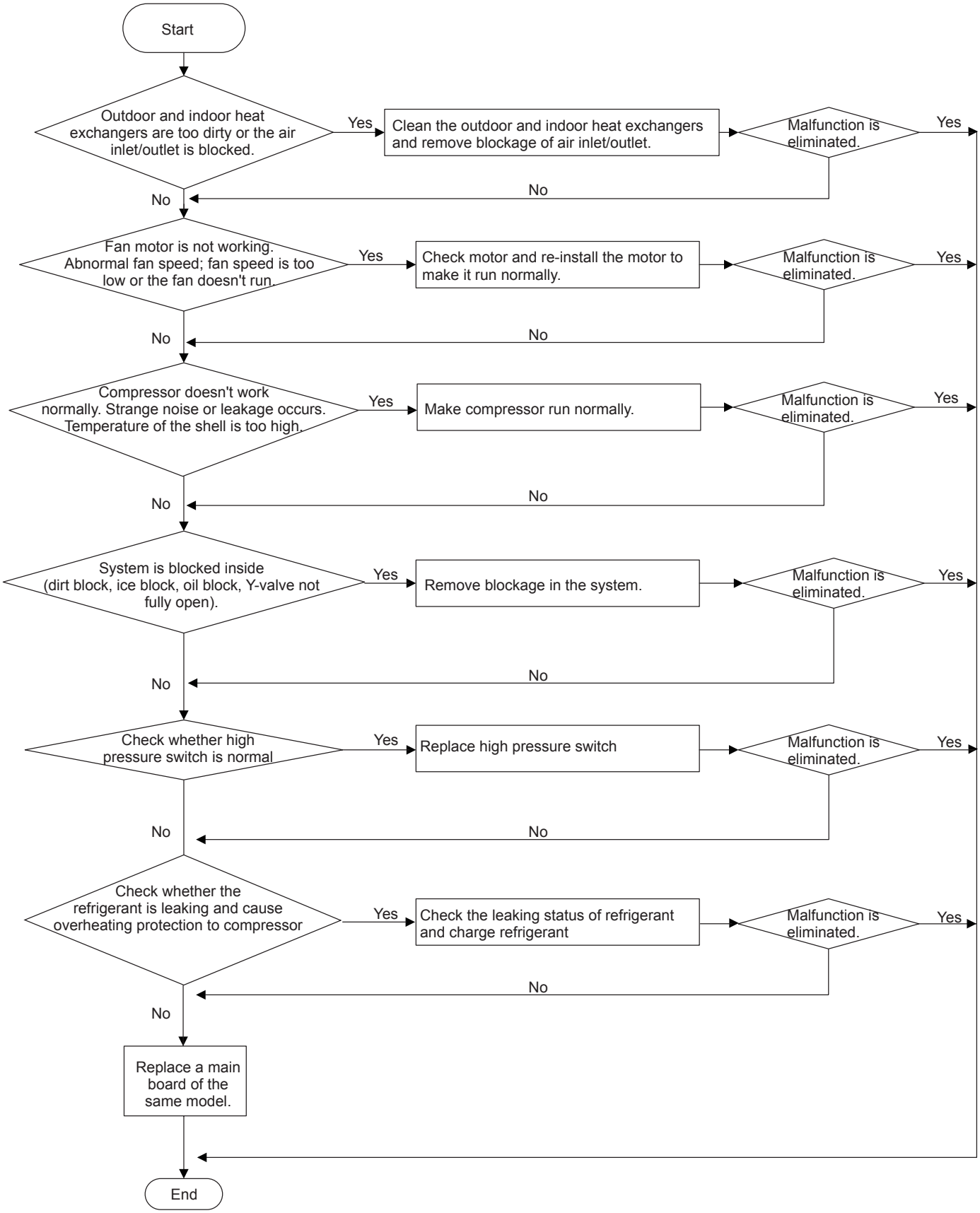


8. Overload Protection Compressor H3

Main detection points:

- Heat exchange of unit is not good? (heat exchanger is dirty and unit radiating environment is bad)
- Fan motor is not working?
- Too much load of the system causes high temperature of compressor after working for a long time?
- Whether high pressure switch is normal?
- If the refrigerant is leaked?

Malfunction diagnosis process:



9.3 Maintenance method for normal malfunction

1. Air Conditioner Cant be Started Up

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

2. Poor Cooling (Heating) for Air Conditioner

Possible Causes	Discriminating Method (Air conditioner Status)	Troubleshooting
Set temperature is improper	Observe the set temperature on remote controller	Adjust the set temperature
Rotation speed of the IDU fan motor is set too low	Small wind blow	Set the fan speed at high or medium
Filter of indoor unit is blocked	Check the filter to see its blocked	Clean the filter
Installation position for indoor unit and outdoor unit is improper	Check whether the installation 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 cant swing	Refer to point 3 of maintenance method for details
Malfunction of the IDU fan motor	The IDU fan motor cant operate	Refer to troubleshooting for H6 for maintenance method in details
Malfunction of the ODU fan motor	The ODU fan motor cant operate	Refer to point 4 of maintenance method for details
Malfunction of compressor	Compressor cant operate	Refer to point 5 of maintenance method for details

3. Horizontal Louver Cant Swing

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

4. ODU Fan Motor Cant Operate

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

5. Compressor Cant Operate

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

6. Air Conditioner is Leaking

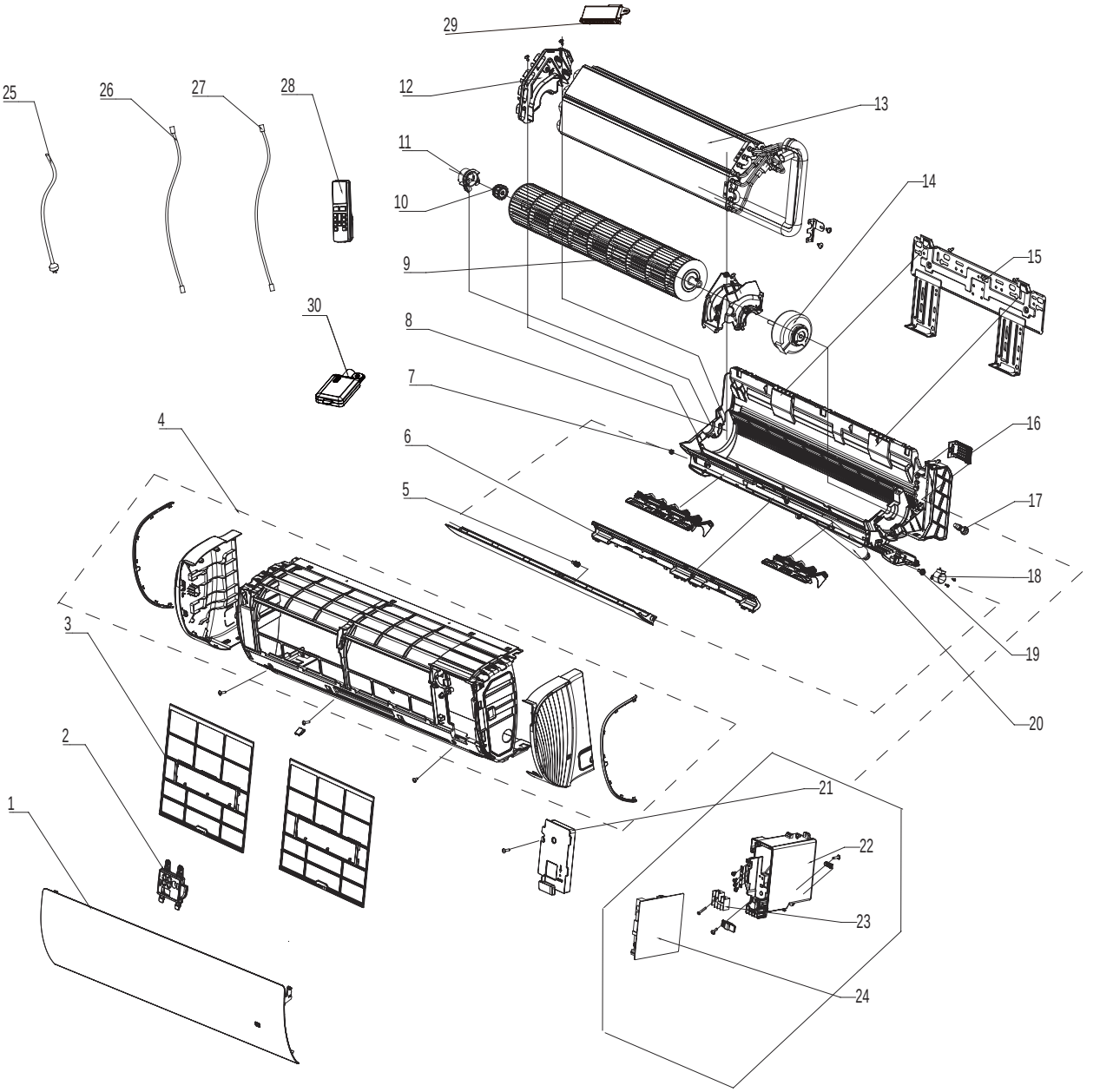
Possible causes	Discriminating method (air conditioner status)	Troubleshooting
Drain pipe is blocked	Water leaking from indoor unit	Eliminate the foreign objects inside the drain pipe
Drain pipe is broken	Water leaking from drain pipe	Replace drain pipe
Wrapping is not tight	Water leaking from the pipe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

7. Abnormal Sound and Vibration

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

10. Exploded View and Parts List

10.1 Indoor Unit



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

NO.	Description	Part Code			Qty
		GWH09ACB-K3NNA1A/I		GWH12ACC-K3NNA1E/I	
	Product Code	CA497N00200	CA497N00201	CA497N05800	
1	Front Panel	200003000131	20000300013101K01	200003000128T01	1
2	Display Board	300001000202	300001000209	300001000202	1
3	Filter Sub-Assy	11122219	11122219	1112246803	2
4	Front Case Assy	000002000041	00000200004101	000002000044	1
5	Axile Bush	10542036	10542036	10542036	1
6	Helicoid Tongue	200006000002	200006000002	26112436	1
7	Left Axile Bush	10512037	10512037	10512037	1
8	Rear Case assy	000001000061	000001000061	000001000054	1
9	Cross Flow Fan	10352066	10352066	10352056	1
10	O-Gasket sub-assy of Bearing	7651205102	7651205102	7651205102	1
11	Ring of Bearing	26152022	26152022	26152022	1
12	Evaporator Support	200025000002	200025000002	24212179	1
13	Evaporator Assy	011001000143	011001000143	01002976	1
14	Fan Motor	150120874	150120874	15012146	1
15	Wall Mounting Frame Sub-assy	017211000005	017211000005	01252484	1
16	Connecting pipe clamp	200017000001	200017000001	2611216401	1
17	Rubber Plug (Water Tray)	76712012	76712012	76712012	1
18	Stepping Motor	1521210811	1521210811	1521210712	1
19	Crank	73012005	73012005	73012005	1
20	Drainage Hose	0523001408	0523001408	05230014	1
21	Electric Box Cover2	200082000005	200082000005P01	2011220801	1
22	Electric Box Assy	100002003125	100002003154	100002062062	1
23	Terminal Board	42010268	42010268	42010268	1
24	Main Board	30135000136	30135000136	300002000550	1
25	Power Cord	4002046439	4002046439	4002048719	1
26	Connecting Cable	40020540	40020540	400205401	0
27	Connecting Cable	40020536	40020536	40020536	0
28	Remote Controller	305001000009	305001000009	30510474	1
29	Cold Plasma Generator	430001000001	430001000001	1114001603	1

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NO.	Description	Part Code			Qty
		GWH12ACC-K3NNA1A/I		GWH18ACC-K3NNA1A/I	
	Product Code	CA497N00100	CA497N00101	CA497N00702	
1	Front Panel	200003000128T01	20000300012801K	200003000128T01	1
2	Display Board	300001000202	300001000209	300001000202	1
3	Filter Sub-Assy	11122468	11122468	11122468	2
4	Front Case Assy	000002000044	00000200004401	000002000044	1
5	Axile Bush	10542036	10542036	10542036	1
6	Helicoid Tongue	26112436	26112436	26112436	1
7	Left Axile Bush	10512037	10512037	10512037	1
8	Rear Case assy	000001000054	000001000054	000001000054	1
9	Cross Flow Fan	10352056	10352056	10352056	1
10	O-Gasket sub-assy of Bearing	7651205102	7651205102	7651205102	1
11	Ring of Bearing	26152022	26152022	26152022	1
12	Evaporator Support	24212179	24212179	24212174	1
13	Evaporator Assy	01002976	01002976	01002695	1
14	Fan Motor	15012146	15012146	15012146	1
15	Wall Mounting Frame Sub-assy	01252484	01252484	01252484	1
16	Connecting pipe clamp	2611216401	2611216401	2611216401	1
17	Rubber Plug (Water Tray)	76712012	76712012	76712012	1
18	Stepping Motor	1521210703	1521210703	1521210703	1
19	Crank	73012005	73012005	73012005	1
20	Drainage Hose	05230014	05230014	05230014	1
21	Electric Box Cover2	2011220801	2011220803P03	2011220801	1
22	Electric Box Assy	100002002958	10000200295801	100002003750	1
23	Terminal Board	42010268	42010268	42010268	1
24	Main Board	30135000071	30135000071	30135000084	1
25	Power Cord	4002046439	4002046439	4002048740	1
26	Connecting Cable	40020540	40020540	400205401	0
27	Connecting Cable	40020536	40020536	40020536	0
28	Remote Controller	305001000009	305001000009	305001000009	1
29	Cold Plasma Generator	1114001603	1114001603	/	1

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NO.	Description	Part Code			Qty
		GWH18ACC-K3NNA1A/I			
	Product Code	CA497N00700	CA497N00701	CA497N00703	
1	Front Panel	200003000128T01	200003000128T01	20000300012801K	1
2	Display Board	300001000202	300001000202	300001000209	1
3	Filter Sub-Assy	11122468	11122468	11122468	2
4	Front Case Assy	000002000044	000002000044	00000200004401	1
5	Axile Bush	10542036	10542036	10542036	1
6	Helicoid Tongue	26112436	26112436	26112436	1
7	Left Axile Bush	10512037	10512037	10512037	1
8	Rear Case assy	000001000054	000001000054	000001000054	1
9	Cross Flow Fan	10352056	10352056	10352056	1
10	O-Gasket sub-assy of Bearing	7651205102	7651205102	7651205102	1
11	Ring of Bearing	26152022	26152022	26152022	1
12	Evaporator Support	24212174	24212174	24212174	1
13	Evaporator Assy	01002695	01002695	01002695	1
14	Fan Motor	15012146	15012146	15012146	1
15	Wall Mounting Frame Sub-assy	01252484	01252484	01252484	1
16	Connecting pipe clamp	2611216401	2611216401	2611216401	1
17	Rubber Plug (Water Tray)	76712012	76712012	76712012	1
18	Stepping Motor	1521210703	1521210703	1521210703	1
19	Crank	73012005	73012005	73012005	1
20	Drainage Hose	05230014	05230014	05230014	1
21	Electric Box Cover2	2011220801	2011220801	2011220803P03	1
22	Electric Box Assy	100002003660	100002003660	100002003826	1
23	Terminal Board	42010268	42010268	42010268	1
24	Main Board	30135000071	30135000071	30135000084	1
25	Power Cord	4002048740	4002048740	4002048740	1
26	Connecting Cable	400205401	400205401	400205401	0
27	Connecting Cable	40020536	40020536	40020536	0
28	Remote Controller	305001000009	305001000009	305001000009	1
29	Cold Plasma Generator	1114001603	1114001603	/	1

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NO.	Description	Part Code			Qty
		GWH12ACB-K3NNA1A/I		GWH18ACC-K3NNA3A/I	
	Product Code	CA497N00500	CA497N00501	CA343N00600	
1	Front Panel	200003000131T01	20000300013101K01	200003060032T01	1
2	Display Board	300001000202	300001000209	300001000202	1
3	Filter Sub-Assy	11122219	11122219	1112246803	2
4	Front Case Assy	000002000041	00000200004101	000002000044	1
5	Axile Bush	10542036	10542036	10542036	1
6	Helicoid Tongue	200006000002	200006000002	26112436	1
7	Left Axile Bush	10512037	10512037	10512037	1
8	Rear Case assy	000001000061	000001000061	000001000054	1
9	Cross Flow Fan	10352066	10352066	10352056	1
10	O-Gasket sub-assy of Bearing	7651205102	7651205102	76512051	1
11	Ring of Bearing	26152022	26152022	26152022	1
12	Evaporator Support	200025000002	200025000002	24212174	1
13	Evaporator Assy	01100100014301	01100100014301	01002695	1
14	Fan Motor	150120874	150120874	15012146	1
15	Wall Mounting Frame Sub-assy	017211000005	017211000005	01252484	1
16	Connecting pipe clamp	200017000001	200017000001	2611216401	1
17	Rubber Plug (Water Tray)	76712012	76712012	76712012	1
18	Stepping Motor	1521210811	1521210811	1521210712	1
19	Crank	73012005	73012005	73012005	1
20	Drainage Hose	0523001408	0523001408	05230014	1
21	Electric Box Cover2	200082000005	200082000005P01	2011220801	1
22	Electric Box Assy	100002001549	100002003395	100002003750	1
23	Terminal Board	42010268	42010268	42010268	1
24	Main Board	30135000136	30135000136	30135000084	1
25	Power Cord	4002046439	4002046439	4002048740	1
26	Connecting Cable	40020540	40020540	400205401	0
27	Connecting Cable	40020536	40020536	400205401	0
28	Remote Controller	305001000009	305001000009	305001000009	1
29	Cold Plasma Generator	430001000001	430001000001	/	1

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NO.	Description	Part Code			Qty
		GWH12ACB-K3NNA1A/I		GWH12ACC-K3NNA3A/I	
	Product Code	CA497N00502	CA497N00503	CA343N00500	
1	Front Panel	20000300013101K01	200003000131T01	200003060032	1
2	Display Board	300001000209	300001000202	300001000202	1
3	Filter Sub-Assy	11122219	11122219	1112246803	2
4	Front Case Assy	00000200004101	000002000041	000002000044	1
5	Axile Bush	10542036	10542036	10542036	1
6	Helicoid Tongue	200006000002	200006000002	26112436	1
7	Left Axile Bush	10512037	10512037	10512037	1
8	Rear Case assy	000001000061	000001000061	000001000054	1
9	Cross Flow Fan	10352066	10352066	10352056	1
10	O-Gasket sub-assy of Bearing	7651205102	7651205102	76512051	1
11	Ring of Bearing	26152022	26152022	26152022	1
12	Evaporator Support	200025000002	200025000002	24212179	1
13	Evaporator Assy	01100100014301	01100100014301	01002976	1
14	Fan Motor	150120874	150120874	15012146	1
15	Wall Mounting Frame Sub-assy	017211000005	017211000005	01252484	1
16	Connecting pipe clamp	200017000001	200017000001	2611216401	1
17	Rubber Plug (Water Tray)	76712012	76712012	76712012	1
18	Stepping Motor	1521210811	1521210811	1521210712	1
19	Crank	73012005	73012005	73012005	1
20	Drainage Hose	0523001408	0523001408	05230014	1
21	Electric Box Cover2	200082000005P01	200082000005	2011220801	1
22	Electric Box Assy	100002003695	100002003690	100002002958	1
23	Terminal Board	42010268	42010268	42010268	1
24	Main Board	30135000145	30135000145	30135000071	1
25	Power Cord	4002046439	4002046439	4002046439	1
26	Connecting Cable	40020540	40020540	40020540	0
27	Connecting Cable	40020536	40020536	40020536	0
28	Remote Controller	305001000009	305001000009	305001000009	1
29	Cold Plasma Generator	/	/	1114001603	1

