GREE
Change for Life

Service Manual

GREE ELECTRIC APPLIANCES,INC.OF ZHUHAI

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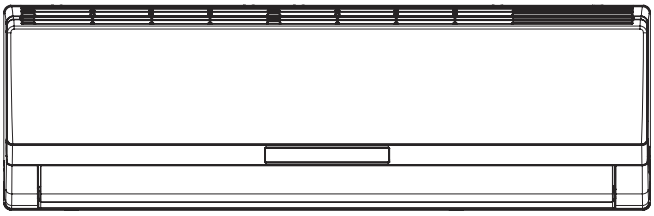
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Part Ⅰ : Technical Information

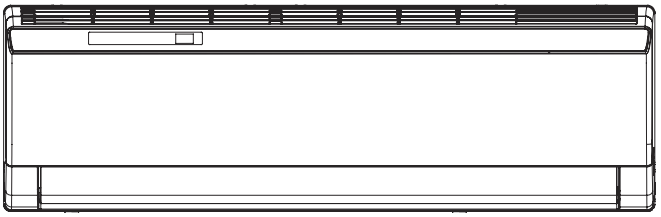
1. Summary

Indoor Unit:

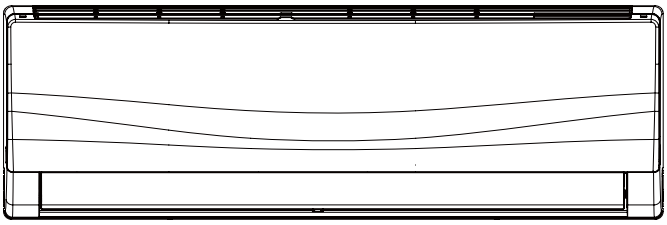
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GWH09RA-K3NNA1C/I
GWH12RB-K3NNA1A/I
GWH12RB-K3NNA1C/I



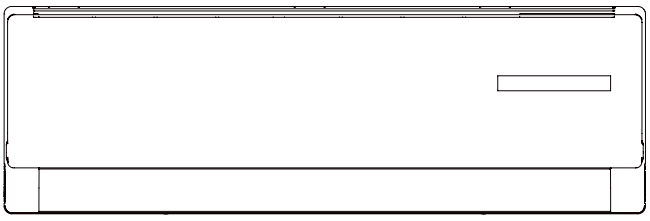
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GWH09RA-K3NNA2C/I
GWH12RB-K3NNA2C/I



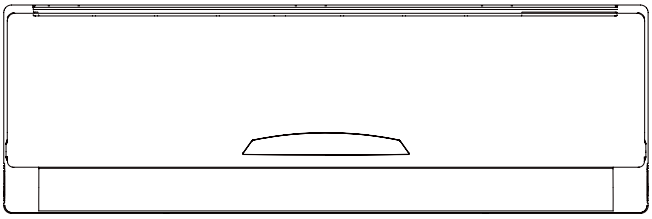
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GWH12RB-K3NNA3A/I
GWH12RB-K3NNA3C/I



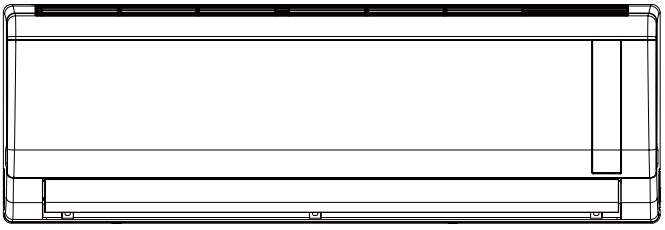
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GWH09RB-K3NNA4A/I
GWH09RA-K3NNA4C/I
GWH12RB-K3NNA4A/I
GWH12RB-K3NNA4C/I



GWH09RB-K3NNA5A/I
GWH09RA-K3NNA5C/I(Cold Plasma)
GWH12RB-K3NNA5A/I
GWH12RB-K3NNA5C/I(Cold Plasma)

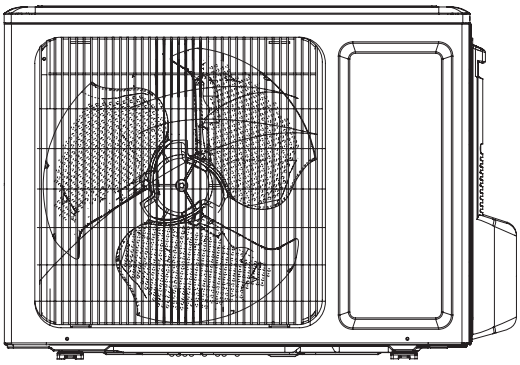


GWH09RA-K3NNA6C/I
GWH09RA-K3NNA6C/I(Cold Plasma)
GWH12RB-K3NNA6C/I
GWH12RB-K3NNA6C/I(Cold Plasma)

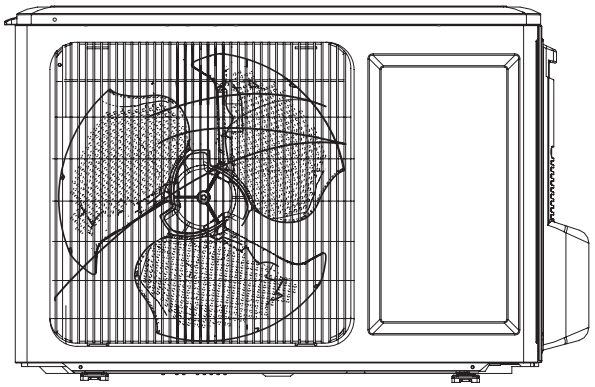


Outdoor Unit:

GWH07MA-K3NNA3E/O



GWH07MA-K3NNA3E/O
GWH07MA-K3NNC9A/O
GWH09RB-K3NNA1A/O
GWH09MA-K3NNA3A/O
GWH12RB-K3NNA1A/O
GWH12MB-K3NNA4A/O



Remote Controller:

YAA1FB



NO.	Model	Product code	Indocr model	Indocr product code	Outdoor model	Outdoor product code
1	GWH07RA-K3NNA1E	CA144008600	GWH07RA-K3NNA1E/I	CA144N08600	GWH07MA-K3NNA3E/O	CA171W26100
2	GWH07RA-K3NNA1A	CA144001800	GWH07RA-K3NNA1A/I	CA144N01800	GWH07MA-K3NNC9A/O	CA145W0010
3	GWH07RA-K3NNA4A	CA303002101	GWH07RA-K3NNA4A/I	CA303N02101		
4	GWH09RB-K3NNA1A	CA144005900	GWH09RB-K3NNA1A/I	CA144N05900	GWH09RB-K3NNA1A/O	CA144W05900
5	GWH09RB-K3NNA2A	CA301001900	GWH09RB-K3NNA2A/I	CA301N01900		
6	GWH09RB-K3NNA3A	CA302002100	GWH09RB-K3NNA3A/I	CA302N02100		
7	GWH09RB-K3NNA4A	CA303001700	GWH09RB-K3NNA4A/I	CA303N01700		
8	GWH09RB-K3NNA5A	CA304001500	GWH09RB-K3NNA5A/I	CA304N01500		
9	GWH09RA-K3NNA1C	CA144005600	GWH09RA-K3NNA1C/I	CA144N05600	GWH09MA-K3NNA3A/O	CA155W0070
10	GWH09RA-K3NNA2C	CA301002100	GWH09RA-K3NNA2C/I	CA301N02100		
11	GWH09RA-K3NNA3C	CA302004100	GWH09RA-K3NNA3C/I	CA302N04100		
12	GWH09RA-K3NNA4C	CA303002201	GWH09RA-K3NNA4C/I	CA303N02201		
13	GWH09RA-K3NNA5C (Cold Plasma)	CA304002200	GWH09RA-K3NNA5C/I	CA304N02200		
14	GWH09RA-K3NNA6C	CA305000401	GWH09RA-K3NNA6C/I	CA305N00400		
15	GWH09RA-K3NNA6C (Cold Plasma)	CA305000402		CA305N00402		
16	GWH12RB-K3NNA1A	CA144006000	GWH12RB-K3NNA1A/I	CA144N06000	GWH12RB-K3NNA1A/O	CA144W06000
17	GWH12RB-K3NNA2A	CA301002000	GWH12RB-K3NNA2A/I	CA301002000		
18	GWH12RB-K3NNA3A	CA302002200	GWH12RB-K3NNA3A/I	CA302N02200		
19	GWH12RB-K3NNA4A	CA303001800	GWH12RB-K3NNA4A/I	CA303N01800		
20	GWH12RB-K3NNA5A	CA304001600	GWH12RB-K3NNA5A/I	CA304N01600		
21	GWH12RB-K3NNA1C	CA144005101	GWH12RB-K3NNA1C/I	CA144N05100	GWH12MB-K3NNA4A/O	CA155W0031
22	GWH12RB-K3NNA2C	CA301001801	GWH12RB-K3NNA2C/I	CA301N01800		
23	GWH12RB-K3NNA3C	CA302001801	GWH12RB-K3NNA3C/I	CA302N01801		
24	GWH12RB-K3NNA3C	CA302001804		CA302N01804		
25	GWH12RB-K3NNA3C	CA302001803		CA302N01803		
26	GWH12RB-K3NNA4C	CA303001602	GWH12RB-K3NNA4C/I	CA303N01602		
27	GWH12RB-K3NNA5C (Cold Plasma)	CA304001401	GWH12RB-K3NNA5C/I	CA304N01401		
28	GWH12RB-K3NNA6C	CA305000201	GWH12RB-K3NNA6C/I	CA305N00200		
29	GWH12RB-K3NNA6C (Cold Plasma)	CA305000202		CA305N00202		

2. Specifications

2.1 Specification Sheet

Parameter		Unit	Value
Model			GWH07RA-K3NNA1E
Product Code			CA144008600
Power Supply	Rated Voltage	V ～	220-240
	Rated Frequency	Hz	50
	Phases		1
Power Supply Mode			Indoor
Cooling Capacity		W	2300
Heating Capacity		W	2500
Cooling Power Input		W	716
Heating Power Input		W	692
Cooling Power Current		A	3.18
Heating Power Current		A	3.07
Rated Input		W	1000
Rated Current		A	4.44
Air Flow Volume(SH/H/M/L/SL)		m^3/h	420/370/330/260/-
Dehumidifying Volume		L/h	0.6
EER		W/W	3.21
COP		W/W	3.61
SEER		W/W	/
HSPF		W/W	/
Application Area		m^2	10-16
Indoor Unit	Model of indoor unit		GWH07RA-K3NNA1E/I
	Fan Type		Cross-flow
	Diameter Length(DXL)	mm	Φ85X596
	Fan Motor Cooling Speed(SH/H/M/L/SL)	r/min	1180/1050/920/730/-
	Fan Motor Heating Speed(SH/H/M/L/SL)	r/min	1260/1160/1060/950/-
	Output of Fan Motor	W	10
	Fan Motor RLA	A	0.13
	Fan Motor Capacitor	μF	1
	Input of Heater	W	/
	Evaporator Form		Aluminum Fin-copper Tube
	Pipe Diameter	mm	Φ7
	Row-fin Gap	mm	2-1.5
	Coil Length (LXDXW)	mm	581X25.4X264
	Swing Motor Model		MP24AA
	Output of Swing Motor	W	2
	Fuse	A	3.15
	Sound Pressure Level (SH/H/M/L/SL)	dB (A)	40/37/35/32/-
	Sound Power Level (SH/H/M/L/SL)	dB (A)	40/47/45/42/-
	Dimension (WXHXD)	mm	794X264.5X182
	Dimension of Carton Box (LXWXH)	mm	870X255X355
	Dimension of Package(LXWXH)	mm	873X258X370
	Net Weight	kg	8.5
	Gross Weight	kg	10

Outdoor Unit	Model of Outdoor Unit		GWH07MA-K3NNA3E/O
	Compressor Manufacturer/Trademark		Shanghai Hitachi Electrical Appliances Co., Ltd.
	Compressor Model		ASD084TV-H6AUN
	Compressor Oil		68HES-H
	Compressor Type		Rotary
	L.R.A.	A	17.6
	Compressor RLA	A	3.2
	Compressor Power Input	W	695
	Overload Protector		Internal
	Throttling Method		Capillary
	Operation Temp	ºC	16 ～ 30
	Ambient Temp (Cooling)	ºC	18 ～ 43
	Ambient Temp (Heating)	ºC	-7 ～ 24
	Condenser Form		Aluminum Fin-copper Tube
	Pipe Diameter	mm	Φ7.94
	Rows-fin Gap	mm	1-1.4
	Coil Length (LXDXW)	mm	711X19.05X506
	Fan Motor Speed	rpm	820
	Output of Fan Motor	W	30
	Fan Motor RLA	A	0.29
	Fan Motor Capacitor	μF	/
	Air Flow Volume of Outdoor Unit	m^3/h	1600
	Fan Type		Axial-flow
	Fan Diameter	mm	Φ394.5
	Defrosting Method		Automatic Defrosting
	Climate Type		T1
	Isolation		I
	Moisture Protection		IP24
	Permissible Excessive Operating Pressure for the Discharge Side	MPa	4.3
	Permissible Excessive Operating Pressure for the Suction Side	MPa	2.5
	Sound Pressure Level (H/M/L)	dB (A)	50/-/-
	Sound Power Level (H/M/L)	dB (A)	60/-/-
	Dimension (WXHXD)	mm	776X540X320
	Dimension of Carton Box (LXWXH)	mm	820X355X580
	Dimension of Package(LXWXH)	mm	823X358X595
	Net Weight	kg	28
	Gross Weight	kg	30.5
	Refrigerant		R410A
	Refrigerant Charge	kg	0.75
Connection Pipe	Length	m	5
	Gas Additional Charge	g/m	20
	Outer Diameter Liquid Pipe	mm	Φ6
	Outer Diameter Gas Pipe	mm	Φ9.52
	Max Distance Height	m	10
	Max Distance Length	m	15
	Note: The connection pipe applies metric diameter.		

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

Parameter		Unit	Value
Model			GWH07RA-K3NNA1A GWH07RA-K3NNA4A
Product Code			CA144001800 CA303002101
Power Supply	Rated Voltage	V ～	220-240
	Rated Frequency	Hz	50
	Phases		1
Power Supply Mode			Indoor
Cooling Capacity		W	2300
Heating Capacity		W	2550
Cooling Power Input		W	716
Heating Power Input		W	706
Cooling Power Current		A	3.18
Heating Power Current		A	3.13
Rated Input		W	1050
Rated Current		A	4.66
Air Flow Volume(SH/H/M/L/SL)		m^3/h	470/400/340/280/-
Dehumidifying Volume		L/h	0.6
EER		W/W	3.21
COP		W/W	3.61
SEER		W/W	/
HSPF		W/W	/
Application Area		m^2	10-16
Indoor Unit	Model of indoor unit		GWH07RA-K3NNA1A/I GWH07RA-K3NNA4A/I
	Fan Type		Cross-flow
	Diameter Length(DXL)	mm	Φ85X596
	Fan Motor Cooling Speed(SH/H/M/L/SL)	r/min	1180/1050/920/730/-
	Fan Motor Heating Speed(SH/H/M/L/SL)	r/min	1260/1160/1060/950/-
	Output of Fan Motor	W	10
	Fan Motor RLA	A	0.13
	Fan Motor Capacitor	μF	1
	Input of Heater	W	/
	Evaporator Form		Aluminum Fin-copper Tube
	Pipe Diameter	mm	Φ7
	Row-fin Gap	mm	2-1.5
	Coil Length (LXDXW)	mm	581X25.4X264
	Swing Motor Model		MP24AA
	Output of Swing Motor	W	1.5
	Fuse	A	3.15
	Sound Pressure Level (SH/H/M/L/SL)	dB (A)	40/37/35/32/-
	Sound Power Level (SH/H/M/L/SL)	dB (A)	50/47/45/42/-
	Dimension (WXHXD)	mm	794X264.5X182
	Dimension of Carton Box (LXWXH)	mm	870X255X350
	Dimension of Package(LXWXH)	mm	873X258X365
	Net Weight	kg	9
	Gross Weight	kg	12

Outdoor Unit	Model of Outdoor Unit		GWH07MA-K3NNC9A/O
	Compressor Manufacturer/Trademark		ZHUHAI LANDA COMPRESSOR CO., LTD./GREE
	Compressor Model		QXA-B092C130
	Compressor Oil		RB68EP
	Compressor Type		Rotary
	L.R.A.	A	20.00
	Compressor RLA	A	3.60
	Compressor Power Input	W	780
	Overload Protector		Internal
	Throttling Method		Capillary
	Operation Temp	ºC	16 ～ 30
	Ambient Temp (Cooling)	ºC	18 ～ 43
	Ambient Temp (Heating)	ºC	-7 ～ 24
	Condenser Form		Aluminum Fin-copper Tube
	Pipe Diameter	mm	Φ7
	Rows-fin Gap	mm	1-1.4
	Coil Length (LXDXW)	mm	741X12.7X495.3
	Fan Motor Speed	rpm	830
	Output of Fan Motor	W	30
	Fan Motor RLA	A	0.23
	Fan Motor Capacitor	μF	2
	Air Flow Volume of Outdoor Unit	m^3/h	1800
	Fan Type		Axial-flow
	Fan Diameter	mm	Φ394.5
	Defrosting Method		Automatic Defrosting
	Climate Type		T1
	Isolation		I
	Moisture Protection		IP24
	Permissible Excessive Operating Pressure for the Discharge Side	MPa	3.8
	Permissible Excessive Operating Pressure for the Suction Side	MPa	1.2
	Sound Pressure Level (H/M/L)	dB (A)	50/-/-
	Sound Power Level (H/M/L)	dB (A)	60/-/-
	Dimension (WXHXD)	mm	848X320X540
	Dimension of Carton Box (LXWXH)	mm	878X360X580
	Dimension of Package(LXWXH)	mm	881X363X595
	Net Weight	kg	31
	Gross Weight	kg	35
	Refrigerant		R410A
	Refrigerant Charge	kg	0.70
Connection Pipe	Length	m	5
	Gas Additional Charge	g/m	20
	Outer Diameter Liquid Pipe	mm	Φ6
	Outer Diameter Gas Pipe	mm	Φ9.52
	Max Distance Height	m	10
	Max Distance Length	m	15
	Note: The connection pipe applies metric diameter.		

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

Parameter		Unit	Value	
Model			GWH09RB-K3NNA1A GWH09RB-K3NNA2A	GWH09RB-K3NNA3A
Product Code			CA144005900 CA301001900	CA302002100
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	2950	2950
Heating Capacity		W	3050	3050
Cooling Power Input		W	775	775
Heating Power Input		W	800	800
Cooling Power Current		A	3.44	3.44
Heating Power Current		A	3.55	3.55
Rated Input		W	1120	1120
Rated Current		A	4.97	4.97
Air Flow Volume(SH/H/M/L/SL)		m^3/h	600/530/430/330/-	600/530/430/330/-
Dehumidifying Volume		L/h	0.80	0.80
EER		W/W	3.81	3.81
COP		W/W	3.81	3.81
Application Area		m^2	12-18	12-18
Indoor Unit	Model of indoor unit		GWH09RB-K3NNA1A/I GWH09RB-K3NNA2A/I	GWH09RB-K3NNA3A/I
	Fan Type		Cross-flow	Cross-flow
	Diameter Length(DXL)	mm	Φ92X645	Φ92X645
	Fan Motor Cooling Speed(SH/H/M/L/SL)	r/min	1260/1070/900/730/-	1260/1070/900/730/-
	Fan Motor Heating Speed(SH/H/M/L/SL)	r/min	1100/1050/980/920/-	1100/1050/980/920/-
	Output of Fan Motor	W	20	20
	Fan Motor RLA	A	0.25	0.25
	Fan Motor Capacitor	μF	1	1
	Input of Heater	W	/	/
	Evaporator Form		Aluminum Fin-copper Tube	Aluminum Fin-copper Tube
	Pipe Diameter	mm	Φ7	Φ7
	Row-fin Gap	mm	2-1.4	2-1.4
	Coil Length (LXDXW)	mm	645X25.4X267	645X25.4X267
	Swing Motor Model		MP24AA	MP24AA
	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)	40/37/35/32/-	40/37/35/32/-
	Sound Power Level (SH/H/M/L/SL)	dB (A)	50/47/45/42/-	50/47/45/42/-
	Dimension (WXHXD)	mm	848X274X189	848X274X189
	Dimension of Carton Box (LXWXH)	mm	923X264X356	923X264X356
	Dimension of Package(LXWXH)	mm	926X267X371	926X267X371
	Net Weight	kg	10	10
	Gross Weight	kg	13	13

Outdoor Unit	Model of Outdoor Unit		GWH09RB-K3NNA1A/O
	Compressor Manufacturer/Trademark		ZHUHAILANDA COMPRESSOR CO.,LTD./GREE
	Compressor Model		QXA-B102uC130
	Compressor Oil		PVE(DN HERMITIC FVC 68D)
	Compressor Type		Rotary
	L.R.A.	A	18.00
	Compressor RLA	A	4±5%
	Compressor Power Input	W	858±5%
	Overload Protector		B210-150-241H
	Throttling Method		Capillary
	Operation Temp	ºC	16 ～ 30
	Ambient Temp (Cooling)	ºC	18 ～ 43
	Ambient Temp (Heating)	ºC	-7 ～ 24
	Condenser Form		Aluminum Fin-copper Tube
	Pipe Diameter	mm	Φ9.52
	Rows-fin Gap	mm	2-1.4
	Coil Length (LXDXW)	mm	741X25.4X495
	Fan Motor Speed	rpm	860
	Output of Fan Motor	W	30
	Fan Motor RLA	A	0.23
	Fan Motor Capacitor	μF	2
	Air Flow Volume of Outdoor Unit	m^3/h	1800
	Fan Type		Axial-flow
	Fan Diameter	mm	Φ394.5
	Defrosting Method		Automatic Defrosting
	Climate Type		T1
	Isolation		I
	Moisture Protection		IP24
	Permissible Excessive Operating Pressure for the Discharge Side	MPa	3.8
	Permissible Excessive Operating Pressure for the Suction Side	MPa	1.2
	Sound Pressure Level (H/M/L)	dB (A)	50/-/-
	Sound Power Level (H/M/L)	dB (A)	60/-/-
	Dimension (WXHXD)	mm	848X540X320
	Dimension of Carton Box (LXWXH)	mm	878X360X580
	Dimension of Package(LXWXH)	mm	881X363X595
	Net Weight	kg	33.5
	Gross Weight	kg	38.5
	Refrigerant		R410A
	Refrigerant Charge	kg	1.23
Connection Pipe	Length	m	7.5
	Gas Additional Charge	g/m	20
	Outer Diameter Liquid Pipe	mm	Φ6
	Outer Diameter Gas Pipe	mm	Φ9.52
	Max Distance Height	m	10
	Max Distance Length	m	15
	Note: The connection pipe applies metric diameter.		

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

Parameter		Unit	Value	
Model			GWH09RB-K3NNA4A	GWH09RB-K3NNA5A
Product Code			CA303001700	CA304001500
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	2950	2950
Heating Capacity		W	3050	3050
Cooling Power Input		W	775	775
Heating Power Input		W	800	800
Cooling Power Current		A	3.44	3.44
Heating Power Current		A	3.55	3.55
Rated Input		W	1120	1120
Rated Current		A	4.97	4.97
Air Flow Volume(SH/H/M/L/SL)		m^3/h	600/530/430/330/-	600/530/430/330/-
Dehumidifying Volume		L/h	0.8	0.8
EER		W/W	3.81	3.81
COP		W/W	3.81	3.81
Application Area		m^2	12-18	12-18
Indoor Unit	Model of indoor unit		GWH09RB-K3NNA4A/I	GWH09RB-K3NNA5A/I
	Fan Type		Cross-flow	Cross-flow
	Diameter Length(DXL)	mm	Φ92X645	Φ92X645
	Fan Motor Cooling Speed(SH/H/M/L/SL)	r/min	1260/1070/900/730/-	1260/1070/900/730/-
	Fan Motor Heating Speed(SH/H/M/L/SL)	r/min	1100/1050/980/920/-	1100/1050/980/920/-
	Output of Fan Motor	W	20	20
	Fan Motor RLA	A	0.25	0.25
	Fan Motor Capacitor	μF	1	1
	Input of Heater	W	/	/
	Evaporator Form		Aluminum Fin-copper Tube	Aluminum Fin-copper Tube
	Pipe Diameter	mm	Φ7	Φ7
	Row-fin Gap	mm	2-1.4	2-1.4
	Coil Length (LXDXW)	mm	645X25.4X267	645X25.4X267
	Swing Motor Model		MP24AA	MP24AA
	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)	40/37/35/32/-	40/37/35/32/-
	Sound Power Level (SH/H/M/L/SL)	dB (A)	50/47/45/42/-	50/47/45/42/-
	Dimension (WXHXD)	mm	848X274X189	848X274X189
	Dimension of Carton Box (LXWXH)	mm	923X264X356	923X264X356
	Dimension of Package(LXWXH)	mm	926X267X371	926X267X371
	Net Weight	kg	10	10
	Gross Weight	kg	13	13

Outdoor Unit	Model of Outdoor Unit		GWH09RB-K3NNA1A/O
	Compressor Manufacturer/Trademark		ZHUHAILANDA COMPRESSOR CO.,LTD./GREE
	Compressor Model		QXA-B102uC130
	Compressor Oil		PVE(DN HERMITIC FVC 68D)
	Compressor Type		Rotary
	L.R.A.	A	18
	Compressor RLA	A	4±5%
	Compressor Power Input	W	858±5%
	Overload Protector		B210-150-241H
	Throttling Method		Capillary
	Operation Temp	ºC	16 ～ 30
	Ambient Temp (Cooling)	ºC	18 ～ 43
	Ambient Temp (Heating)	ºC	-7 ～ 24
	Condenser Form		Aluminum Fin-copper Tube
	Pipe Diameter	mm	Φ9.52
	Rows-fin Gap	mm	2-1.4
	Coil Length (LXDXW)	mm	741X25.4X495
	Fan Motor Speed	rpm	860
	Output of Fan Motor	W	30
	Fan Motor RLA	A	0.23
	Fan Motor Capacitor	μF	2
	Air Flow Volume of Outdoor Unit	m^3/h	1800
	Fan Type		Axial-flow
	Fan Diameter	mm	Φ394.5
	Defrosting Method		Automatic Defrosting
	Climate Type		T1
	Isolation		I
	Moisture Protection		IP24
	Permissible Excessive Operating Pressure for the Discharge Side	MPa	3.8
	Permissible Excessive Operating Pressure for the Suction Side	MPa	1.2
	Sound Pressure Level (H/M/L)	dB (A)	50/-/-
	Sound Power Level (H/M/L)	dB (A)	60/-/-
	Dimension (WXHXD)	mm	848X540X320
	Dimension of Carton Box (LXWXH)	mm	878X360X580
	Dimension of Package(LXWXH)	mm	881X363X595
	Net Weight	kg	33.5
	Gross Weight	kg	38.5
	Refrigerant		R410A
	Refrigerant Charge	kg	1.23
Connection Pipe	Length	m	7.5
	Gas Additional Charge	g/m	20
	Outer Diameter Liquid Pipe	mm	Φ6
	Outer Diameter Gas Pipe	mm	Φ9.52
	Max Distance Height	m	10
	Max Distance Length	m	15
	Note: The connection pipe applies metric diameter.		

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

Parameter		Unit	Value	
Model			GWH12RB-K3NNA1A GWH12RB-K3NNA2A GWH12RB-K3NNA4A	GWH12RB-K3NNA3A GWH12RB-K3NNA5A
Product Code			CA144006000 CA301002000 CA303001800	CA302002200 CA304001600
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	3500	3500
Heating Capacity		W	3600	3600
Cooling Power Input		W	920	920
Heating Power Input		W	945	945
Cooling Power Current		A	4.08	4.08
Heating Power Current		A	4.19	4.19
Rated Input		W	1350	1350
Rated Current		A	5.99	5.99
Air Flow Volume(SH/H/M/L/SL)		m^3/h	630/530/430/330/-	630/530/430/330/-
Dehumidifying Volume		L/h	1.40	1.40
EER		W/W	3.80	3.80
COP		W/W	3.81	3.81
Application Area		m^2	15-22	15-22
Indoor Unit	Model of indoor unit		GWH12RB-K3NNA1A/I GWH12RB-K3NNA2A/I GWH12RB-K3NNA4A/I	GWH12RB-K3NNA3A/I GWH12RB-K3NNA5A/I
	Fan Type		Cross-flow	Cross-flow
	Diameter Length(DXL)	mm	Φ92X645	Φ92X645
	Fan Motor Cooling Speed(SH/H/M/L/SL)	r/min	1260/1070/900/730/-	1260/1070/900/730/-
	Fan Motor Heating Speed(SH/H/M/L/SL)	r/min	1100/1050/980/920/-	1100/1050/980/920/-
	Output of Fan Motor	W	20	20
	Fan Motor RLA	A	0.25	0.25
	Fan Motor Capacitor	μF	1	1
	Input of Heater	W	/	/
	Evaporator Form		Aluminum Fin-copper Tube	Aluminum Fin-copper Tube
	Pipe Diameter	mm	Φ7	Φ7
	Row-fin Gap	mm	2-1.4	2-1.4
	Coil Length (LXDXW)	mm	645X25.4X267	645X25.4X267
	Swing Motor Model		MP24AA	MP24AA
	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)	42/39/36/33/-	42/39/36/33/-
	Sound Power Level (SH/H/M/L/SL)	dB (A)	52/49/46/43/-	52/49/46/43/-
	Dimension (WXHXD)	mm	848X274X189	848X274X189
	Dimension of Carton Box (LXWXH)	mm	923X264X356	923X264X356
	Dimension of Package(LXWXH)	mm	926X267X371	926X267X371
	Net Weight	kg	10	10
	Gross Weight	kg	13	13

Outdoor Unit	Model of Outdoor Unit		GWH12RB-K3NNA1A/O
	Compressor Manufacturer/Trademark		ZHUHAILANDA COMPRESSOR CO.,LTD./GREE
	Compressor Model		QXA-C124B030
	Compressor Oil		RB68EP or FVC68D
	Compressor Type		Rotary
	L.R.A.	A	25.00
	Compressor RLA	A	5±5%
	Compressor Power Input	W	1035±5%
	Overload Protector		Internal
	Throttling Method		Capillary
	Operation Temp	ºC	16 ～ 30
	Ambient Temp (Cooling)	ºC	18 ～ 43
	Ambient Temp (Heating)	ºC	-7 ～ 24
	Condenser Form		Aluminum Fin-copper Tube
	Pipe Diameter	mm	Φ7
	Rows-fin Gap	mm	3-1.5
	Coil Length (LXDXW)	mm	764X44X550
	Fan Motor Speed	rpm	860
	Output of Fan Motor	W	30
	Fan Motor RLA	A	0.23
	Fan Motor Capacitor	μF	/
	Air Flow Volume of Outdoor Unit	m^3/h	2000
	Fan Type		Axial-flow
	Fan Diameter	mm	Φ400.5
	Defrosting Method		Automatic Defrosting
	Climate Type		T1
	Isolation		I
	Moisture Protection		IP24
	Permissible Excessive Operating Pressure for the Discharge Side	MPa	3.8
	Permissible Excessive Operating Pressure for the Suction Side	MPa	1.2
	Sound Pressure Level (H/M/L)	dB (A)	52/-/-
	Sound Power Level (H/M/L)	dB (A)	62/-/-
	Dimension (WXHXD)	mm	848X592X320
	Dimension of Carton Box (LXWXH)	mm	878X360X630
	Dimension of Package(LXWXH)	mm	881X363X645
	Net Weight	kg	39
	Gross Weight	kg	44
	Refrigerant		R410A
	Refrigerant Charge	kg	1.37
Connection Pipe	Length	m	5
	Gas Additional Charge	g/m	20
	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.

Parameter		Unit	Value
Model			GWH09RA-K3NNA1C GWH09RA-K3NNA2C GWH09RA-K3NNA3C GWH09RA-K3NNA4C GWH09RA-K3NNA5C(Cold Plasma) GWH09RA-K3NNA6C GWH09RA-K3NNA6C(Cold Plasma)
Product Code			CA144005600 CA301002100 CA302004100 CA303002201 CA304002200 CA305000401 CA305000402
Power Supply	Rated Voltage	V ～	220-240
	Rated Frequency	Hz	50
	Phases		1
Power Supply Mode			Indoor
Cooling Capacity		W	2600
Heating Capacity		W	2800
Cooling Power Input		W	809
Heating Power Input		W	775
Cooling Power Current		A	3.59
Heating Power Current		A	3.44
Rated Input		W	1120
Rated Current		A	4.97
Air Flow Volume(SH/H/M/L/SL)		m^3/h	500/440/400/360/-
Dehumidifying Volume		L/h	0.8
EER		W/W	3.21
COP		W/W	3.61
SEER		W/W	/
HSPF		W/W	/
Application Area		m^2	12-18
Indoor Unit	Model of indoor unit		GWH09RA-K3NNA1C/I GWH09RA-K3NNA2C/I GWH09RA-K3NNA3C/I GWH09RA-K3NNA4C/I GWH09RA-K3NNA5C/I(Cold Plasma) GWH09RA-K3NNA6C/I GWH09RA-K3NNA6C/I(Cold Plasma)
	Fan Type		Cross-flow
	Diameter Length(DXL)	mm	Φ85X596
	Fan Motor Cooling Speed(SH/H/M/L/SL)	r/min	1260/1050/920/730/-
	Fan Motor Heating Speed(SH/H/M/L/SL)	r/min	1320/1200/1100/950/-
	Output of Fan Motor	W	10
	Fan Motor RLA	A	0.13
	Fan Motor Capacitor	μF	1
	Input of Heater	W	/
	Evaporator Form		Aluminum Fin-copper Tube
	Pipe Diameter	mm	Φ7
	Row-fin Gap	mm	2-1.5
	Coil Length (LXDXW)	mm	581X25.4X264
	Swing Motor Model		MP24AA
	Output of Swing Motor	W	1.5
	Fuse	A	3.15
	Sound Pressure Level (SH/H/M/L/SL)	dB (A)	40/37/35/32/-
	Sound Power Level (SH/H/M/L/SL)	dB (A)	50/47/45/42/-
	Dimension (WXHXD)	mm	794X264.5X182
	Dimension of Carton Box (LXWXH)	mm	870X255X350
	Dimension of Package(LXWXH)	mm	873X258X365
	Net Weight	kg	9
	Gross Weight	kg	12

Outdoor Unit	Model of Outdoor Unit		GWH09MA-K3NNA3A/O
	Compressor Manufacturer/ Trademark		ZHUHAI LANDA COMPRESSOR CO.,LTD. /GREE
	Compressor Model		QXA-B102uC130
	Compressor Oil		POE(Ze-GLES RB 68EP)
	Compressor Type		Rotary
	L.R.A.	A	18
	Compressor RLA	A	4
	Compressor Power Input	W	858
	Overload Protector		B210-150-241H
	Throttling Method		Capillary
	Operation Temp	ºC	16 ～ 30
	Ambient Temp (Cooling)	ºC	18 ～ 43
	Ambient Temp (Heating)	ºC	-7 ～ 24
	Condenser Form		Aluminum Fin-copper Tube
	Pipe Diameter	mm	Φ7
	Rows-fin Gap	mm	1-1.4
	Coil Length (LXDXW)	mm	741X12.7X495.3
	Fan Motor Speed	rpm	830
	Output of Fan Motor	W	30
	Fan Motor RLA	A	0.23
	Fan Motor Capacitor	μF	2
	Air Flow Volume of Outdoor Unit	m^3/h	1800
	Fan Type		Axial-flow
	Fan Diameter	mm	Φ394.5
	Defrosting Method		Automatic Defrosting
	Climate Type		T1
	Isolation		I
	Moisture Protection		IP24
	Permissible Excessive Operating Pressure for the Discharge Side	MPa	3.8
	Permissible Excessive Operating Pressure for the Suction Side	MPa	1.2
	Sound Pressure Level (H/M/L)	dB (A)	50/-/-
	Sound Power Level (H/M/L)	dB (A)	60/-/-
	Dimension (WXHXD)	mm	848X540X320
	Dimension of Carton Box (LXWXH)	mm	878X360X580
	Dimension of Package(LXWXH)	mm	881X363X595
	Net Weight	kg	26
	Gross Weight	kg	30
	Refrigerant		R410A
	Refrigerant Charge	kg	0.75
Connection Pipe	Length	m	5
	Gas Additional Charge	g/m	20
	Outer Diameter Liquid Pipe	mm	Φ6
	Outer Diameter Gas Pipe	mm	Φ9.52
	Max Distance Height	m	10
	Max Distance Length	m	15
	Note: The connection pipe applies metric diameter.		

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

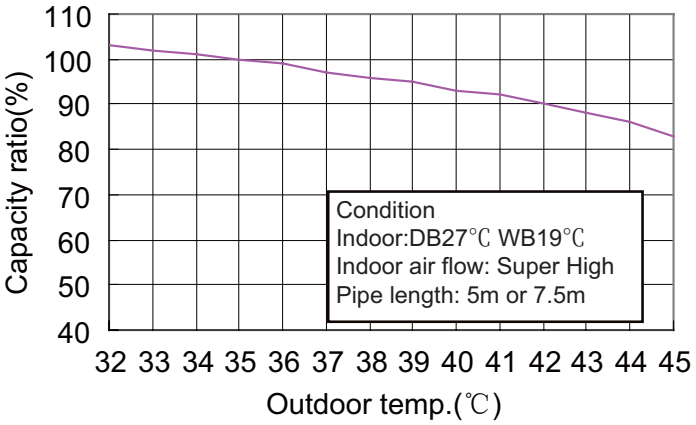
Parameter		Unit	Value
Model			1.GWH12RB-K3NNA1C 2.GWH12RB-K3NNA2C 3.GWH12RB-K3NNA3C 4.GWH12RB-K3NNA4C 5.GWH12RB-K3NNA5C(Cold Plasma) 6.GWH12RB-K3NNA6C 7.GWH12RB-K3NNA6C(Cold Plasma)
Product Code			1.CA144005101 2.CA301001801 3.CA302001801,CA302001804,CA302001803 4.CA303001602 5.CA304001401 6.CA305000201 7.CA305000202
Power Supply	Rated Voltage	V ～	220-240
	Rated Frequency	Hz	50
	Phases		1
Power Supply Mode			Indoor
Cooling Capacity		W	3500
Heating Capacity		W	3850
Cooling Power Input		W	1075
Heating Power Input		W	1065
Cooling Power Current		A	4.77
Heating Power Current		A	4.70
Rated Input		W	1500
Rated Current		A	6.65
Air Flow Volume(SH/H/M/L/SL)		m^3/h	630/-/-/-/-
Dehumidifying Volume		L/h	1.4
EER		W/W	3.26
COP		W/W	3.62
SEER		W/W	/
HSPF		W/W	/
Application Area		m^2	16-24
Indoor Unit	Model of indoor unit		GWH12RB-K3NNA1C/I GWH12RB-K3NNA2C/I GWH12RB-K3NNA3C/I GWH12RB-K3NNA4C/I GWH12RB-K3NNA5C/I(Cold Plasma) GWH12RB-K3NNA6C/I GWH12RB-K3NNA6C/I(Cold Plasma)
	Fan Type		Cross-flow
	Diameter Length(DXL)	mm	Φ92X645
	Fan Motor Cooling Speed(SH/H/M/L/SL)	r/min	1290/1070/900/730/-
	Fan Motor Heating Speed(SH/H/M/L/SL)	r/min	1280/1150/1050/920/-
	Output of Fan Motor	W	20
	Fan Motor RLA	A	0.2
	Fan Motor Capacitor	μF	1
	Input of Heater	W	/
	Evaporator Form		Aluminum Fin-copper Tube
	Pipe Diameter	mm	Φ7
	Row-fin Gap	mm	2-1.4
	Coil Length (LXDXW)	mm	645X25.4X267
	Swing Motor Model		MP24AA
	Output of Swing Motor	W	1.5
	Fuse	A	3.15
	Sound Pressure Level (SH/H/M/L/SL)	dB (A)	42/39/36/33/-
	Sound Power Level (SH/H/M/L/SL)	dB (A)	52/49/46/43/-
	Dimension (WXHXD)	mm	848X274X189
	Dimension of Carton Box (LXWXH)	mm	923X264X356
	Dimension of Package(LXWXH)	mm	926X267X371
	Net Weight	kg	10
	Gross Weight	kg	13

Outdoor Unit	Model of Outdoor Unit		GWH12MB-K3NNA4A/O
	Compressor Manufacturer/ Trademark		ZHUHAI LANDA COMPRESSOR CO.,LTD./GREE
	Compressor Model		QXA-C133B030gA
	Compressor Oil		RB68EPorFVC 68D
	Compressor Type		Rotary
	L.R.A.	A	32
	Compressor RLA	A	5.3±5%
	Compressor Power Input	W	1130
	Overload Protector		Internal
	Throttling Method		Capillary
	Operation Temp	ºC	16 ～ 30
	Ambient Temp (Cooling)	ºC	18 ～ 43
	Ambient Temp (Heating)	ºC	-7 ～ 24
	Condenser Form		Aluminum Fin-copper Tube
	Pipe Diameter	mm	Φ7
	Rows-fin Gap	mm	1-1.4
	Coil Length (LXDXW)	mm	781X22X508
	Fan Motor Speed	rpm	850
	Output of Fan Motor	W	30
	Fan Motor RLA	A	0.23
	Fan Motor Capacitor	μF	2
	Air Flow Volume of Outdoor Unit	m^3/h	1800
	Fan Type		Axial-flow
	Fan Diameter	mm	Φ394.5
	Defrosting Method		Automatic Defrosting
	Climate Type		T1
	Isolation		I
	Moisture Protection		IP24
	Permissible Excessive Operating Pressure for the Discharge Side	MPa	3.8
	Permissible Excessive Operating Pressure for the Suction Side	MPa	1.2
	Sound Pressure Level (H/M/L)	dB (A)	51/-/-
	Sound Power Level (H/M/L)	dB (A)	61/-/-
	Dimension (WXHXD)	mm	848X540X320
	Dimension of Carton Box (LXWXH)	mm	878X360X580
	Dimension of Package(LXWXH)	mm	881X363X595
	Net Weight	kg	34
	Gross Weight	kg	38
	Refrigerant		R410A
	Refrigerant Charge	kg	1
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.		

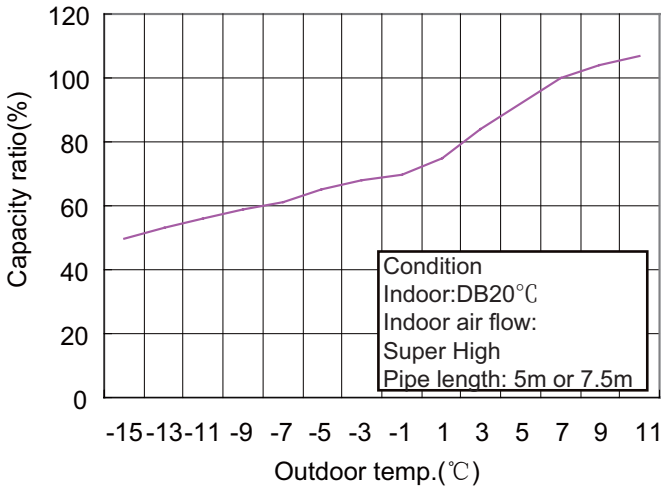
The above data is subject to change without notice. Please refer to the nameplate of the unit.

2.2 Capacity Variation Ratio According to Temperature

Cooling



Heating



2.3 Operation Data

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	07K/09K/12K	0.8~1.1	in:8~11 out:11~14	in:75~85 out:37~43	Super High	High

Heating

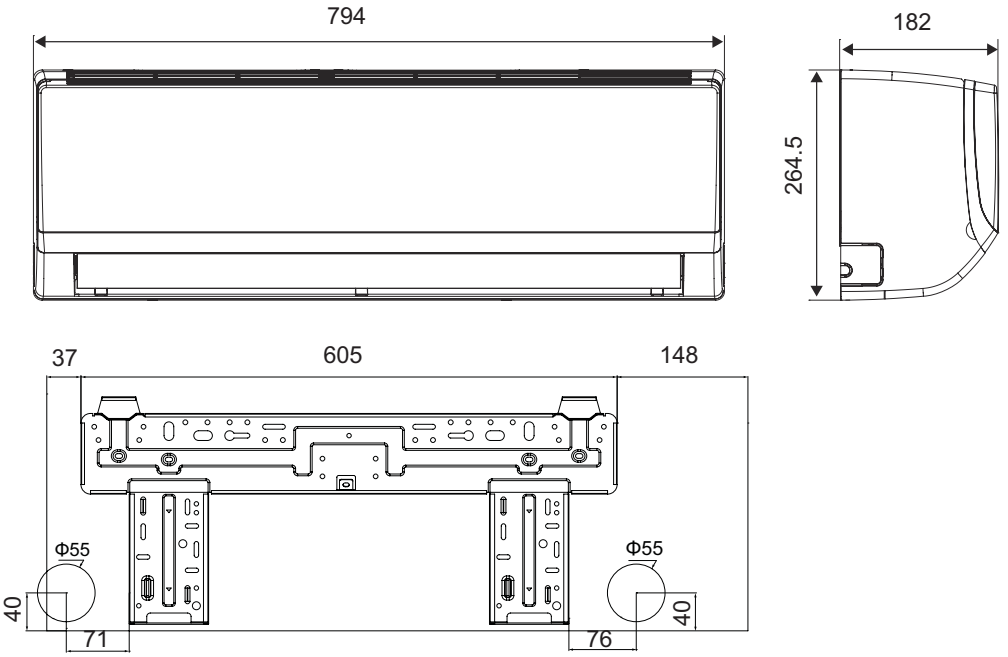
Rated heating condition(°C) (DB/WB)		Model	Pressure of gas pipe connecting indoor and outdoor unit	Inlet and outlet pipe temperature of heat exchanger		Fan speed of indoor unit	Fan speed of outdoor unit
Indoor	Outdoor		P (MPa)	T1 (°C)	T2 (°C)		
20/-	7/6	07K/09K/12K	2.8~3.2	in:75~85 out:37~43	in:1~3 out:2~5	Super High	High

Instruction:
T1: Inlet and outlet pipe temperature of evaporator
T2: Inlet and outlet pipe temperature of condenser
P: Pressure at the side of big valve
Connection pipe length: 5 m or 7.5 m

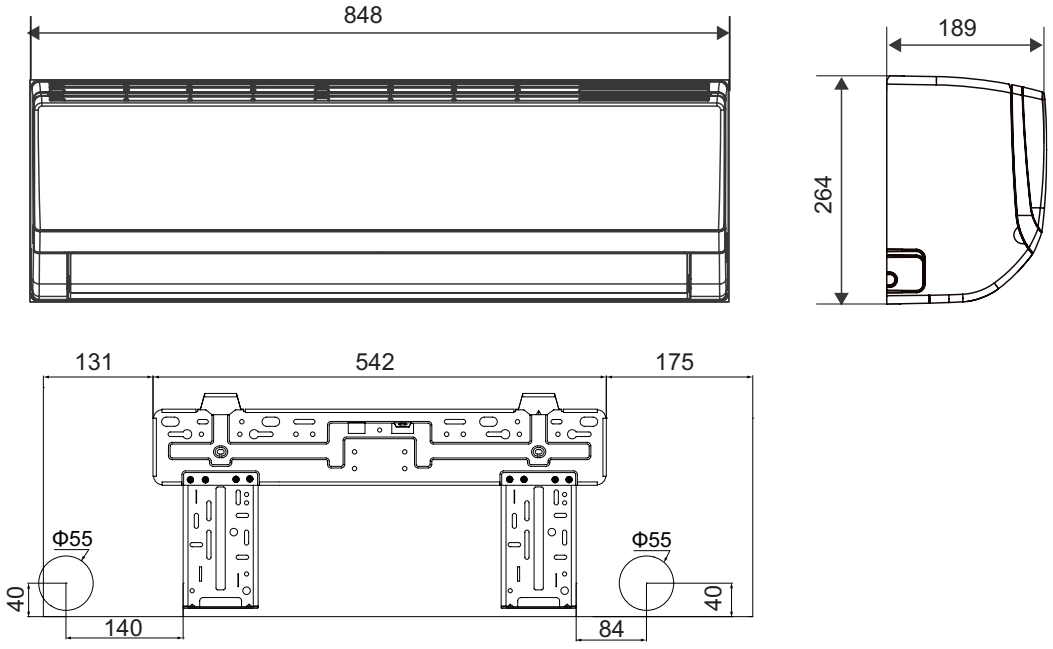
3. Construction Views

3.1 Indoor Unit

GWH07RA-K3NNA1E/I
GWH07RA-K3NNA1A/I
GWH07RA-K3NNA4A/I
GWH09RA-K3NNA1C/I
GWH09RA-K3NNA2C/I
GWH09RA-K3NNA3C/I
GWH09RA-K3NNA4C/I
GWH09RA-K3NNA5C/I
GWH09RA-K3NNA6C/I



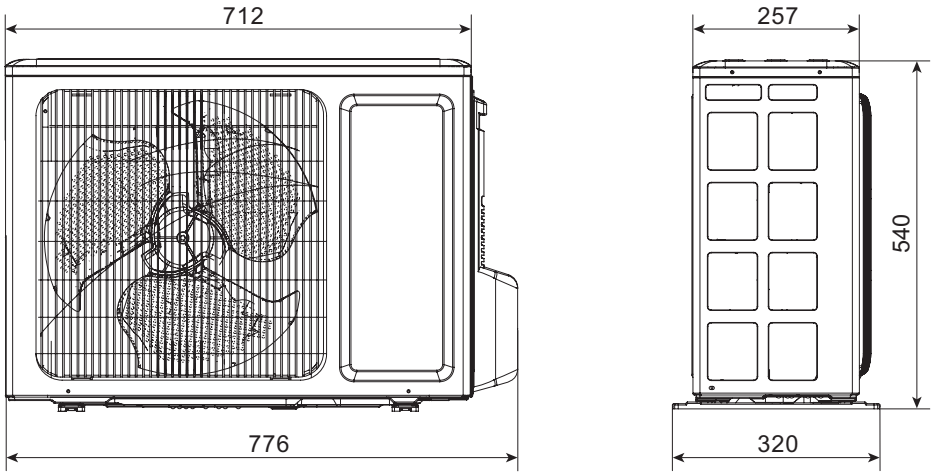
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GWH09RB-K3NNA2A/I
GWH09RB-K3NNA3A/I
GWH09RB-K3NNA4A/I
GWH09RB-K3NNA5A/I
GWH12RB-K3NNA1C/I
GWH12RB-K3NNA1A/I
GWH12RB-K3NNA2A/I
GWH12RB-K3NNA2C/I
GWH12RB-K3NNA3A/I
GWH12RB-K3NNA3C/I
GWH12RB-K3NNA4A/I
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GWH12RB-K3NNA6C/I



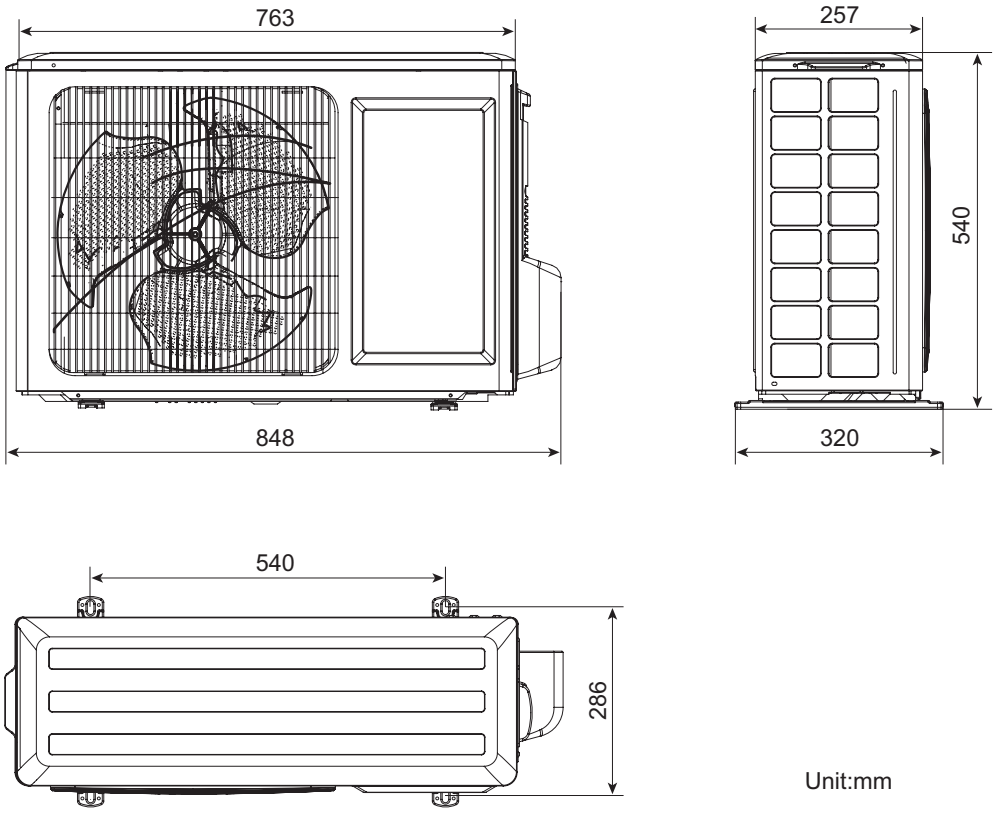
Unit:mm

3.2 Outdoor Unit

GWH07MA-K3NNA3E/O

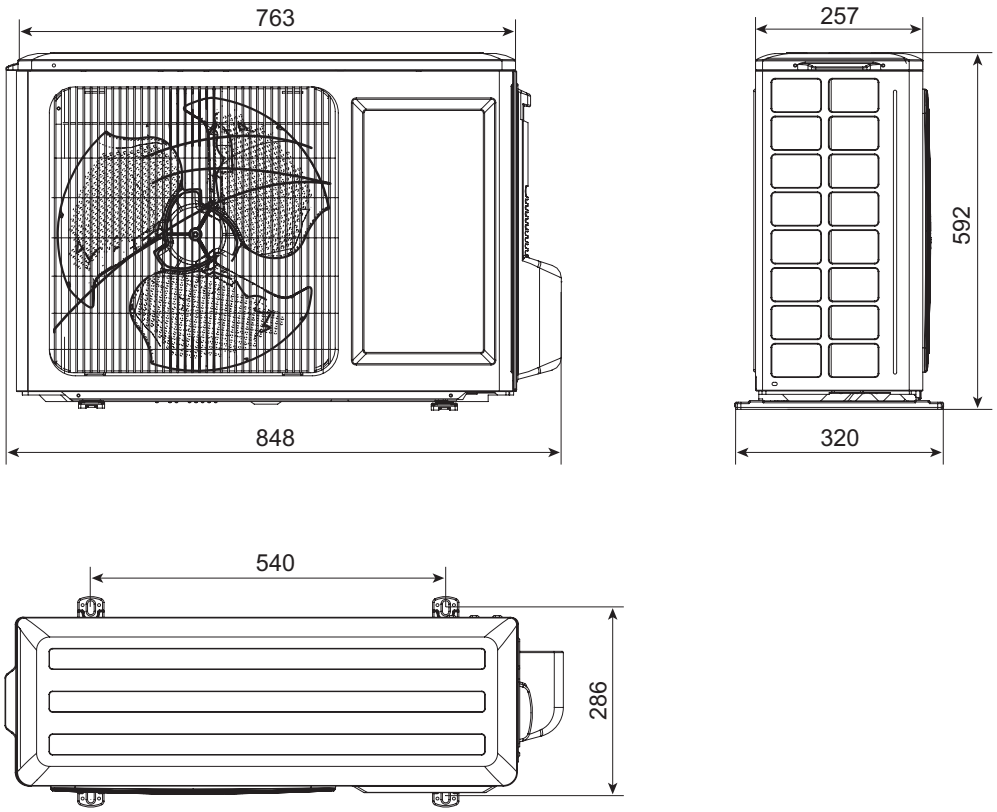


GWH07MA-K3NNC9A/O
GWH09MA-K3NNA3A/O
GWH09RB-K3NNA1A/O
GWH12MB-K3NNA4A/O
GWH12RB-K3NNA1A/O



Unit:mm

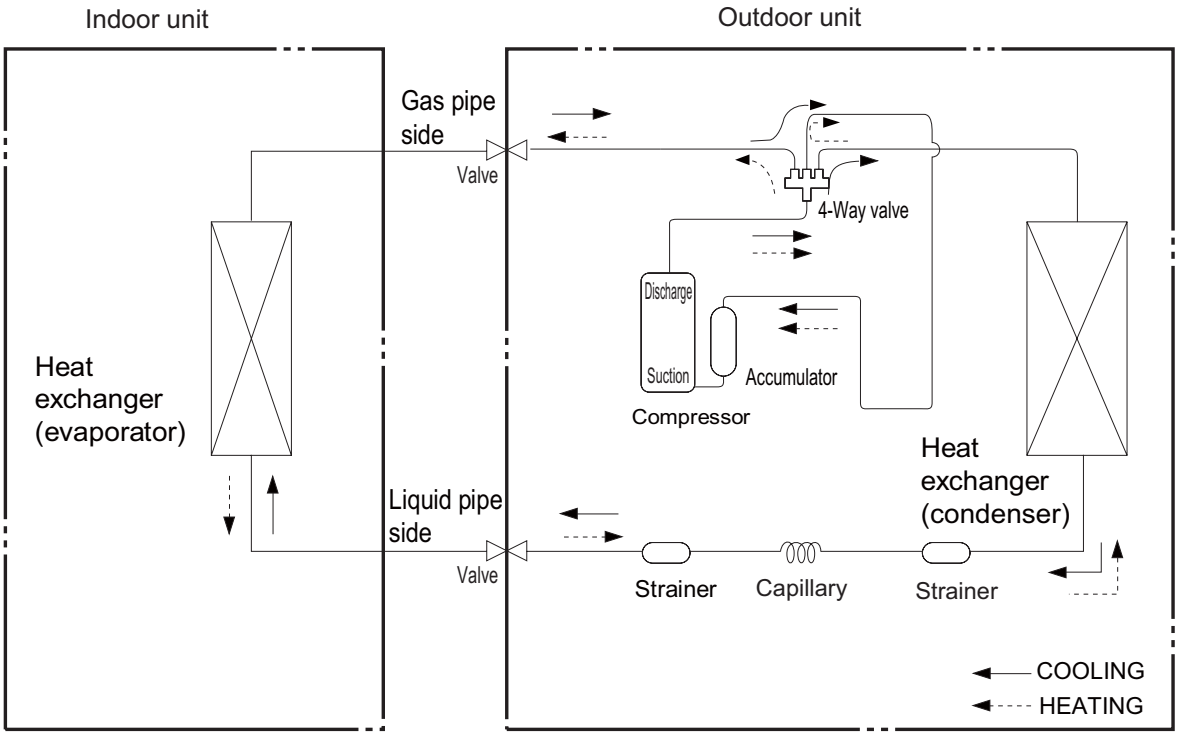
GWH12RB-K3NNA1A/O



Unit:mm

4. Refrigerant System Diagram

Cooling and heating model



Refrigerant pipe diameter
Liquid : 1/4" (6 mm)
Gas : 3/8" (9.52mm)(07&09K)
Gas : 1/2" (12mm)(12K)

5. Electrical Part

5.1 Wiring Diagram

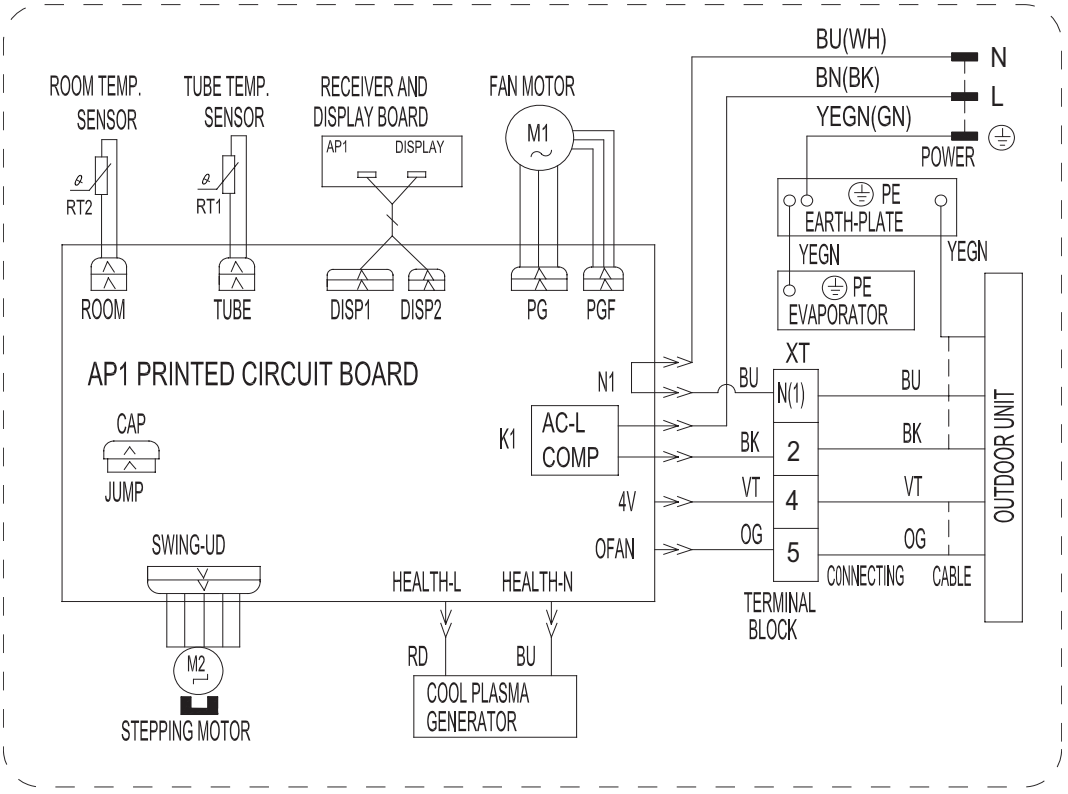
● Instruction

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.

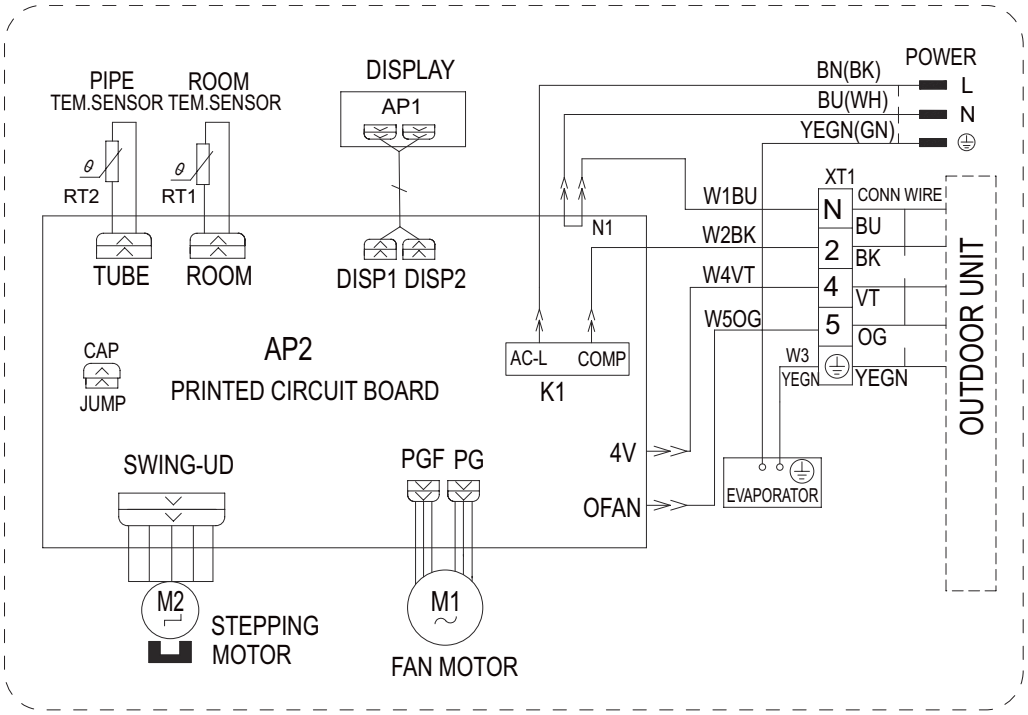
● Indoor Unit

(1) Model:
GWH07RA-K3NNA1E/I



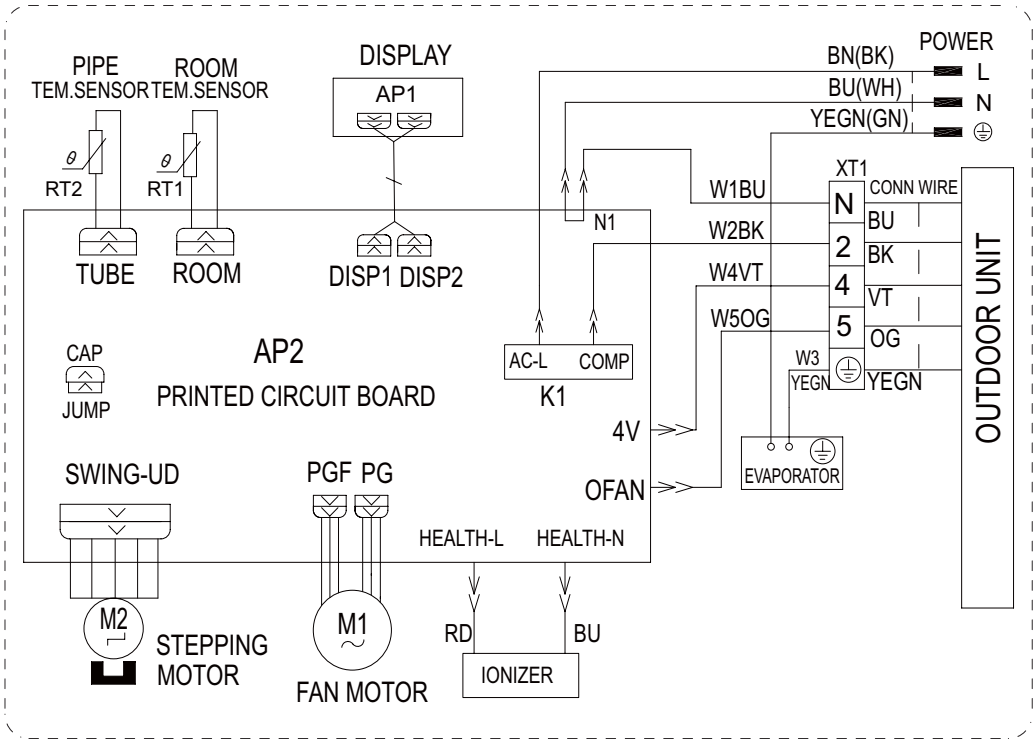
(2) Models:

GWH07RA-K3NNA1A/I
GWH07RA-K3NNA4A/I
GWH09RA-K3NNA1C/I
GWH09RB-K3NNA1A/I
GWH09RB-K3NNA2A/I
GWH09RA-K3NNA2C/I
GWH09RB-K3NNA3A/I
GWH09RB-K3NNA4A/I
GWH09RA-K3NNA3C/I
GWH09RB-K3NNA5A/I
GWH12RB-K3NNA1C/I
GWH12RB-K3NNA1A/I
GWH12RB-K3NNA2A/I
GWH12RB-K3NNA2C/I
GWH12RB-K3NNA3A/I
GWH12RB-K3NNA4A/I
GWH12RB-K3NNA3C/I
GWH12RB-K3NNA5A/I