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NO.	Description	Part Code			Qty
		GWH12ACC-K3NNA5A/I		GWH12ACC-K3NNA4A/I	
	Product Code	CA341N00400	CA341N00402	CA344N00500	
1	Front Panel	000003060046	000003060046	000003060054	1
2	Display Board	300001000202	300001000202	300001000202	1
3	Filter Sub-Assy	11122468	1112246803	1112246803	2
4	Front Case Assy	000002000044	000002000044	000002000044	1
5	Axile Bush	10542036	10542036	10542036	1
6	Helicoid Tongue	26112436	26112436	26112436	1
7	Left Axile Bush	10512037	10512037	10512037	1
8	Rear Case assy	000001000054	000001000054	000001000054	1
9	Cross Flow Fan	10352056	10352056	10352056	1
10	O-Gasket sub-assy of Bearing	7651205102	76512051	7651205102	1
11	Ring of Bearing	26152022	26152022	26152022	1
12	Evaporator Support	24212179	24212179	24212179	1
13	Evaporator Assy	01002976	01002976	01002976	1
14	Fan Motor	15012146	15012146	15012146	1
15	Wall Mounting Frame Sub-assy	01252484	01252484	01252484	1
16	Connecting pipe clamp	2611216401	2611216401	2611216401	1
17	Rubber Plug (Water Tray)	76712012	76712012	76712012	1
18	Stepping Motor	1521210712	1521210712	1521210712	1
19	Crank	73012005	73012005	73012005	1
20	Drainage Hose	05230014	05230014	05230014	1
21	Electric Box Cover2	2011220801	2011220801	2011220801	1
22	Electric Box Assy	100002002958	100002060497	100002002958	1
23	Terminal Board	42010268	42010268	42010268	1
24	Main Board	30135000071	30135000084	30135000071	1
25	Power Cord	4002046439	4002046439	4002046439	1
26	Connecting Cable	40020540	40020540	40020540	0
27	Connecting Cable	40020536	40020536	40020536	0
28	Remote Controller	305001000009	305001000009	305001000009	1
29	Cold Plasma Generator	1114001603	/	1114001603	1

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NO.	Description	Part Code			Qty
		GWH12ACB-K3NNA5A/I	GWH12ACB-K3NNA4A/I	GWH12ACC-K3NNA4A/I	
	Product Code	CA341N01200	CA344N00800	CA344N00502	
1	Front Panel	200003060004	200003060018T	200003060027T	1
2	Display Board	300001000202	300001000202	300001000202	1
3	Filter Sub-Assy	1112221905	1112221905	11122468	2
4	Front Case Assy	000002000041	000002000041	000002000044	1
5	Axile Bush	10542036	10542036	10542036	1
6	Helicoid Tongue	200006000002	200006000002	26112436	1
7	Left Axile Bush	10512037	10512037	10512037	1
8	Rear Case assy	000001000061	000001000061	000001000054	1
9	Cross Flow Fan	10352066	10352066	10352056	1
10	O-Gasket sub-assy of Bearing	7651205102	7651205102	76512051	1
11	Ring of Bearing	26152022	26152022	26152022	1
12	Evaporator Support	200025000002	200025000002	24212179	1
13	Evaporator Assy	01100100014301	01100100014301	01002976	1
14	Fan Motor	150120874	150120874	15012146	1
15	Wall Mounting Frame Sub-assy	017211000005	017211000005	01252484	1
16	Connecting pipe clamp	200017000001	200017000001	2611216401	1
17	Rubber Plug (Water Tray)	76712012	76712012	76712012	1
18	Stepping Motor	1521210811	1521210811	1521210712	1
19	Crank	73012005	73012005	73012005	1
20	Drainage Hose	0523001408	0523001408	05230014	1
21	Electric Box Cover2	200082000005	200082000005	2011220801	1
22	Electric Box Assy	100002003690	100002003690	100002060497	1
23	Terminal Board	42010268	42010268	42010268	1
24	Main Board	30135000145	30135000145	30135000084	1
25	Power Cord	4002046439	4002046439	4002046439	1
26	Connecting Cable	40020540	40020540	40020540	0
27	Connecting Cable	40020536	40020536	40020536	0
28	Remote Controller	305001000009	305001000009	305001000009	1
29	Cold Plasma Generator	/	/	/	/

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NO.	Description	Part Code			Qty
		GWH12ACB-K3NNA2A/I		GWH18ACC-K3NNA2A/I	
	Product Code	CA342N00600	CA342N00601	CA342N00801	
1	Front Panel	200003060043T	200003060043T	200003060025T	1
2	Display Board	300001000202	300001000202	300001000202	1
3	Filter Sub-Assy	1112221905	1112221905	1112246803	2
4	Front Case Assy	000002000041	000002000041	000002000044	1
5	Axile Bush	10542036	10542036	10542036	1
6	Helicoid Tongue	200006000002	200006000002	26112436	1
7	Left Axile Bush	10512037	10512037	10512037	1
8	Rear Case assy	000001000061	000001000061	000001000054	1
9	Cross Flow Fan	10352066	10352066	10352056	1
10	O-Gasket sub-assy of Bearing	7651205102	7651205102	7651205102	1
11	Ring of Bearing	26152022	26152022	26152022	1
12	Evaporator Support	200025000002	200025000002	24212174	1
13	Evaporator Assy	01100100014301	01100100014301	01002695	1
14	Fan Motor	150120874	150120874	15012146	1
15	Wall Mounting Frame Sub-assy	017211000005	017211000005	01252484	1
16	Connecting pipe clamp	200017000001	200017000001	2611216401	1
17	Rubber Plug (Water Tray)	76712012	76712012	76712012	1
18	Stepping Motor	1521210811	1521210811	1521210712	1
19	Crank	73012005	73012005	73012005	1
20	Drainage Hose	0523001408	0523001408	05230014	1
21	Electric Box Cover2	200082000005	200082000005	2011220801	1
22	Electric Box Assy	100002001549	100002003690	100002003750	1
23	Terminal Board	42010268	42010268	42010268	1
24	Main Board	30135000136	30135000145	30135000084	1
25	Power Cord	4002046439	4002046439	4002048740	1
26	Connecting Cable	40020540	40020540	400205401	0
27	Connecting Cable	40020536	40020536	40020536	0
28	Remote Controller	305001000009	305001000009	305001000009	1
29	Cold Plasma Generator	430001000001	/	/	1

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NO.	Description	Part Code		Qty
		GWH12ACC-K3NNA2A/I	GWH18ACC-K3NNA5A/I	
	Product Code	CA342N00200	CA341N01100	
1	Front Panel	200003060025T	200003060010T	1
2	Display Board	300001000202	300001000202	1
3	Filter Sub-Assy	1112246803	1112246803	2
4	Front Case Assy	000002000044	000002000044	1
5	Axile Bush	10542036	10542036	1
6	Helicoid Tongue	26112436	26112436	1
7	Left Axile Bush	10512037	10512037	1
8	Rear Case assy	000001000054	000001000054	1
9	Cross Flow Fan	10352056	10352056	1
10	O-Gasket sub-assy of Bearing	7651205102	7651205102	1
11	Ring of Bearing	26152022	26152022	1
12	Evaporator Support	24212179	24212174	1
13	Evaporator Assy	01002976	01002695	1
14	Fan Motor	15012146	15012146	1
15	Wall Mounting Frame Sub-assy	01252484	01252484	1
16	Connecting pipe clamp	2611216401	2611216401	1
17	Rubber Plug (Water Tray)	76712012	76712012	1
18	Stepping Motor	1521210712	1521210712	1
19	Crank	73012005	73012005	1
20	Drainage Hose	05230014	05230014	1
21	Electric Box Cover2	2011220801	2011220801	1
22	Electric Box Assy	100002002958	100002003750	1
23	Terminal Board	42010268	42010268	1
24	Main Board	30135000071	30135000084	1
25	Power Cord	4002046439	4002048740	1
26	Connecting Cable	40020540	400205401	0
27	Connecting Cable	40020536	40020536	0
28	Remote Controller	305001000009	305001000009	1
29	Cold Plasma Generator	1114001603	/	1

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NO.	Description	Part Code		Qty
		GWH18ACC-K3NNA4A/I	GWH18ACC-K3NNA2A/I	
	Product Code	CA344N00900	CA342N00800	
1	Front Panel	000003060054	000003060054	1
2	Display Board	300001000202	300001000202	1
3	Filter Sub-Assy	1112246803	1112246803	2
4	Front Case Assy	000002000044	000002000044	1
5	Axile Bush	10542036	10542036	1
6	Helicoid Tongue	26112436	26112436	1
7	Left Axile Bush	10512037	10512037	1
8	Rear Case assy	000001000054	000001000054	1
9	Cross Flow Fan	10352056	10352056	1
10	O-Gasket sub-assy of Bearing	7651205102	7651205102	1
11	Ring of Bearing	26152022	26152022	1
12	Evaporator Support	24212174	24212179	1
13	Evaporator Assy	01002695	01002976	1
14	Fan Motor	15012146	15012146	1
15	Wall Mounting Frame Sub-assy	01252484	01252484	1
16	Connecting pipe clamp	2611216401	2611216401	1
17	Rubber Plug (Water Tray)	76712012	76712012	1
18	Stepping Motor	1521210712	1521210712	1
19	Crank	73012005	73012005	1
20	Drainage Hose	05230014	05230014	1
21	Electric Box Cover2	2011220801	2011220801	1
22	Electric Box Assy	100002003750	100002002958	1
23	Terminal Board	42010268	42010268	1
24	Main Board	30135000084	30135000071	1
25	Power Cord	4002048740	4002046439	1
26	Connecting Cable	400205401	40020540	0
27	Connecting Cable	40020536	40020536	0
28	Remote Controller	305001000009	305001000009	1
29	Cold Plasma Generator	/	1114001603	1

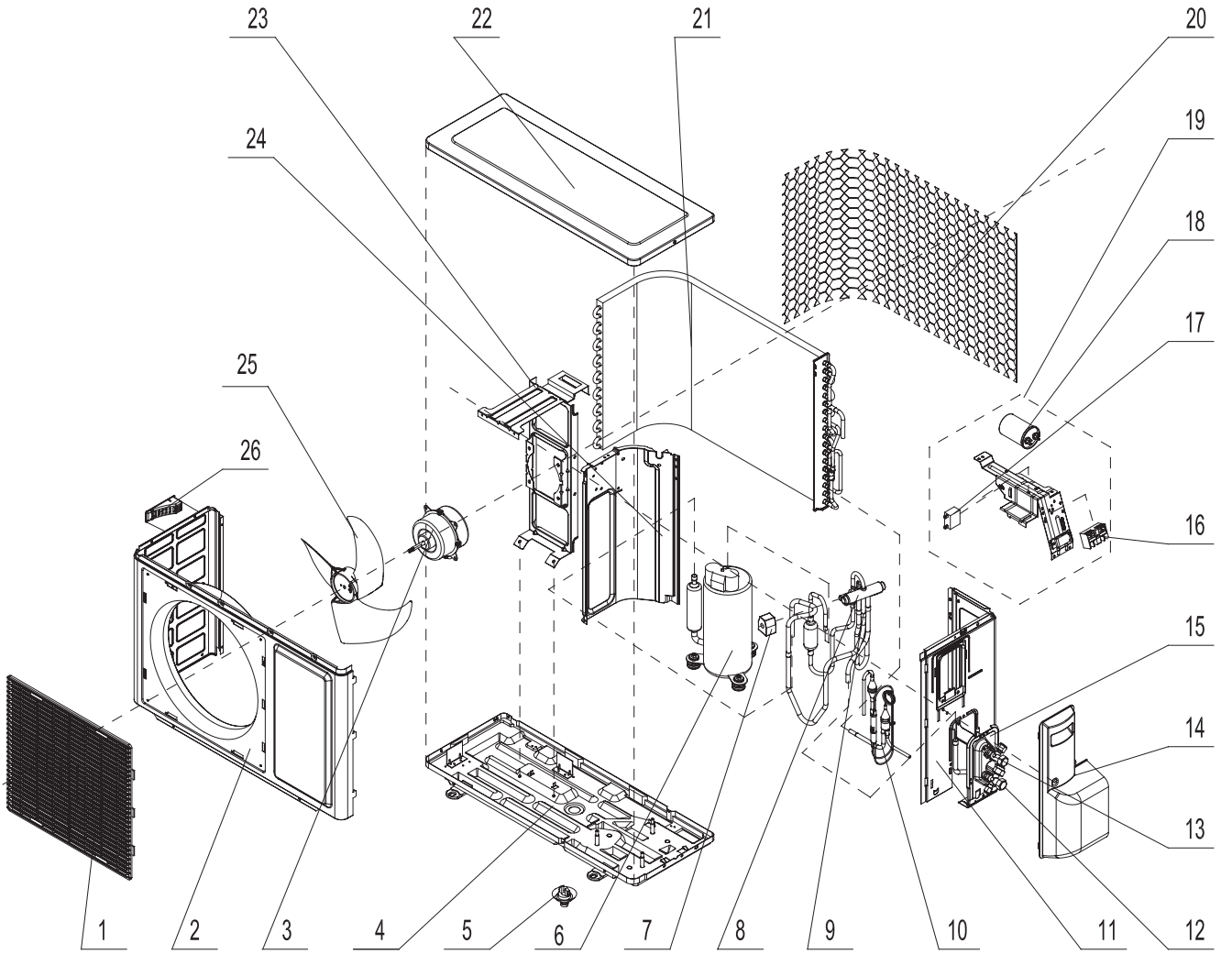
Above data is subject to change without notice.

NO.	Description	Part Code	Qty
		GWH12ACB-K3NNA3A/I	
	Product Code	CA343N00800	
1	Front Panel	200003060021T01	1
2	Display Board	300001000202	1
3	Filter Sub-Assy	1112221905	2
4	Front Case Assy	000002000041	1
5	Axile Bush	10542036	1
6	Helicoid Tongue	200006000002	1
7	Left Axile Bush	10512037	1
8	Rear Case assy	000001000061	1
9	Cross Flow Fan	10352066	1
10	O-Gasket sub-assy of Bearing	76512051	1
11	Ring of Bearing	26152022	1
12	Evaporator Support	200025000002	1
13	Evaporator Assy	01100100014301	1
14	Fan Motor	150120874	1
15	Wall Mounting Frame Sub-assy	017211000005	1
16	Connecting pipe clamp	200017000001	1
17	Rubber Plug (Water Tray)	76712012	1
18	Stepping Motor	1521210811	1
19	Crank	73012005	1
20	Drainage Hose	0523001408	1
21	Electric Box Cover2	200082000005	1
22	Electric Box Assy	100002003690	1
23	Terminal Board	42010268	1
24	Main Board	30135000145	1
25	Power Cord	4002046439	1
26	Connecting Cable	40020540	0
27	Connecting Cable	40020536	0
28	Remote Controller	305001000009	1
29	Cold Plasma Generator	/	/

Above data is subject to change without notice.

10.2 Outdoor Unit

GWH09AAB-K3NNA1A/O

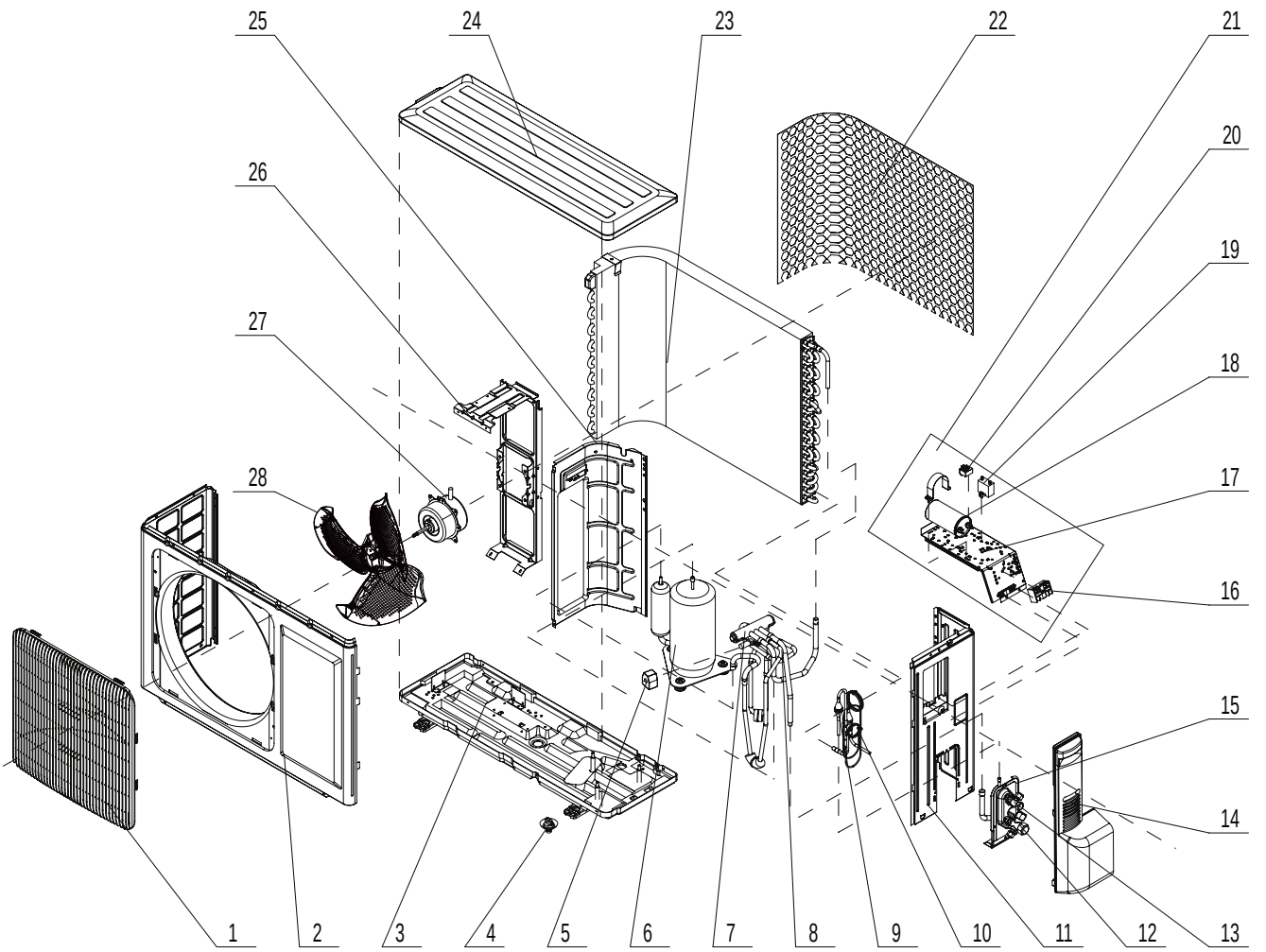


The component picture is only for reference; please refer to the actual product.

NO.	Description	Part Code	Qty
		GWH09AAB-K3NNA1A/O	
	Product Code	CA115W13700	
1	Front Grill	22263002	1
2	Cabinet	01533255P	1
3	Fan Motor	1501315604	1
4	Chassis Sub-assy	0280312302P	1
5	Drainage Connecter	06123401	1
6	Compressor and Fittings	009001000101	1
7	Magnet Coil	4300040047	1
8	4-Way Valve	430004022	1
9	4-Way Valve Assy	030152000150	1
10	Capillary Sub-assy	030006000223	1
11	Right Side Plate Sub-Assy	01303243	1
12	Valve	07130239	1
13	Valve	07100005	1
14	Big Handle	2623304202	1
15	Valve Support	01713041	1
16	Terminal Board	42010265	1
17	Capacitor CBB61S	3301074701	1
18	Capacitor CBB65	33000081	1
19	Electric Box Assy	100002000477	1
20	Rear Grill	11123204	1
21	Condenser Assy	011002000235	1
22	Top Cover Plate	01253045P	1
23	Motor Support Sub-Assy	01703204	1
24	Clapboard Sub-Assy	01233207	1
25	Axial Flow Fan	10333002	1
26	Small Handle	26233100	1

Above data is subject to change without notice.

GWH12QC-K3NNA1A/O(CA419W00100) GWH18AAC-K3NNA1A/O

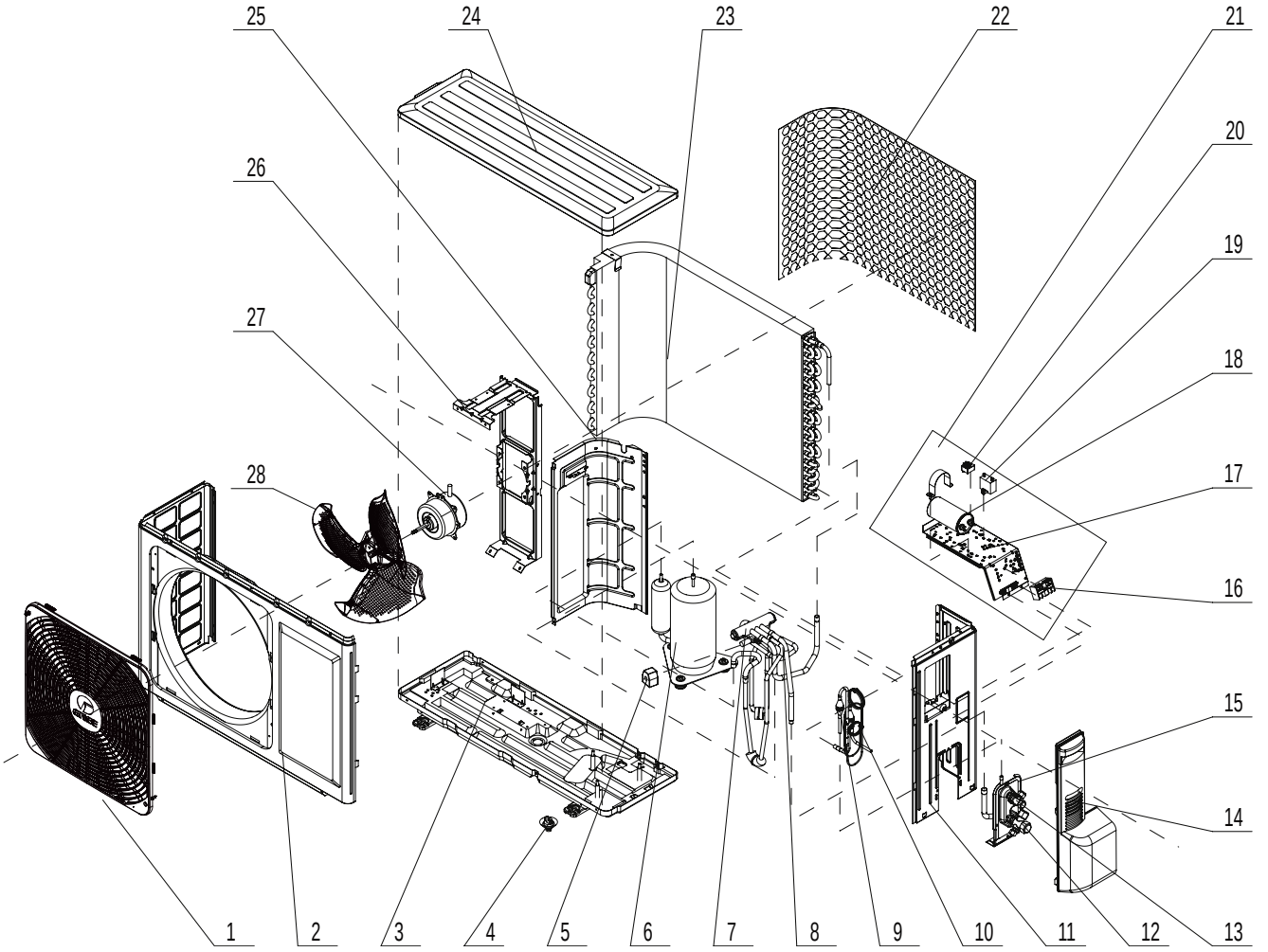


The component picture is only for reference; please refer to the actual product.

NO.	Description	Part Code		Qty
		GWH12QC-K3NNA1A/O	GWH18AAC-K3NNA1A/O	
	Product Code	CA419W00100	CA115W14200	
1	Front Grill	22413433	22413008	1
2	Front Panel	01533047	0153304702	1
3	Chassis Sub-assy	02803307	017000000042	1
4	Drainage Connecter	06123401	06123401	1
5	Magnet Coil	43000400	4300040047	1
6	Compressor and Fttings	00103781G	009001000074	1
7	4-way Valve	03073110	430004032	1
8	4-way Valve Assy	430004022	030152000185	1
9	StrainerA	07210022	07210022	1
10	Capillary Sub-Assy	03163251	030006000254	1
11	Right Side Plate Assy	0130200404	0130200404	1
12	Valve	07100003	07100003	1
13	Valve	07100006	07100006	1
14	Big Handle	262334332	262334332	1
15	Valve Support	01713041	01713041	1
16	Terminal Board	420001000003	420001000003	1
17	Electric Box Sub-Assy	01403117	02613089	1
18	Capacitor CBB65	3300008102	3300008104	1
19	Capacitor CBB61	3301074702	3301074710	1
20	Terminal Board	/	/	/
21	Electric Box Assy	02603488	100002000583	1
22	Rear grill	11123205	11123205	1
23	Condenser Assy	01163857	011002000273	1
24	Top Cover Plate	01253443	01253443	1
25	Clapboard Sub-Assy	012334172	012334172	1
26	Motor Support Sub-Assy	01703104	0170310401	1
27	Fan Motor	150130672	150130676	1
28	Axial Flow Fan	10333004	10333427	1

Above data is subject to change without notice.

GWH12QC-K3NNA1A/O(CA419W00101)

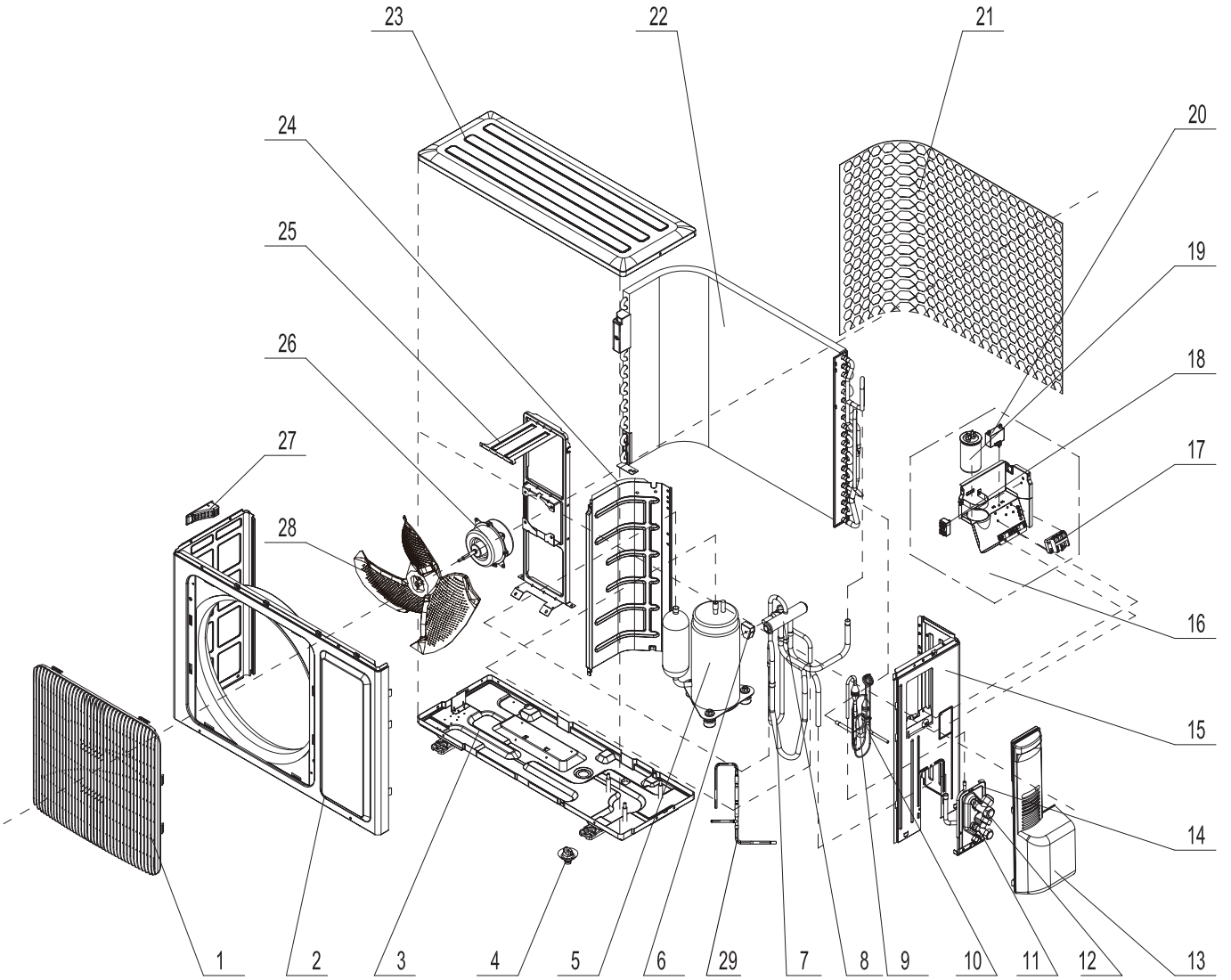


The component picture is only for reference; please refer to the actual product.

NO.	Description	Part Code	Qty
		GWH12QC-K3NNA1A/O	
	Product Code	CA419W00101	
1	Front Grill	22413049	1
2	Front Panel	0153303204P	1
3	Chassis Sub-assy	02803307P	1
4	Drainage Connecter	06123401	1
5	Magnet Coil	43000400	1
6	Compressor and Fttings	00103781G	1
7	4-way Valve	03073110	1
8	4-way Valve Assy	430004022	1
9	StrainerA	07210022	1
10	Capillary Sub-Assy	03163251	1
11	Right Side Plate Assy	0130200404	1
12	Valve	07100003	1
13	Valve	07100006	1
14	Big Handle	262334332	1
15	Valve Support	01713041	1
16	Terminal Board	420001000003	1
17	Electric Box Sub-Assy	01403117	1
18	Capacitor CBB65	3300008109	1
19	Capacitor CBB61	3301074702	1
20	Terminal Board	420001000003	1
21	Electric Box Assy	100002060796	1
22	Rear grill	01473057	1
23	Condenser Assy	01163857	1
24	Top Cover Plate	01253107P	1
25	Clapboard Sub-Assy	017021000152	1
26	Motor Support Sub-Assy	01703104	1
27	Fan Motor	150130672	1
28	Axial Flow Fan	10333004	1

Above data is subject to change without notice.

GWH12AAB-K3NNA2A/O

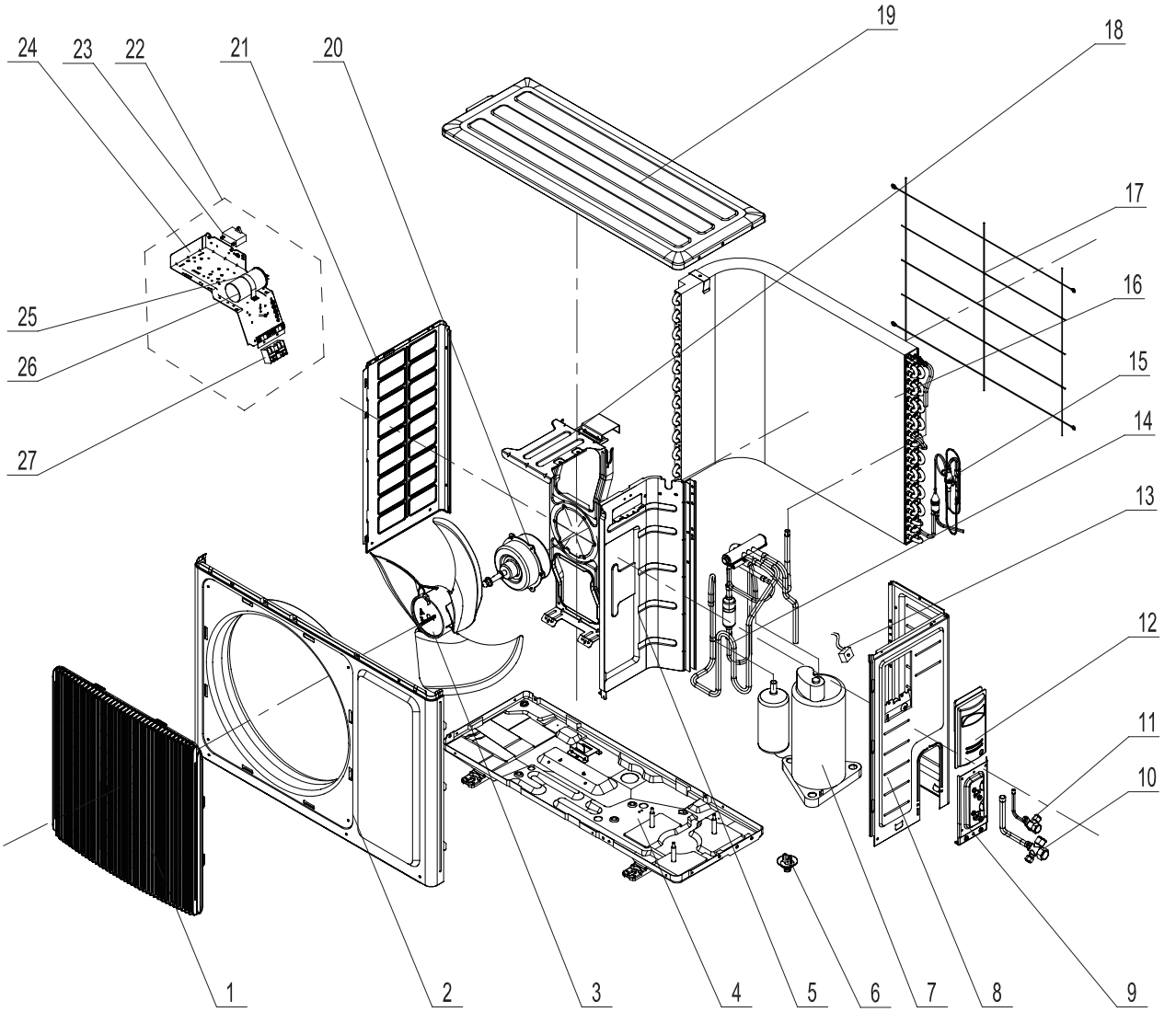


The component picture is only for reference; please refer to the actual product.

No.	Description	Part Code	Qty
		GWH12AAB-K3NNA2A/O	
	Product Code	CA115W14100	
1	Front grill	22413008	1
2	Front Panel	01533034P	1
3	Chassis Sub-assy	017000000168	1
4	Drainage Connecter	06123401	1
5	Compressor and fittings	009001000024	1
6	Magnet Coil	4300040047	1
7	4-way Valve Assy	030152000222	1
8	4-way Valve	430004022	1
9	Strainer	07210022	1
10	Capillary Sub-Assy	030006000259	1
11	Valve	07100003	1
12	Valve	0713386901	1
13	Big Handle	262334332	1
14	Valve Support	0170308901P	1
15	Right Side Plate Sub-Assy	0130200404	1
16	Electric Box Assy	100002000615	1
17	Terminal Board	420001000003	1
18	Terminal Board	42011147	1
19	Capacitor CBB65	3300008101	1
20	Capacitor CBB61	3301074710	1
21	Rear grill	1112320501	1
22	Condenser Assy	011002000277	1
23	Top Cover Sub-Assy	0125309901	1
24	Clapboard Sub-Assy	01233066	1
25	Motor Support	01703104	1
26	Fan Motor	150130676	1
27	Small Handle	26233100	1
28	Axial Flow Fan	10333427	1
28	Throttle Valve Sub-assy	/	/

Above data is subject to change without notice.