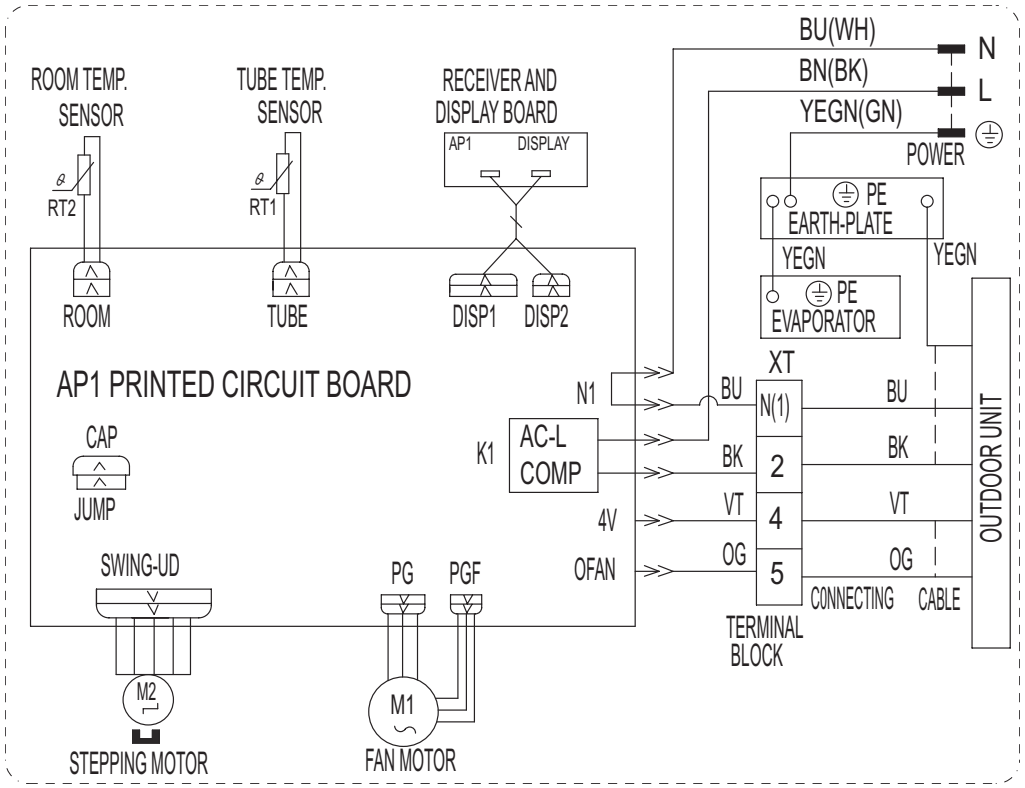


(3) Models:

GWH09RA-K3NNA5C/I (Cold Plasma)
GWH12RB-K3NNA5C/I (Cold Plasma)
GWH09RA-K3NNA6C/I (Cold Plasma)
GWH12RB-K3NNA6C/I (Cold Plasma)

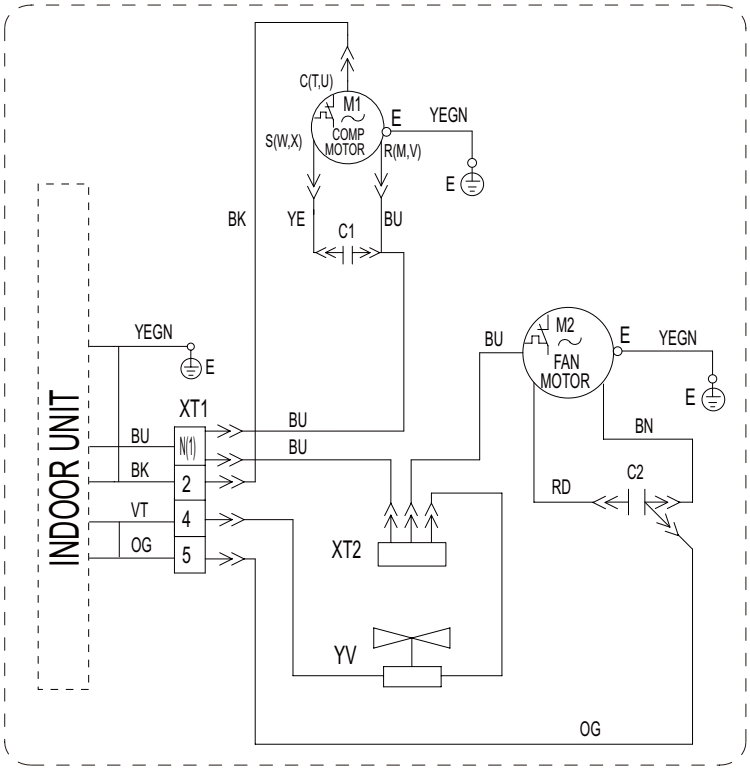


(4) Models:
GWH09RA-K3NNA4C/I
GWH12RB-K3NNA4C/I
GWH09RA-K3NNA6C/I
GWH12RB-K3NNA6C/I

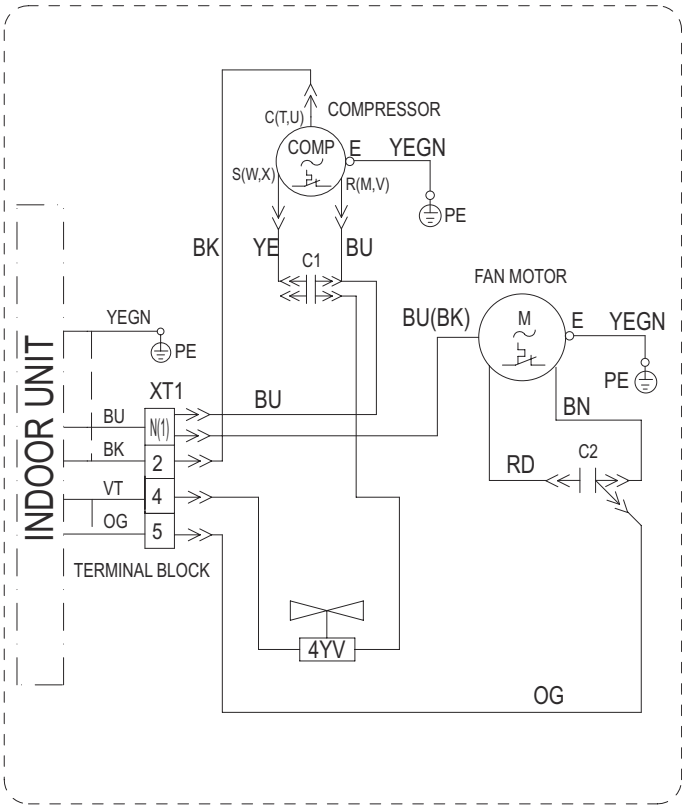


● **Outdoor Unit**

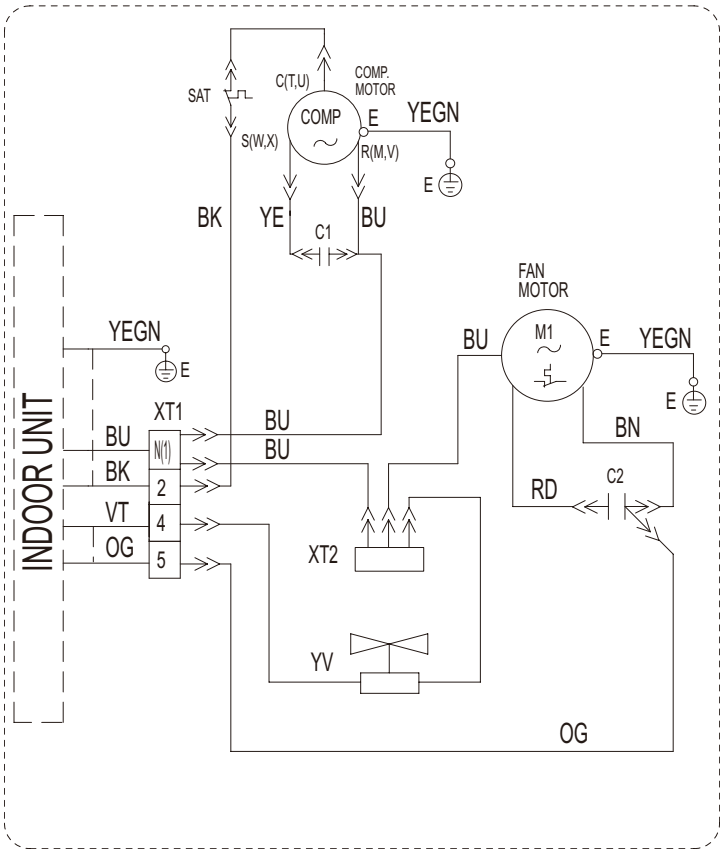
(1) Model:GWH07MA-K3NNA3E/O



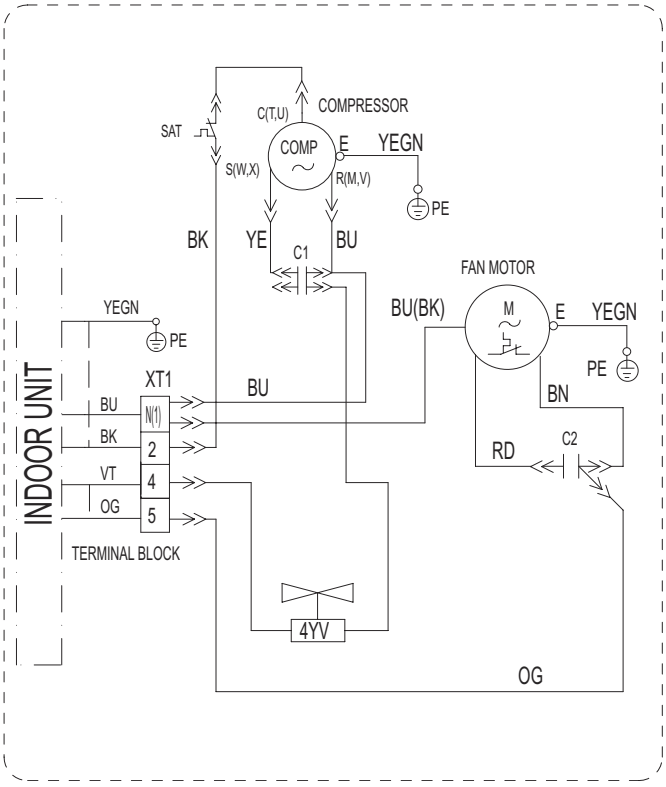
(2) Models:GWH07MA-K3NNC9A/O GWH12MB-K3NNA4A/O



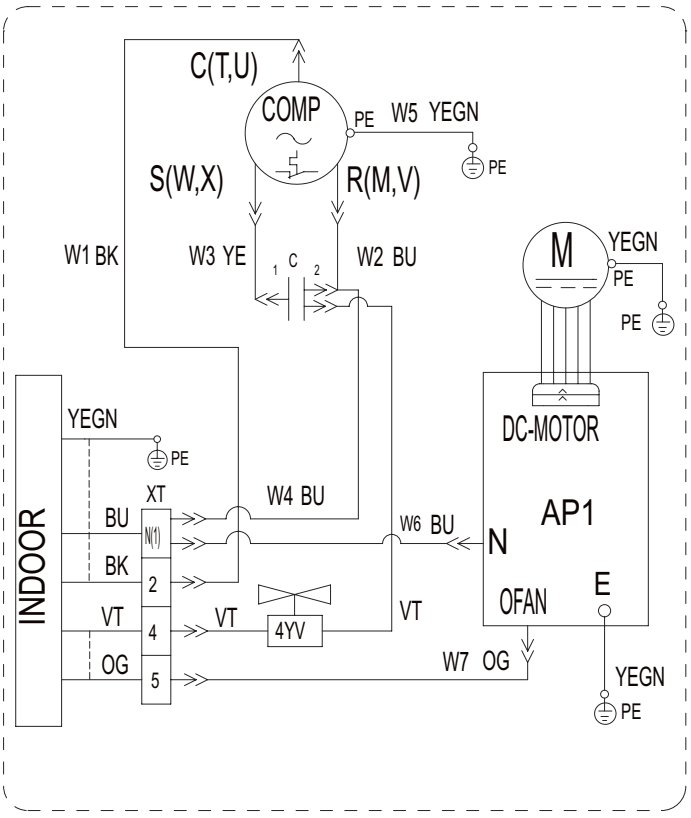
(3) Model:GWH09MA-K3NNA3A/O



(4) Model:GWH09RB-K3NNA1A/O



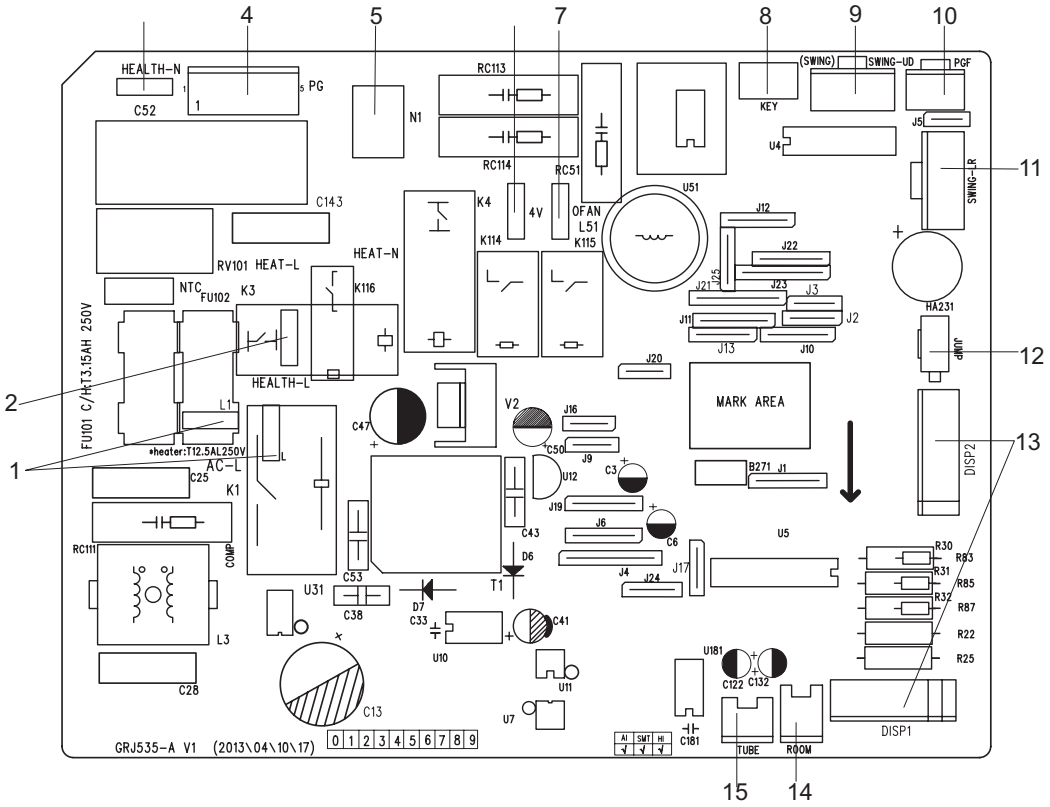
(5) Model:GWH12RB-K3NNA1A/O



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

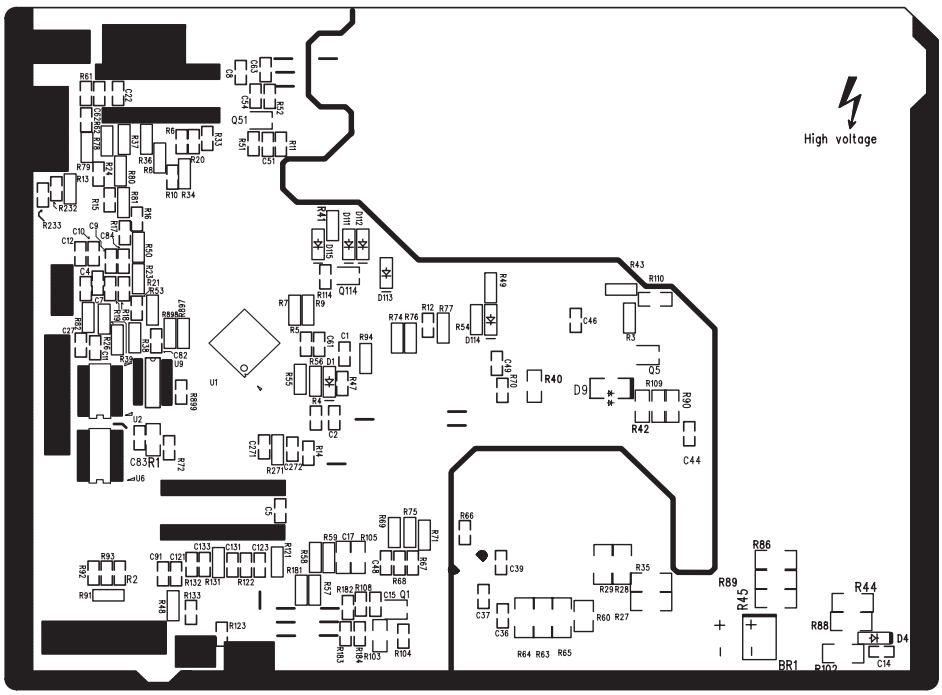
5.2 PCB Printed Diagram

● **Top View**



NO.	NAME
1	Interface of live wire
2	Interface of live wire for health function
3	Interface of neutral wire for health function
4	Control interface of PG motor
5	Interface of neutral wire
6	Interface of 4-way valve
7	Interface of outdoor fan
8	Tact Switch
9	Up & down swing
10	PG Motor Feedback Interface
11	Left & Right Air Swing Interface
12	Jumper Cap Interface
13	Display Interface
14	Ambient Temperature Sensor
15	Tube Temperature Sensor

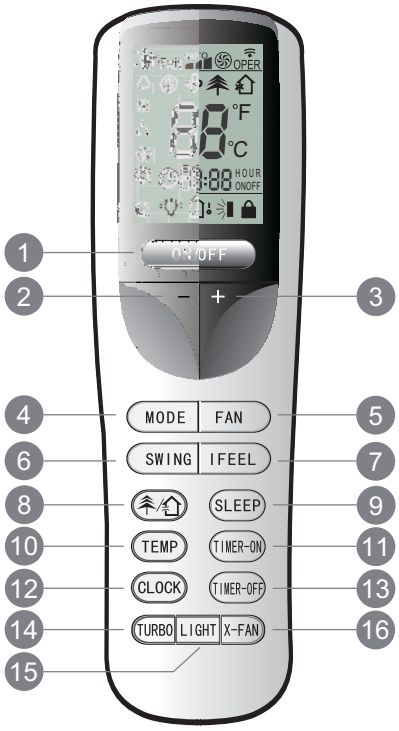
● **BOTTOM VIEW**



6. Function and Control

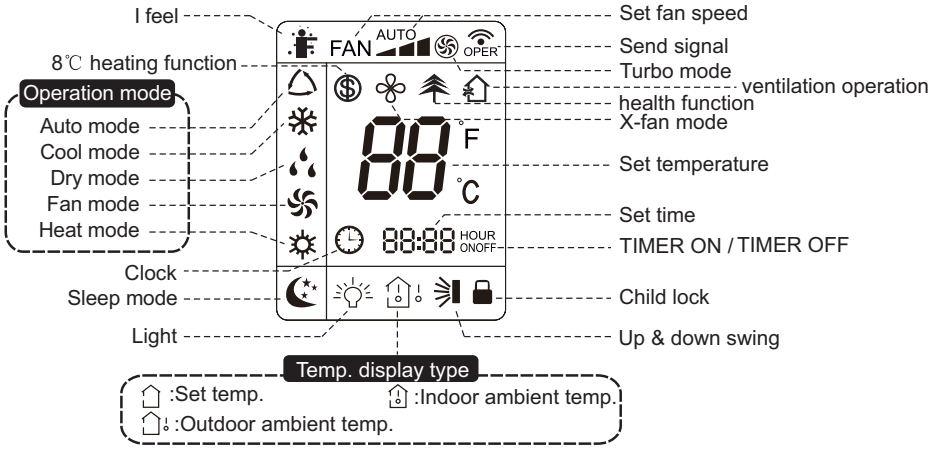
6.1 Remote Controller Description

Buttons on Remote Controller



1. ON/OFF button
2. - button
3. + button
4. MODE button
5. FAN button
6. SWING button
7. I FEEL button
8. ↟/⌂ button
9. SLEEP button
10. TEMP button
11. TIMER-ON button
12. CLOCK button
13. TIMER-OFF button
14. TURBO button
15. LIGHT button
16. X-FAN button

Introduction for Icons on Display Screen



Introduction for Buttons on Remote Controller

Note:

●.After.putting.through.the.power,.the.air.conditioner.will.give.out.a.sound..Operation.indictor.".".is.ON.(red.indicator)..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. - Button

Press this button to decrease set temperature. Holding it down above 2 seconds rapidly decreases set temperature. In AUTO mode, set temperature is not adjustable.

3. + Button

Press this button to increase set temperature. Holding it down above 2 seconds rapidly increases set temperature. In AUTO mode, set temperature is not adjustable.

4. MODE Button

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



*Note:Only for models with heating function.

After energization, AUTO mode is defaulted. In AUTO mode, the set temperature will not be displayed on the LCD, and the unit will automatically select the suitable operation mode in accordance with the room temperature to make indoor room comfortable.
(As for cooling only unit, it won't have any action when it receives the signal of heating operation.)

5. FAN Button

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



6. SWING Button

Press this button to set up &down swing angle, which circularly changes as below:



This remote controller is universal. If any command , or is sent out, the unit will carry out the command as indicates the guide louver swings as:

7. I FEEL Button

Press this button to turn on I FEEL function. The unit automatically adjust temperature according to the sensed temperature. Press this button again to cancel I FEEL function.

8. / Button

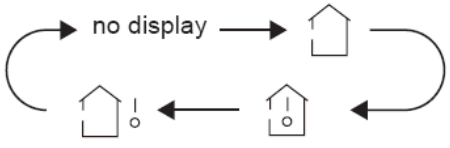
Press this button to achieve the on and off of healthy and scavenging functions in operation status. Press this button for the first time to start scavenging function; LCD displays "". Press the button for the second time to start healthy and scavenging functions simultaneously; LCD displays "" and "". Press this button for the third time to quit healthy and scavenging functions simultaneously. Press the button for the fourth time to start healthy function; LCD display "". Press this button again to repeat the operation above. (This function is applicable to partial of models)

9. SLEEP Button

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

10. TEMP Button

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



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

11. TIMER-ON Button

Press this button to initiate the auto-ON timer. To cancel the auto-timer program, simply press this button again.

After press of this button, disappears and "ON" blinks. 00:00 is displayed for ON time setting. Within 5 seconds, press + or - button to adjust the time value. Every press of either button changes the time setting by 1 minute. Holding down either button rapidly changes the time setting by 1 minute and then 10 minutes. Within 5 Seconds after setting,press TIMER ON button to confirm.

12. CLOCK Button

Press CLOCK button,blinking. Within 5 seconds, pressing + or - button adjusts the present time. Holding down either button above 2 seconds increases or decreases the time by 1 minute every 0.5 second and then by 10 minutes every 0.5 second. During blinking after setting, press CLOCK button again to confirm the setting, and then will be constantly displayed.

13. TIMER-OFF Button

Press this button to initiate the auto-off timer. To cancel the auto-timer program, simply press the button again. TIMER OFF setting is the same as TIMER ON.

14. TURBO Button

Press this button to activate / deactivate the Turbo function which enables the unit to reach the preset temperature in the shortest time. In COOL mode, the unit will blow strong cooling air at super high fan speed. In HEAT mode, the unit will blow strong heating air at super high fan speed.

15. LIGHT Button

Press LIGHT button to turn on the display's light and press this button again to turn off the display's light. If the light is turned on, is displayed. If the light is turned off, disappears.

16. X-FAN Button

Pressing X-FAN button in COOL or DRY mode, the icon is displayed and the indoor fan will continue operation for 10 minutes in order to dry the indoor unit even though you have turned off the unit.

After energization, X-FAN OFF is defaulted. X-FAN is not available in AUTO, FAN or HEAT mode.

17. Combination of "+" and "-" buttons: About lock

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

18. Combination of "MODE" and "-" buttons:About switch between Fahrenheit and centigrade

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

19. Combination of "TEMP" and "CLOCK" buttons:About Energy-saving Function

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

20. Combination of "TEMP" and "CLOCK" buttons:About 8°C Heating Function

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

21. About Back-lighting Function

The unit lights for 4s when energizing for the first time, and 3s for later press.

22. About HEALTH function (COLD PLASMA)

Turn on the unit, start up the fan (Breezing and X-FAN are excluded) and press HEATLTH button on remote controller to start health function (If there is not HEALTH button on remote controller, the unit defaults health function ON.)

23. 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.

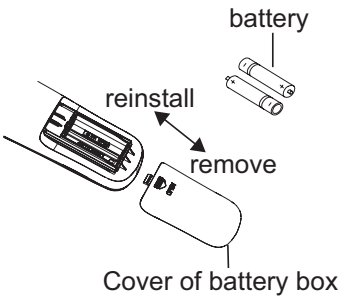
● The distance between signal sender and receiving window should be no more than 8m, and there should be no obstacles between them.

● 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

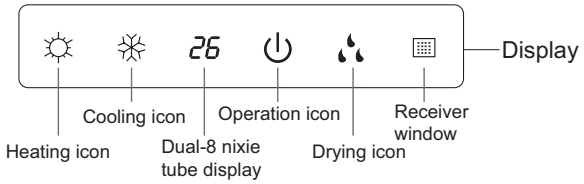
1. Summary

(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).



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

(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 wont stop within 6 mins according to the change of room temp.

(1) Auto mode

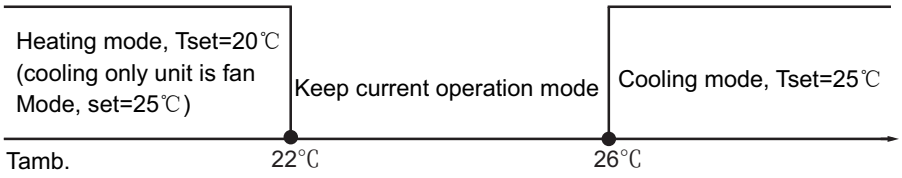
Under auto mode, the system will automatically select operation mode (cooling, heating or fan) according to indoor ambient temperature. The display displays the operation icon and actual operation mode icon and set temperature. There will be 30s delayed for protection between mode switchover. The protection functions are the same as those in other modes.

Auto operation modes are as below:

a. When Tamb. ≥26℃, the system operates in cooling mode and the ex-factory set temperature is 25℃;

b. When Tamb. ≤22℃, the system operates in heating mode and the ex-factory set temperature is 20℃;

c. When 22℃＜Tamb. ＜26℃, the system operates under fan mode if turning on the unit to enter into auto mode for the first time; If switch to auto mode from other modes, the system keeps previous operation mode; If switch to auto mode from drying mode, the system operates under fan mode.



(2) Cooling mode

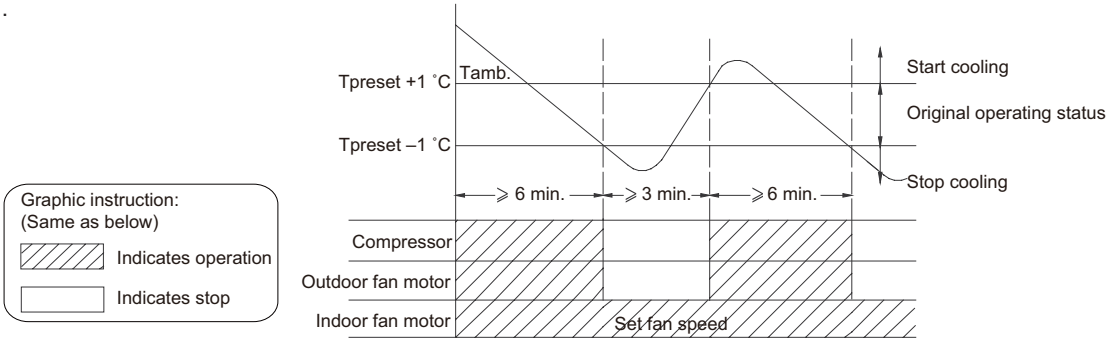
① Operation condition and process for cooling mode

◆ 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℃ .



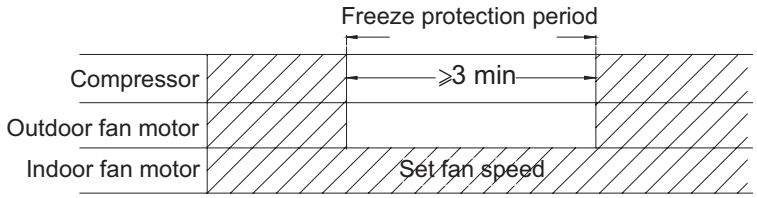
② Display: Operation icon, cooling icon, set temperature.

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

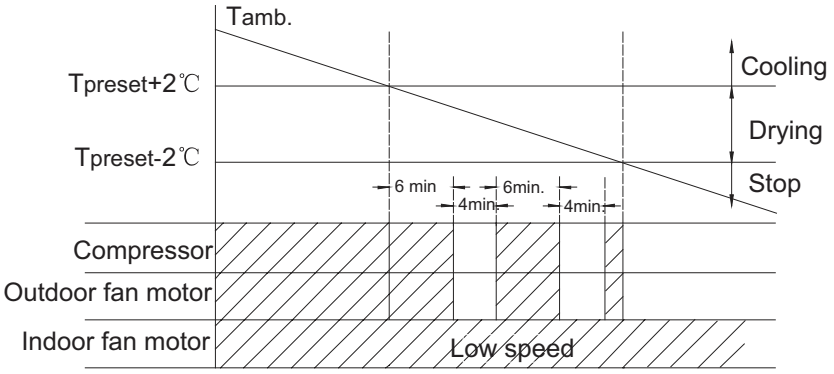
the compressor has been out of operation for 3 mins, the unit will resume its previous operation status.



◆ 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 wont exceed 6min every time, overcurrent protection information will be displayed. After turning off the unit, display wont be displayed.
If turn on the unit again, the system will be restated up again. Overcurrent protection information will be eliminated.
Please refer to maintenance part for display information and disposal method for details.

◆ Locked protection to IDU fan motor
During operation of IDU fan motor, if controller detected that the rotation speed of IDU fan motor less than 300/min or stop rotation, the motor operates abnormally. In order to prevent damage to motor, controller will protect automatically, the system stops operation and blocked information of IDU fan motor will be displayed. After turning off the unit, display wont be displayed.
If turn on the unit again, the system will be restated up again. Blocked information of IDU fan motor will be eliminated. (For some models, they can only be restated up after re-energized)
Please refer to maintenance part for display information and disposal method for details.

(3) Drying mode
① Operation condition and process for drying mode
◆ When 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 cant be adjusted.



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

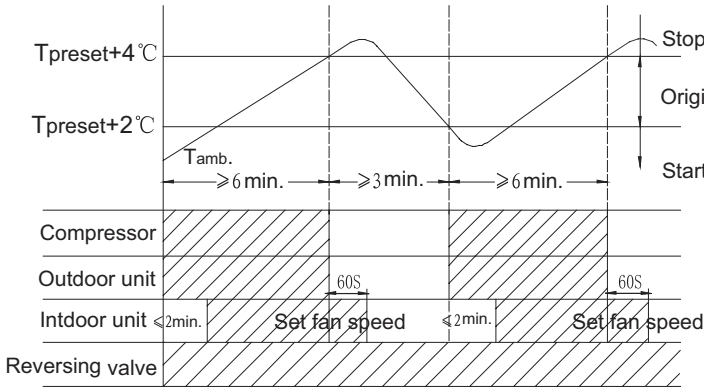
③ Protection function

◆ 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. ≤Tset+2℃ , the system starts heating operation. In this case, the 4-way valve is energized. The compressor and the ODU fan motor operates simultaneously; The IDU fan motor will be started up after delayed for a period of time to make sure the air conditioner wont blow out cold wind.
◆ When Tamb.≥Tpreset+4℃ , the compressor and the ODU motor stop. The 4-way valve is energized all the time. The IDU fan motor will blow residual heat after operating at set speed for a period of time consecutively to make sure the inner temperature of air conditioner wont be too high.
◆ When Tpreset<Tamb.<Tpreset+4℃ , the system will maintain its previous operation 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. Dual-8 nixie tube displays H1 during defrosting. (Heating icon is bright for a period time and then OFF for some models)
④ Protection function
◆ Overheating prevention protection
During operation, when controller is detected that Ttube>55℃ , the ODU fan motor stops operation; When Ttube is resumed normally, the ODU fan motor resumes operation.
◆ Noise silencing protection
When turning off the unit or during mode switchover, the 4-way valve is closed. In order to decrease noise, the 4-way valve will delay 2mins to be closed.
◆ Overcurrent protection (this protection function is not available for those models whose cooling capacity ≤12000Btu/h)
During operation process, if controller detected that system current exceeds the limit value for 3s consecutively(overcurrent), the system stops operation. About 3mins later, if overcurrent is released, the system will resume original operation. If overcurrent protection occurs for 6 times consecutively, and resume operation time wont exceed 6min every time, overcurrent protection information will be displayed. After turning off the unit, display wont be displayed.
If turn on the unit again, the system will be restated up again. Overcurrent protection information will be eliminated.
Please refer to maintenance part for display information and disposal method for details.
◆ Locked protection to IDU fan motor
During operation of IDU fan motor, if controller detected that the rotation speed of IDU fan motor less than 300/min or stop rotation, the motor operates abnormally. In order to prevent damage to motor, controller will protect automatically, the system stops operation and blocked information of IDU fan motor will be displayed. After turning off the unit, display wont be displayed.
If turn on the unit again, the system will be restated up again. Blocked information of IDU fan motor will be eliminated. (For some models, they can only be restated up after re-energized)
Please refer to maintenance part for display information and disposal method for details.