GWH12QC-K3NNB2E/O



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

NO.	Description	Part Code	Qty
		GWH12QC-K3NNB2E/O	
	Product Code	CA432W06500	
1	Front Grill	22413040	1
2	Cabinet	01433033P	1
3	Axial Flow Fan	10333011	1
4	Chassis Assy	017000000009P	1
5	Clapboard	01235093	1
6	Drainage Joint	26113009	1
7	Compressor and Fittings	00103377	1
8	Right Side Plate	0130325501P	1
9	Valve Support	0170308901P	1
10	Valve	07100006	1
11	Valve	07100003	1
12	Big Handle	2623343106	1
13	Magnet Coil	4300040089	1
14	4-Way Valve Assy	030152000041	1
15	Capillary Sub-assy	030006000046	1
16	Condenser Assy	011002000046	1
17	Rear Grill	01473074	1
18	Motor Support	01701200001	1
19	Top Cover Plate	01253443	1
20	Fan Motor	150130676	1
21	Left Side Plate	01303200P	1
22	Electric Box Assy	10000204174	1
23	Capacitor CBB61	3301074710	1
24	Electric Box Sub-Assy	02603160	1
25	Capacitor Clamp	02143401	1
26	Capacitor CBB65	3300008108	1
27	Terminal Board	420001000003	1

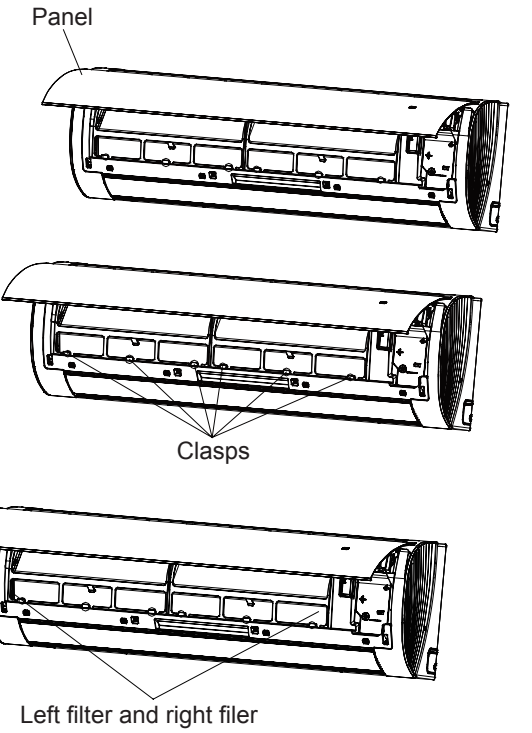
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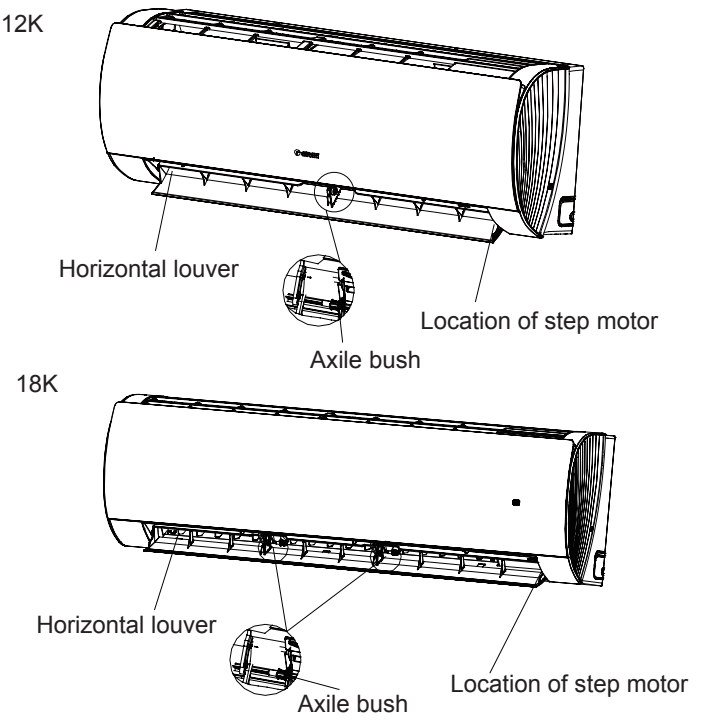
11. Removal Procedure

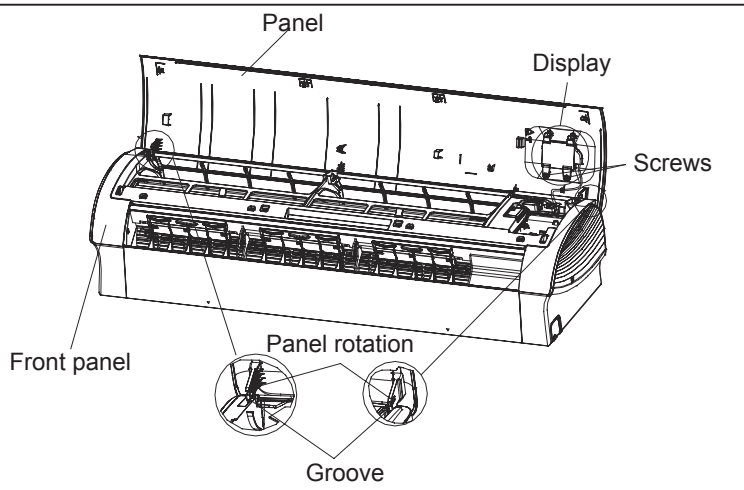
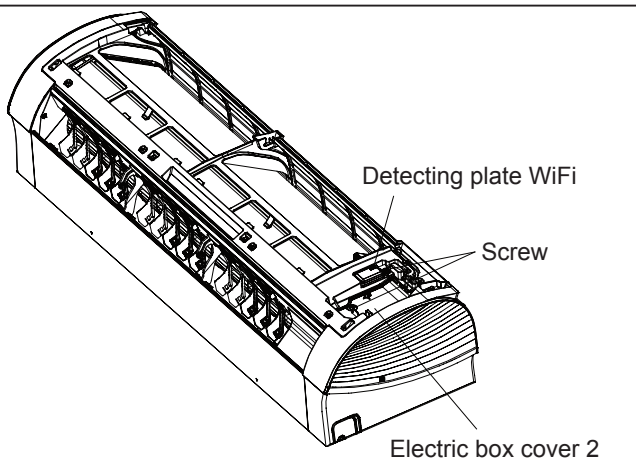
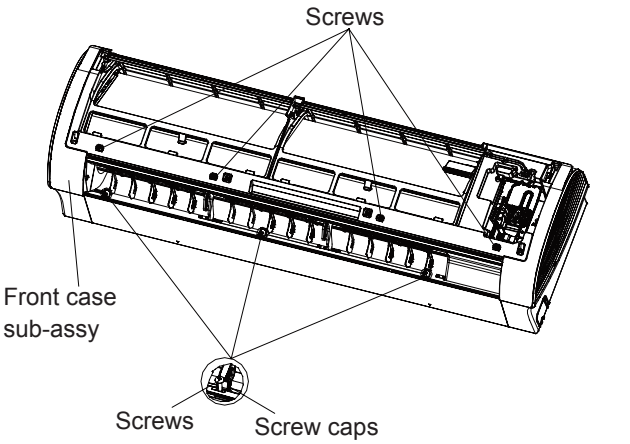
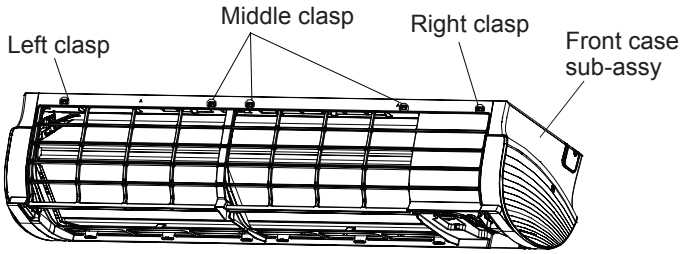
11.1 Removal Procedure of Indoor Unit

Caution: discharge the refrigerant completely before removal.

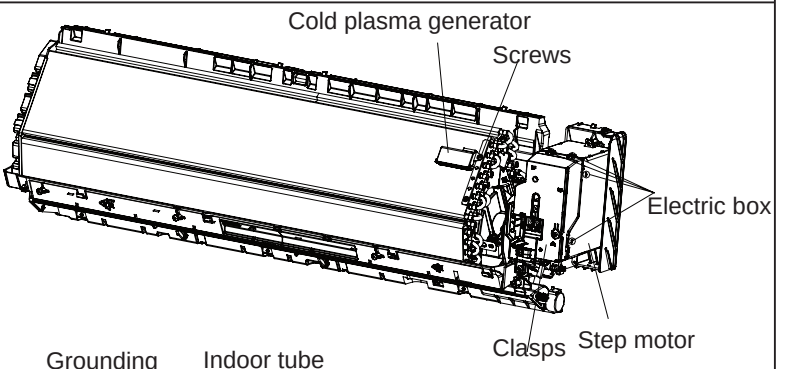
Step	Procedure	
1. Remove filter		
a	Open the panel.	
b	Loosen the clasp shown in the fig and then pull the left filter and right filer outwards to remove them.	
2. Remove horizontal louver		
	Push out the axile bush on horizontal louver. Bend the horizontal louver with hand and then separate the horizontal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

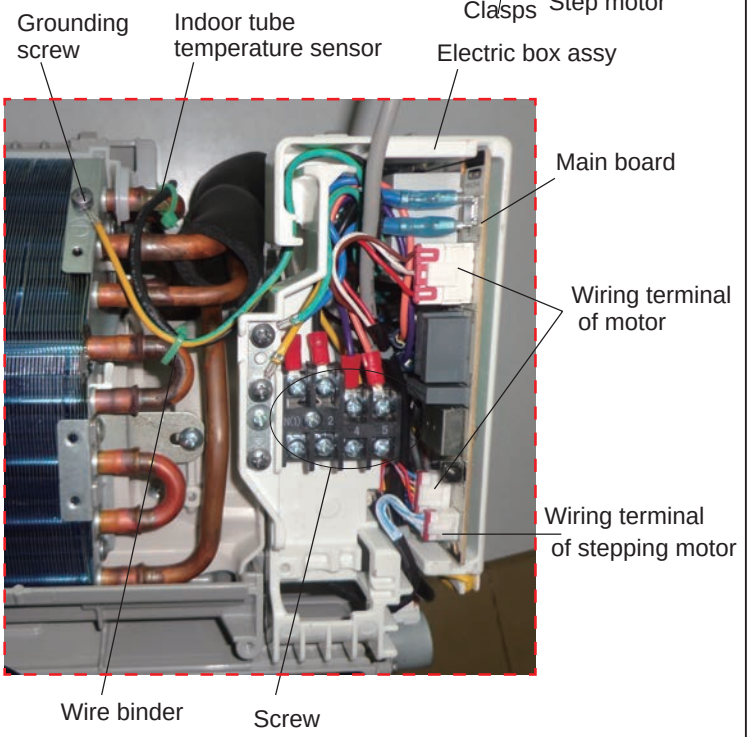


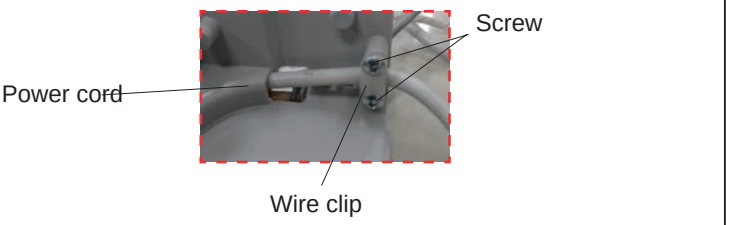


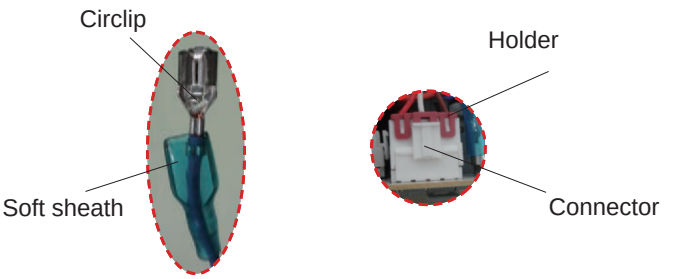
Step	Procedure
3. Remove panel	
	Open the front panel; separate the panel rotation shaft from the groove fixing the front panel and then removes the front panel. Note: The display of some models is fixed on the panel; unscrew the screws fixing the display on the panel before removing the panel.
4. Remove 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	
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 assy	
a	Loosen the connection clasps between Cold plasma generator and electric box, and then remove the cold plasma generator.
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 andstepping 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 product 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.

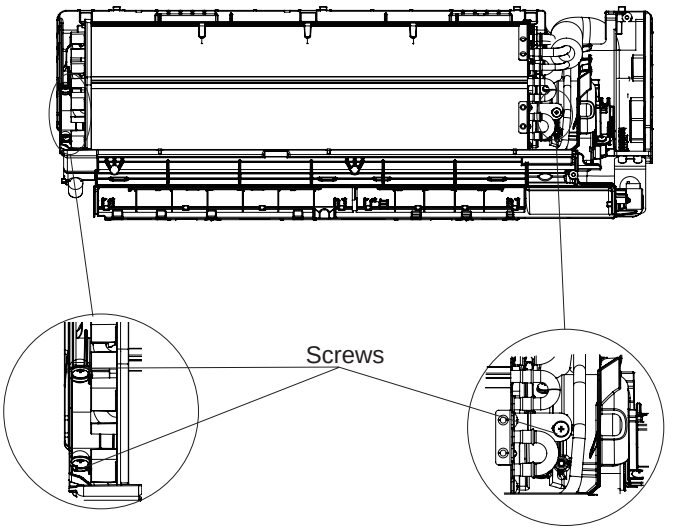


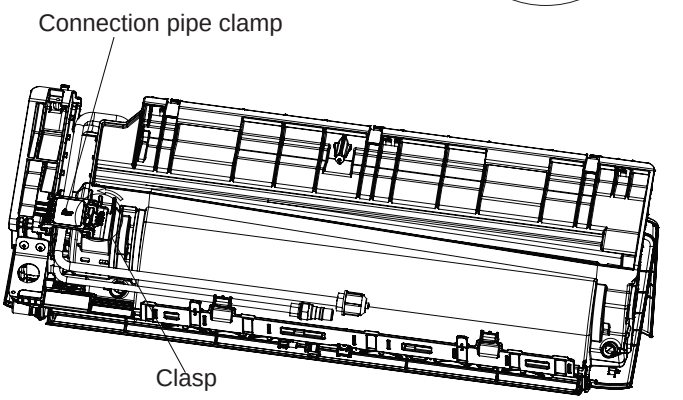


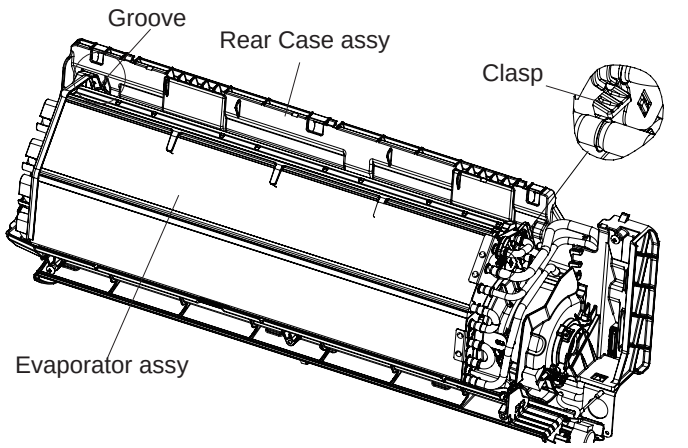


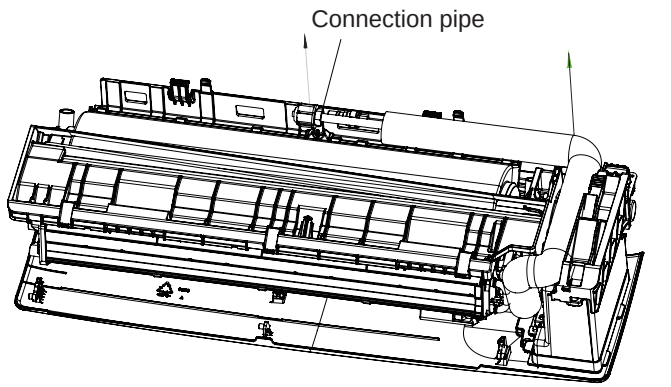


Step	Procedure
7. Remove evaporator assy	
a	Remove 3 screws fixing evaporator assy.
b	At the back of the unit, Loosen the clasp,connection pipe clamp and then remove the connection pipe clamp.
c	First remove the left side of evaporator from the groove of bottom shell and then remove the right side from 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.

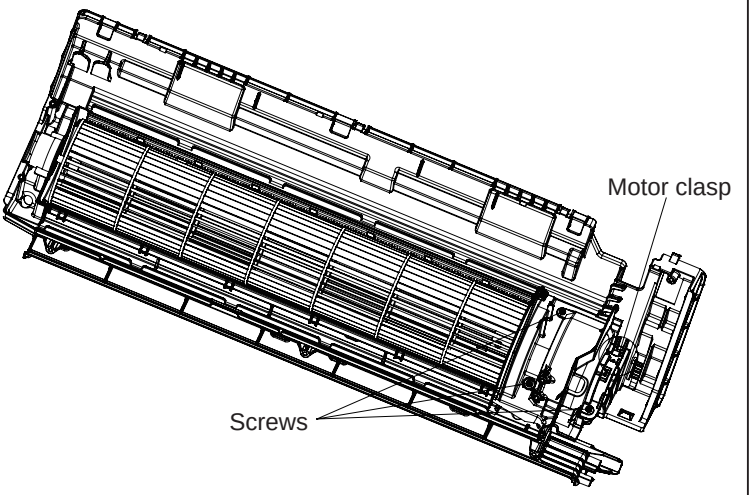


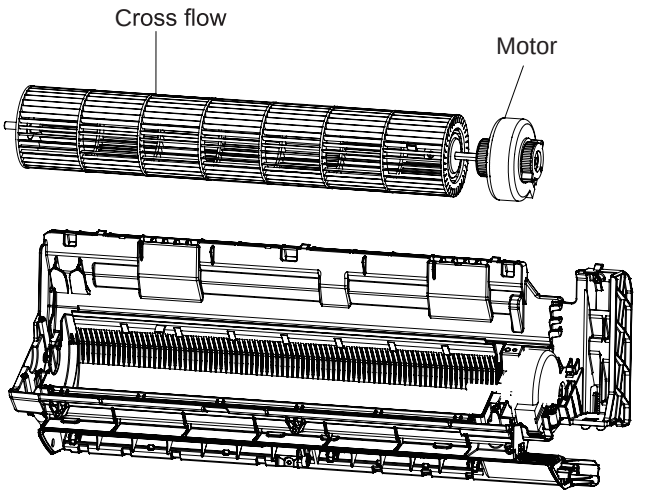


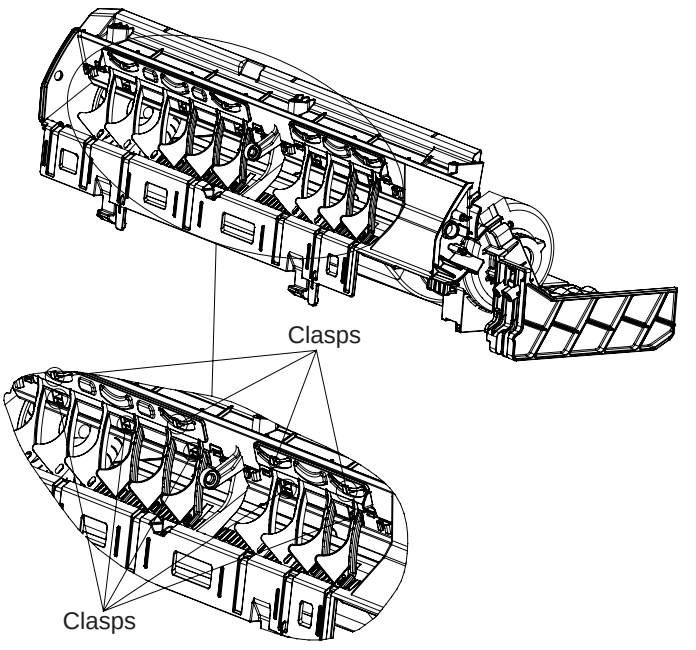




Step	Procedure
8. Remove motor and cross flow blade	
a	Remove 3 screws fixing motor clamp and then remove the motor clamp.
b	Remove the at the connection place of cross flow blade and motor; lift the motor and cross flow blade upwards to remove them.
9. Remove vertical louver	
	Loosen the connection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

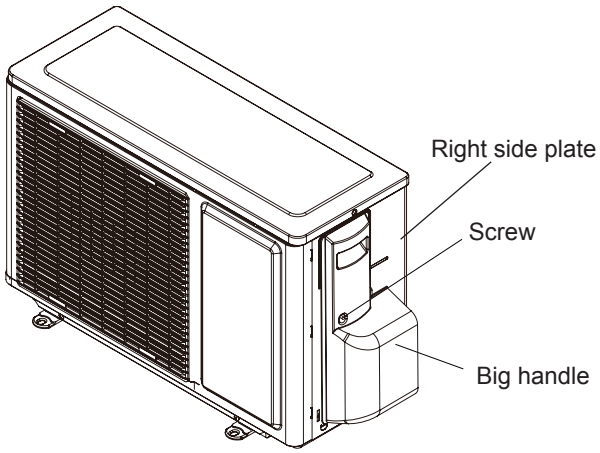
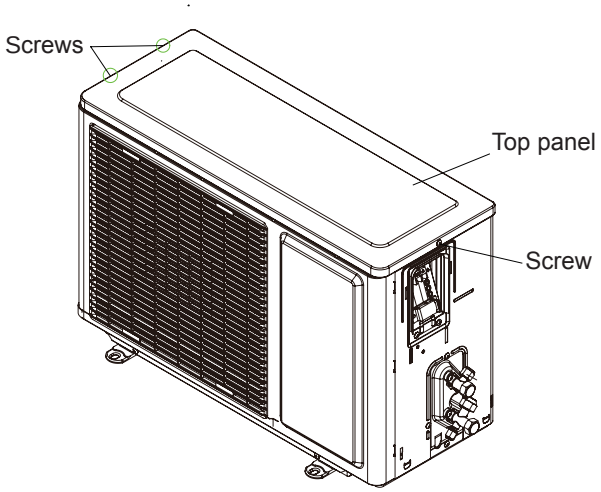
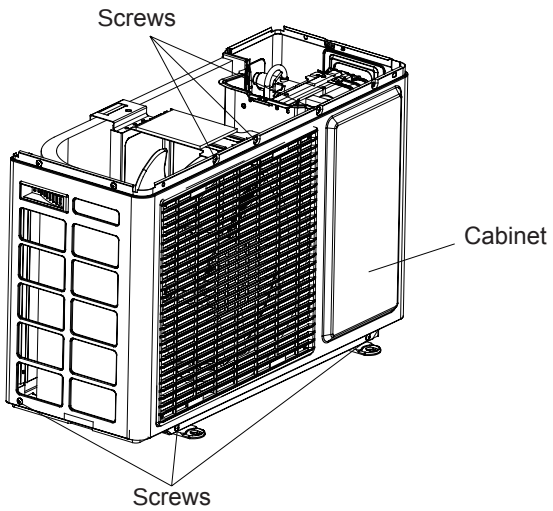


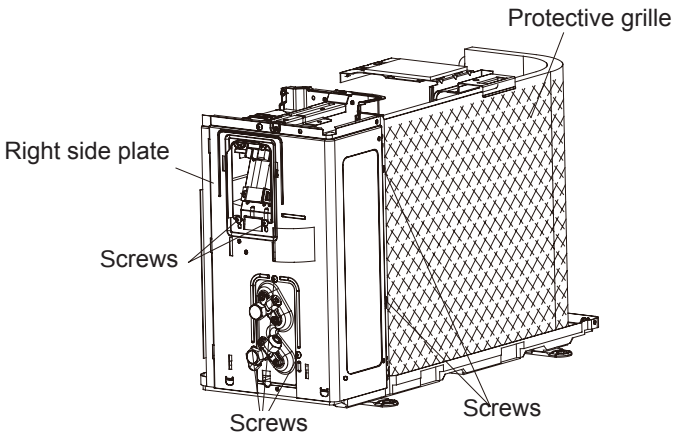
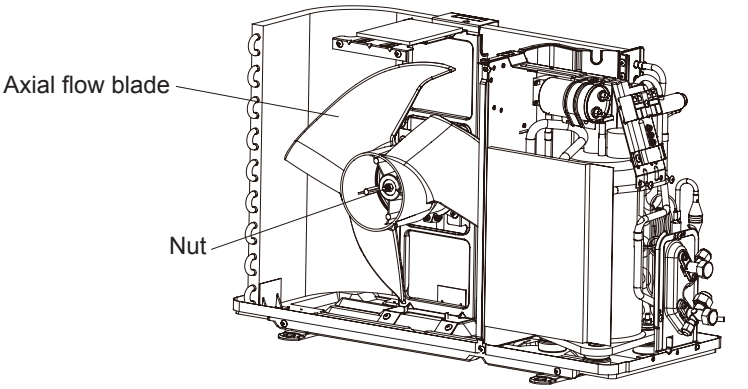
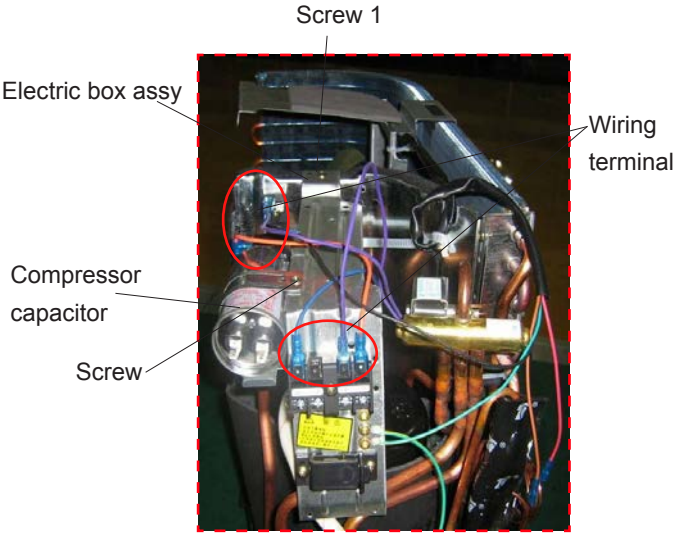


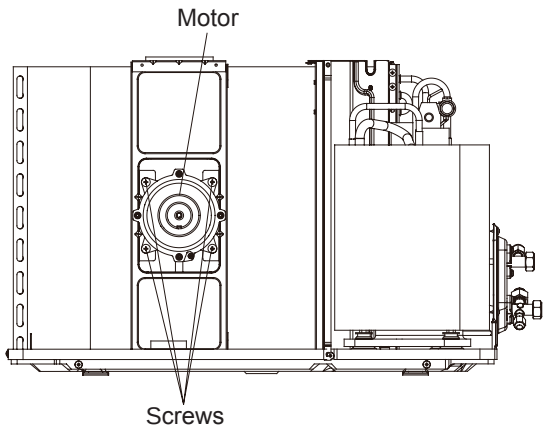
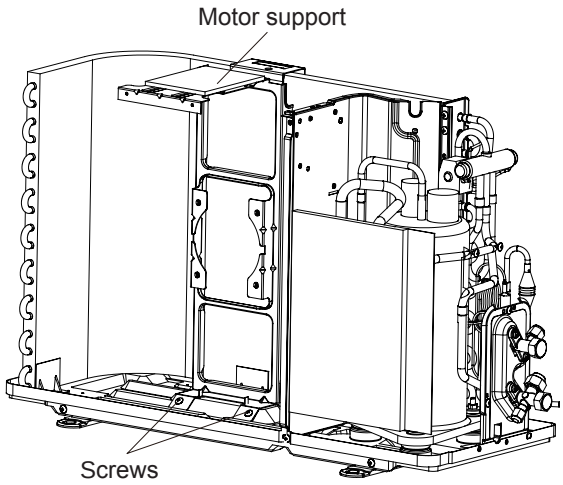
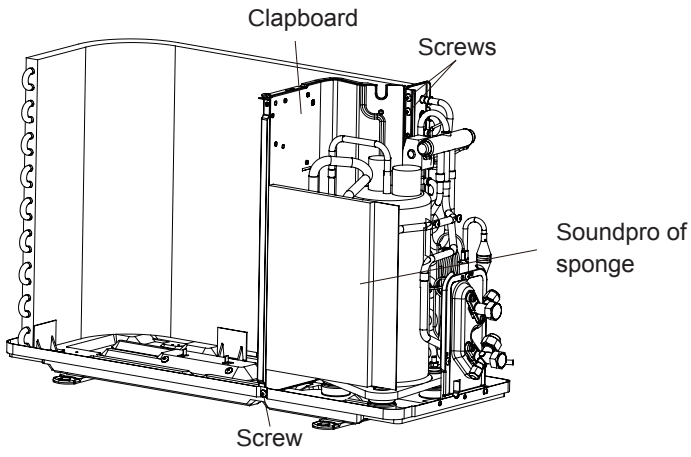


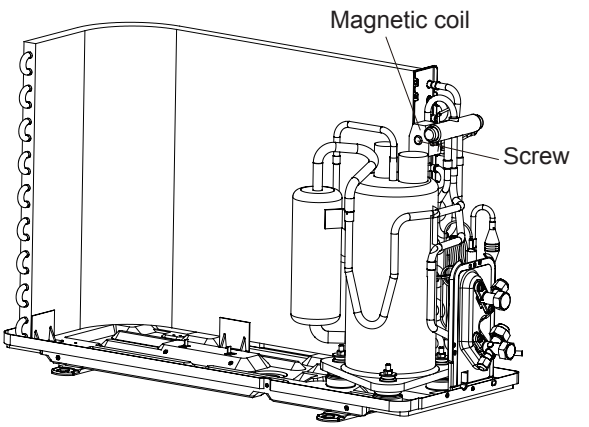
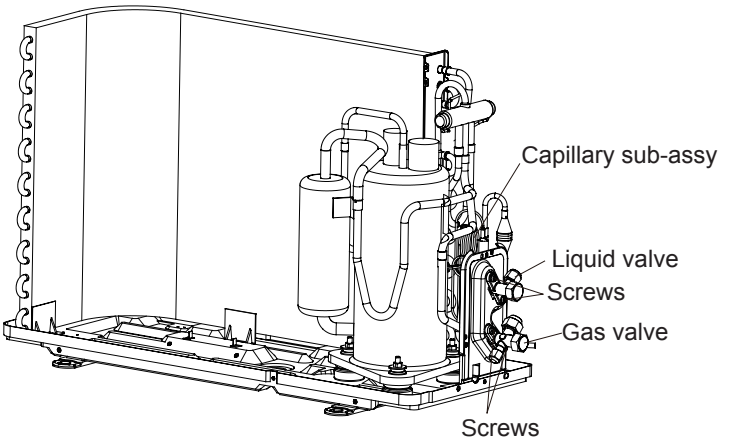
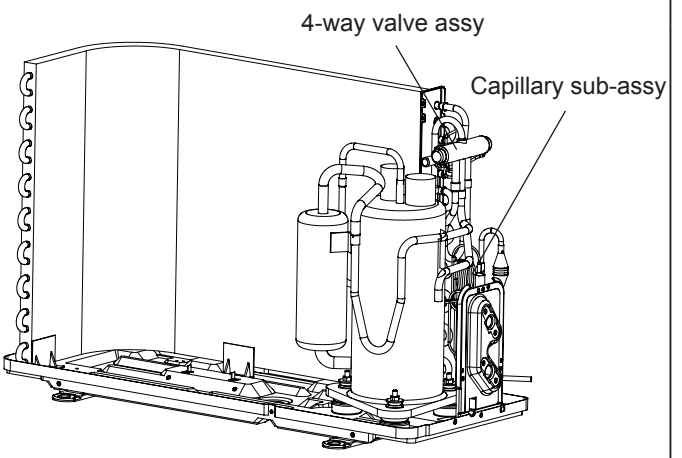
11.2 Removal Procedure of Outdoor Unit

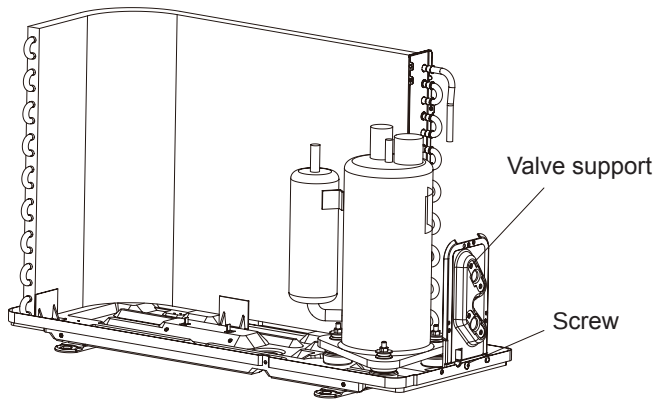
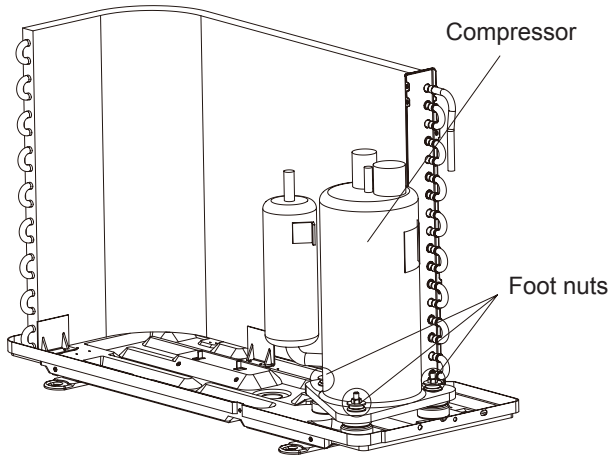
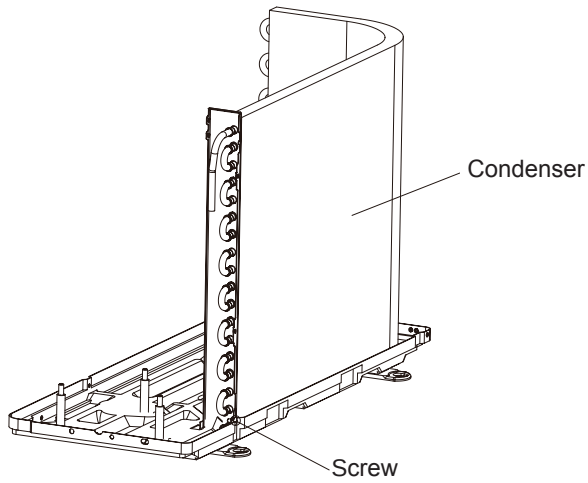
09K

Step	Procedure	
1. Remove big handle		
	Remove the screw fixing big handle; slide out the big handle upwards to make the clasp of big handle separate from the groove of right side plate, and then remove the big handle.	
2. Remove top panel		
	Remove the screws fixing top panel and then remove the top panel.	
3. Remove cabinet		
	Remove the cabinet by screwing off the locking screws on cabinet.	

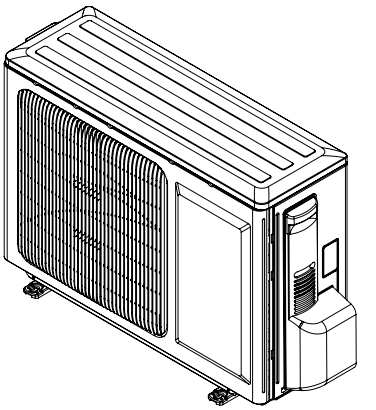
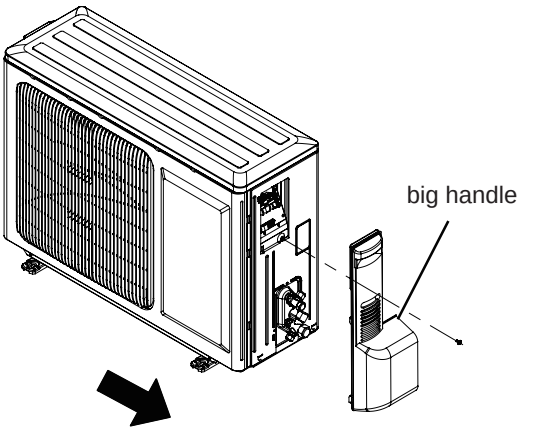
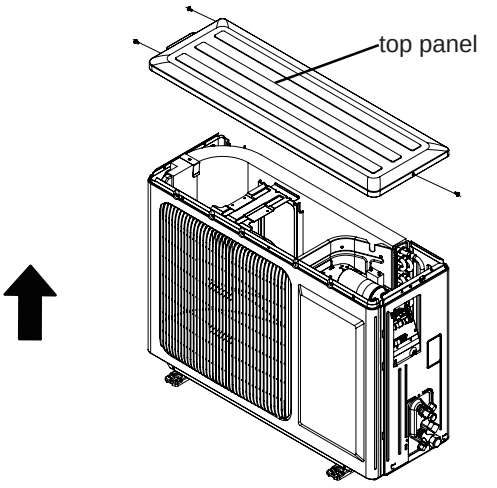
Step	Procedure
4. Remove right side plate	
Remove the screws fixing right side plate and then remove the right side plate. Cut off the wire binder fixing the protective grille and then remove the protective grille.	
5. Remove axial flow blade	
Remove the nut fixing axial flow blade and then remove the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

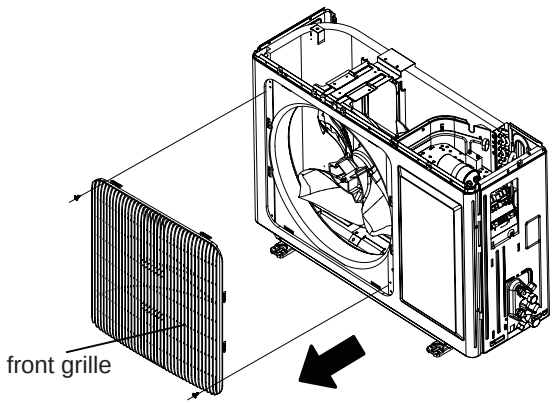
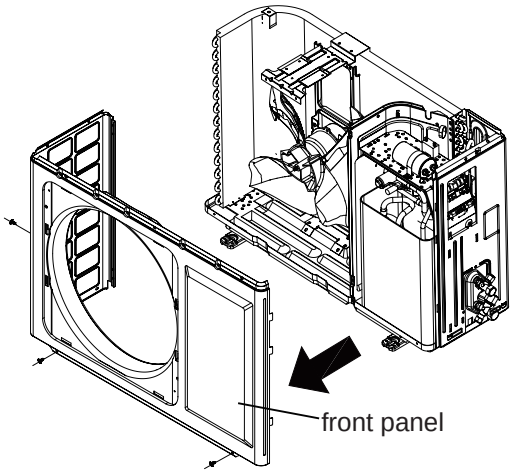
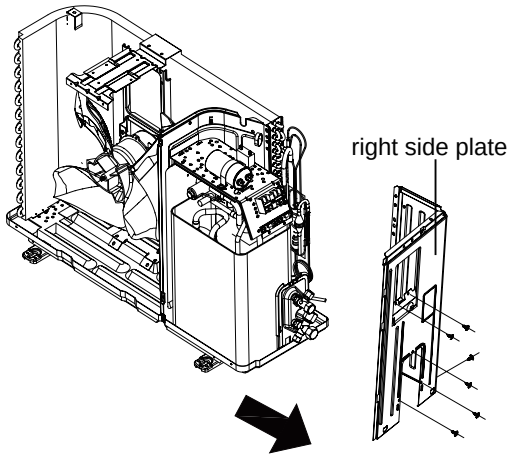
Step	Procedure
7. Remove motor	
Remove the screws fixing motor and then remove the motor.	
8. Remove motor support	
Remove the screws fixing motor support and then remove the motor support.	
9. Remove clapboard and soundproof sponge	
Remove the screws fixing clapboard and then remove the clapboard. Remove the soundproof sponge wrapping the compressor.(Some models are without soundproof sponge)	