3. Other Control Function Introduction

(1)Timer function

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

Timer OFF: If timer OFF is set at unit OFF, upon OFF time reaches, the unit 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 of the remote controller. You can also set the timer once again, and then the unit will operate according to the last setting.

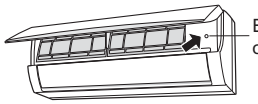
If timer ON and timer OFF are set at the same time during operation of the unit, the unit will keep operating at current status till OFF time reaches.

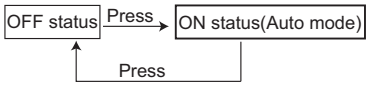
If timer ON and timer OFF are set at the same time at unit OFF, the unit will keep off status till ON time reaches.

Each day in future, the system will operate according to preset mode till OFF time reaches and stop operation till ON time reaches. If ON time and OFF time are the same, OFF command will prevail.

(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:

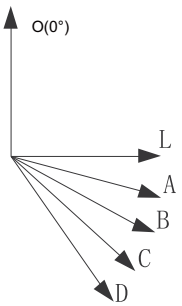
◆ Stay at position B: control by remote controller:

◆ 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

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

(9) Memory function

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

4. Special Function

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

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

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

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

Part Ⅱ : Installation and Maintenance

7. Notes for Installation and Maintenance

Safety Precautions: Important!

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

Please follow the instructions below.

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

Warnings

Electrical Safety Precautions:

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

Installation Safety Precautions:

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

Refrigerant Safety Precautions:

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

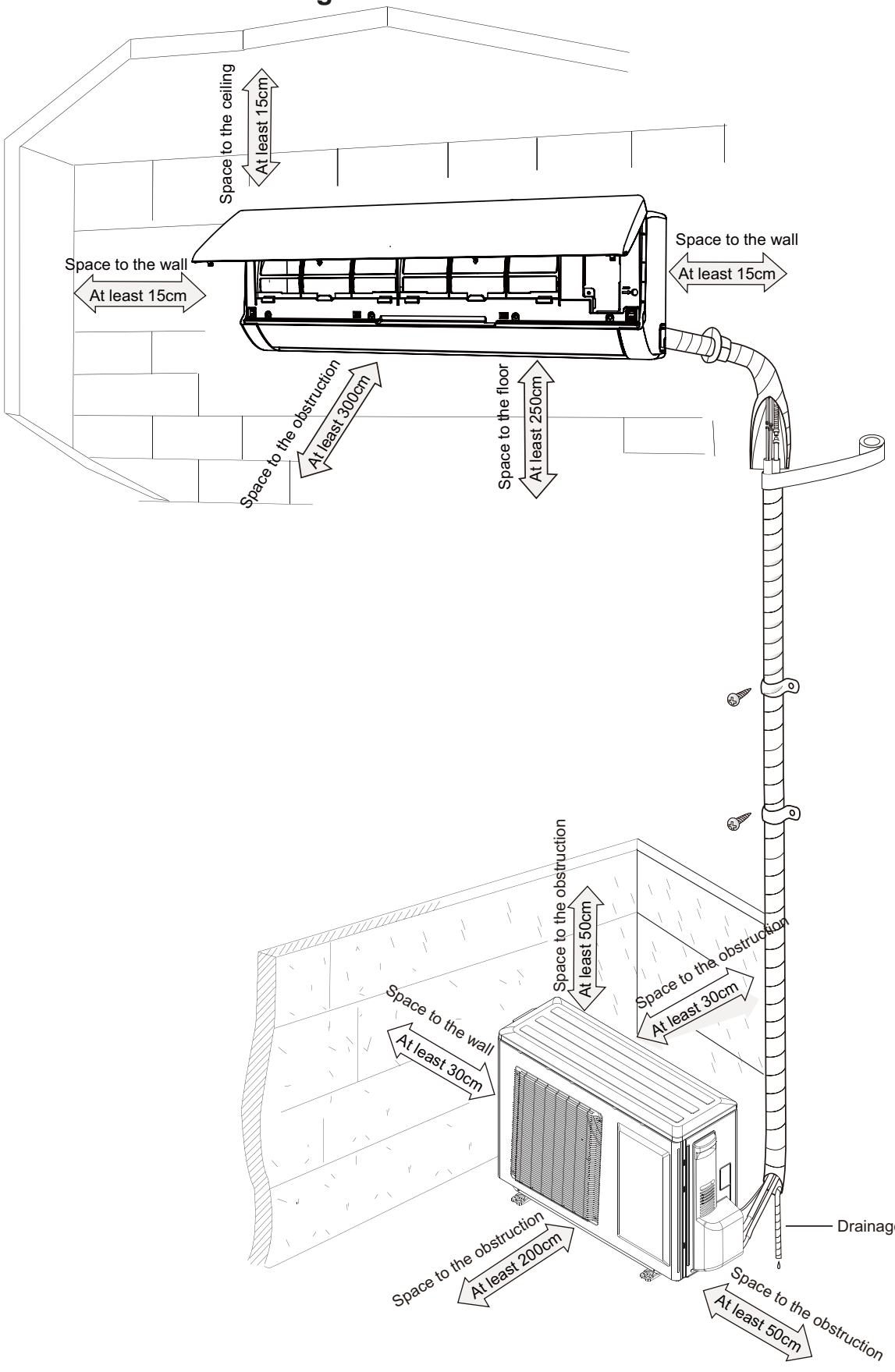
Improper installation may lead to fire hazard, explosion, electric shock or injury.

Main Tools for Installation and Maintenance

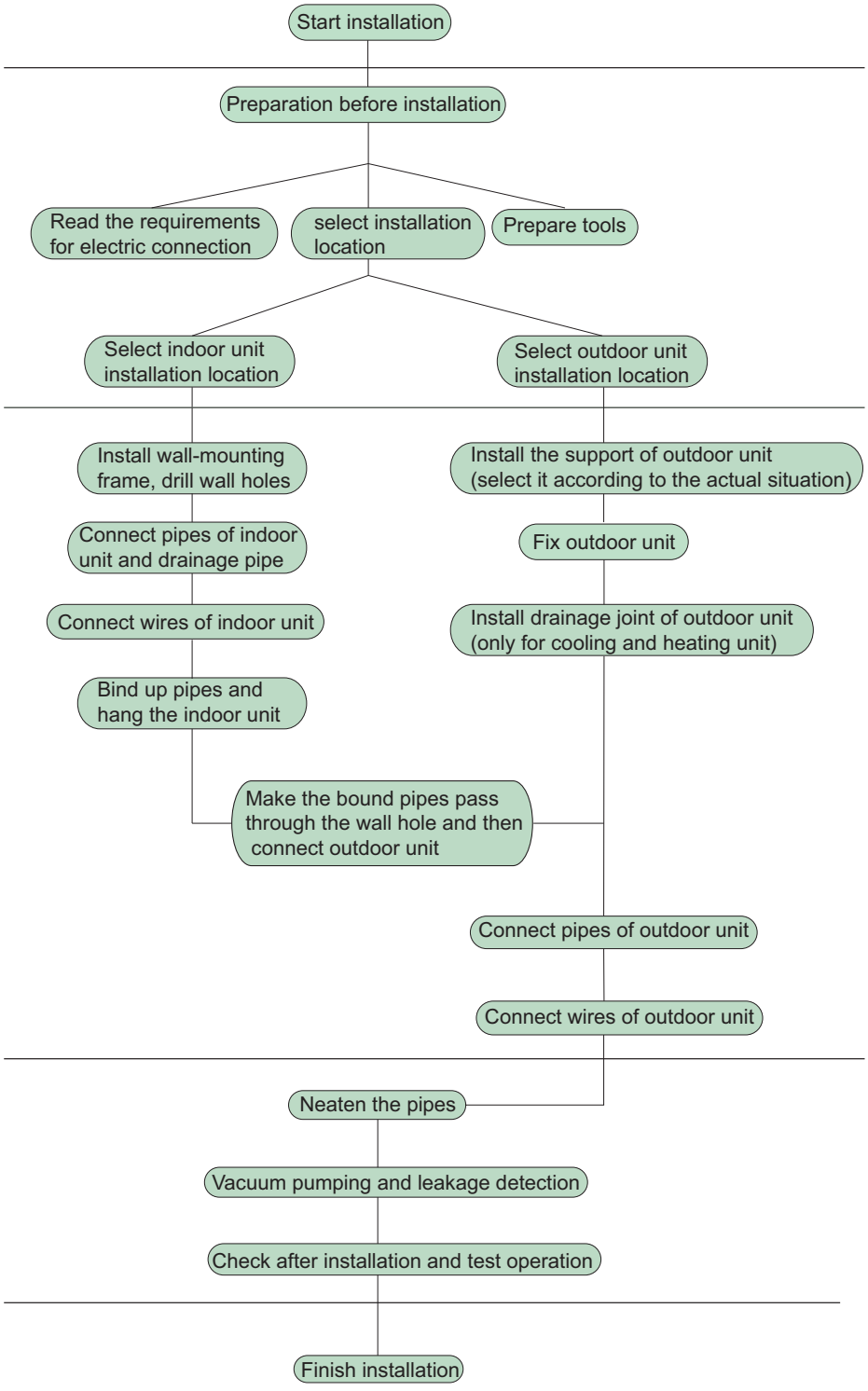
1. Level meter, measuring tape 	**2. Screw driver** 	**3. Impact drill, drill head, electric drill** 
4. Electroprobe 	**5. Universal meter** 	**6. Torque wrench, open-end wrench, inner hexagon spanner** 
7. Electronic leakage detector 	**8. Vacuum pump** 	**9. Pressure meter** 
10. Pipe pliers, pipe 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	Owner's manual, remote controller
7	Wall pipe		

Note:
1.Please contact the local agent for installation.
2.Don't 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. in the air.
(5) The place with sulfureted gas.
(6) Other places with special circumstances.

2. Indoor Unit:
(1) There should be no obstruction near air inlet and air outlet.
(2) Select a location where the condensation water can be dispersed easily and won't 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 won't increase noise and vibration.
(6) The appliance must be installed 2.5m above floor.
(7) Don't instal sall the indoor unit right above the electric appliance.
(8) The appliance shall not be installed in the laundry.

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

8.4 Electric Connection Requirement

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

Air-conditioner	Air switch capacity
07K/09K	10A
12K	16A

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

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

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)

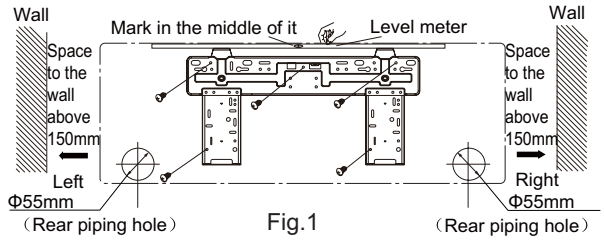


Fig.1

(2) Open a piping hole with the diameter of 55 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)

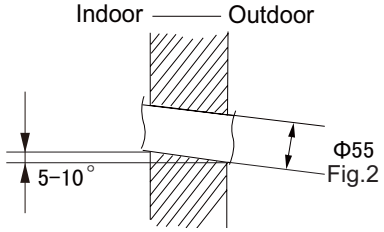


Fig.2

⚠ **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)

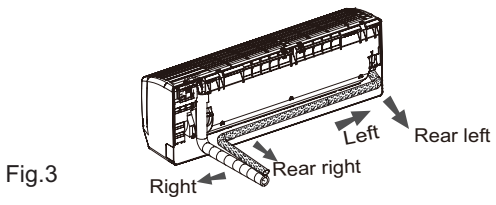


Fig.3

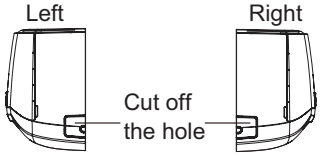


Fig.4

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)

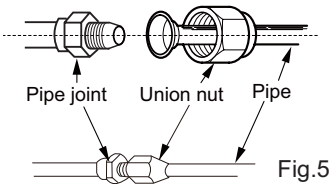


Fig.5

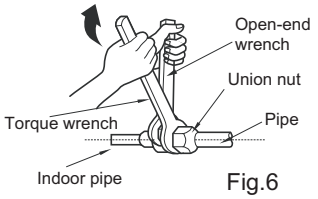


Fig.6

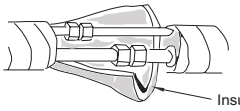


Fig.7

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)

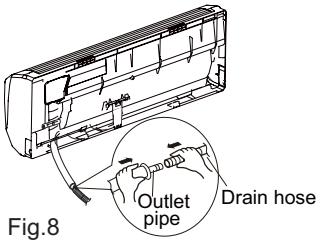


Fig.8

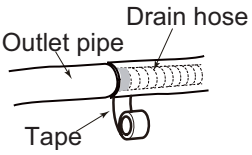


Fig.9

⚠ **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)

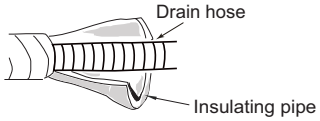


Fig.10

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)

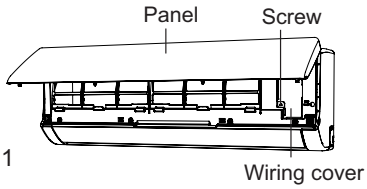


Fig.11

(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)

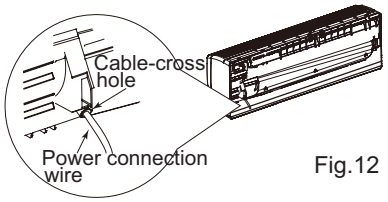


Fig.12

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

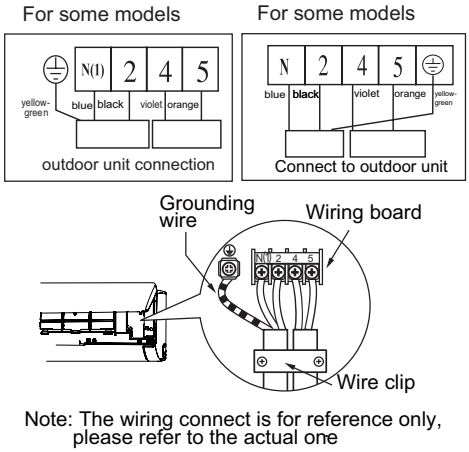


Fig.13

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

⚠ **Note:**

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

8. Bind up Pipe

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

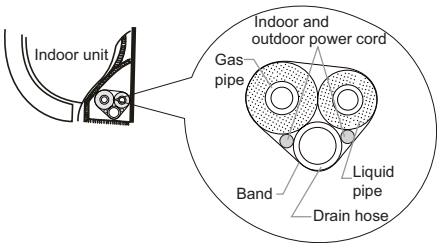


Fig.14

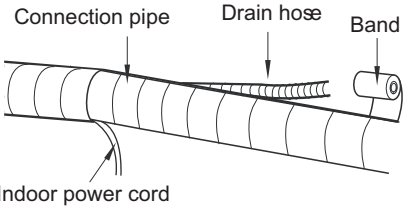


Fig.15

⚠ **Note:**

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

9. Hang the Indoor Unit

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

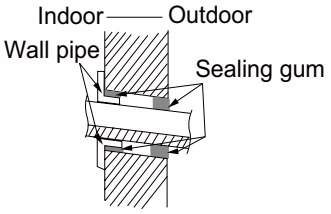
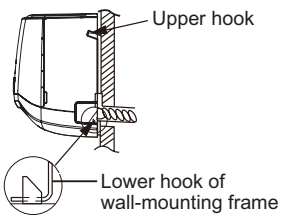


Fig.16

Fig.17



⚠ **Note:**

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

8.6 Installation of Outdoor Unit

1. Fix the support of outdoor unit(select it according to the actual installation situation)

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

⚠ **Note:**

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

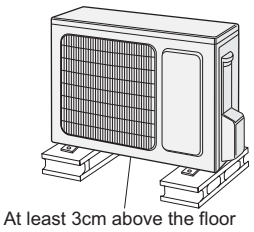


Fig.18

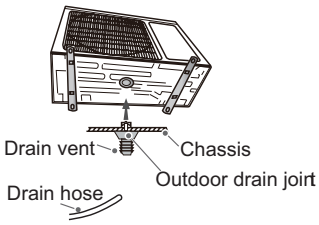


Fig.19

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

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

3. Fix Outdoor Unit

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

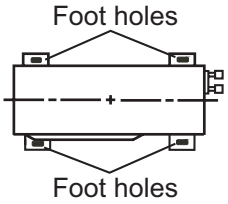


Fig.20

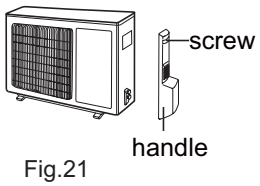
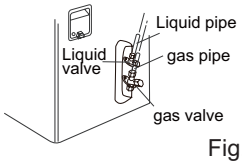


Fig.21

4. Fix Outdoor Unit

(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)



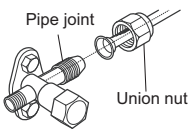


Fig.22

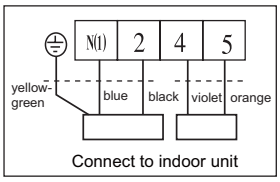
(3) Pretightening the union nut with hand.
(4) Tighten the union nut with torque wrench .

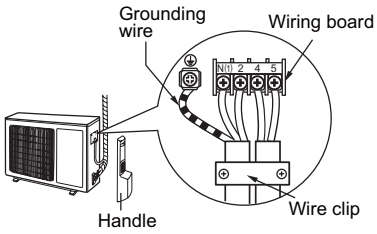
Refer to the following table for wrench moment of force:

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 to the wiring terminal according to the color; fix them with screws.(As show in Fig.23)





Note: the wiring connect is for reference only, please refer to the actual one.
Fig.23

(2) Fix the power connection wire and signal control wire with wire clip.

⚠ **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)

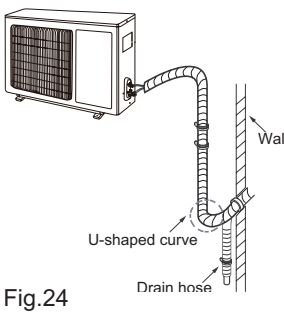


Fig.24

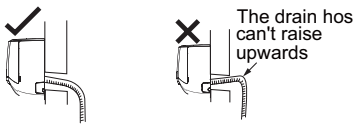


Fig.25

⚠ **Note:**

(1) The through-wall height of drain hose shouldn't be higher than the outlet pipe hole of indoor unit.(As show in Fig.25)
(2) Slant the drain hose slightly downwards. The drain hose can't be curved, raised and fluctuant, etc.(As show in Fig.26)

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

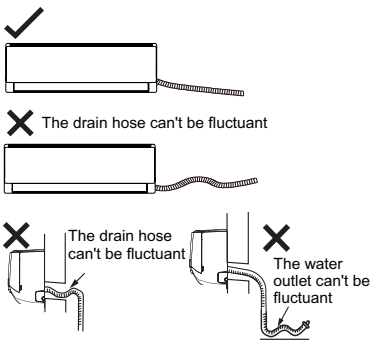


Fig.26

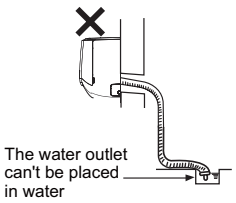


Fig.27

8.7 Vacuum Pumping and Leak Detection

1. Use Vacuum Pump

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

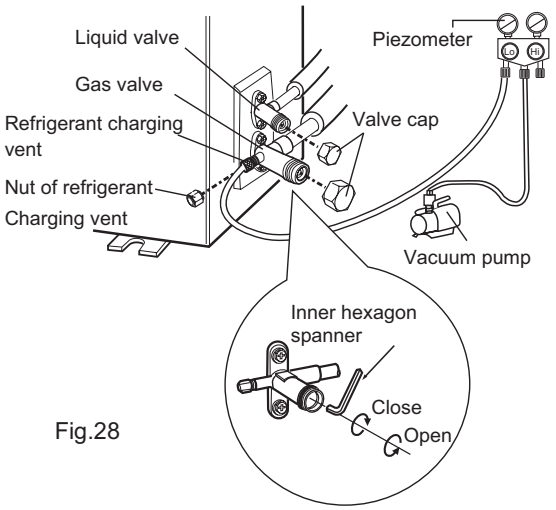


Fig.28

2. Leakage detection

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

8.8 Check after Installation and Test Operation

1. Check after Installation

Check according to the following requirement after finishing installation.

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

2. Test operation

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

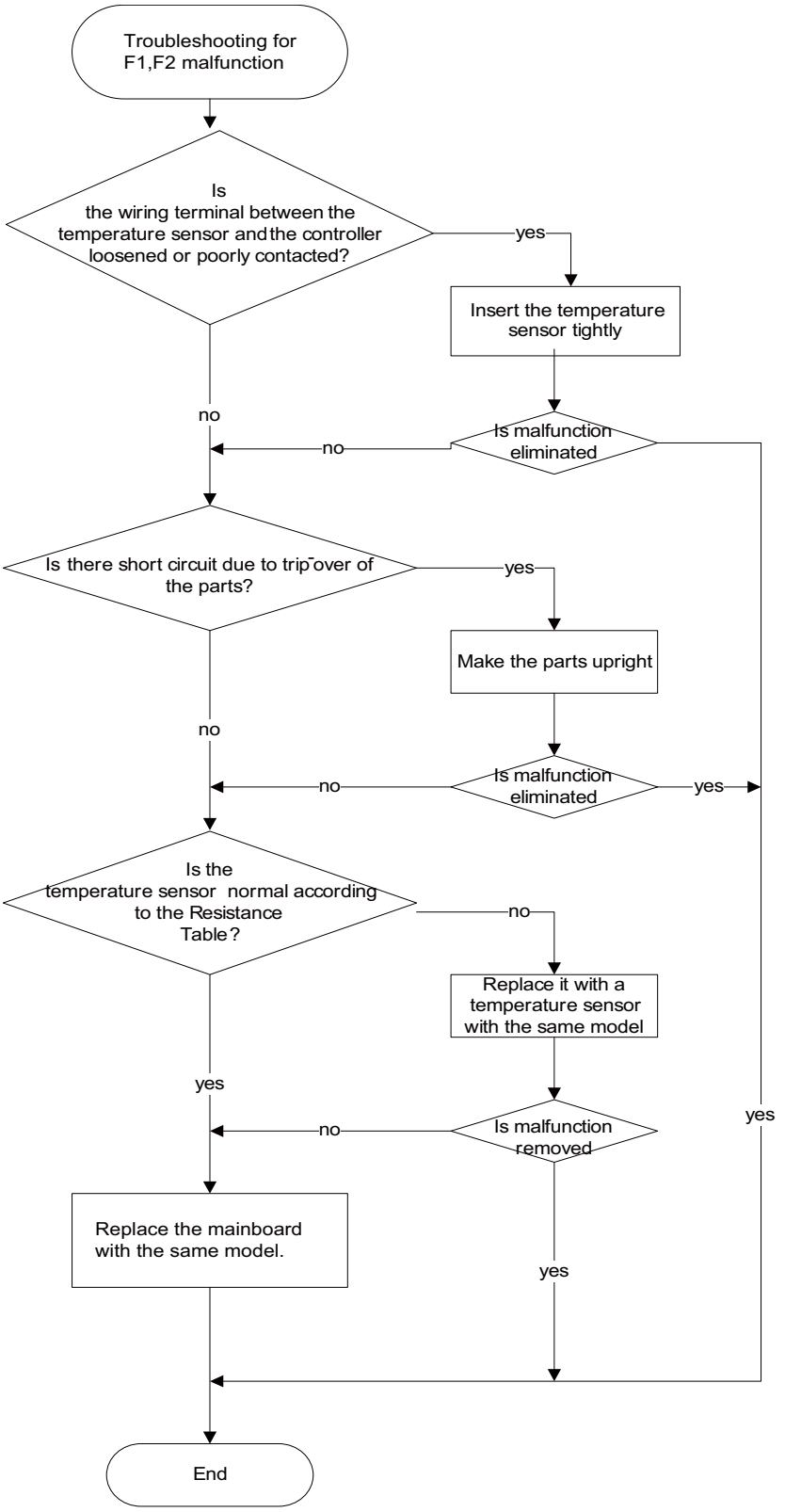
9. Maintenance

9.1 Error Code

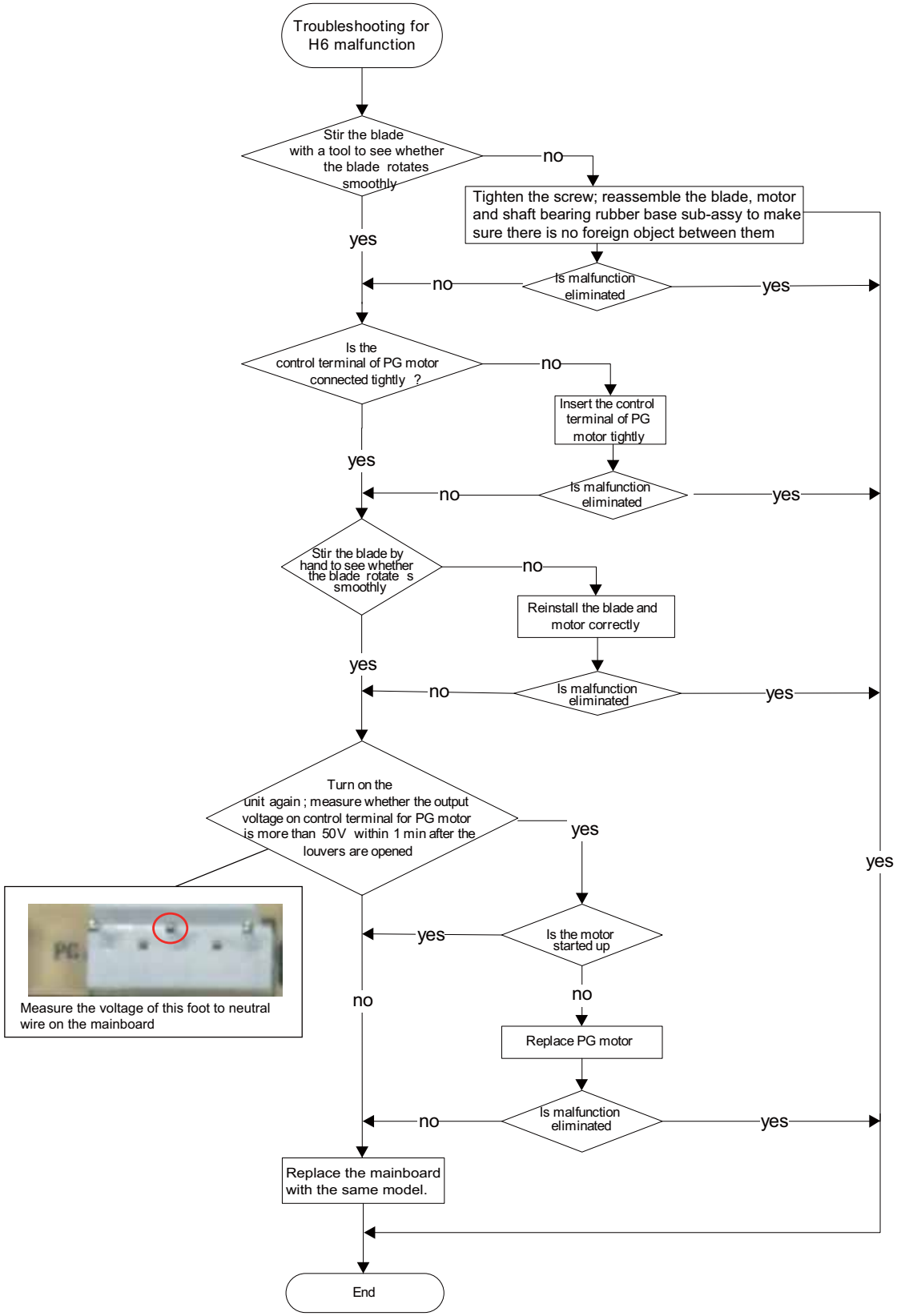
No.	Malfunction Name	Display Method of Indoor Unit				A/C Status	Possible Causes(For specific maintenance method, please refer to the following procedure of troubleshooting)
		Error Code	Indicator lamp (Only for the unit with indictor; during blinking, ON for 0.5S and OFF for 0.5S)				
			Operation Lamp	COOL Lamp	HEAT Lamp		
1	Indoor ambient temperature sensor is open/short-circuited	F1		Blinks once every 3s		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		Blinks twice every 3s		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	Blinks 11 times every 3s			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	Blinks 15 times every 3s			Operation of remote controller or control panel is available, but the unit won't act.	1.There's not jumper cap on the main board. 2.Jumper cap is not inserted properly and tightly. 3.Jumper cap is damaged. 4.Controller is damaged.
5	Zero-crossing inspection circuit malfunction of the IDU fan motor	U8	Blinks 17 times every 3s			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.