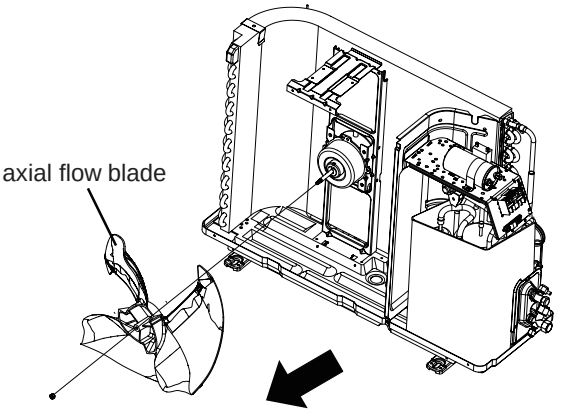
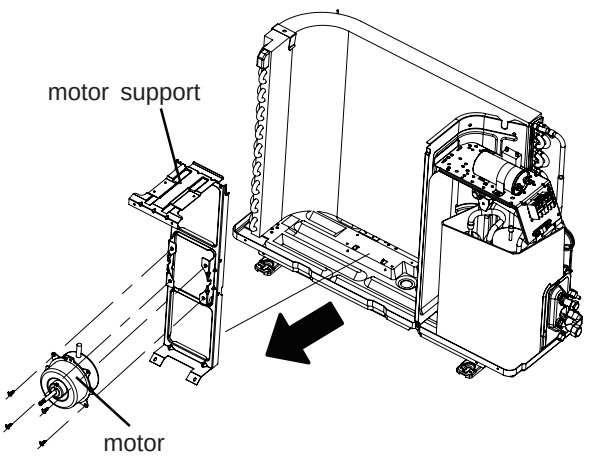
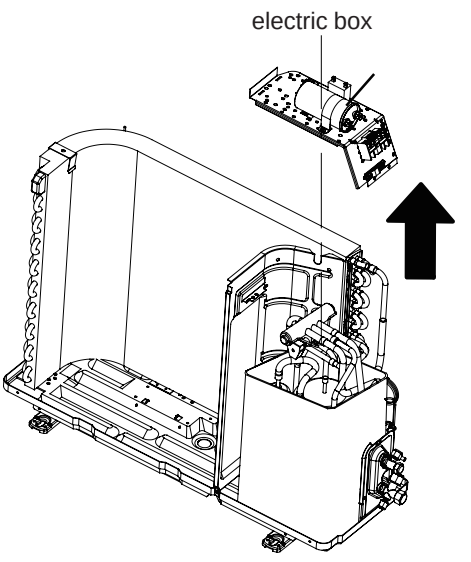
Step	Procedure
10. Remove magnetic coil	
Remove one screw on magnetic coil, and then remove the magnetic coil.	
11. Remove gas valve and liquid valve	
Unsolder the spot weld between capillary with valve and condenser; remove two screws fixing the gas valve; unsolder the spot weld connecting gas valve and air-return pipe, and then remove the gas valve. Remove two screws fixing the liquid valve; unsolder the spot weld connecting liquid valve and Y-type pipe, and then remove the liquid valve. Note: When unsoldering the spot weld, wrap the gas valve with wet cloth completely to avoid damaging the valve due to high temperature.	
12. Remove 4-way valve assy and capillary sub-assy	
Unsolder the spot weld of 4-way valve assy, capillary, compressor and condenser, and then remove the 4-way valve assy and capillary sub-assy. Note: When unsoldering the spot weld, wrap the 4-way valve with wet cloth completely to avoid damaging the valve due to high temperature.	

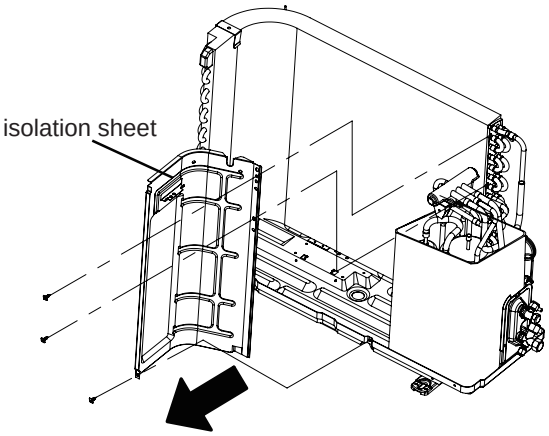
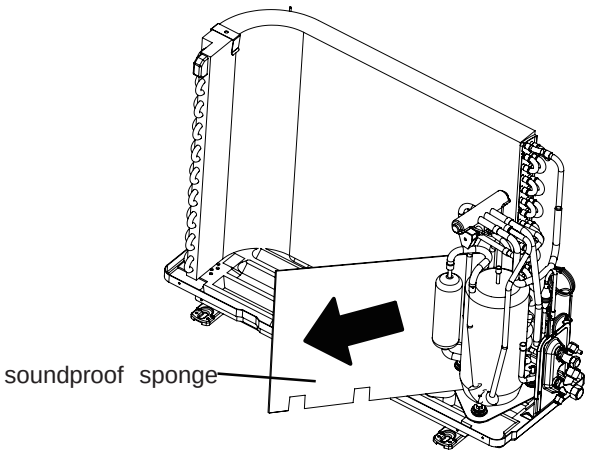
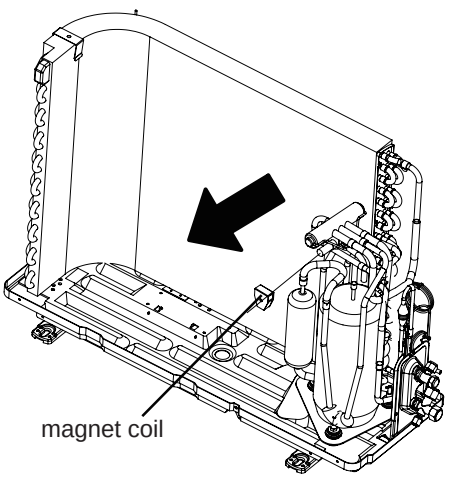
Step	Procedure
13. Remove valve support	
Screw off the screw fixing the valve support and then remove the valve support.	
14.Remove compressor	
Remove 3 foot nuts on compressor, and then remove the compressor. Note: Protect the ports of discharge pipe and suction pipe to avoid foreign objects to enter it.	
15. Remove condenser	
Remove one screw fixing the condenser, then remove the condenser.	

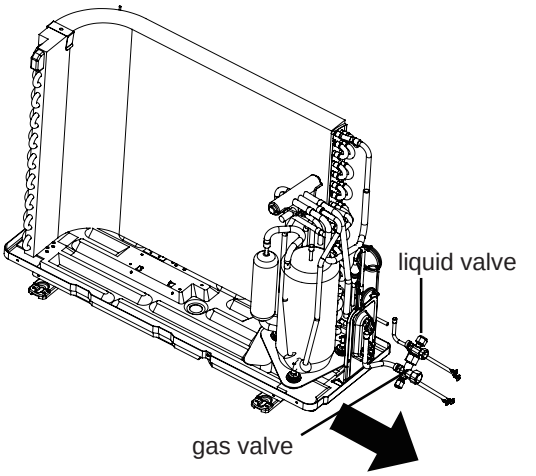
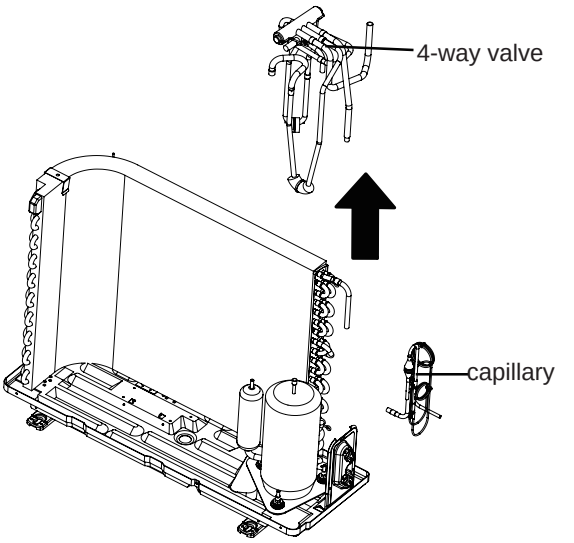
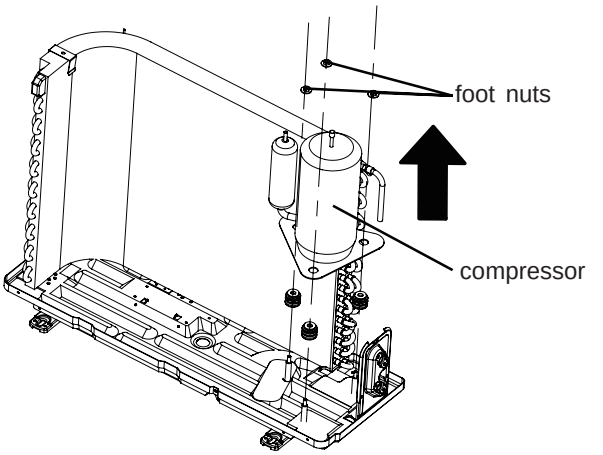
GWH12QC-K3NNA1A/O(CA419W00100)
GWH18AAC-K3NNA1A/O

Steps	Procedure
1. Before disassembly	
2. Remove big handle Remove the connection screw fixing the big handle and then remove the handle.	
3. Remove top cover plate Remove connection screws connecting the top panel with the front panel and the right side plate, and then remove the top panel.	

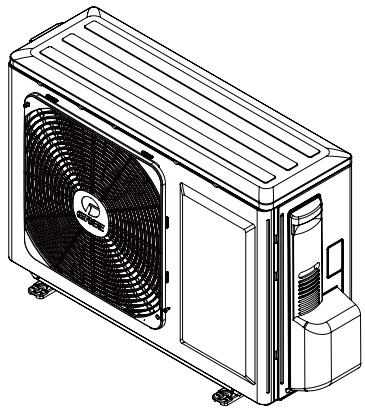
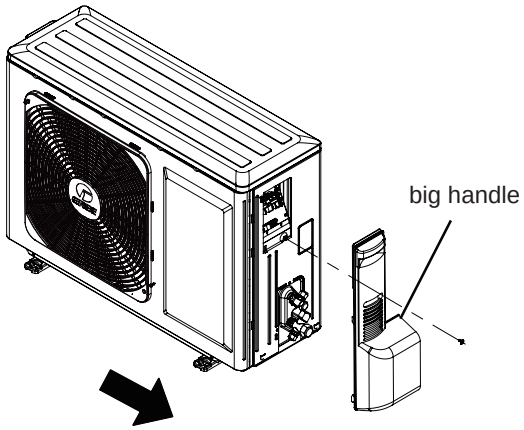
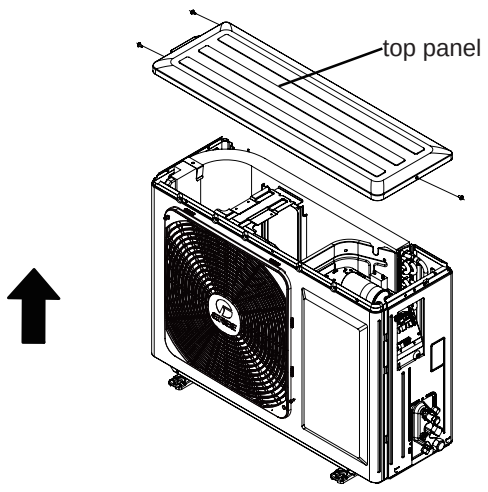
Steps	Procedure
4. Remove front grille	
	Remove connection screws between the front grille and the front panel. Then remove the front grille.
	
5. Remove front panel	
	Remove connection screws connecting the front panel with the chassis and the motor support and then remove the front panel.
	
6. Remove right side plate	
	Remove connection screws connecting the right side plate with the valve support and the electric box. Then remove the right side plate.
	

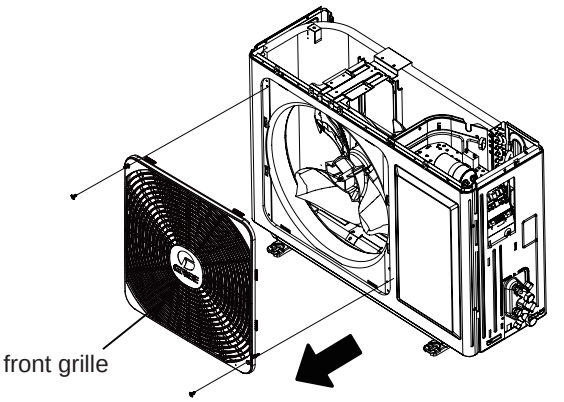
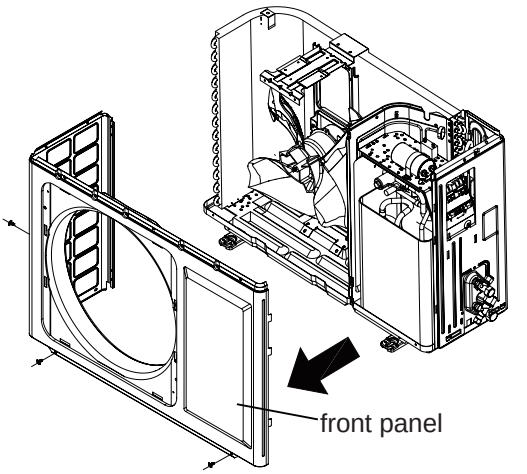
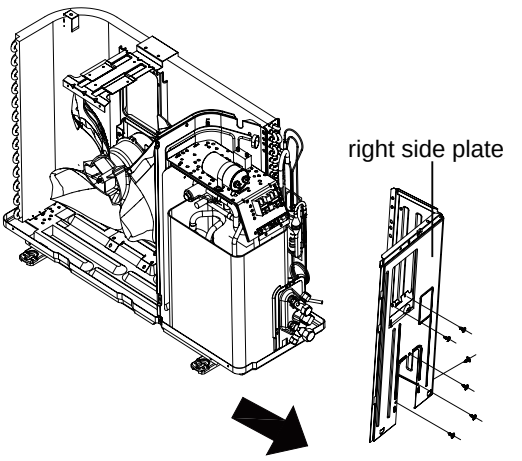
Steps	Procedure
7. Remove axial flow blade	
	Remove the nut on the blade and then remove the axial flow blade.
	
8. Remove motor and motor support	
	Remove the 4 tapping screws fixing the motor and disconnect the leading wire insert of the motor. Then remove the motor. Remove the 2 tapping screws fixing the motor support and lift the motor support to remove it.
	
9. Remove electric box	
	Remove screws fixing the electric box subassembly; loosen the wire bundle and unplug the wiring terminals. Then lift the electric box to remove it.
	

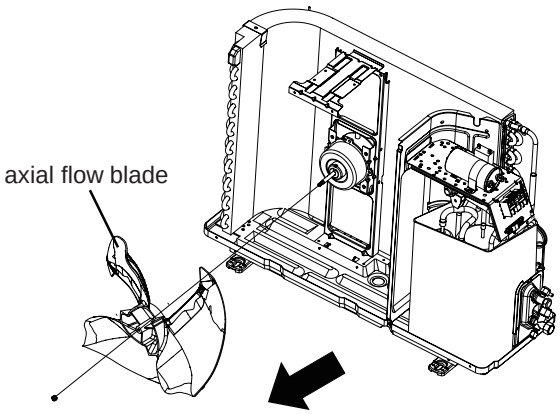
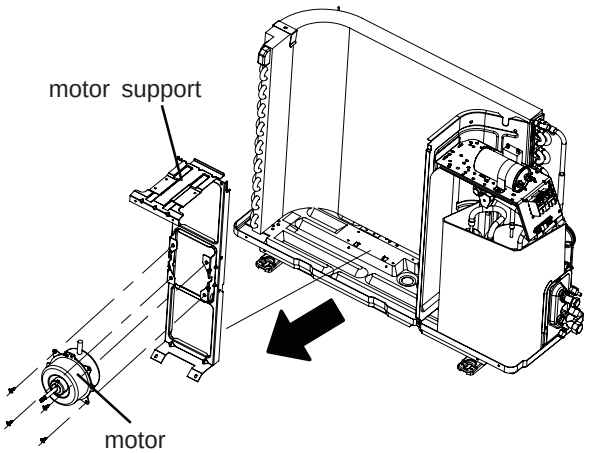
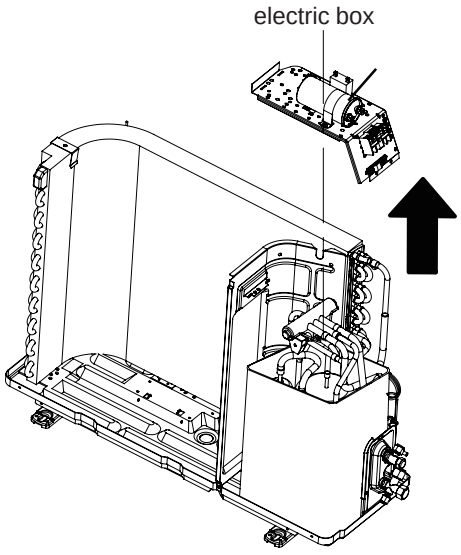
Steps	Procedure	
	10. Remove isolation sheet	
	Remove the 3 screws fixing the isolation sheet and then remove the isolation sheet.	
	11. Remove soundproof sponge	
	Remove the soundproof sponge wrapping the compressor.	
	12. Remove magnet coil	
	Remove the screw fixing the magnet coil and then remove the coil.	