9.2 Procedure of Troubleshooting

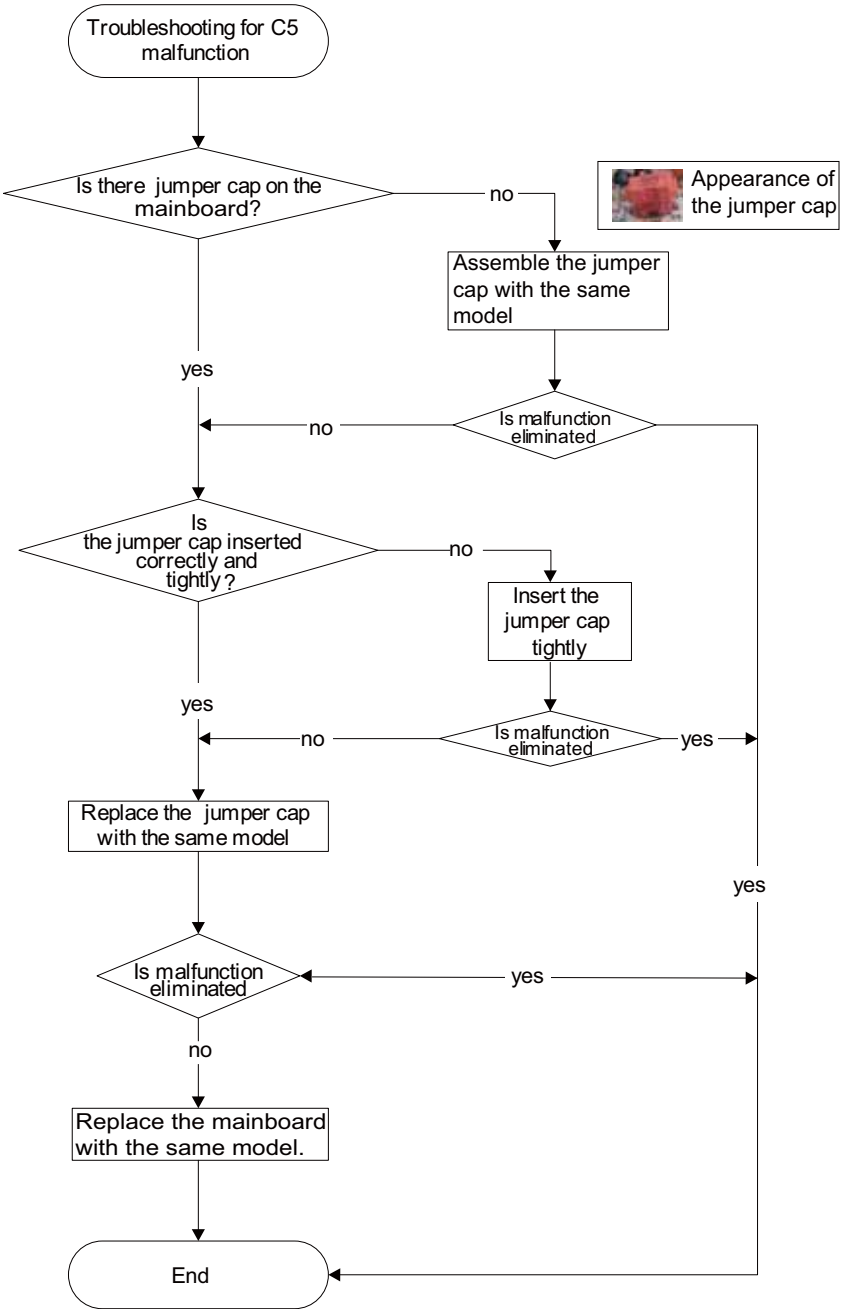
1. Malfunction of Temperature Sensor F1, F2



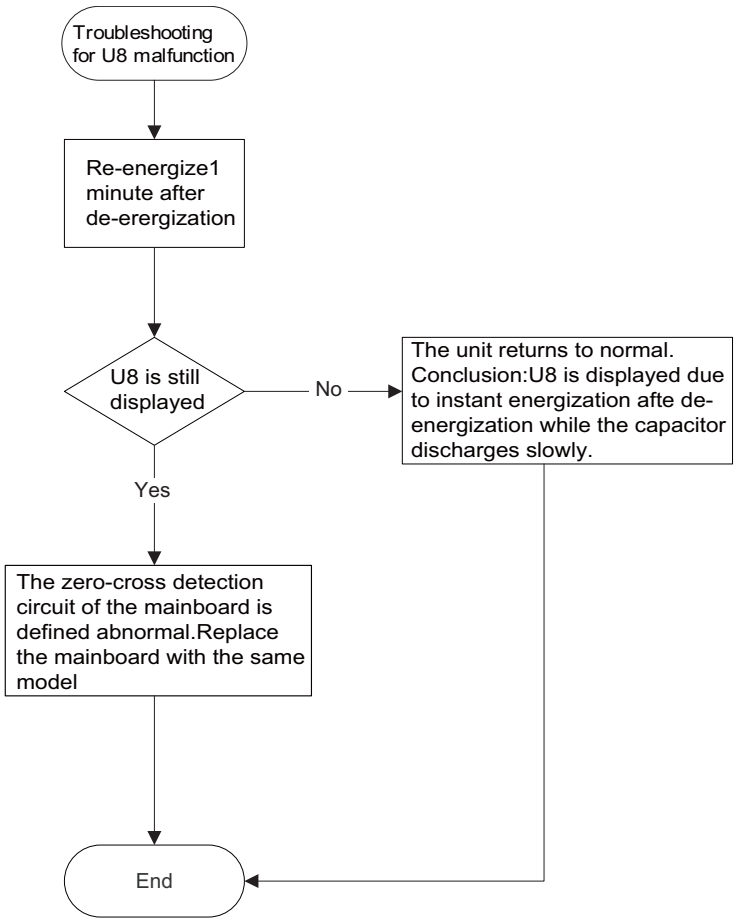
2. Malfunction of Blocked Protection of IDU Fan Motor H6



3. Malfunction of Protection of Jumper Cap C5



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



9.3 Maintenance Method for Normal Malfunction

1. Air Conditioner Can't be Started Up

Possible Causes	Discriminating Method (Air conditioner Status)	Troubleshooting
No power supply, or poor connection for power plug	After energization, operation indicator isn't bright and the buzzer can't give out sound	Confirm whether it's 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 isn't 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 it's 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; Unit's pressure is much lower than regulated range	Find out the leakage causes and deal with it. Add refrigerant.
Malfunction of 4-way valve	blow cold wind during heating	Replace the 4-way valve
Malfunction of capillary	Discharged air temperature during cooling is higher than normal discharged wind temperature; Discharged air temperature during heating is lower than normal discharged wind temperature; Unit't pressure is much lower than regulated range. If refrigerant isn't leaking, part of capillary is blocked	Replace the capillary
Flow volume of valve is insufficient	Pressure at the valve is much lower than the regulated range i	Open the valve completely
Malfunction of horizontal louver	Horizontal louver can't swing	Refer to point 3 of maintenance method for details
Malfunction of the IDU fan motor	The IDU fan motor can't operate	Refer to troubleshooting for H6 for maintenance method in details
Malfunction of the ODU fan motor	The ODU fan motor can't operate	Refer to point 4 of maintenance method for details
Malfunction of compressor	Compressor can't operate	Refer to point 5 of maintenance method for details

3. Horizontal Louver Can't Swing

Possible Causes	Discriminating Method (Air conditioner Status)	Troubleshooting
Wrong wire connection, or poor connection	Check the wiring status according to circuit diagram	Connect wires according to wiring diagram to make sure all wiring terminals are connected firmly
Stepping motor is damaged	Stepping motor can't operate	Repair or replace stepping motor
Main board is damaged	Others are all normal, while horizontal louver can't operate	Replace the main board with the same model

4. ODU fan Motor Can't Operate

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

5. Compressor Can't Operate

Possible causes	Discriminating method (air conditioner status)	Troubleshooting
Wrong wire connection, or poor connection	Check the wiring status according to circuit diagram	Connect wires according to wiring diagram to make sure all wiring terminals are connected firmly
Capacity of compressor is damaged	Measure the capacity of fan capacitor with an universal meter and find that the capacity is out of the deviation range indicated on the nameplate of fan capacitor.	Replace the compressor capacitor
Power voltage is a little low or high	Use universal meter to measure the power supply voltage. The voltage is a little high or low	Suggest to equip with voltage regulator
Coil of compressor is burnt out	Use universal meter to measure the resistance between compressor terminals and it's 0	Repair or replace compressor
Cylinder of compressor is blocked	Compressor can't operate	Repair or replace compressor

6. Air Conditioner is Leaking

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

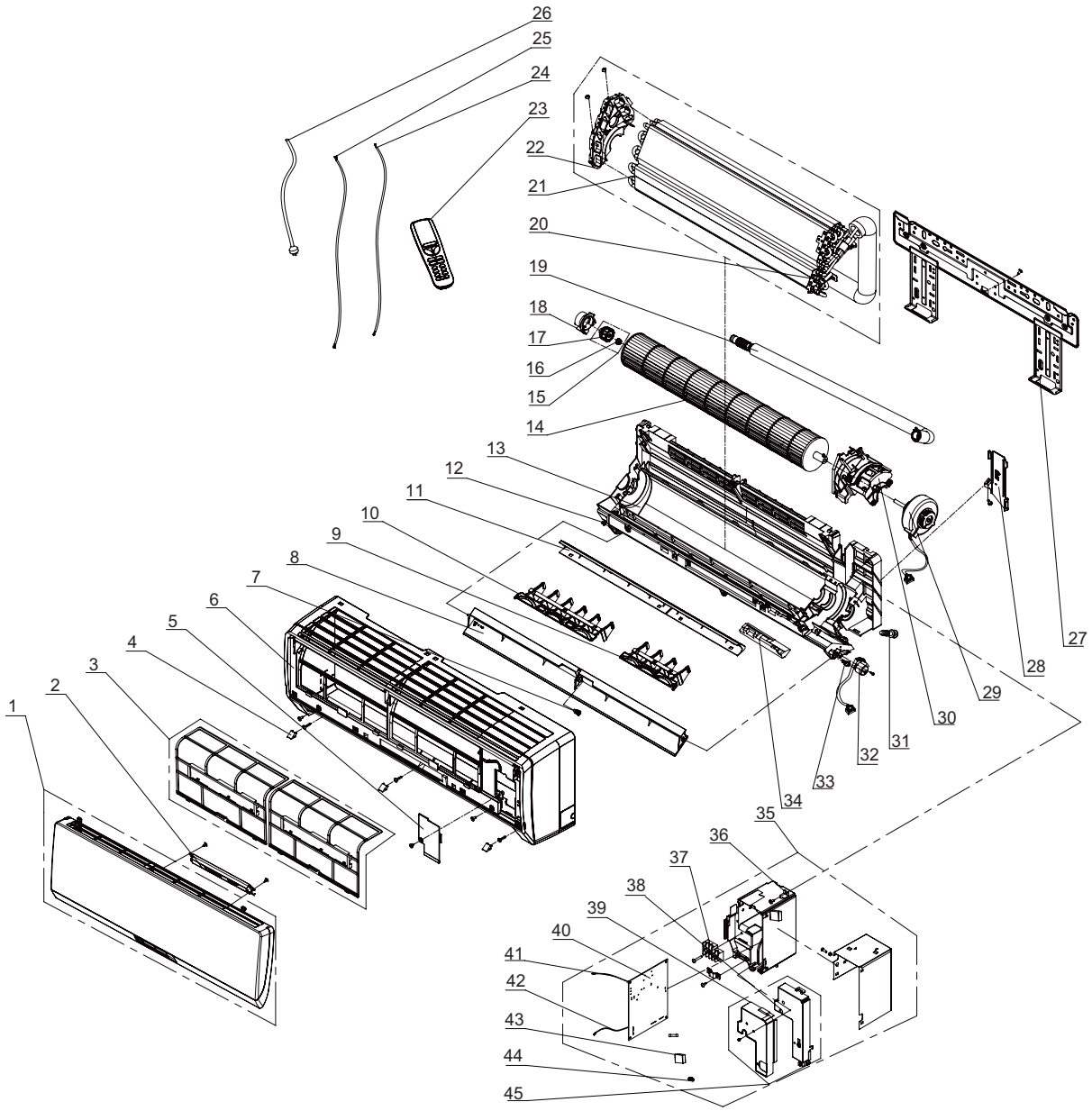
7. Abnormal Sound and Vibration

Possible causes	Discriminating method (air conditioner status)	Troubleshooting
When turn on or turn off the unit, the panel and other parts will expand and there's abnormal sound	There's the sound of "PAPA"	Normal phenomenon. Abnormal sound will disappear after a few minutes.
When turn on or turn off the unit, there's 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 there're parts touching together inside the indoor unit	There's 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 there're parts touching together inside the outdoor unit	There's 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

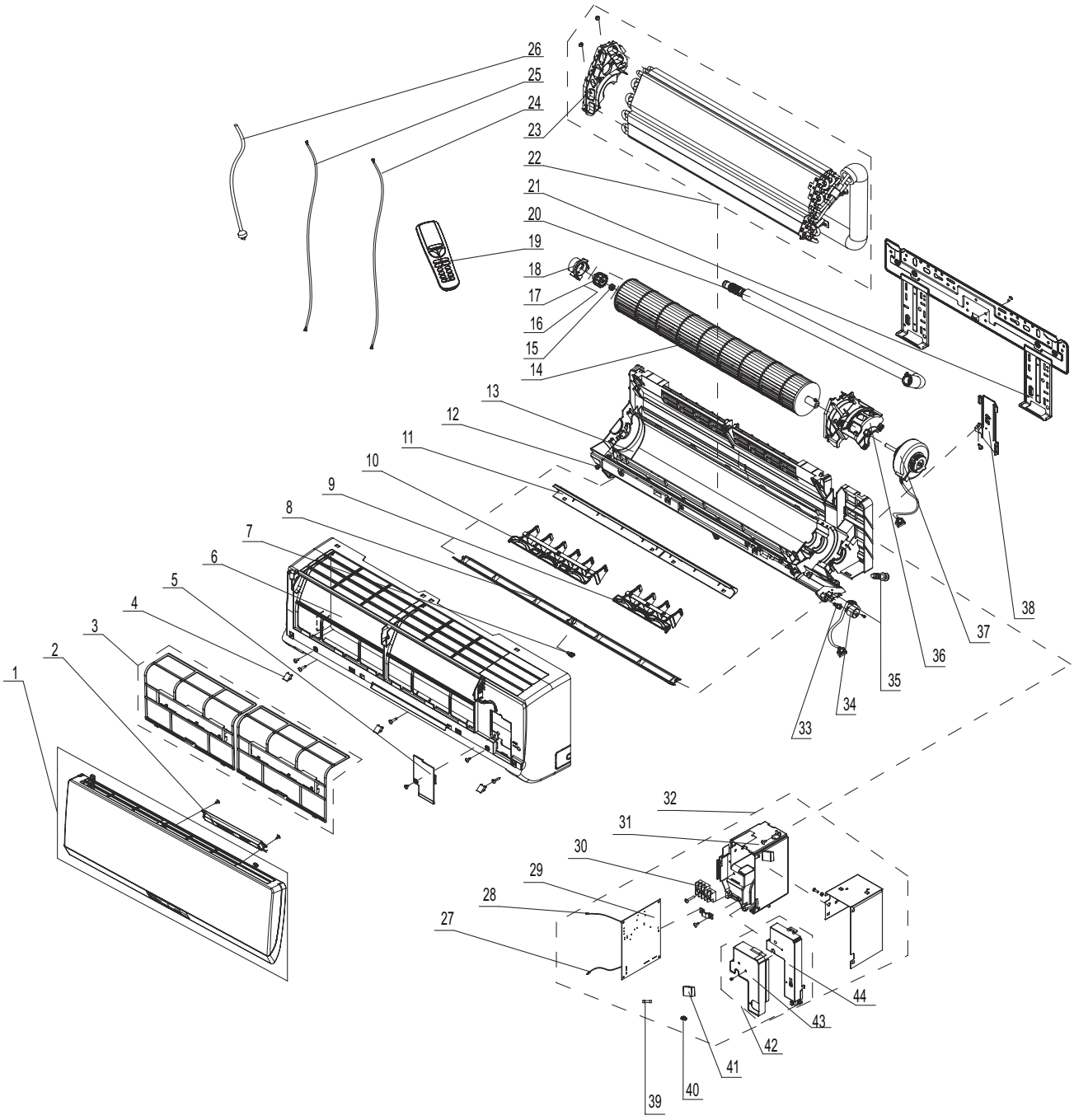
GWH07RA-K3NNA1E/I
GWH07RA-K3NNA1A/I



NO.	Description	Part Code		Qty
		GWH07RA-K3NNA1E/I	GWH07RA-K3NNA1A/I	
	Product code	CA144N08600	CA144N01800	
1	Front Panel Assy	20012671	20012671	1
2	Display Board	30565110	30565110	1
3	Filter Sub-Assy	1112220602	11122206	2
4	Screw Cover	24252016	24252016	3
5	Electric Box Cover2	20122075	20122075	1
6	Front Case	20012672	20012672	1
7	Axile Bush	10542704	10542704	1
8	Guide Louver	10512204	10512204	1
9	Air Louver 1	1051211302	1051211302	1
10	Air Louver 2	1051211402	1051211402	1
11	Helicoid Tongue	2611216202	2611216202	1
12	Axile Bush	10542036	10542008	1
13	Rear Case assy	22202186	22202186	1
14	Cross Flow Fan	10352018	10352018	1
15	O-Gasket sub-assy of Bearing	7651205102	76512051	1
16	Fan Bearing	7651221001	76512210	1
17	O-Gasket of Cross Fan Bearing	76512203	76512203	1
18	Ring of Bearing	26152022	26152022	1
19	Drainage hose	0523001406	0523001406	1
20	Temp. Sensor sleeving	10542047	05212423	1
21	Evaporator Assy	01002762	0100255902	1
22	Evaporator Support	24212090	24212090	1
23	Remote Controller	30510125	30510125	1
24	Connecting Cable	40020536	40020536	0
25	Connecting Cable	40020540	40020540	0
26	Power Cord	4002046417	400220113	1
27	Wall Mounting Frame	01252015	1252015	1
28	Pipe Clamp	2611216401	26112164	1
29	Fan Motor	15012115	15012115	1
30	Motor Press Plate	26112160	26112160	1
31	Rubber Plug (Water Tray)	76712012	76712012	1
32	Step Motor	15012115	1521212901	1
33	Crank	10582070	10582070	1
34	Foam C (Water tray)	12312163	12312163	1
35	Electric Box Assy	20402513	2020262401	1
36	Electric Box	2011216701	2011210501	1
37	Terminal Board	42010268	42010262	1
38	Electric Box Cover1	22242135	20122103	1
39	Shield cover of Electric Box	0141203601	0141203601	1
40	Main Board	30135578	30135550	1
41	Ambient Temperature Sensor	390000453	390000453	1
42	Tube Sensor	33010002	390000591	1
43	Capacitor CBB61	4202300129	33010002	1
44	Jumper	0159207301	4202300126	1
45	Shield cover of Electric Box sub-assy	0141203601	0159207301	1

Above data is subject to change without notice.

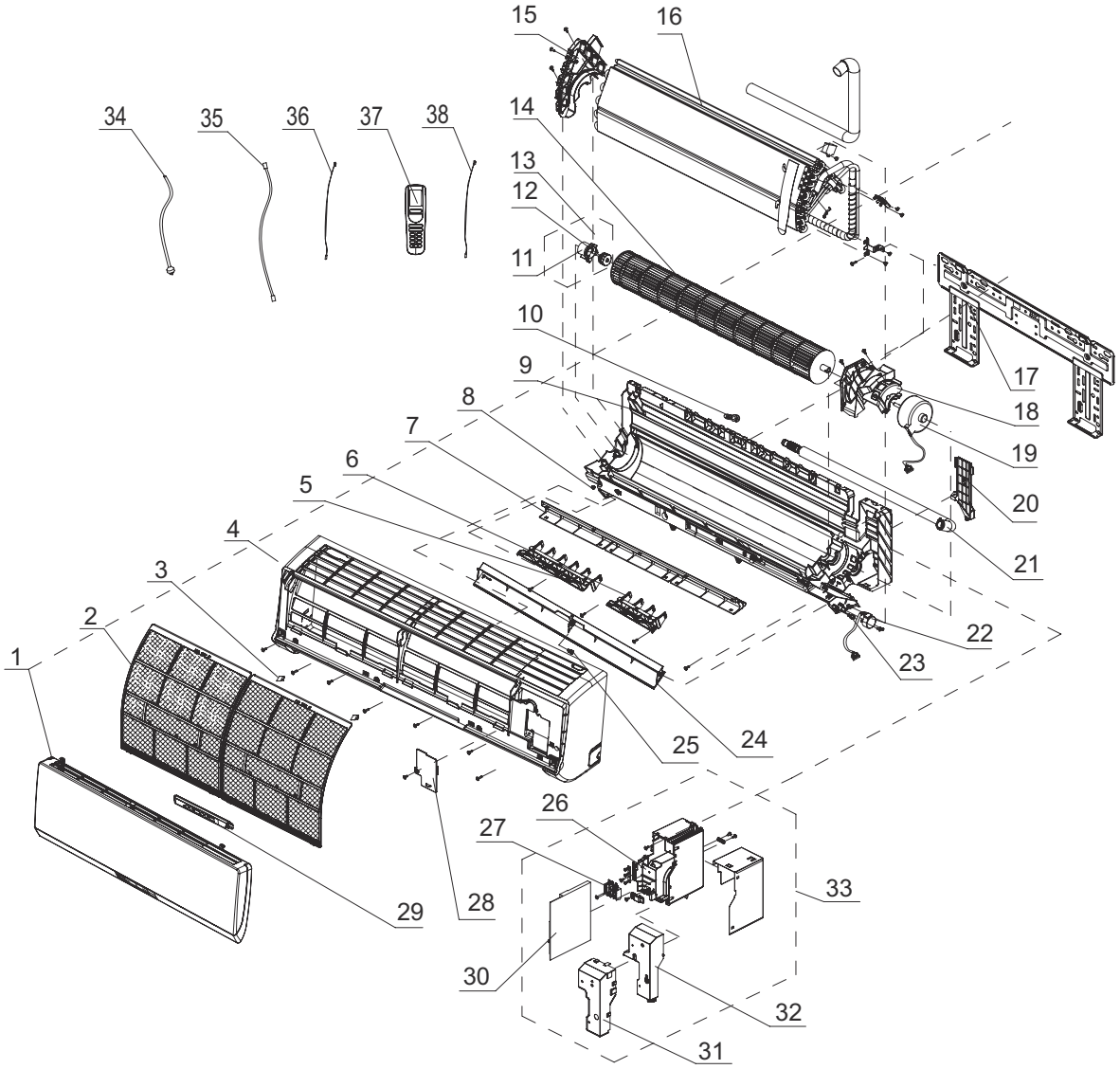
GWH09RA-K3NNA1C/I
GWH12RB-K3NNA1C/I



NO.	Description	Part Code		Qty
		GWH09RA-K3NNA1C/I	GWH12RB-K3NNA1C/I	
	Product code	CA144N05600	CA144N05100	
1	Front Panel Assy	20012671	20012765	1
2	Display Board	30565110	30565110	1
3	Filter Sub-Assy	11122206	1112220403	2
4	Screw Cover	24252016	24252016	3/1
5	Electric Box Cover2	20122075	20122075	1
6	Front Case	20012672	20012665	1
7	Axile Bush	10542008	10512037	1
8	Guide Louver	10512204	10512203	1
9	Air Louver 1	1051211302	1051215603	1
10	Air Louver 2	1051211402	1051215503	1
11	Helicoid Tongue	2611216202	2611216302	1
12	Axile Bush	10542704	10542008	1
13	Rear Case assy	22202186	22202467	1
14	Cross Flow Fan	10352018	10352017	1
15	Fan Bearing	76512210	76512210	1
16	O-Gasket sub-assy of Bearing	76512051	76512051	1
17	O-Gasket of Cross Fan Bearing	76512203	76512203	1
18	Ring of Bearing	26152022	26152022	1
19	Remote Controller	30510125	30510125	1
20	Drainage hose	0523001406	0523001401	1
21	Wall Mounting Frame	01252015	01252021	1
22	Evaporator Assy	0100255202	0100256401	1
23	Evaporator Support	24212090	24212091	1
24	Connecting Cable	40020540	40020540	0
25	Connecting Cable	40020536	40020536	0
26	Power Cord	400220113	4002046413	1
27	Tube Sensor	390000591	390000591	1
28	Ambient Temperature Sensor	390000453	390000453	1
29	Main Board	30135550	30135642	1
30	Terminal Board	42010262	42010262	1
31	Electric Box	2011210501	2011210501	1
32	Electric Box Assy	2020262401	2020262703	1
33	Crank	10582070	10582070	1
34	Step Motor	1521212901	1521212901	1
35	Rubber Plug (Water Tray)	76712012	76712012	1
36	Motor Press Plate	26112160	26112161	1
37	Fan Motor	15012115	150120874	1
38	Pipe Clamp	26112164	2611216401	1
39	Fuse	46010055	46010055	1
40	Jumper	4202300126	4202300125	1
41	Capacitor CBB61	33010002	33010002	1
42	Shield cover of Electric Box sub-assy	0159207301	0159207301	1
43	Shield cover of Electric Box	0141203601	0141203601	1
44	Electric Box Cover1	20122103	20122103	1

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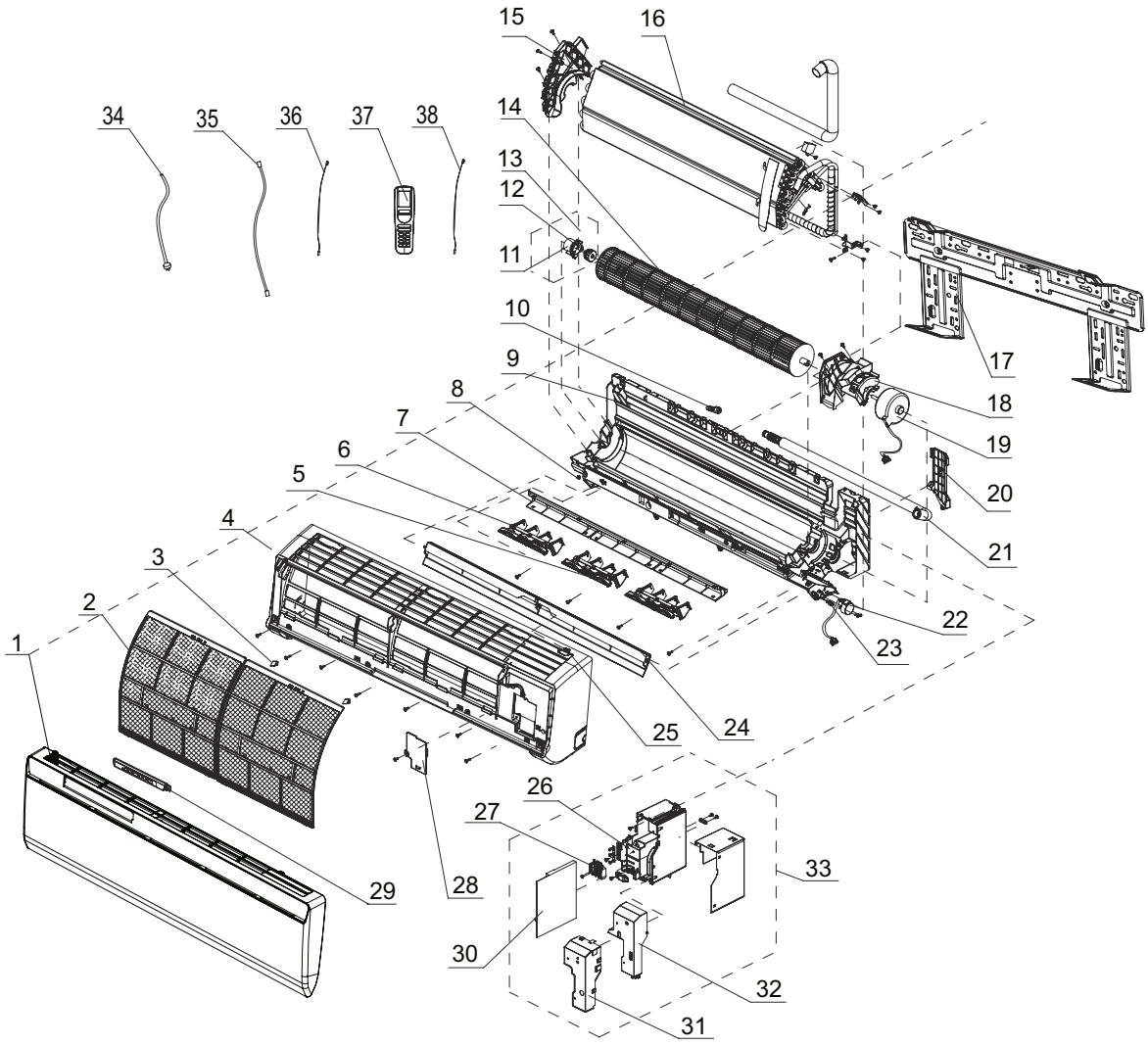
GWH09RB-K3NNA1A/I
GWH12RB-K3NNA1A/I



NO.	Description	Part Code		Qty
		GWH09RB-K3NNA1A/I	GWH12RB-K3NNA1A/I	
	Product code	CA144N05900	CA144N06000	
1	Front Panel Assy	20012765	20012765	1
2	Filter Sub-Assy	1112220403	1112220403	2
3	Screw Cover	24252016	24252016	1
4	Front Case Sub-assy	20012790	20012790	1
5	Air Louver 1	1051215602	1051215603	1
6	Air Louver 2	1051215502	1051215503	1
7	Helicoid Tongue	2611216303	2611216302	1
8	Left Axile Bush	10512037	10512037	1
9	Rear Case assy	22202467	22202467	1
10	Rubber Plug (Water Tray)	76712012	76712012	1
11	Ring of Bearing	26152022	26152022	1
12	O-Gasket of Cross Fan Bearing	76512203	76512203	1
13	O-Gasket sub-assy of Bearing	76512051	76512051	1
14	Cross Flow Fan	10352044	10352044	1
15	Evaporator Support	24212091	24212091	1
16	Evaporator Assy	01002574	0100256502	1
17	Wall Mounting Frame	01252021	01252021	1
18	Motor Press Plate	26112161	26112161	1
19	Fan Motor	150120874	150120874	1
20	Pipe Clamp	26112164	26112164	1
21	Drainage hose	0523001401	0523001401	1
22	Step Motor	1521212901	1521212901	1
23	Crank	10582070	10582070	1
24	Guide Louver	10512203	10512203	1
25	Axile Bush	10542008	10542008	1
26	Electric Box	2011210501	2011210501	1
27	Terminal Board	42010262	42010262	1
28	Electric Box Cover2	20122075	20122075	1
29	Display Board	30565110	30565110	1
30	Main Board	30135628	30135642	1
31	Shield cover of Electric Box sub-assy	0159207301	0159207301	1
32	Electric Box Cover1	20122103	20122103	1
33	Electric Box Assy	2020262701	2020262703	1
34	Power Cord	400220113	4002046413	1
35	Connecting Cable	40020540/40020536	40020540/40020536	0
36	Ambient Temperature Sensor	390000453	390000453	1
37	Remote Controller	30510125	30510125	1
38	Tube Sensor	390000591	390000591	1

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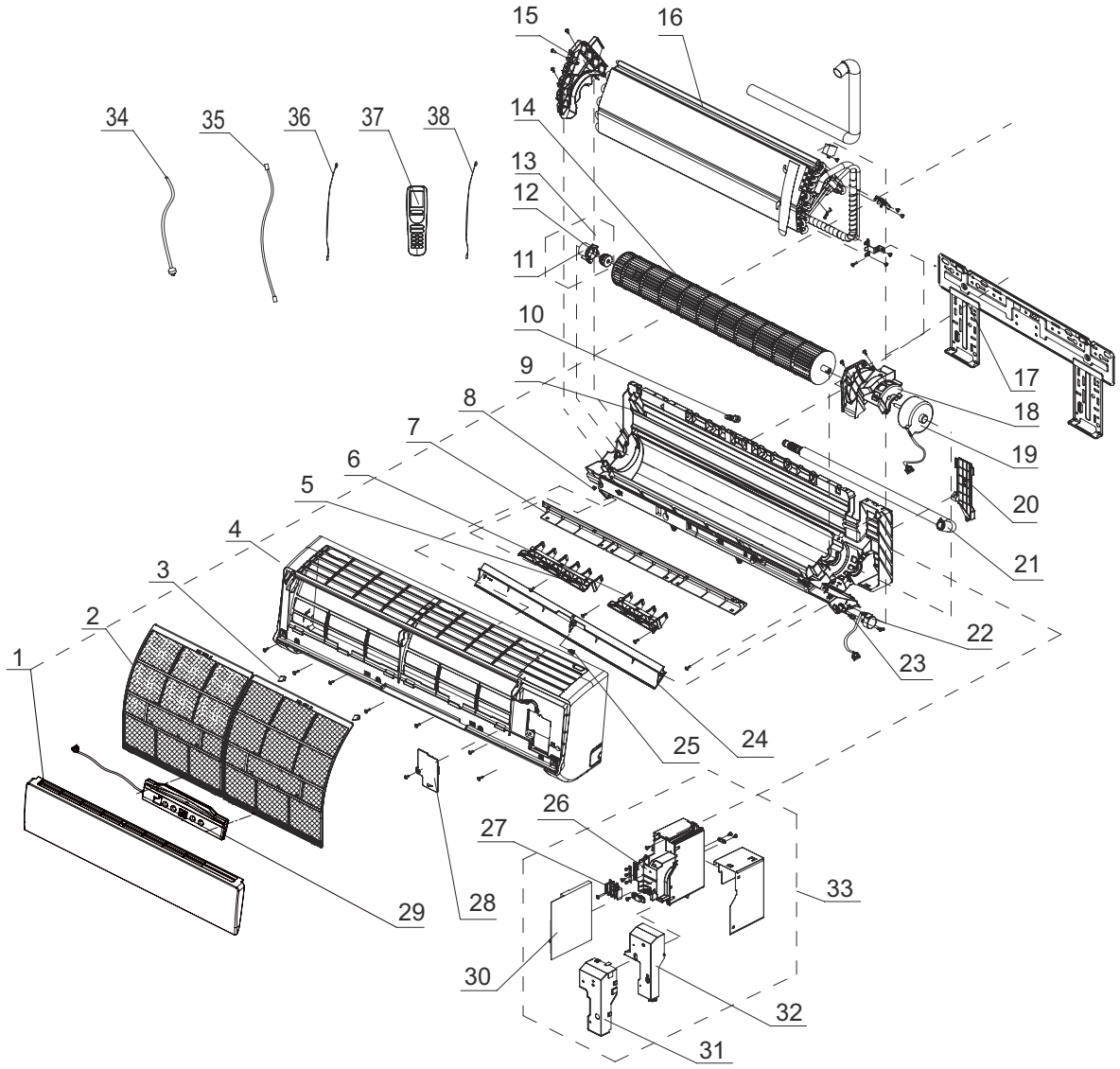
GWH09RB-K3NNA2A/I
GWH12RB-K3NNA2A/I



NO.	Description	Part Code		Qty
		GWH09RB-K3NNA2A/I	GWH12RB-K3NNA2A/I	
	Product code	CA301N01900	CA301N02000	
1	Front Panel Assy	20012726S	20012726S	1
2	Filter Sub-Assy	1112220403	1112220403	2
3	Screw Cover	242520179	242520179	1
4	Front Case Sub-assy	2001279001	2001279001	1
5	Air Louver 1	1051215603	1051215603	1
6	Air Louver 2	1051215503	1051215503	1
7	Helicoid Tongue	2611216302	2611216302	1
8	Left Axile Bush	10512037	2611216302	1
9	Rear Case assy	22202467	22202467	1
10	Rubber Plug (Water Tray)	76712012	76712012	1
11	Ring of Bearing	26152022	26152022	1
12	O-Gasket of Cross Fan Bearing	76512203	76512203	1
13	O-Gasket sub-assy of Bearing	76512051	76512051	1
14	Cross Flow Fan	10352044	10352044	1
15	Evaporator Support	24212091	24212091	1
16	Evaporator Assy	01002574	0100256502	1
17	Wall Mounting Frame	01002574	01252021	1
18	Motor Press Plate	26112161	26112161	1
19	Fan Motor	150120874	150120874	1
20	Pipe Clamp	2611216401	2611216401	1
21	Drainage hose	0523001401	0523001401	1
22	Step Motor	1521212901	1521212901	1
23	Crank	10582070	10582070	1
24	Guide Louver	10512203	10512203	1
25	Axile Bush	10542008	10542008	1
26	Electric Box	2011210501	2011210501	1
27	Terminal Board	42010262	42010262	1
28	Electric Box Cover2	20122075	20122075	1
29	Display Board	30565120	30565120	1
30	Main Board	30135628	30135642	1
31	Shield cover of Electric Box sub-assy	0159207301	0159207301	1
32	Electric Box Cover1	20122103	20122103	1
33	Electric Box Assy	2020262708	2020262709	1
34	Power Cord	400220113	4002046413	1
35	Connecting Cable	40020540/40020536	40020540/40020536	0
36	Ambient Temperature Sensor	390000453	390000453	1
37	Remote Controller	30510125	30510125	1
38	Tube Sensor	390000591	390000591	1

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GWH09RB-K3NNA3A/I
GWH12RB-K3NNA3A/I
GWH09RA-K3NNA3C/I
GWH12RB-K3NNA3C/I



NO.	Description	Part Code		Qty
		GWH09RB-K3NNA3A/I	GWH12RB-K3NNA3A/I	
	Product code	CA302N02100	CA302N02200	
1	Front Panel Assy	20012858	20012858	1
2	Filter Sub-Assy	1112220403	1112220403	2
3	Screw Cover	24252016	24252016	1
4	Front Case Sub-assy	20012790	20012790	1
5	Air Louver 1	1051215603	1051215603	1
6	Air Louver 2	1051215503	1051215503	1
7	Helicoid tongue	2611216302	2611216302	1
8	Left Axile Bush	10512037	10512037	1
9	Rear Case assy	22202467	22202467	1
10	Rubber Plug (Water Tray)	76712012	76712012	1
11	Ring of Bearing	26152022	26152022	1
12	O-Gasket of Cross Fan Bearing	76512203	76512203	1
13	O-Gasket sub-assy of Bearing	76512051	76512051	1
14	Cross Flow Fan	10352044	10352044	1
15	Evaporator Support	24212091	24212091	1
16	Evaporator Assy	01002574	0100256502	1
17	Wall Mounting Frame	01252021	01252021	1
18	Motor Press Plate	26112161	26112161	1
19	Fan Motor	150120874	150120874	1
20	Pipe Clamp	2611216401	2611216401	1
21	Drainage hose	0523001401	0523001401	1
22	Step Motor	1521212901	1521212901	1
23	Crank	10582070	10582070	1
24	Guide Louver	10512203	10512203	1
25	Axile Bush	10542008	10542008	1
26	Electric Box	2011210501	2011210501	1
27	Terminal Board	42010262	42010262	1
28	Electric Box Cover2	20122075	20122075	1
29	Display Board	30565137	30565137	1
30	Main Board	30135665	30135665	1
31	Shield cover of Electric Box sub-assy	0159207301	0159207301	1
32	Electric Box Cover1	20122103	20122103	1
33	Electric Box Assy	2020262710	2020262711	1
34	Power Cord	400220113	4002046413	1
35	Connecting Cable	40020540 /40020536	40020540 /40020536	0
36	Ambient Temperature Sensor	390000453	390000453	1
37	Remote Controller	30510125	30510125	1
38	Tube Sensor	390000591	390000591	1

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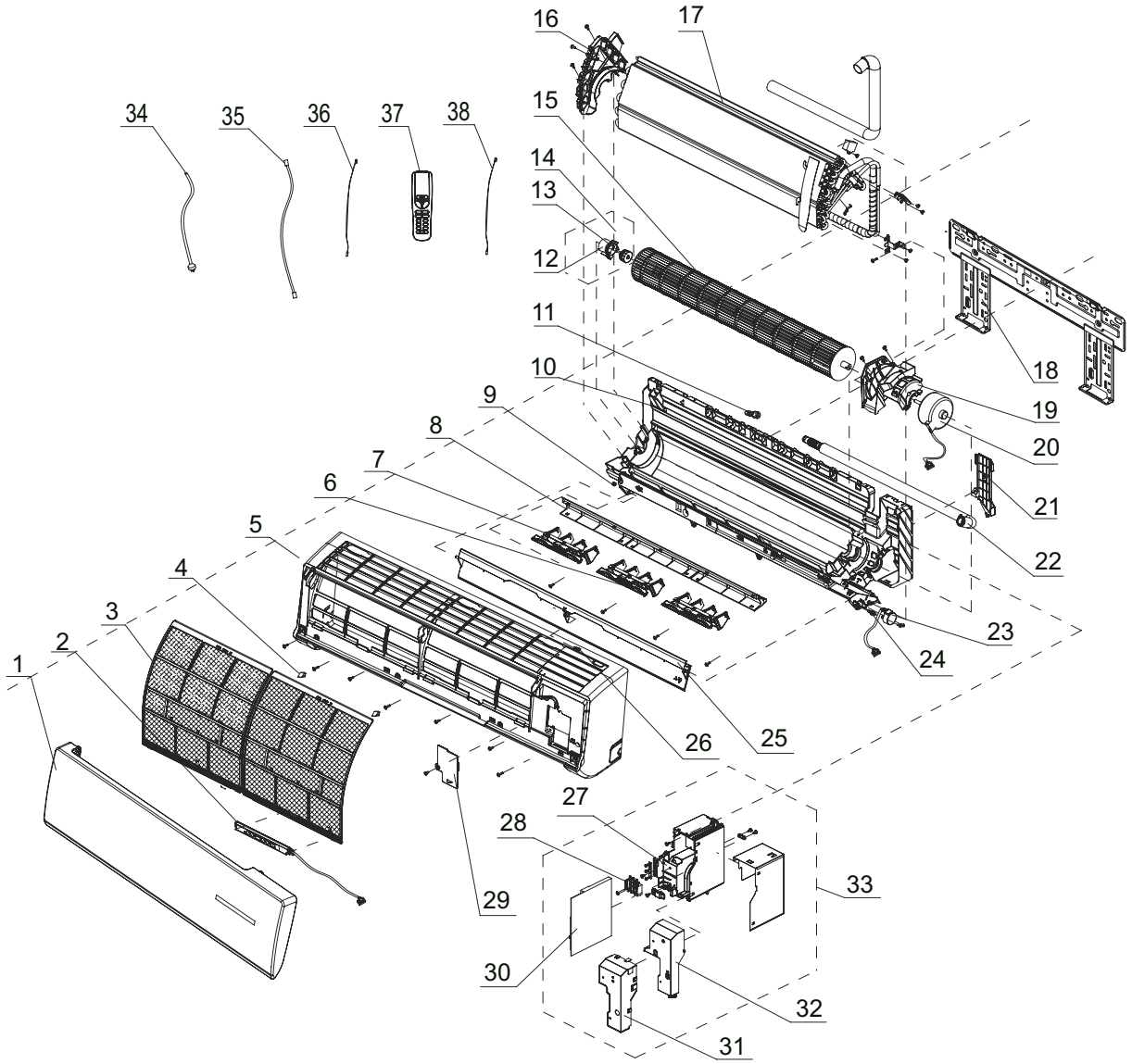
NO.	Description	Part Code		Qty
		GWH09RA-K3NNA3C/I	GWH12RB-K3NNA3C/I	
	Product code	CA302N04100	CA302N01801	
1	Front Panel Assy	20012878	20012858	1
2	Filter Sub-Assy	11122206	1112220403	2
3	Screw Cover	24252016	24252016	3/1
4	Front Case Sub-assy	20012672	20012790	1
5	Air Louver 1	1051211302	1051215603	1
6	Air Louver 2	1051211402	1051215503	1
7	Helicoid tongue	2611216202	2611216302	1
8	Left Axile Bush	10542036	10512037	1
9	Rear Case assy	22202186	22202467	1
10	Rubber Plug (Water Tray)	76712012	76712012	1
11	Ring of Bearing	26152022	26152022	1
12	O-Gasket of Cross Fan Bearing	76512203	76512203	1
13	O-Gasket sub-assy of Bearing	76512051	76512051	1
14	Cross Flow Fan	10352018	10352017	1
15	Evaporator Support	24212090	24212091	1
16	Evaporator Assy	0100255202	0100256401	1
17	Wall Mounting Frame	01252015	01252021	1
18	Motor Press Plate	26112160	26112161	1
19	Fan Motor	15012115	150120874	1
20	Pipe Clamp	2611216401	2611216401	1
21	Drainage hose	0523001406	0523001401	1
22	Step Motor	1521212901	1521212901	1
23	Crank	10582070	10582070	1
24	Guide Louver	10512204	10512203	1
25	Axile Bush	10542704	10542036	1
26	Electric Box	2011216701	2011216701	1
27	Terminal Board	42010262	42010262	1
28	Electric Box Cover2	20122075	20122075	1
29	Display Board	30565137	30565137	1
30	Main Board	30135698	30135665	1
31	Shield cover of Electric Box sub-assy	0159207301	0159207301	1
32	Electric Box Cover1	20122103	20122103	1
33	Electric Box Assy	2020262402	20402038	1
34	Power Cord	400220113	4002046413	1
35	Connecting Cable	40020540/40020536	40020540/40020536	0
36	Ambient Temperature Sensor	390000453	390000453	1
37	Remote Controller	30510125	30510125	1
38	Tube Sensor	390000591	390000591	1

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NO.	Description	Part Code		Qty
		GWH09RB-K3NNA3C/I	GWH12RB-K3NNA3C/I	
	Product code	CA302N01804	CA302N01803	
1	Front Panel Assy	2001285802	2001285804	1
2	Filter Sub-Assy	1112220403	1112220403	2
3	Screw Cover	24252016	24252016	1
4	Front Case Sub-assy	20012790	20012790	1
5	Air Louver 1	1051215603	1051215603	1
6	Air Louver 2	1051215503	1051215503	1
7	Helicoid tongue	2611216302	2611216302	1
8	Left Axile Bush	10512037	10512037	1
9	Rear Case assy	22202467	22202467	1
10	Rubber Plug (Water Tray)	76712012	76712012	1
11	Ring of Bearing	26152022	26152022	1
12	O-Gasket of Cross Fan Bearing	76512203	76512203	1
13	O-Gasket sub-assy of Bearing	26152022	7651205102	1
14	Cross Flow Fan	10352017	10352017	1
15	Evaporator Support	24212091	24212091	1
16	Evaporator Assy	0100256401	0100256401	1
17	Wall Mounting Frame	01252021	01252021	1
18	Motor Press Plate	26112161	26112161	1
19	Fan Motor	150120874	150120874	1
20	Pipe Clamp	2611216401	2611216401	0
21	Drainage hose	0523001401	0523001401	1
22	Step Motor	1521212901	1521212901	1
23	Crank	10582070	10582070	1
24	Guide Louver	10512203	10512203	1
25	Axile Bush	10542036	10542036	1
26	Electric Box	2011216701	2011216701	1
27	Terminal Board	42010262	42010262	1
28	Electric Box Cover2	20122075	20122075	1
29	Display Board	30565158	30565137	1
30	Main Board	30135665	30135665	1
31	Shield cover of Electric Box sub-assy	0159207301	0159207301	1
32	Electric Box Cover1	22242135	22242135	1
33	Electric Box Assy	20402613	20402038	1
34	Power Cord	4002046413	4002046413	1
35	Connecting Cable	40020540/40020536	40020540/40020536	0
36	Ambient Temperature Sensor	390000453	390000453	1
37	Remote Controller	30510125	30510125	1
38	Tube Sensor	390000599	390000599	1

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GWH09RB-K3NNA4A/I
GWH12RB-K3NNA4A/I
GWH07RA-K3NNA4A/I
GWH09RA-K3NNA4C/I
GWH12RB-K3NNA4C/I



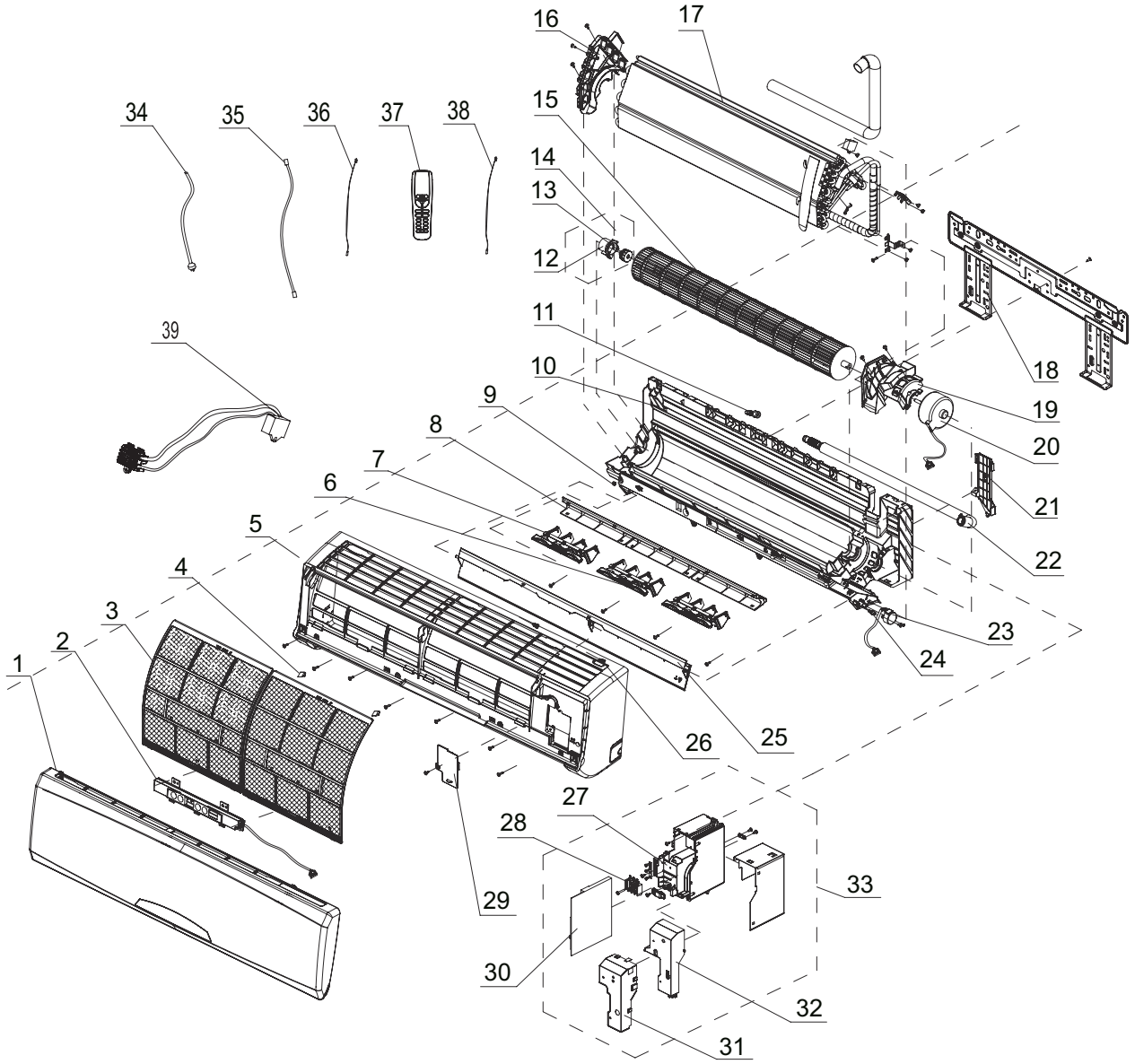
NO.	Description	Part Code		Qty
		GWH09RB-K3NNA4A/I	GWH12RB-K3NNA4A/I	
	Product code	CA303N01700	CA303N01800	
1	Front Panel	20012800	20012800	1
2	Display Board	30565037	30565037	1
3	Filter Sub-Assy	1112220403	1112220403	2
4	Screw Cover	24252016	24252016	1
5	Front Case Sub-assy	20012790	20012790	1
6	Air Louver 1	1051215603	1051215603	1
7	Air Louver 2	1051215503	1051215503	1
8	Helicoid tongue	2611216302	2611216302	1
9	Left Axile Bush	10512037	10512037	1
10	Rear Case assy	22202467	22202467	1
11	Rubber Plug (Water Tray)	76712012	76712012	1
12	Ring of Bearing	26152022	26152022	1
13	O-Gasket of Cross Fan Bearing	76512203	76512203	1
14	O-Gasket sub-assy of Bearing	76512051	76512051	1
15	Cross Flow Fan	10352044	10352044	1
16	Evaporator Support	24212091	24212091	1
17	Evaporator Assy	01002574	0100256502	1
18	Wall Mounting Frame	01252021	01252021	1
19	Motor Press Plate	26112161	26112161	1
20	Fan Motor	150120874	150120874	1
21	Pipe Clamp	2611216401	2611216401	1
22	Drainage hose	0523001401	0523001401	1
23	Step Motor	1521212901	1521212901	1
24	Crank	10582070	10582070	1
25	Guide Louver	10512203	10512203	1
26	Axile Bush	10542008	10542008	1
27	Electric Box	2011210501	2011210501	1
28	Terminal Board	42010262	42010262	1
29	Electric Box Cover2	20122075	20122075	1
30	Main Board	30135723	30135642	1
31	Shield cover of Electric Box sub-assy	0159207301	0159207301	1
32	Electric Box Cover1	20122103	20122103	1
33	Electric Box Assy	2020280903	2020280902	1
34	Power Cord	400220113	4002046413	1
35	Connecting Cable	40020540/40020536	40020540/40020536	0
36	Ambient Temperature Sensor	390000453	390000453	1
37	Remote Controller	30510125	30510125	1
38	Tube Sensor	390000591	390000591	1

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NO.	Description	Part Code			Qty
		GWH07RA-K3NNA4A/I	GWH09RA-K3NNA4C/I	GWH12RB-K3NNA4C/I	
	Product code	CA303N02101	CA303N02201	CA303N01602	
1	Front Panel	2001270502	2001270502	2001280002	1
2	Display Board	30565229	30565229	30565229	1
3	Filter Sub-Assy	11122206	11122206	1112220403	2
4	Screw Cover	24252016	24252016	24252016	3/3/1
5	Front Case Sub-assy	20012672	20012672	20012790	1
6	Air Louver 1	1051211302	1051211302	1051215603	1
7	Air Louver 2	1051211402	1051211402	1051215503	1
8	Helicoid tongue	2611216202	2611216202	2611216302	1
9	Left Axile Bush	10542036	10542036	10512037	1
10	Rear Case assy	22202186	22202186	22202467	1
11	Rubber Plug (Water Tray)	76712012	76712012	76712012	1
12	Ring of Bearing	26152022	26152022	26152022	1
13	O-Gasket of Cross Fan Bearing	76512203	76512203	76512203	1
14	O-Gasket sub-assy of Bearing	76512051	76512051	76512051	1
15	Cross Flow Fan	10352018	10352018	10352017	1
16	Evaporator Support	24212090	24212090	24212091	1
17	Evaporator Assy	0100255202	0100255202	0100256401	1
18	Wall Mounting Frame	01252015	01252015	01252021	1
19	Motor Press Plate	26112160	26112160	26112161	1
20	Fan Motor	15012115	15012115	150120874	1
21	Pipe Clamp	2611216401	2611216401	2611216401	1
22	Drainage hose	0523001406	0523001406	0523001401	1
23	Step Motor	1521212901	1521212901	1521212901	1
24	Crank	10582070	10582070	10582070	1
25	Guide Louver	2001270502	10512204	10512203	1
26	Axile Bush	10542704	10542036	10542036	1
27	Electric Box	2011216701	2011216701	2011216701	1
28	Terminal Board	42010268	42010268	42010268	1
29	Electric Box Cover2	20122075	20122075	20122075	1
30	Main Board	30135550	30135550	30135628	1
31	Shield cover of Electric Box sub-assy	0159207301	0159207301	0159207301	1
32	Electric Box Cover1	20122103	20122103	20122103	1
33	Electric Box Assy	20402014	20402010	20402005	1
34	Power Cord	4002046417	4002046417	4002046417	1
35	Connecting Cable	40020540/40020536	40020540/40020536	40020540/40020536	0
36	Ambient Temperature Sensor	390000453	390000453	390000453	1
37	Remote Controller	30510125	30510125	30510125	1
38	Tube Sensor	390000591	390000591	390000591	1

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GWH09RB-K3NNA5A/I
GWH12RB-K3NNA5A/I
GWH09RA-K3NNA5C/I(Cold Plasma)
GWH12RB-K3NNA5C/I(Cold Plasma)



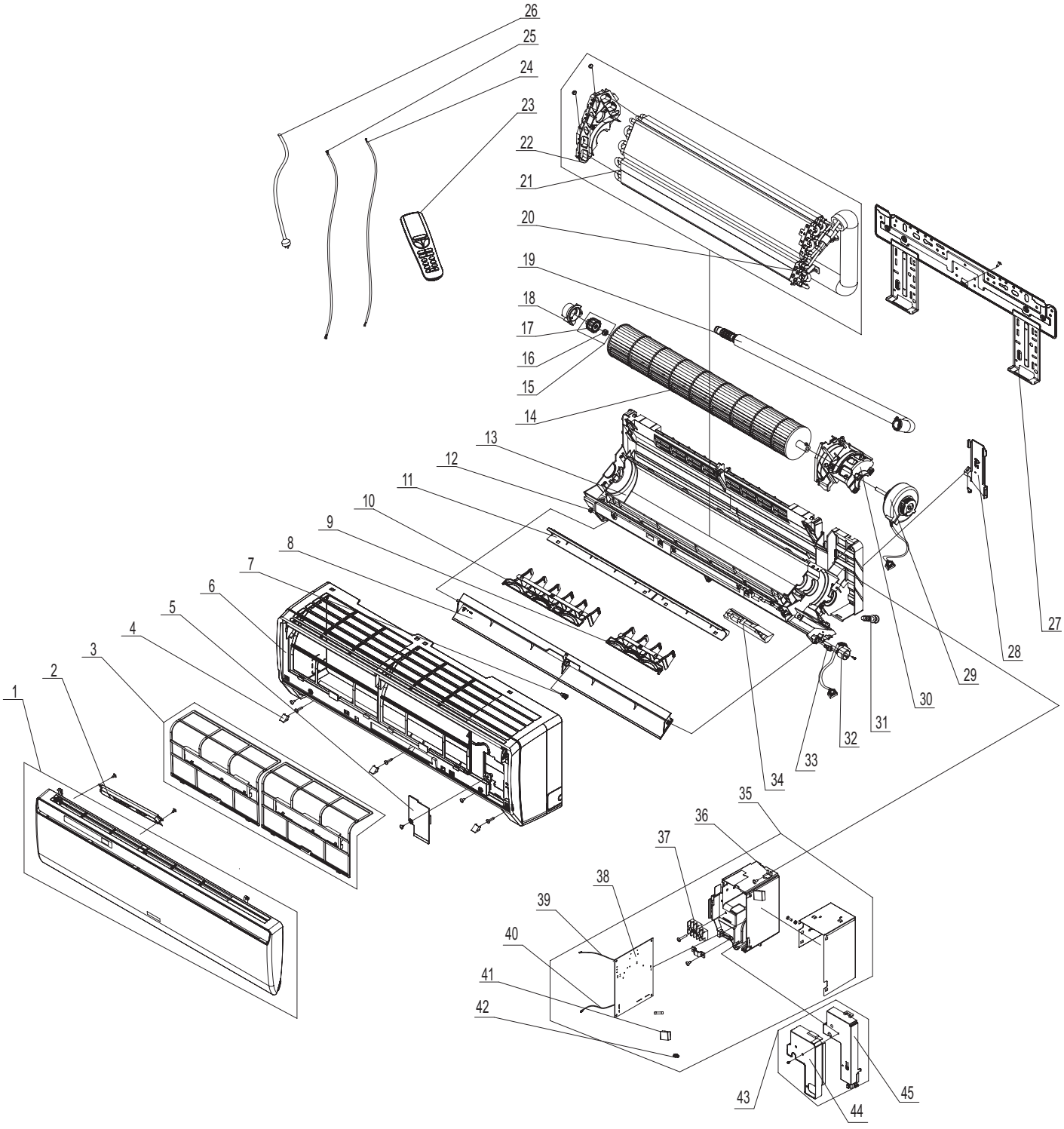
NO.	Description	Part Code		Qty
		GWH09RB-K3NNA5A/I	GWH12RB-K3NNA5A/I	
	Product code	CA304N01500	CA304N01600	
1	Front Panel Assy	20012948	20012948	1
2	Display Board	30565159	30565159	1
3	Filter Sub-Assy	1112220403	1112220403	2
4	Screw Cover	242520179	242520179	1
5	Front Case Sub-assy	2001279001	2001279001	1
6	Air Louver 1	1051215603	1051215603	1
7	Air Louver 2	1051215503	1051215503	1
8	Helicoid tongue	2611216302	2611216302	1
9	Left Axile Bush	10512037	10512037	1
10	Rear Case assy	22202467	22202467	1
11	Rubber Plug (Water Tray)	76712012	76712012	1
12	Ring of Bearing	26152022	26152022	1
13	O-Gasket of Cross Fan Bearing	76512203	76512203	1
14	O-Gasket sub-assy of Bearing	76512051	76512051	1
15	Cross Flow Fan	10352044	10352044	1
16	Evaporator Support	24212091	24212091	1
17	Evaporator Assy	01002574	0100256502	1
18	Wall Mounting Frame	01252021	01252021	1
19	Motor Press Plate	26112161	26112161	1
20	Fan Motor	150120874	150120874	1
21	Pipe Clamp	2611216401	2611216401	1
22	Drainage hose	0523001401	0523001401	1
23	Step Motor	1521212901	1521212901	1
24	Crank	10582070	10582070	1
25	Guide Louver	1051220301	1051220301	1
26	Axile Bush	10542008	10542008	1
27	Electric Box	2011210501	2011210501	1
28	Terminal Board	42010262	42010262	1
29	Electric Box Cover2	2012207512	2012207512	1
30	Main Board	30135723	30135642	1
31	Shield cover of Electric Box sub-assy	0159207301	0159207301	1
32	Electric Box Cover1	20122103	20122103	1
33	Electric Box Assy	2020262721	2020262722	1
34	Power Cord	400220113	4002046413	1
35	Connecting Cable	40020540/40020536	40020540/40020536	0
36	Ambient Temperature Sensor	390000453	390000453	1
37	Remote Controller	30510125	30510125	1
38	Tube Sensor	390000591	390000591	1
39	Cold Plasma Generator Sub-assy	/	/	/

Above data is subject to change without notice.

NO.	Description	Part Code		Qty
		GWH09RA-K3NNA5C/I (Cold Plasma)	GWH12RB-K3NNA5C/I (Cold Plasma)	
	Product code	CA304N02200	CA304N01401	
1	Front Panel Assy	20012986	20012948	1
2	Display Board	30565139	30565159	1
3	Filter Sub-Assy	11122206	1112220403	2
4	Screw Cover	242520179	242520179	3/1
5	Front Case Sub-assy	2001267201	2001279001	1
6	Air Louver 1	1051211302	1051215603	1
7	Air Louver 2	1051211402	1051215503	1
8	Helicoid tongue	2611216202	2611216302	1
9	Left Axile Bush	10542036	10512037	1
10	Rear Case assy	22202186	22202467	1
11	Rubber Plug (Water Tray)	76712012	76712012	1
12	Ring of Bearing	26152022	26152022	1
13	O-Gasket of Cross Fan Bearing	76512203	76512203	1
14	O-Gasket sub-assy of Bearing	76512051	76512051	1
15	Cross Flow Fan	10352018	10352017	1
16	Evaporator Support	24212090	24212091	1
17	Evaporator Assy	0100255202	0100256401	1
18	Wall Mounting Frame	01252015	01252021	1
19	Motor Press Plate	26112160	26112161	1
20	Fan Motor	15012115	150120874	1
21	Pipe Clamp	2611216401	2611216401	1
22	Drainage hose	0523001406	0523001401	1
23	Step Motor	1521212901	1521212901	1
24	Crank	10582070	10582070	1
25	Guide Louver	1051220401	1051220301	1
26	Axile Bush	10542704	10542036	1
27	Electric Box	2011216701	2011216701	1
28	Terminal Board	42010262	42010262	1
29	Electric Box Cover2	2012207512	2012207512	1
30	Main Board	30135578	30135578	1
31	Shield cover of Electric Box sub-assy	0159207301	0159207301	1
32	Electric Box Cover1	20122103	20122103	1
33	Electric Box Assy	20302742	20302744	1
34	Power Cord	400220113	4002046413	1
35	Connecting Cable	40020540/40020536	40020540/40020536	0
36	Ambient Temperature Sensor	390000453	390000453	1
37	Remote Controller	30510125	30510125	1
38	Tube Sensor	390000591	390000591	1
39	Cold Plasma Generator Sub-assy	11140009	11140009	1

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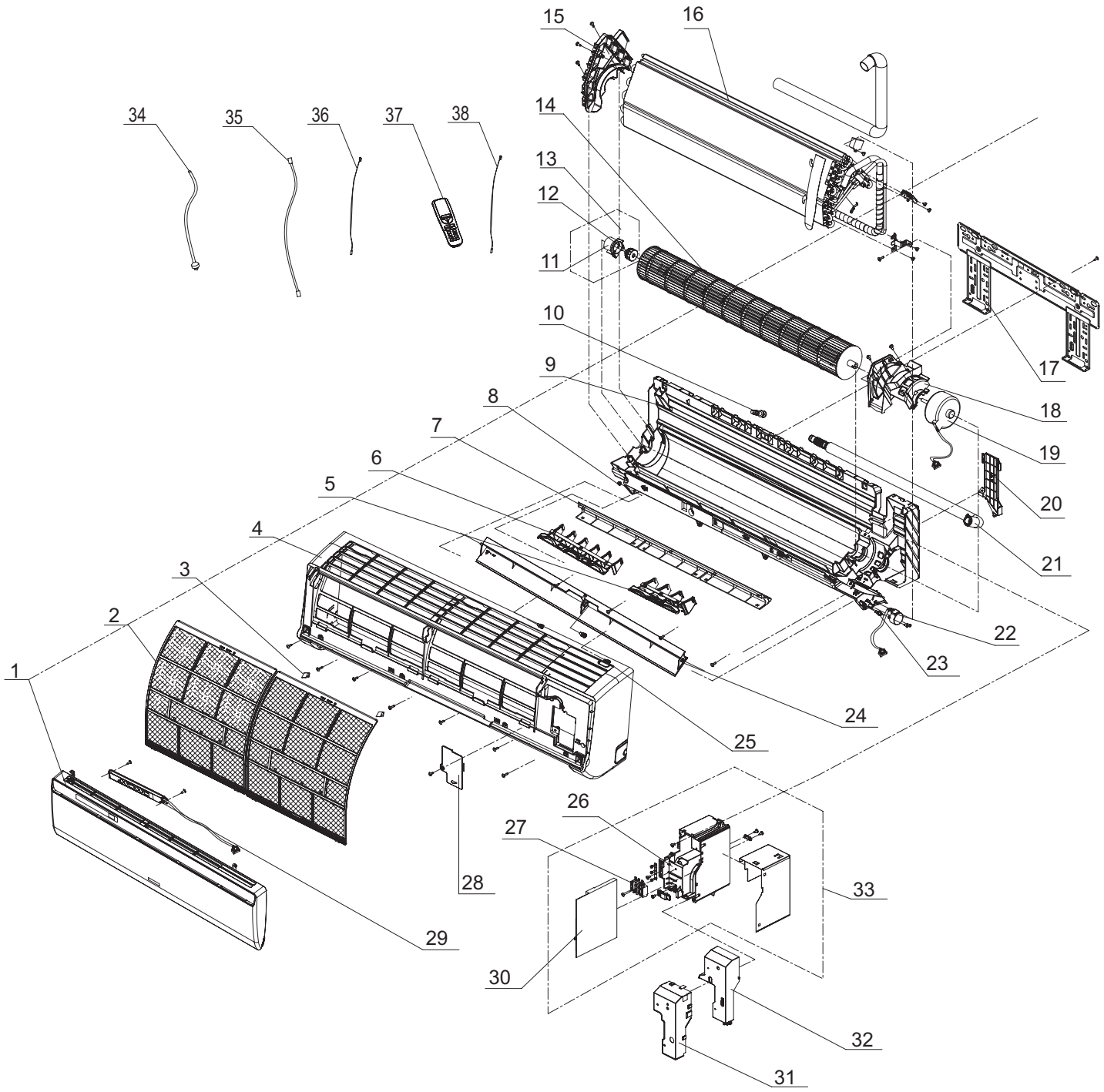
GWH09RA-K3NNA2C/I



NO.	Description	Part Code	Qty
		GWH09RA-K3NNA2C/I	
	Product code	CA301N02100	
1	Front Panel Assy	20012827	1
2	Display Board	30565120	1
3	Filter Sub-Assy	11122206	2
4	Screw Cover	242520179	3
5	Electric Box Cover2	2012207512	1
6	Front Case	2001267201	1
7	Axile Bush	10542036	1
8	Guide Louver	1051220401	1
9	Air Louver 1	1051211302	1
10	Air Louver 2	1051211402	1
11	Helicoid Tongue	2611216202	1
12	Axile Bush	10542704	1
13	Rear Case assy	22202186	1
14	Cross Flow Fan	10352018	1
15	O-Gasket sub-assy of Bearing	76512051	1
16	Fan Bearing	76512210	1
17	O-Gasket of Cross Fan Bearing	76512203	1
18	Ring of Bearing	26152022	1
19	Drainage Hose	0523001406	1
20	Temp Sensor Sleeving	05212423	1
21	Evaporator Assy	0100255202	1
22	Evaporator Support	24212090	1
23	Remote Controller	30510125	1
24	Connecting Cable	40020536	0
25	Connecting Cable	40020540	0
26	Power Cord	400220113	1
27	Wall Mounting Frame	01252015	1
28	Pipe Clamp	2611216401	1
29	Fan Motor	15012115	1
30	Motor Press Plate	26112160	1
31	Rubber Plug (Water Tray)	76712012	1
32	Step Motor	1521212901	1
33	Crank	10582070	1
34	Foam C (Water tray)	12312163	1
35	Electric Box Assy	20302512	1
36	Electric Box	2011216701	1
37	Terminal Board	42010262	1
38	Main Board	30135550	1
39	Ambient Temperature Sensor	390000453	1
40	Tube Sensor	390000591	1
41	Capacitor CBB61	33010002	1
42	Jumper	4202300126	1
43	Shield Cover of Electric Box Sub-assy	0159207301	1
44	Shield Cover of Electric Box	0141203601	1
45	Electric Box Cover1	20122103	1

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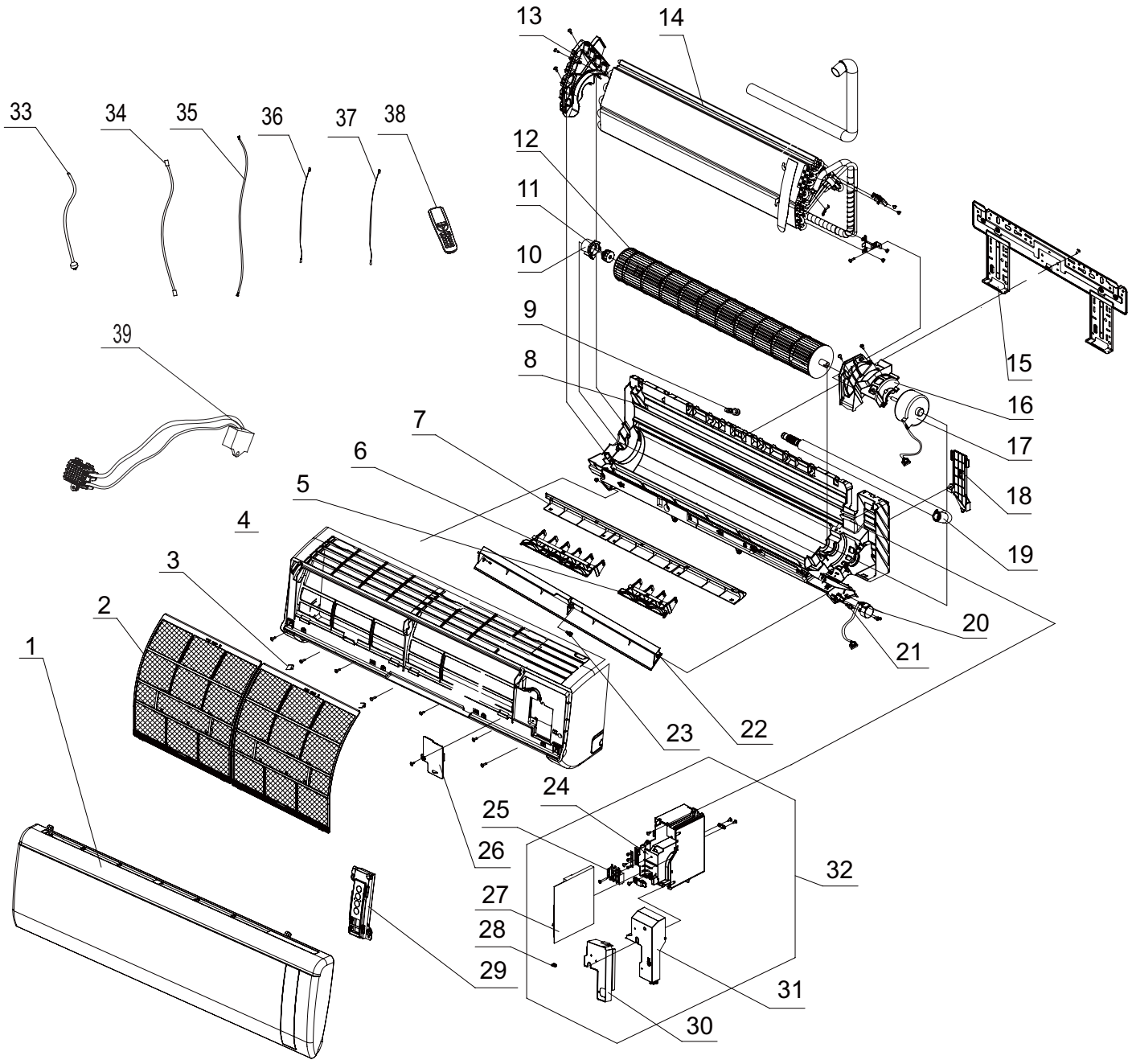
GWH12RB-K3NNA2C/I



NO.	Description	Part Code	Qty
		GWH12RB-K3NNA2C/I	
	Product code	CA301N01800	
1	Front Panel Assy	20022122	1
2	Filter Sub-Assy	1112220403	2
3	Screw Cover	242520179	1
4	Front Case Sub-assy	2001279001	1
5	Air Louver 1	1051215603	1
6	Air Louver 2	1051215503	1
7	Helicoid Tongue	2611216302	1
8	Left Axile Bush	10512037	1
9	Rear Case assy	22202467	1
10	Rubber Plug (Water Tray)	76712012	1
11	Ring of Bearing	26152022	1
12	O-Gasket of Cross Fan Bearing	76512203	1
13	O-Gasket sub-assy of Bearing	76512051	1
14	Cross Flow Fan	10352017	1
15	Evaporator Support	24212091	1
16	Evaporator Assy	0100256401	1
17	Wall Mounting Frame	01252021	1
18	Motor Press Plate	26112161	1
19	Fan Motor	150120874	1
20	Pipe Clamp	2611216401	1
21	Drainage Hose	0523001401	1
22	Step Motor	1521212901	1
23	Crank	10582070	1
24	Guide Louver	1051220301	1
25	Axile Bush	10542036	1
26	Electric Box	2011216701	1
27	Terminal Board	42010262	1
28	Electric Box Cover2	2012207512	1
29	Display Board	30565120	1
30	Main Board	30135628	1
31	Shield Cover of Electric Box	0141203601	1
32	Electric Box Cover1	20122103	1
33	Electric Box Assy	2020262702	1
34	Power Cord	4002046413	1
35	Connecting Cable	40020540	0
36	Ambient Temperature Sensor	390000453	1
37	Remote Controller	30510125	1
38	Tube Sensor	390000591	1

Above data is subject to change without notice.