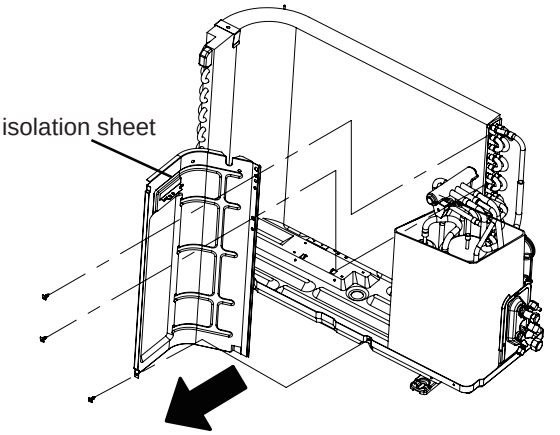
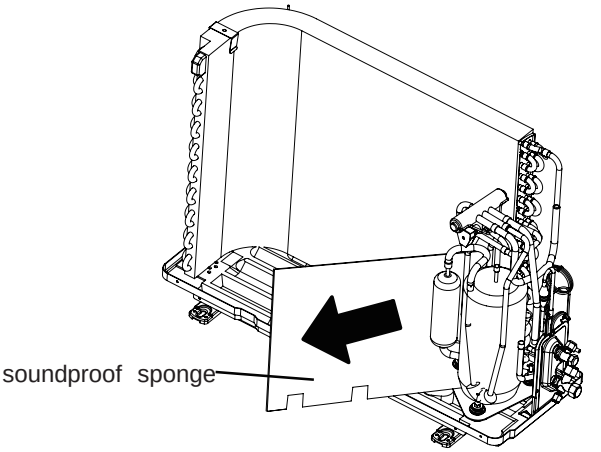
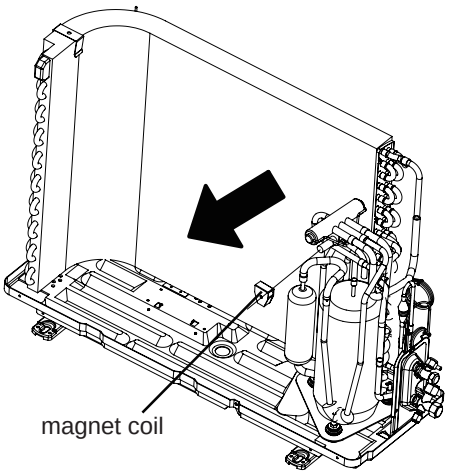
Step	Procedure	
	13. Remove liquid valve and gas valve	
	Unsolder the welding joint connecting the capillary, valves and the outlet pipe of condenser to remove the capillary. Do not block the capillary with welding slag during unsoldering. Remove the 2 screws fixing the gas valve and unsolder the welding joint between the gas valve and the air-return pipe to remove the gas valve. (NOTE: Discharge the refrigerant completely before unsoldering; when unsoldering, wrap the gas valve with a wet cloth completely to avoid damage to the valve caused by high temperature). Remove the 2 screws fixing the liquid valve and unsolder the welding joint connecting the liquid valve to the Y-type pipe to remove the liquid valve.	
	14. Remove compressor	
a	Unsolder pipes connecting with compressor.	
b	Remove the 3 foot nuts on the compressor and then remove the compressor.	

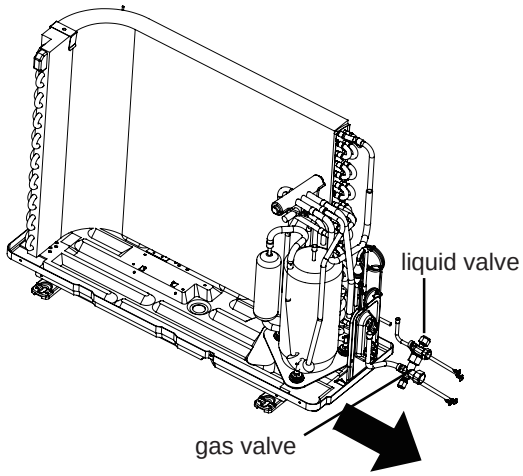
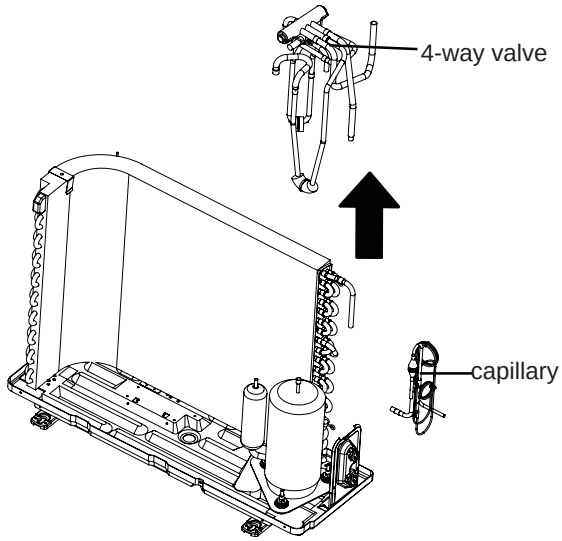
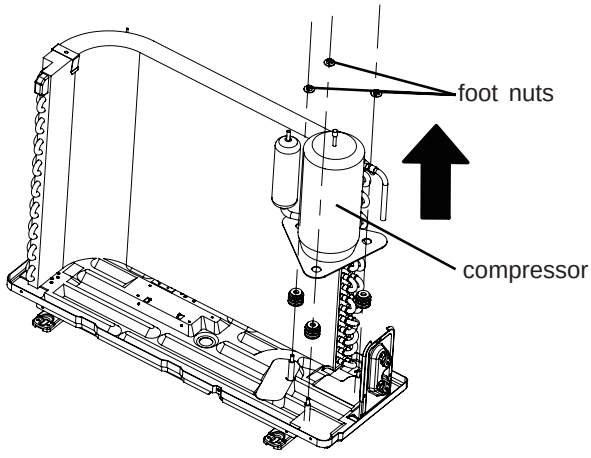
GWH12QC-K3NNA1A/O(CA419W00101)

Steps	Procedure
1. Before disassembly	
2. Remove big handle Remove the connection screw fixing the big handle and then remove the handle.	
3. Remove top cover plate Remove connection screws connecting the top panel with the front panel and the right side plate, and then remove the top panel.	

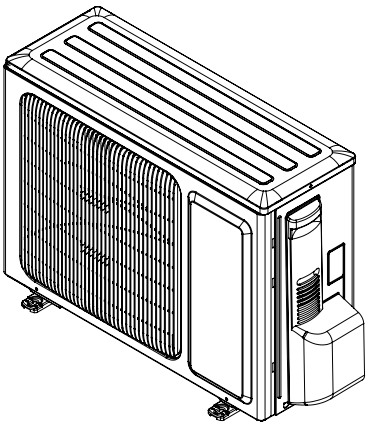
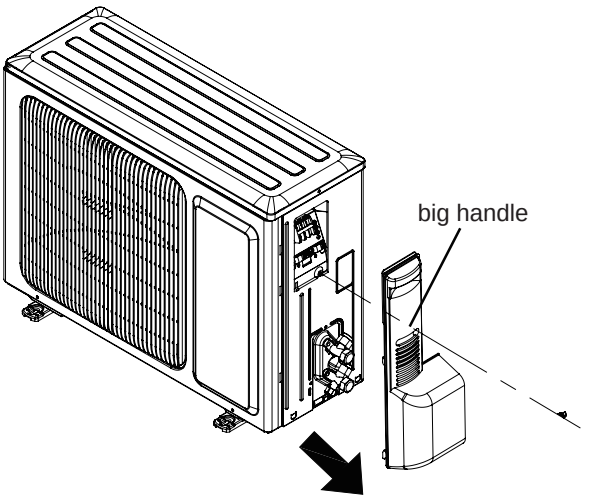
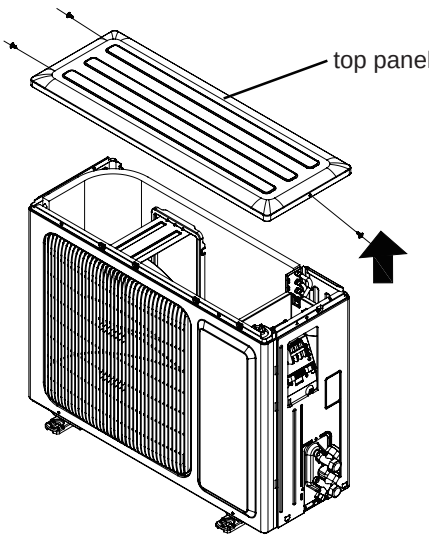
Steps	Procedure	
	4. Remove front grille	
	Remove connection screws between the front grille and the front panel. Then remove the front grille.	
	5. Remove front panel	
	Remove connection screws connecting the front panel with the chassis and the motor support and then remove the front panel.	
	6. Remove right side plate	
	Remove connection screws connecting the right side plate with the valve support and the electric box. Then remove the right side plate.	

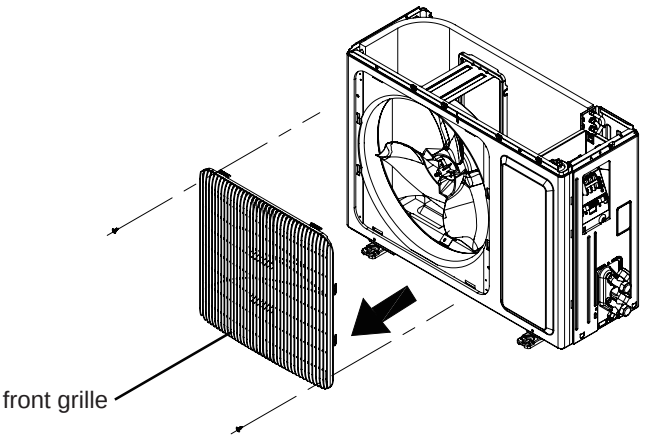
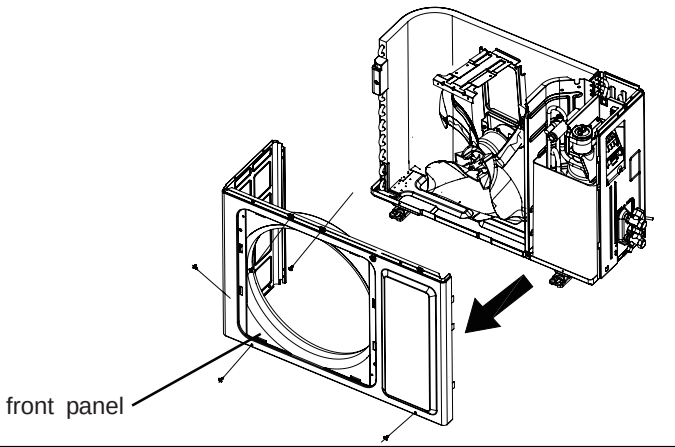
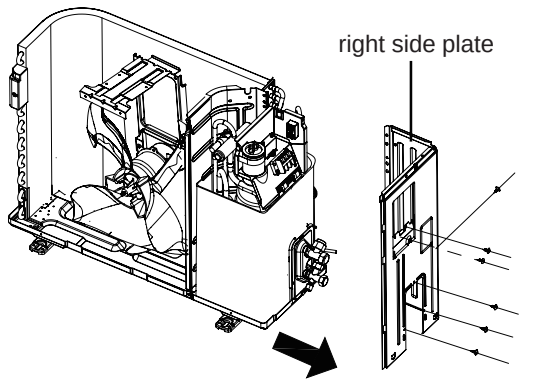
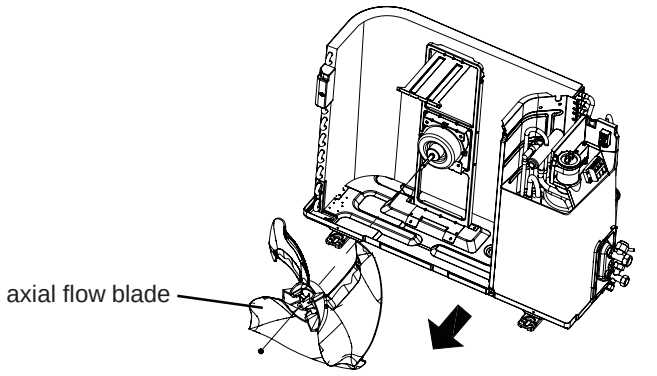
Steps	Procedure	
	7. Remove axial flow blade	
	Remove the nut on the blade and then remove the axial flow blade.	
	8. Remove motor and motor support	
	Remove the 4 tapping screws fixing the motor and disconnect the leading wire insert of the motor. Then remove the motor. Remove the 2 tapping screws fixing the motor support and lift the motor support to remove it.	
	9. Remove electric box	
	Remove screws fixing the electric box subassembly; loosen the wire bundle and unplug the wiring terminals. Then lift the electric box to remove it.	

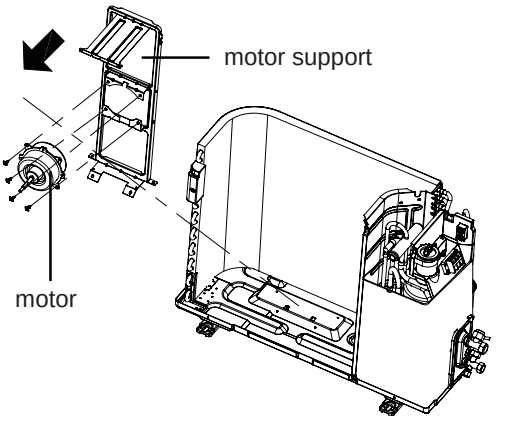
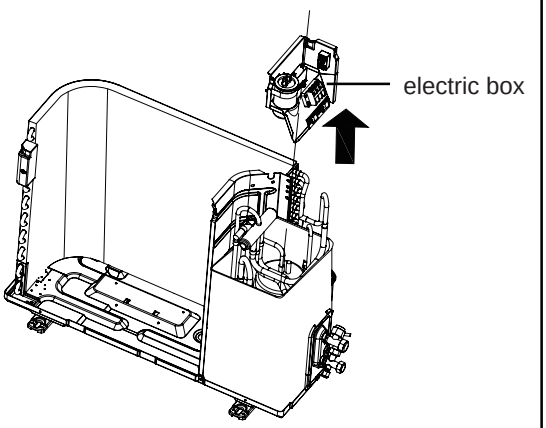
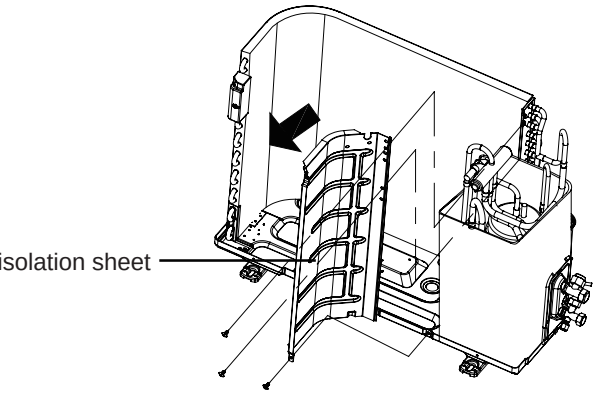
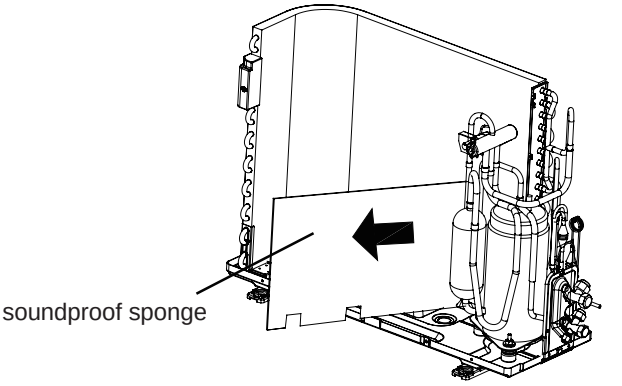
Steps	Procedure	
	10. Remove isolation sheet	
	Remove the 3 screws fixing the isolation sheet and then remove the isolation sheet.	
	11. Remove soundproof sponge	
	Remove the soundproof sponge wrapping the compressor.	
	12. Remove magnet coil	
	Remove the screw fixing the magnet coil and then remove the coil.	

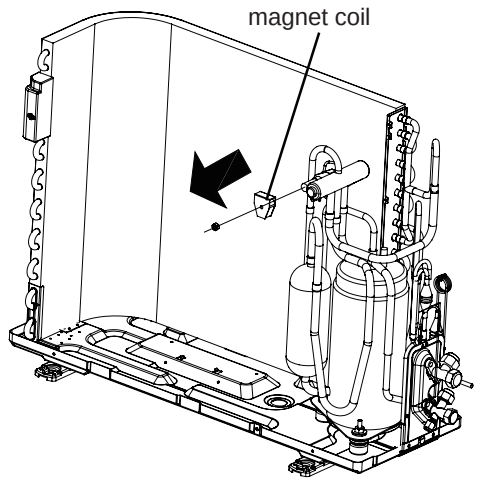
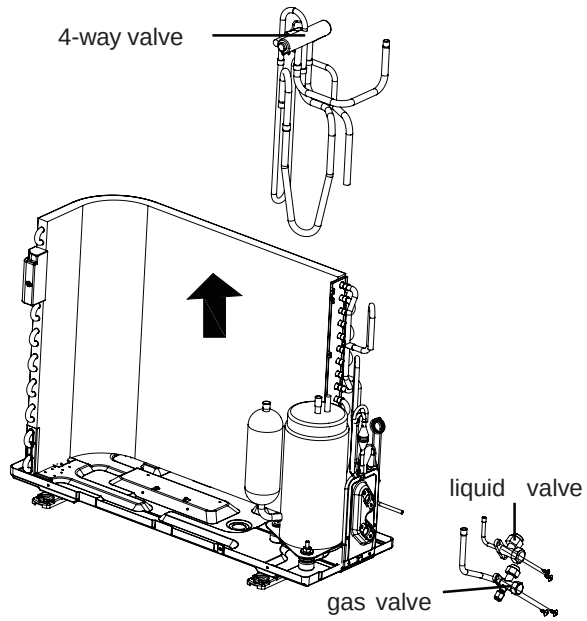
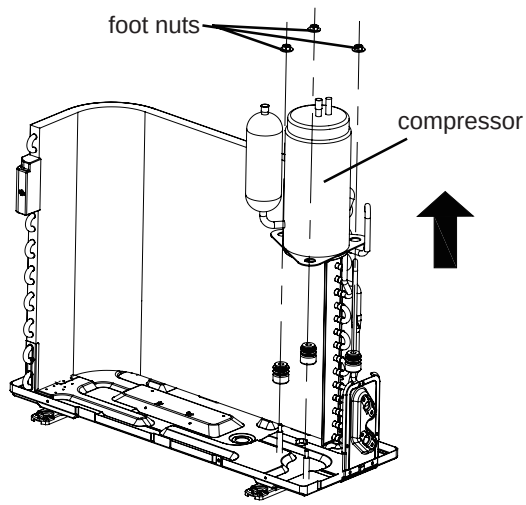
Step	Procedure	
	13. Remove liquid valve and gas valve	
	Unsolder the welding joint connecting the capillary, valves and the outlet pipe of condenser to remove the capillary. Do not block the capillary with welding slag during unsoldering. Remove the 2 screws fixing the gas valve and unsolder the welding joint between the gas valve and the air-return pipe to remove the gas valve. (NOTE: Discharge the refrigerant completely before unsoldering; when unsoldering, wrap the gas valve with a wet cloth completely to avoid damage to the valve caused by high temperature). Remove the 2 screws fixing the liquid valve and unsolder the welding joint connecting the liquid valve to the Y-type pipe to remove the liquid valve.	
	14. Remove compressor	
a	Unsolder pipes connecting with compressor.	
b	Remove the 3 foot nuts on the compressor and then remove the compressor.	