GWH09RA-K3NNA6C/I
GWH12RB-K3NNA6C/I
GWH09RA-K3NNA6C/I(Cold Plasma)
GWH12RB-K3NNA6C/I(Cold Plasma)



NO.	Description	Part Code		Qty
		GWH09RA-K3NNA6C/I	GWH12RB-K3NNA6C/I	
	Product code	CA305N00400	CA305N00200	
1	Front Panel Assy	20022317	20022260	1
2	Filter Sub-Assy	11122206	1112220403	2
3	Screw Cover	242520179	242520179	3
4	Front Case	2001267201	2001266501	1
5	Air Louver 1	1051211302	1051215603	1
6	Air Louver 2	1051211402	1051215503	1
7	Helicoid Tongue	2611216202	2611216302	1
8	Rear Case assy	22202186	22202467	1
9	Rubber Plug (Water Tray)	76712012	76712012	1
10	O-Gasket sub-assy of Bearing	76512051	76512051	1
11	O-Gasket of Cross Fan Bearing	76512203	76512203	1
12	Cross Flow Fan	10352018	10352017	1
13	Evaporator Support	24212090	24212091	1
14	Evaporator Assy	0100255202	0100256401	1
15	Wall Mounting Frame	01252015	01252021	1
16	Motor Press Plate	26112160	26112161	1
17	Fan Motor	15012115	150120874	1
18	Pipe Clamp	2611216401	2611216401	1
19	Drainage Hose	0523001406	0523001401	1
20	Step Motor	1521212901	1521212901	1
21	Crank	10582070	10582070	1
22	Guide Louver	1051220401	1051220301	1
23	Axile Bush	10542036	10542036	1
24	Electric Box	2011216701	2011216701	1
25	Terminal Board	42010268	42010268	1
26	Electric Box Cover2	2012207512	2012207512	1
27	Main Board	30135550	30135628	1
28	Jumper	4202300126	4202300125	1
29	Display Board	30565207	30565207	1
30	Shield Cover of Electric Box Sub-assy	0159207301	0159207301	1
31	Electric Box Cover1	20122103	22242135	1
32	Electric Box Assy	20302600	20302435	1
33	Power Cord	4002046417	4002046417	1
34	Connecting Cable	40020536	40020536	0
35	Connecting Cable	40020540	40020540	0
36	Ambient Temperature Sensor	390000453	390000453	1
37	Temperature Sensor	390000591	390000591	1
38	Remote Controller	30510125	30510125	1
39	Cold Plasma Generator Sub-assy	/	/	/

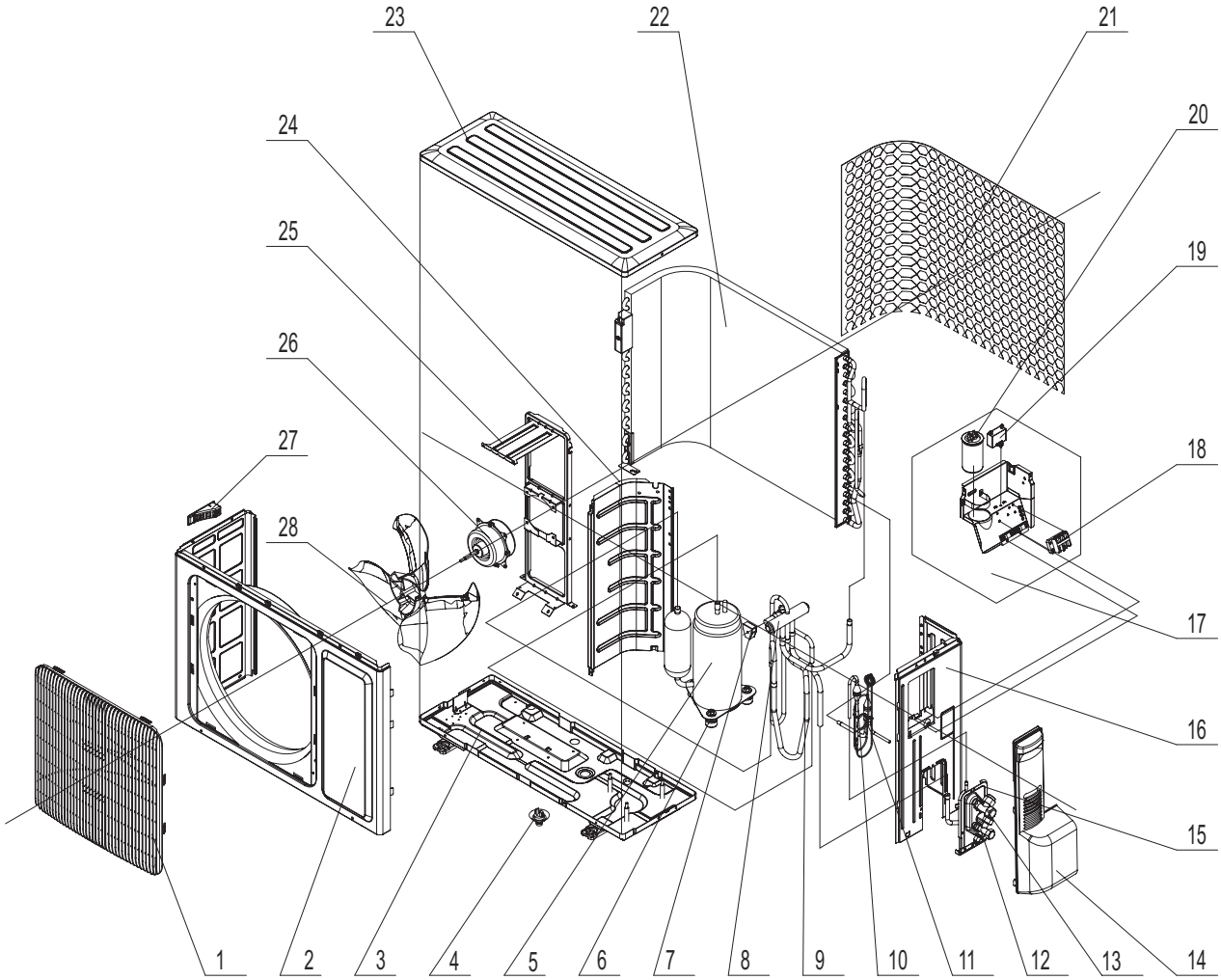
Above data is subject to change without notice.

NO.	Description	Part Code		Qty
		GWH09RA-K3NNA6C/I (Cold Plasma)	GWH12RB-K3NNA6C/I (Cold Plasma)	
	Product code	CA305N00402	CA305N00202	
1	Front Panel Assy	20022317	20022260	1
2	Filter Sub-Assy	11122206	1112220403	2
3	Screw Cover	242520179	242520179	3
4	Front Case	2001267201	2001266501	1
5	Air Louver 1	1051211302	1051215603	1
6	Air Louver 2	1051211402	1051215503	1
7	Helicoid Tongue	2611216202	2611216302	1
8	Rear Case assy	22202186	22202467	1
9	Rubber Plug (Water Tray)	76712012	76712012	1
10	O-Gasket sub-assy of Bearing	76512051	76512051	1
11	O-Gasket of Cross Fan Bearing	76512203	76512203	1
12	Cross Flow Fan	10352018	10352017	1
13	Evaporator Support	24212090	24212091	1
14	Evaporator Assy	0100255202	0100256401	1
15	Wall Mounting Frame	01252015	01252021	1
16	Motor Press Plate	26112160	26112161	1
17	Fan Motor	15012115	150120874	1
18	Pipe Clamp	2611216401	2611216401	1
19	Drainage Hose	0523001406	0523001401	1
20	Step Motor	1521212901	1521212901	1
21	Crank	10582070	10582070	1
22	Guide Louver	1051220401	1051220301	1
23	Axile Bush	10542036	10542036	1
24	Electric Box	2011216701	2011216701	1
25	Terminal Board	42010262	42010262	1
26	Electric Box Cover2	2012207512	2012207512	1
27	Main Board	30135578	30135578	1
28	Jumper	4202300126	4202300125	1
29	Display Board	30565207	30565207	1
30	Shield Cover of Electric Box Sub-assy	0159207301	0159207301	1
31	Electric Box Cover1	20122103	22242135	1
32	Electric Box Assy	20402058	20402049	1
33	Power Cord	4002046413	4002046413	1
34	Connecting Cable	40020536	40020536	0
35	Connecting Cable	40020540	40020540	0
36	Ambient Temperature Sensor	390000453	390000453	1
37	Temperature Sensor	390000591	390000591	1
38	Remote Controller	30510125	30510125	1
39	Cold Plasma Generator Sub-assy	11140009	11140009	/

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10.2 Outdoor Unit

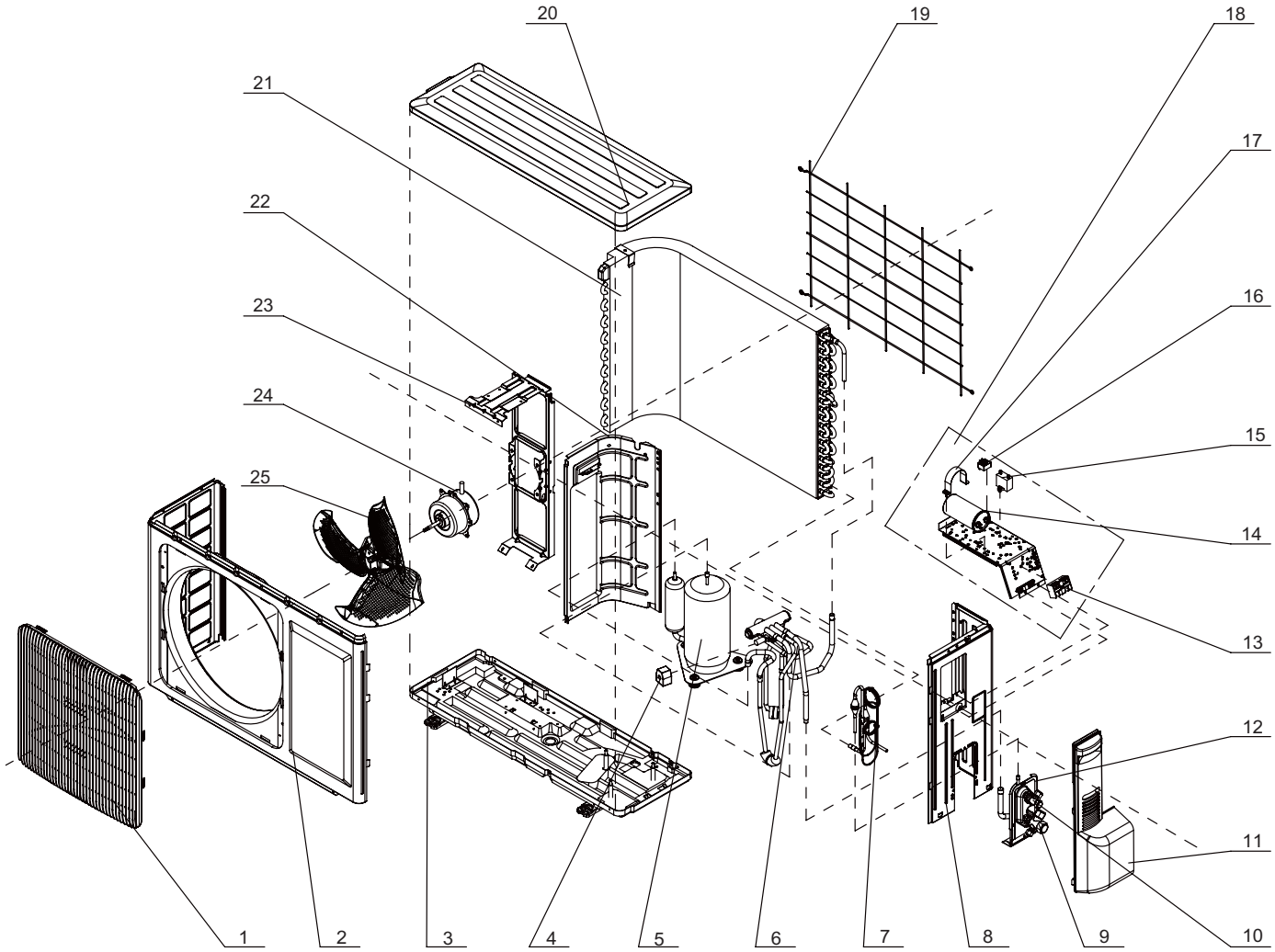
GWH07MA-K3NNA3E/O



NO.	Description	Part Code	Qty
		GWH07MA-K3NNA3E/O	
	Product code	CA171W26100	
1	Front Panel	01533034P	1
2	Front Grill	22413433	1
3	Chassis Sub-assy	02803342P	1
4	Drainage Connecter	06123401	1
5	Compressor and Fittings	00103940	1
6	Rubber Grommet	76710250	1
7	Magnet Coil	4300040022	1
8	4-Way Valve	430004022	1
9	4-Way Valve Assy	03073288	1
10	StrainerA	07210022	1
11	Capillary Sub-assy	03163505	1
12	Valve	07100003	1
13	Valve	07100005	1
14	Big Handle	26233433	1
15	Valve Support	0170308901P	1
16	Right Side Plate Sub-Assy	01303183	1
17	Electric Box Assy	01403000110	1
18	Terminal Board	42010265	1
19	Capacitor CBB61	33010026	1
20	Capacitor CBB65	33000081	1
21	Rear Grill	1112320501	1
22	Condenser Assy	01103000196	1
23	Top Cover Sub-Assy	01253087	1
24	Clapboard Sub-Assy	01233066	1
25	Motor Support Sub-Assy	01703104	1
26	Fan Motor	1501306733	1
27	Small Handle	26233100	1
28	Axial Flow Fan	10333427	1

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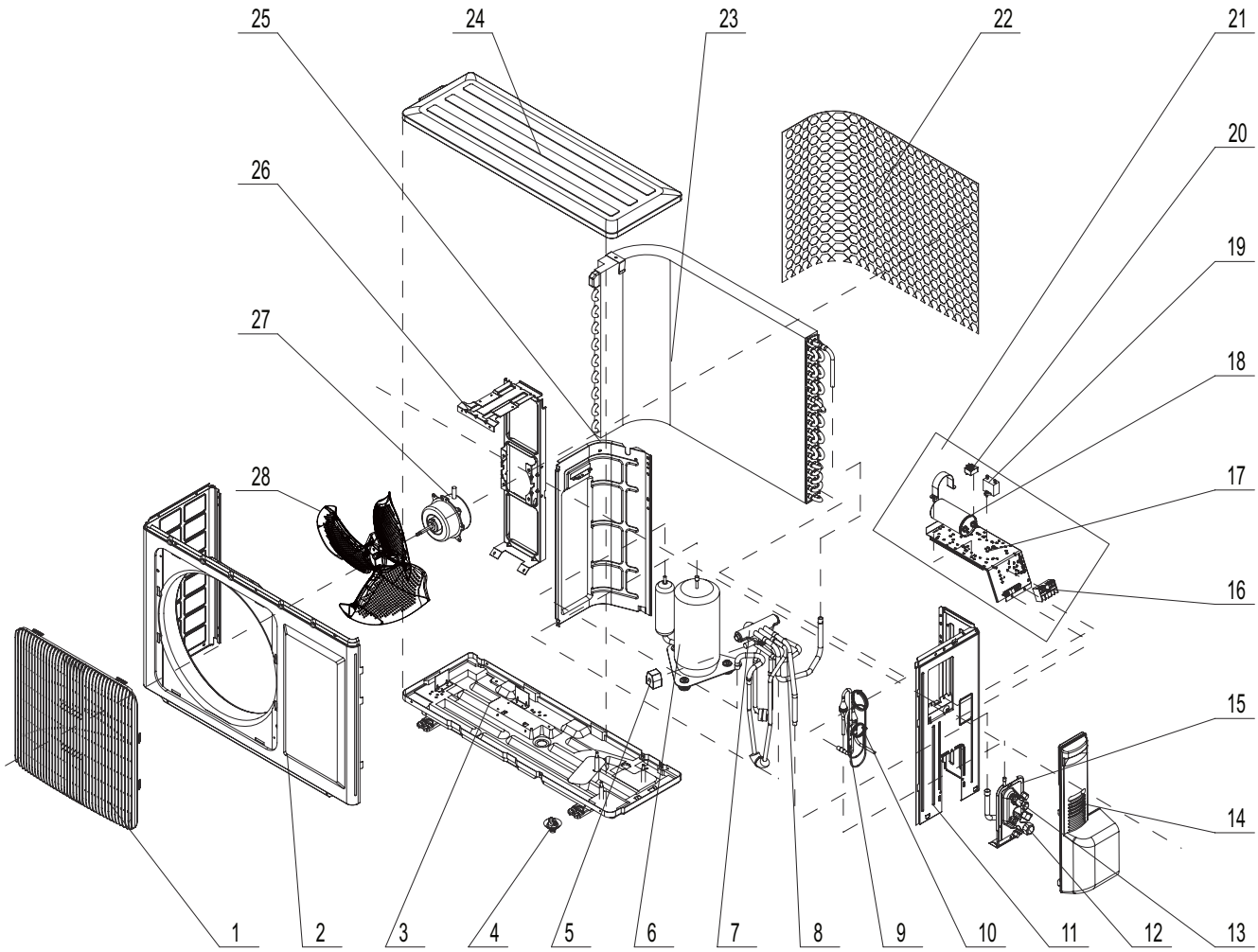
GWH07MA-K3NNC9A /O



NO.	Description	Part Code	Qty
		GWH07MA-K3NNC9A/O	
	Product code	CA145W0010	
1	Front Grill	22413433	1
2	Front Panel	015330124	1
3	Chassis Sub-assy	01203659P	1
4	Magnet Coil	43000400	1
5	Compressor and Fittings	00103176_G	1
6	4-way Valve Assy	03123426	1
7	Capillary Sub-Assy	0306324601	1
8	Right Side Plate Assy	0130200403	1
9	Valve	07100005	1
10	Valve	07100003	1
11	Big Handle	26233433	1
12	Valve Support	01713041	1
13	Terminal Board	42010265	1
14	Capacitor CBB65	33000018	1
15	Capacitor CBB61	33010025	1
16	Terminal Board	/	0
17	capacitor clamp sub	02143401	1
18	Electric Box Assy	02603490	1
19	Rear grill	11123205	1
20	Top Cover Plate	01253443	1
21	Condenser Assy	0111372901	1
22	Clapboard Sub-Assy	012334172	1
23	Motor Support Sub-Assy	01703053	1
24	Fan Motor	150130671	1
25	Axial Flow Fan	10333004	1

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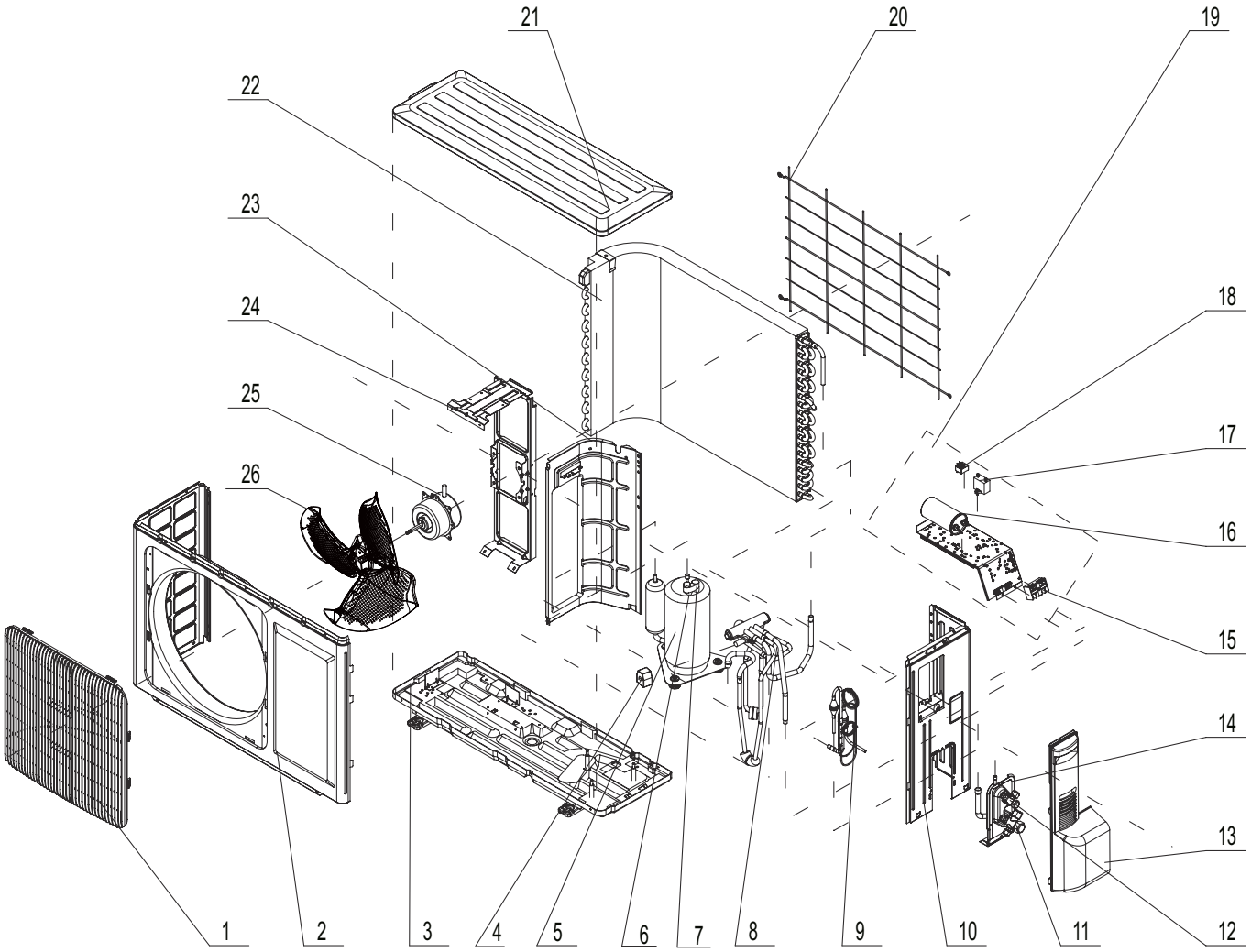
GWH09MA-K3NNA3A/O
GWH12MB-K3NNA4A/O



NO.	Description	Part Code		Qty
		GWH09MA-K3NNA3A/O	GWH12MB-K3NNA4A/O	
	Product code	CA155W0070	CA155W0031	
1	Front Grill	22413433	22413433	1
2	Front Panel	015330124	015330124	1
3	Chassis Sub-assy	01203659P	012032455	1
4	Drainage Connecter	06123401	06123401	1
5	Magnet Coil	43000400	43000400	1
6	Compressor and Fttings	00103253	00103781G	1
7	4-way Valve	430004022	03123483	1
8	4-way Valve Assy	03123018	430004032	1
9	StrainerA	07210022	07210022	1
10	Capillary Sub-Assy	0310349702	03063373	1
11	Right Side Plate Assy	0130200403	0130200404	1
12	Valve	07100005	07100003	1
13	Valve	07100003	07100006	1
14	Big Handle	26233433	26233433	1
15	Valve Support	01713041	01713041	1
16	Terminal Board	42010265	42010265	1
17	Electric Box Sub-Assy	01403117	01403117	1
18	Capacitor CBB65	33000018	33010743	1
19	Capacitor CBB61	33010025	33010025	1
20	Terminal Board	42011147	/	1
21	Electric Box Assy	0140386101	02603488	1
22	Rear grill	11123205	11123205	1
23	Condenser Assy	0110395702	01113858	1
24	Top Cover Plate	01253443	01253443	1
25	Clapboard Sub-Assy	012334172	012334172	1
26	Motor Support Sub-Assy	01703053	01703050	1
27	Fan Motor	150130671	15013067	1
28	Axial Flow Fan	10333004	10333004	1

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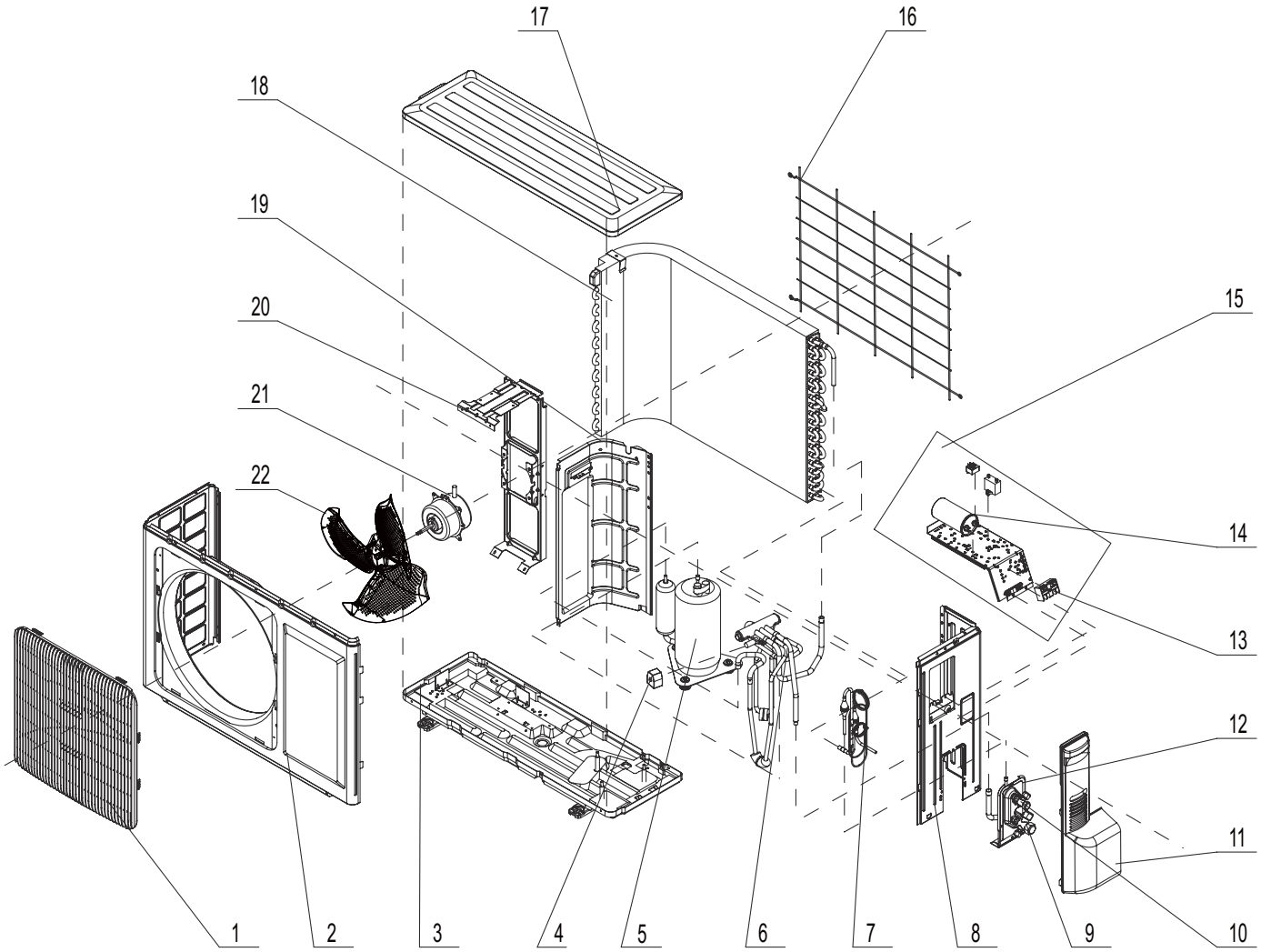
GWH09RB-K3NNA1A/O



NO.	Description	Part Code	Qty
		GWH09RB-K3NNA1A/O	
	Product code	CA144W05900	
1	Front Grill	22413433	1
2	Front Panel	015330124	1
3	Chassis Sub-assy	0120365901P	1
4	Magnet Coil	43000400	1
5	Compressor and Fittings	00103253	1
6	Compressor Glue Cushion	/	/
7	Compressor Overload	/	/
8	4-way Valve Assy	03123018	1
9	Capillary Sub-Assy	03103943	1
10	Right Side Plate Assy	0130200403	1
11	Valve	07100005	1
12	Valve	07100003	1
13	Big Handle	26233433	1
14	Valve Support	01713041	1
15	Terminal Board	42010265	1
16	Capacitor CBB65	33000018	1
17	Capacitor CBB61	33010025	1
18	Terminal Board	/	/
19	Electric Box Assy	02603493	1
20	Rear grill	11123205	1
21	Top Cover Plate	01253443	1
22	Condenser Assy	01113390	1
23	Clapboard Sub-Assy	012334172	1
24	Motor Support Sub-Assy	017030501	1
25	Fan Motor	150130671	1
26	Axial Flow Fan	10333427	1

Above data is subject to change without notice.