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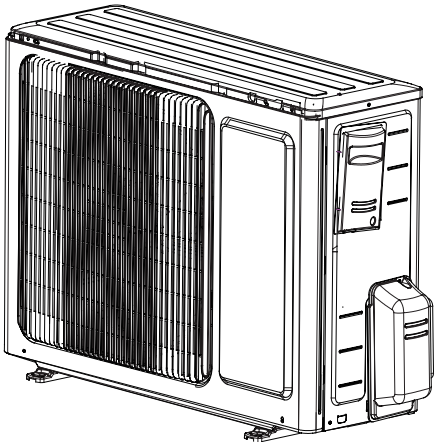
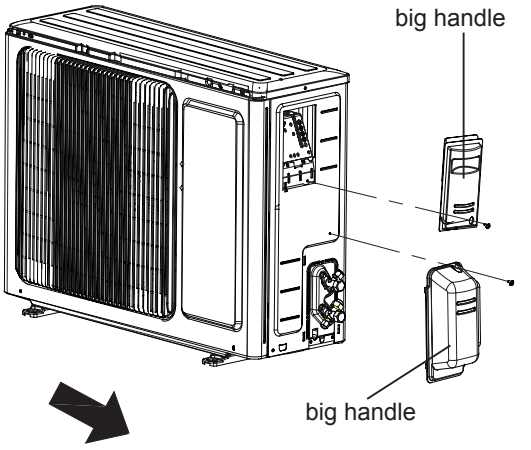
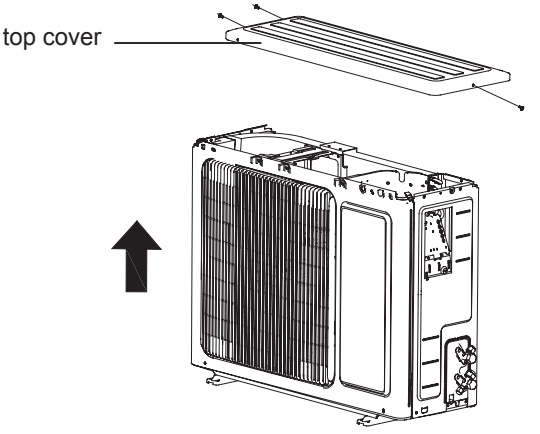
Step	Procedure
1. Before disassembly	
2. Remove big handle Remove the connection screw fixing the big handle and then remove the handle.	
3. Remove top panel Remove connection screws connecting the top panel with the front panel and the right side plate, and then remove the top panel.	

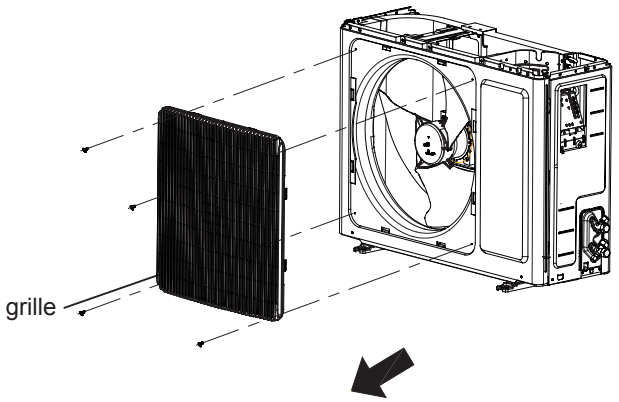
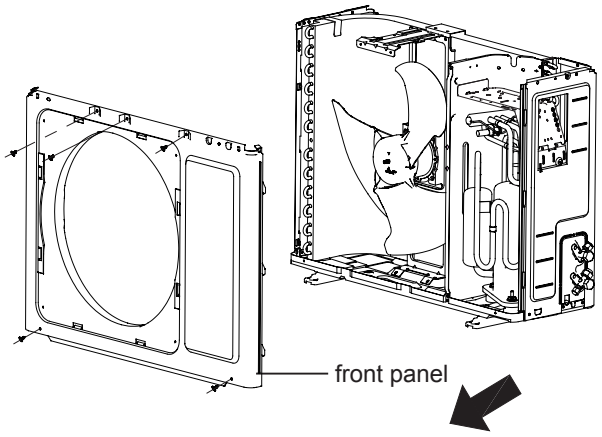
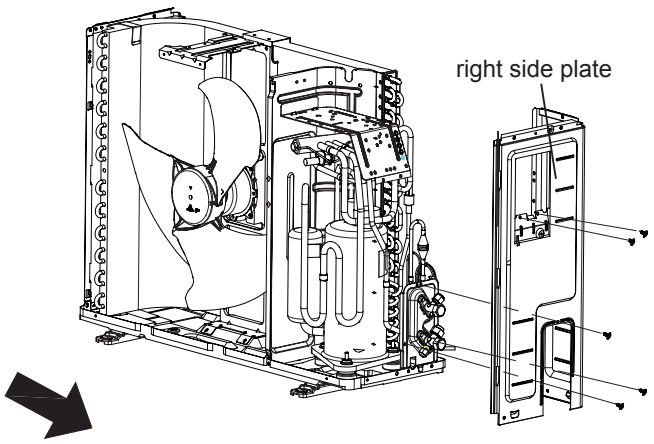
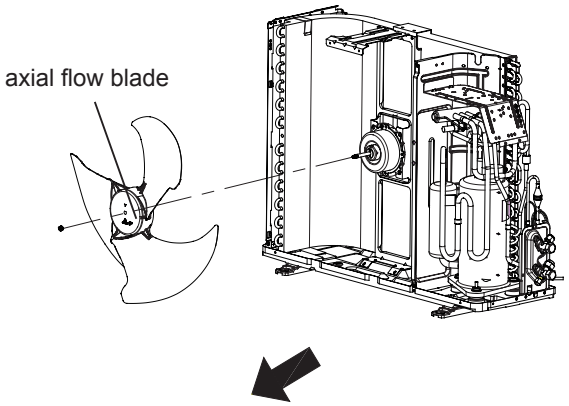
Step	Procedure
4. Remove front grille	
Remove connection screws between the front grille and the front panel. Then remove the front grille.	
5. Remove front panel	
Remove connection screws connecting the front panel with the chassis and the motor support, and then remove the front panel.	
6. Remove right side plate	
Remove connection screws connecting the right side plate with the chassis, the valve support and the electric box. Then remove the right side plate.	
7. Remove axial flow blade	
Remove the nut on the blade and then remove the axial flow blade.	

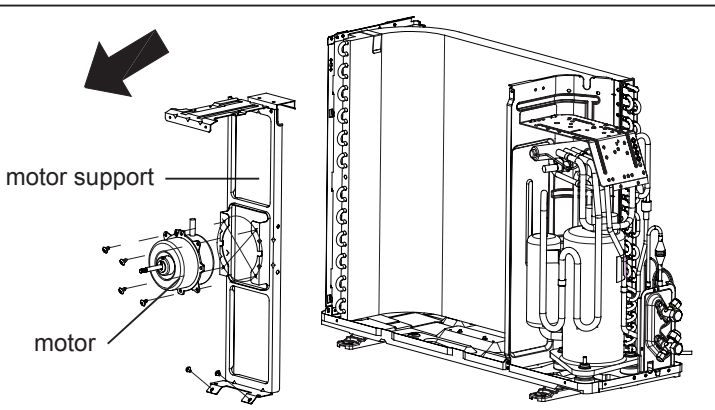
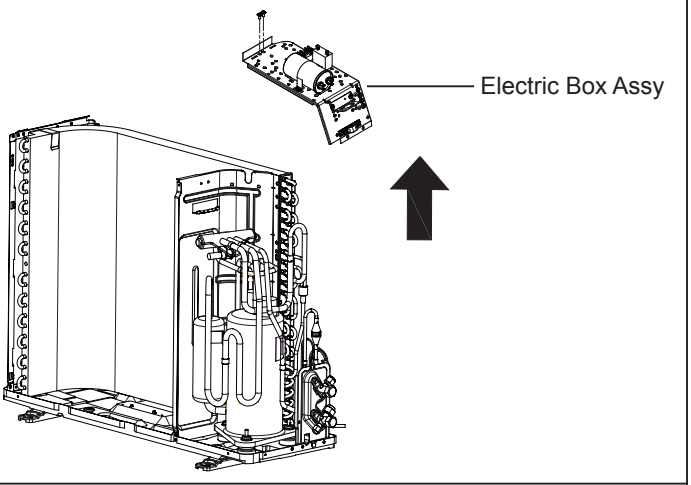
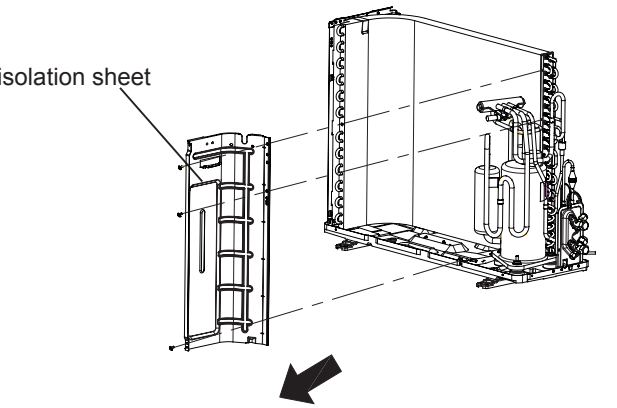
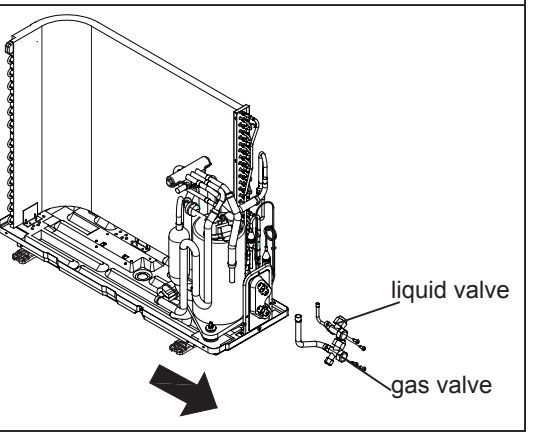
Step	Procedure	
	8. Remove motor and motor support	
	Remove the 4 tapping screws fixing the motor and disconnect the leading wire insert of the motor. Then remove the motor. Remove the 2 tapping screws fixing the motor support and lift the motor support to remove it.	
	9. Remove electric box	
	Remove screws fixing the electric box subassembly; loosen the wire bundle and unplug the wiring terminals. Then lift the electric box to remove it.	
	10. Remove isolation sheet	
	Remove the 3 screws fixing the isolation sheet and then remove the isolation sheet.	
	11. Remove soundproof sponge	
	Remove the soundproof sponge wrapping the compressor.	

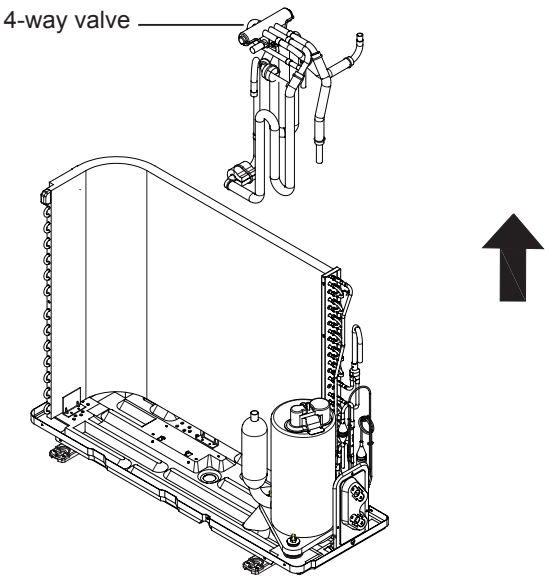
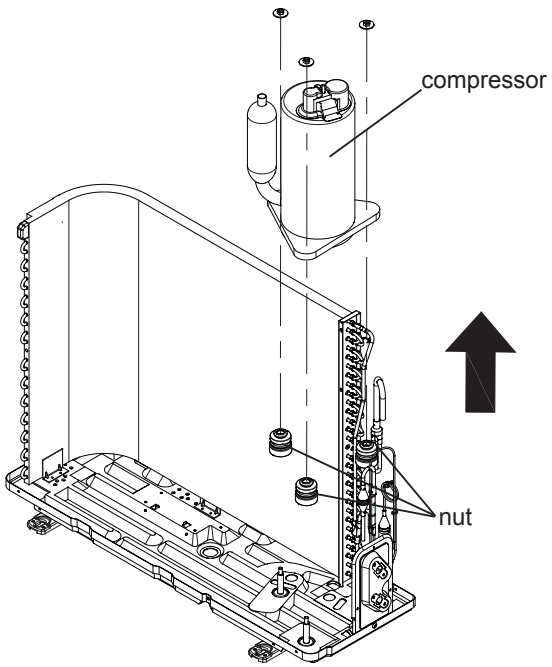
Step	Procedure
12. Remove magnet coil	
Remove the screw fixing the magnet coil and then remove the coil.	
13. Remove valves and 4-way valve subassembly	
Unsolder welding joint connecting the capillary, the valve and the outlet pipe of condenser to remove the capillary. Do not block the capillary with welding slag during unsoldering. Remove the 2 screws fixing the gas valve and unsolder the welding point between the gas valve and the air-return pipe to remove the gas valve. (NOTE: Discharge the refrigerant completely before unsoldering; when unsoldering, wrap the gas valve with a wet cloth completely to avoid damage to the valve caused by high temperature). Remove the 2 screws fixing the liquid valve and unsolder the welding joint connecting the liquid valve to the Y-type pipe to remove the liquid valve. Unsolder the welding joint connecting the 4-way valve, the compressor and the condenser to remove the 4-way valve.	
14. Remove compressor	
Remove the foot nuts on the compressor and then remove the compressor.	

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Steps	Procedure
1. Before disassembly	
2.Remove big handle Remove the connection screw fixing the big handle and then remove the handle.	
3. Remove top cover Remove connection screws connecting the top panel with the front panel and the right side plate, and then remove the top panel.	

Steps	Procedure
4.Remove grille	
	Remove connection screws between the front grille and the front panel. Then remove the grille.
	
5. Remove front panel	
	Remove connection screws connecting the front panel with the chassis and the motor support and then remove the front panel.
	
6. Remove right side plate	
	Remove connection screws connecting the right side plate with the valve support and the electric box. Then remove the right side plate.
	
7. Remove axial flow blade	
	Remove the nut on the blade and then remove the axial flow blade.
	

Steps	Procedure
8. Remove motor and motor support	
Remove the tapping screws fixing the motor and disconnect the leading wire insert of the motor. Then remove the motor. Remove the tapping screws fixing the motor support and lift the motor support to remove it.	
9.Remove Electric Box Assy	
Remove screws fixing the electric box subassembly; loosen the wire bundle and unplug the wiring terminals. Then lift the electric box to remove it.	
10.Remove isolation sheet	
Remove the screws fixing the isolation sheet and then remove the isolation sheet.	
11. Remove compressor	
a	Unsolder the welding joint connecting the capillary, valves and the outlet pipe of condenser to remove the capillary. Do not block the capillary with welding slag during unsoldering.

Steps	Procedure	
b	Remove the 2 screws fixing the gas valve and unsolder the welding joint between the gas valve and the air-return pipe to remove the gas valve. (NOTE: Discharge the refrigerant completely before unsoldering; when unsoldering, wrap the gas valve with a wet cloth completely to avoid damage to the valve caused by high temperature). Remove the 2 screws fixing the liquid valve and unsolder the welding joint connecting the liquid valve to the Y-type pipe to remove the liquid valve.	
c	Unsolder pipes connecting with compressor.	
d	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 (°F)	Fahrenheit (°F)	Celsius(°C)	Fahrenheit display temperature (°F)	Fahrenheit (°F)	Celsius(°C)	Fahrenheit display temperature (°F)	Fahrenheit (°F)	Celsius(°C)
61	60.8	16	69/70	69.8	21	78/79	78.8	26
62/63	62.6	17	71/72	71.6	22	80/81	80.6	27
64/65	64.4	18	73/74	73.4	23	82/83	82.4	28
66/67	66.2	19	75/76	75.2	24	84/85	84.2	29
68	68	20	77	77	25	86	86	30

Ambient temperature

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

Appendix 2: Configuration of Connection Pipe

1.Standard length of connection pipe

● 5m, 7.5m, 8m.

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

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

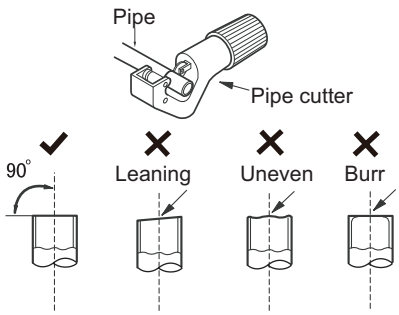
● The calculation method of additional refrigerant charging amount (on the basis of liquid pipe):

● 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(mm)	Gas pipe(mm)	Cooling only(g/m)	Cooling and heating(g/m)
Φ6	Φ9.5 or Φ12	15	20
Φ6 or Φ9.5	Φ16 or Φ19	15	50
Φ12	Φ19 or Φ22.2	30	120
Φ16	Φ25.4 or Φ31.8	60	120
Φ19	/	250	250
Φ22.2	/	350	350

Appendix 2: Pipe Expanding Method



⚠ **Note:**

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

A:Cut the 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

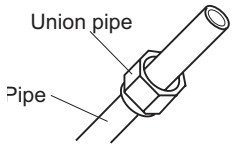
- Remove the burrs with shaper and prevent the burrs from getting into the pipe.



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.



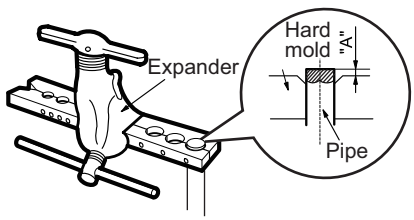
E:Expand the port

- Expand the port with expander.

⚠ **Note:**

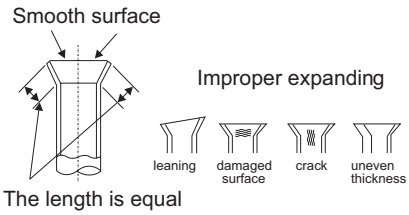
- "A" is different according to the diameter, please refer to the sheet below:

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



F:Inspection

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



Appendix 4: List of Resistance for Temperature Sensor

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

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

Resistance Table of Tube Temperature Sensors for Outdoor and Indoor (20K)

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

Resistance Table of Discharge Temperature Sensor for Outdoor (50K)

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



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