GWH12RB-K3NNA1A/O



NO.	Description	Part Code	Qty
		GWH12RB-K3NNA1A/O	
	Product code	CA144W06000	
1	Front Grill	22413433	1
2	Front Panel	01535002	1
3	Chassis Sub-assy	01203829P	1
4	Magnet Coil	43000400	1
5	Compressor and Fittings	00103174	1
6	4-Way Valve Assy	0312344702	1
7	Capillary Sub-assy	03063466	1
8	Right Side Plate	01305075P	1
9	Valve	07100006	1
10	Valve	07100003	1
11	Big Handle	26233043	1
12	Valve Support	01713041	1
13	Terminal Board	42010265	1
14	Capacitor CBB65	33010743	1
15	Electric Box Assy	02603195	1
16	Rear Grill	01475014	1
17	Top Cover Plate	01253443	1
18	Condenser Assy	0111372801	1
19	Clapboard Sub-Assy	01235057	1
20	Motor suport spot welding sub-assy	01703397	1
21	Fan Motor	15013159	1
22	Axial Flow Fan	10333012	1

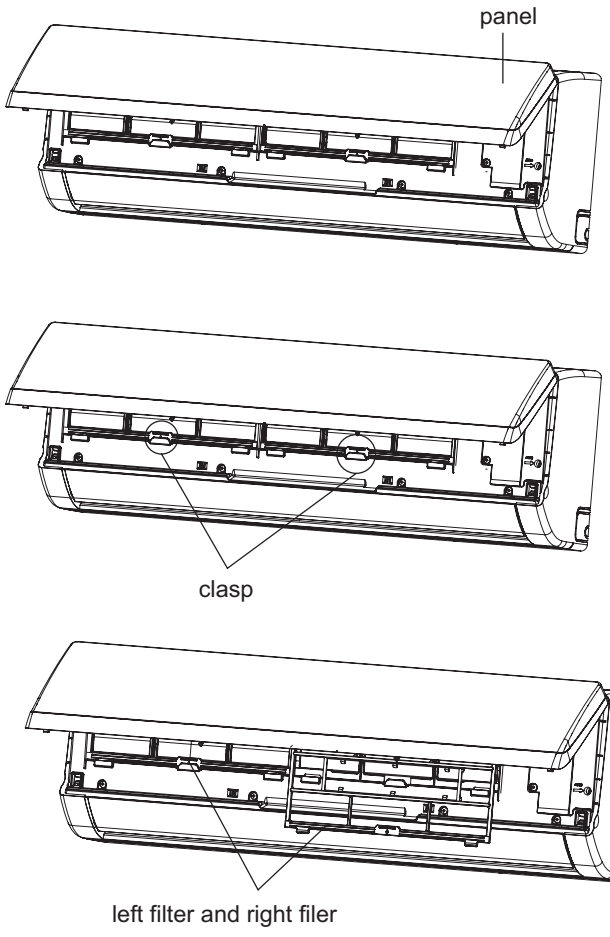
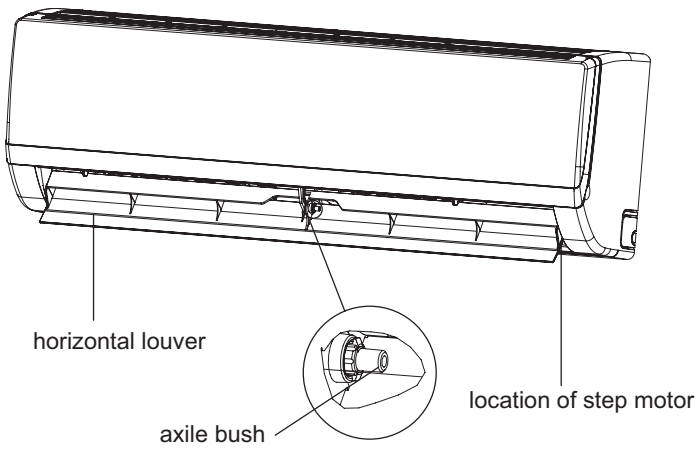
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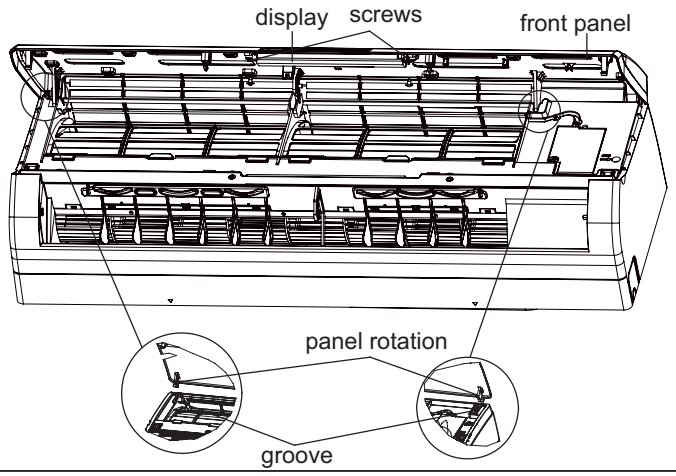
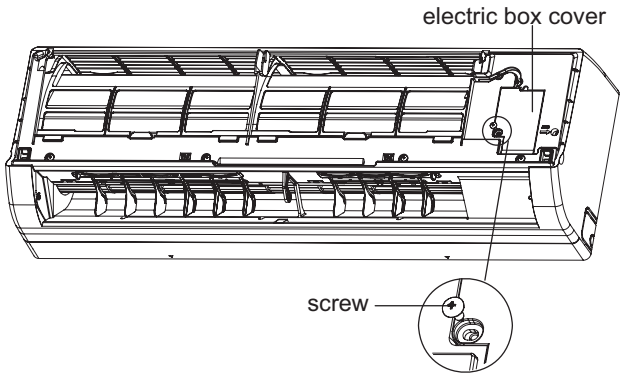
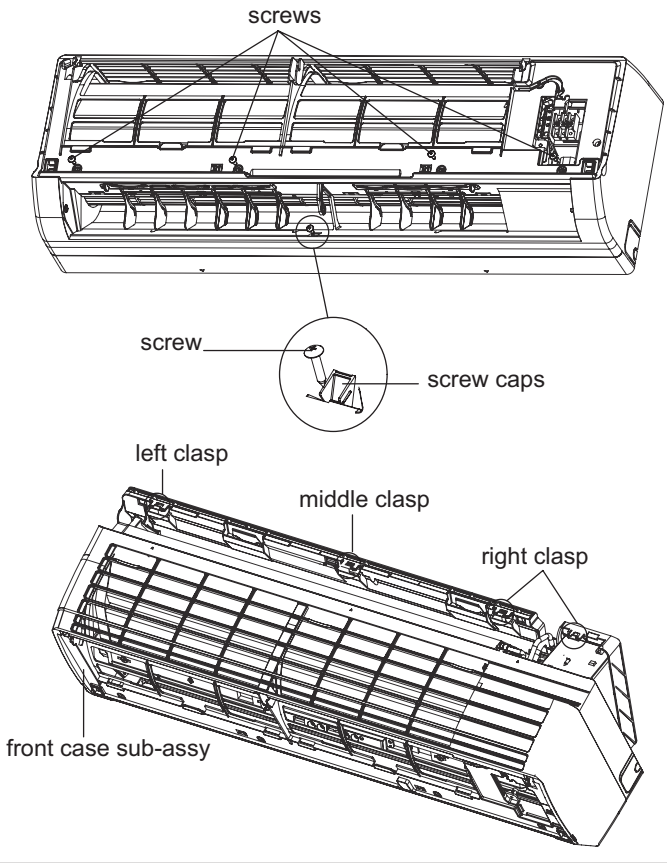
11. Removal Procedure

⚠ Caution: discharge the refrigerant completely before removal.

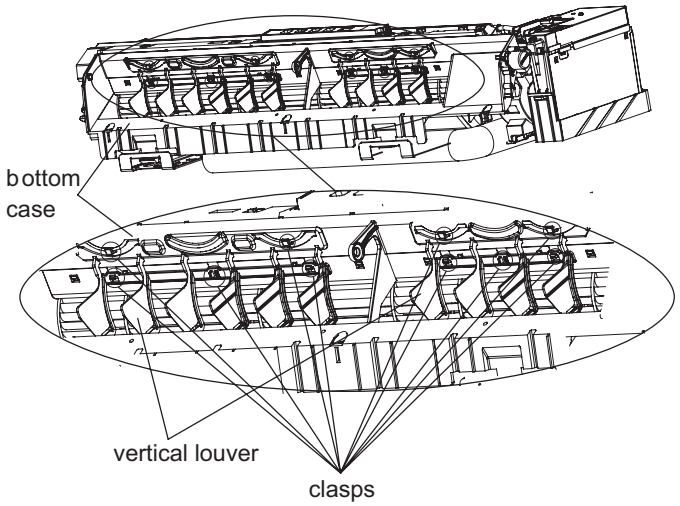
11.1 Removal Procedure of Indoor Unit

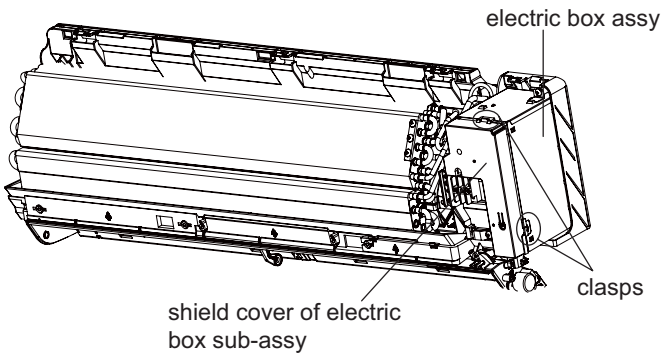
Note:Take the A3 panel for example.

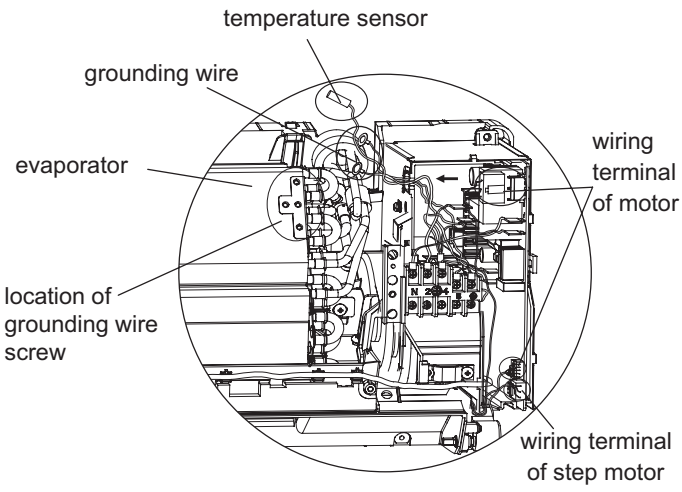
Steps	Procedure	
1. Remove filter		
a	Open the panel.	
b	Loosen the clasp shown in the fig and then pull the left filter and right filer outwards to remove them.	
2. Remove horizontal louver		
	Push out the axile bush on horizontal louver. Bend the horizontal louver with hand and then separate the horizontal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

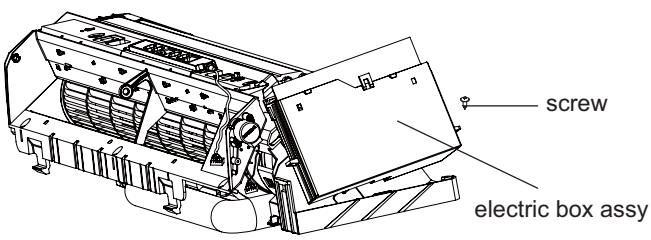
Steps	Procedure	
3. Remove panel		
	Open the front panel; remove two screws fixing display and then remove it. Separate the panel rotation shaft from the groove fixing the front panel and then removes the front panel.	
4. Remove electric box cover		
	Remove the screws on the electric box cover to remove the electric box cover.	
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.	

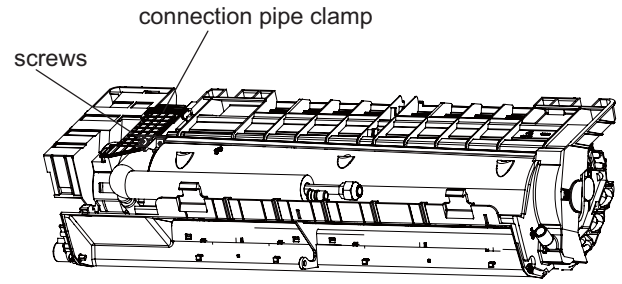
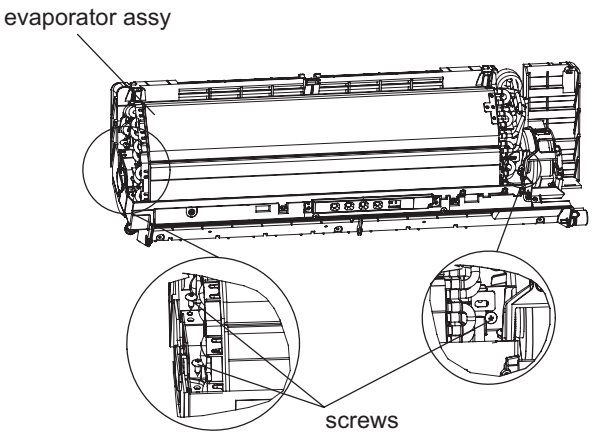
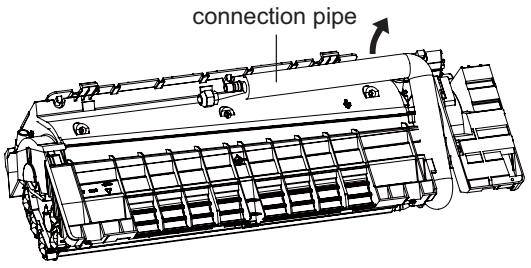
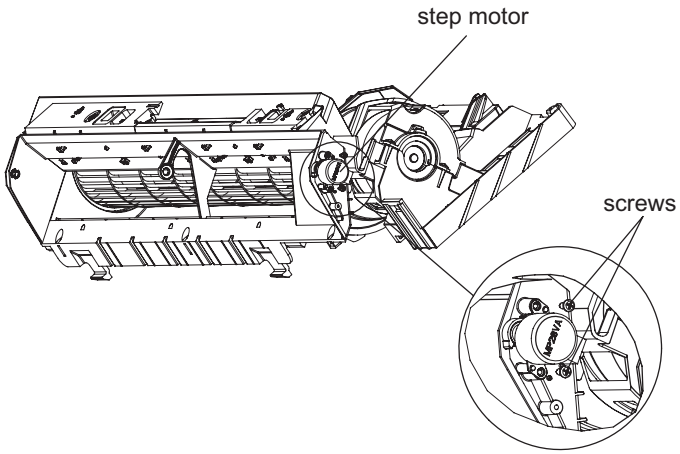
Steps	Procedure
6. Remove vertical louver	
	Loosen the connection clasps between vertical louver and bottom case to remove vertical louver.
7. Remove electric box assy	
a	Loosen the connection clasps between shield cover of electric box sub-assy and electric box, and then remove the shield cover of electric box sub-assy.
b	Cut off the tieline which binding the temperature sensor and grounding wire on the evaporator, and then pull out the indoor tube temperature sensor from the evaporator. Remove the screws at the connection place between grounding wire and evaporator. Pull out the wiring terminal of motor and wiring terminal of step motor from the mainboard. Note: 1.Location of tube temperature sensor and tieline on the evaporator is different for different models. 2.When pulling out the wiring terminal, pay attention to loose the clasp and don't pull it so hard.
c	Remove the screw fixing electric box assy and then remove the electric box assy.



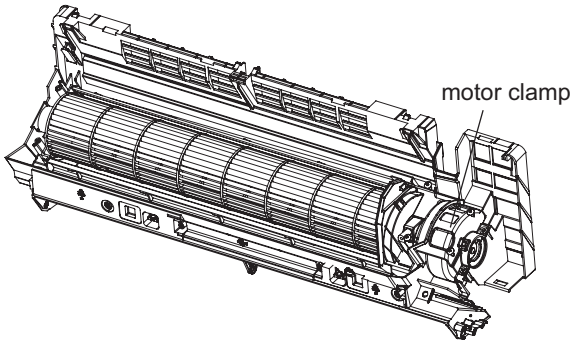


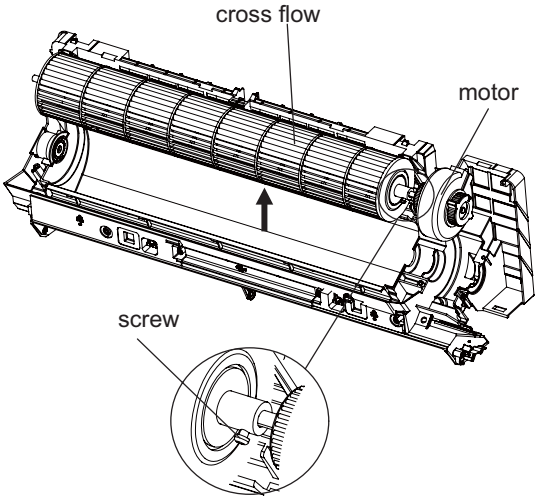


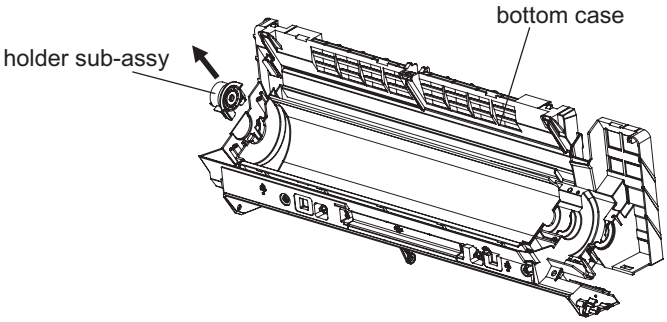


Steps	Procedure
8. Remove evaporator assy	
a	At the back of the unit, remove the screw fixing connection pipe clamp and then remove the connection pipe clamp.
b	Remove 3 screws fixing evaporator assy. 
c	Adjust the position of connection pipe on evaporator slightly and then lift the evaporator upwards to remove it. 
9. Remove stepping motor	
	Remove the screw fixing step motor and then remove the step motor.

Steps	Procedure
10. Remove motor and cross flow blade	
a	Remove the screws fixing motor clamp and then remove the motor clamp.
b	Remove the screws at the connection place of cross flow blade and motor; lift the motor and cross flow blade upwards to remove them.
c	Remove the bearing holder sub-assy.

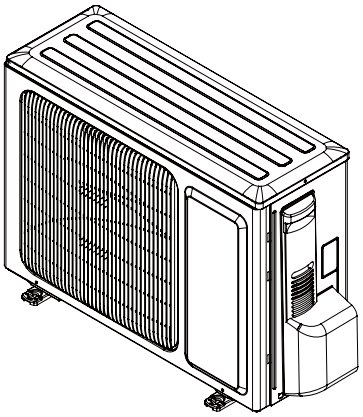
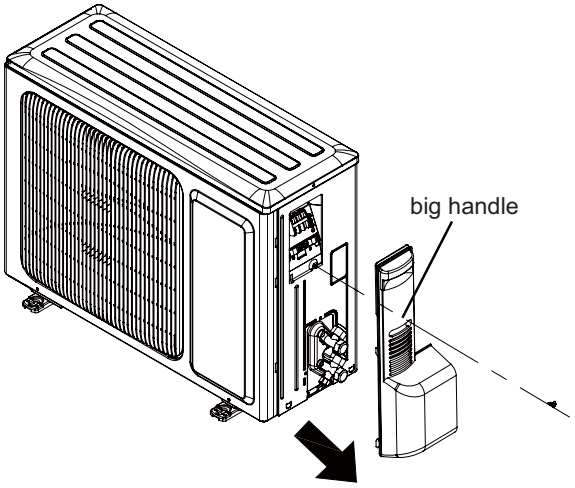
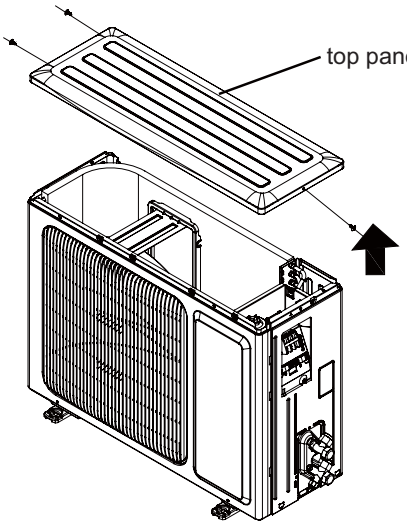


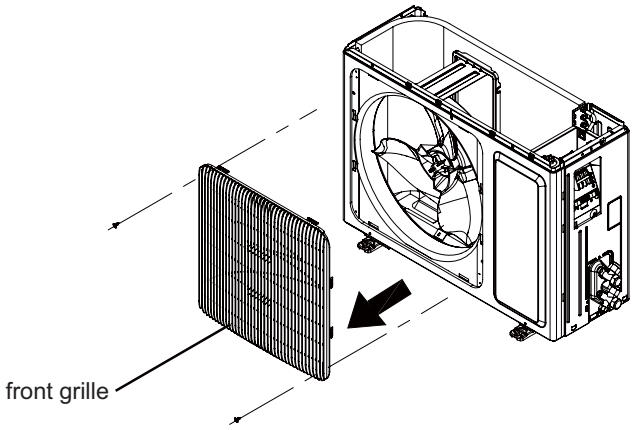
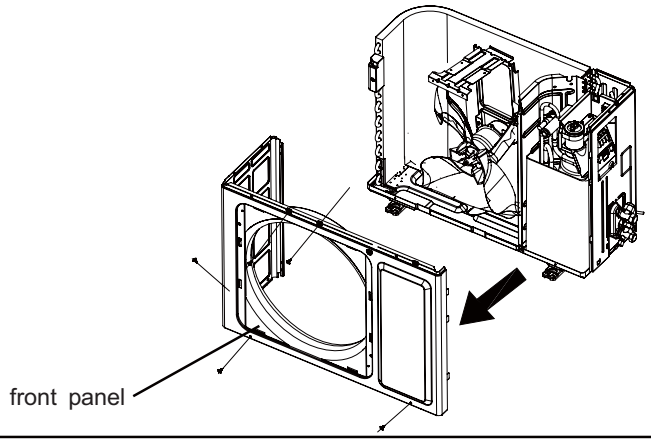
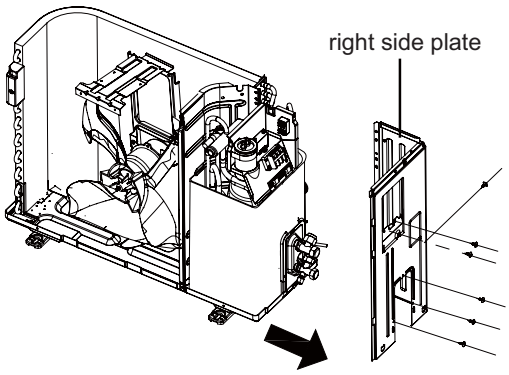
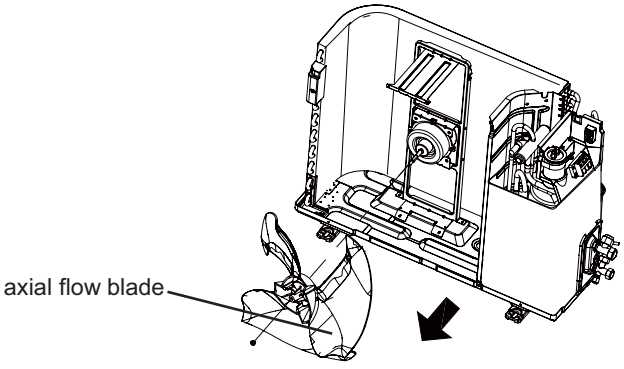


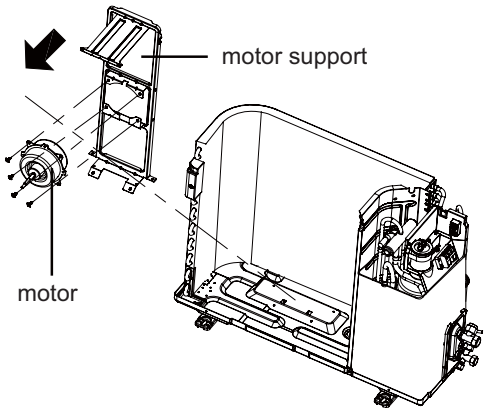
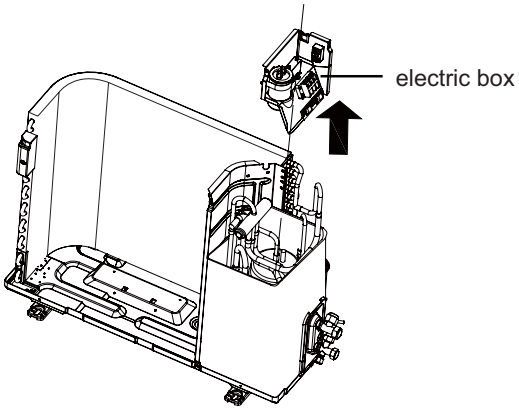
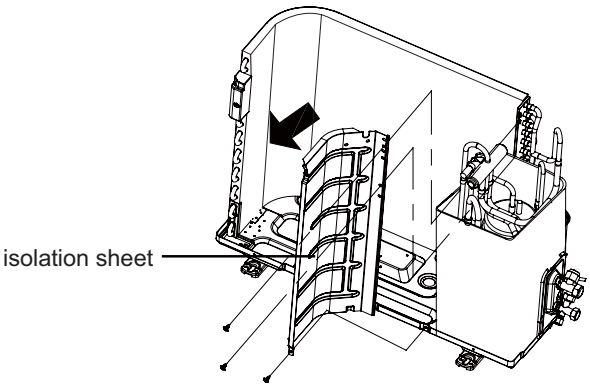
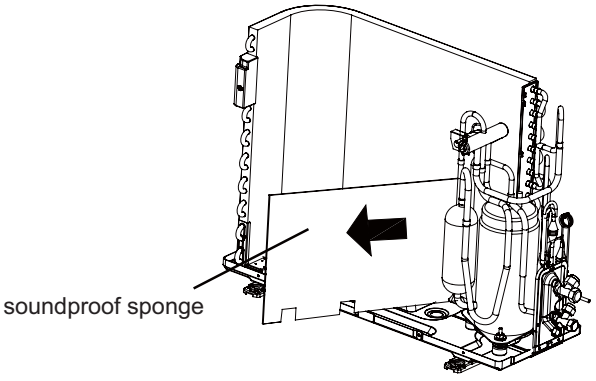


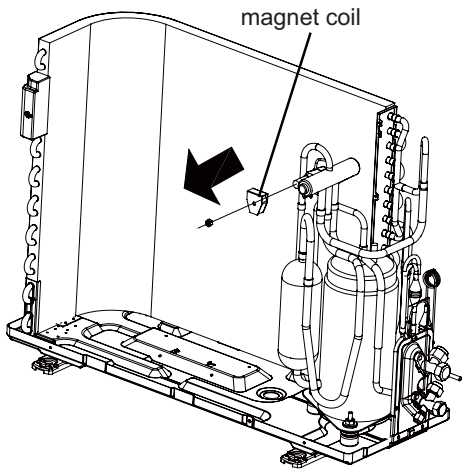
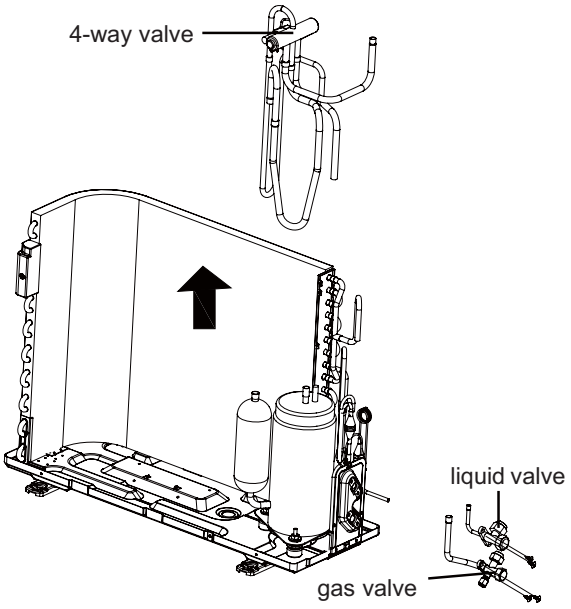
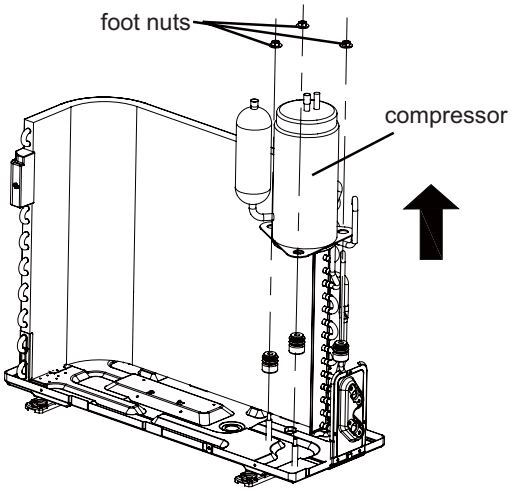
11.2 Removal Procedure of Outdoor Unit

GWH07MA-K3NNA3E/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 panel	Remove connection screws connecting the top panel with the front panel and the right side plate, and then remove the top panel.	

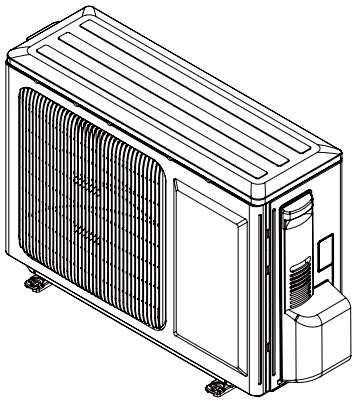
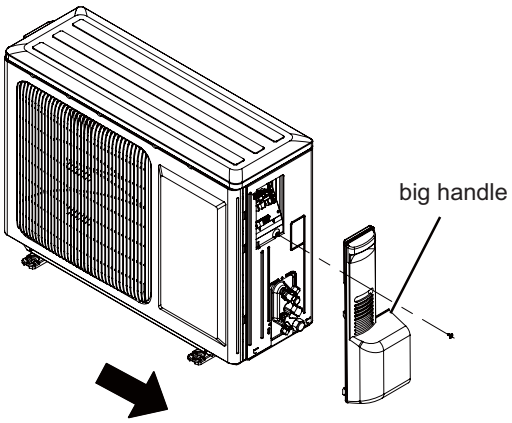
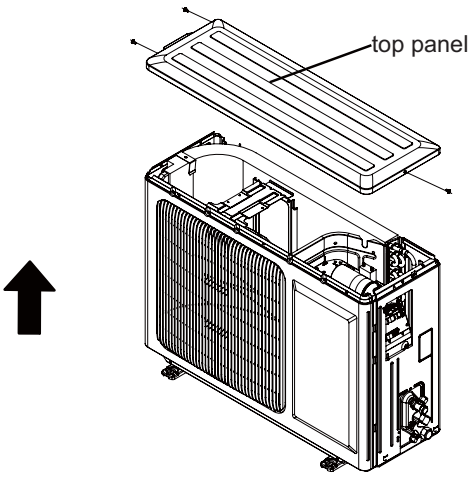
Steps	Procedure
4. Remove front grille	
	Remove connection screws between the front grille and the front panel. Then remove the front grille.
	
5. Remove front panel	
	Remove connection screws connecting the front panel with the chassis and the motor support, and then remove the front panel.
	
6. Remove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

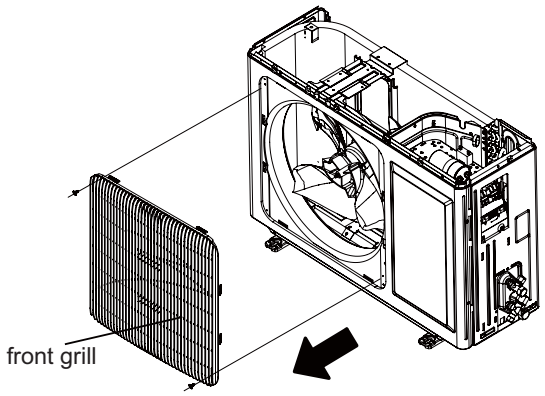
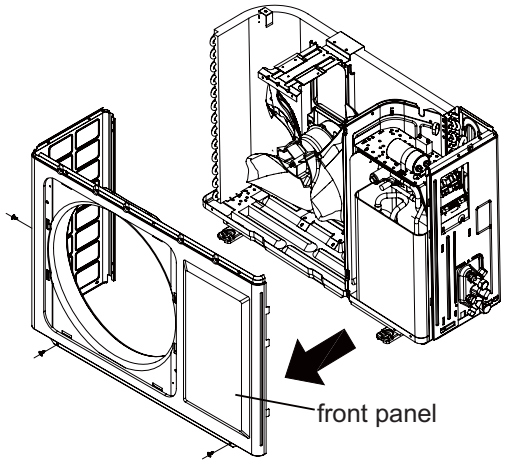
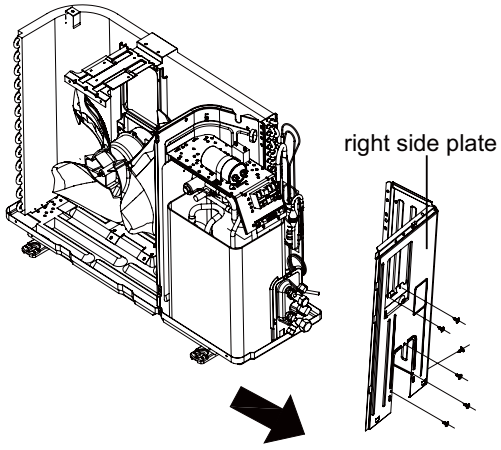
Steps	Procedure	
	8. Remove motor and motor support	
	Remove the 4 tapping screws fixing the motor and disconnect the leading wire insert of the motor. Then remove the motor. Remove the 2 tapping screws fixing the motor support and lift the motor support to remove it.	
	9. Remove electric box	
	Remove 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.	

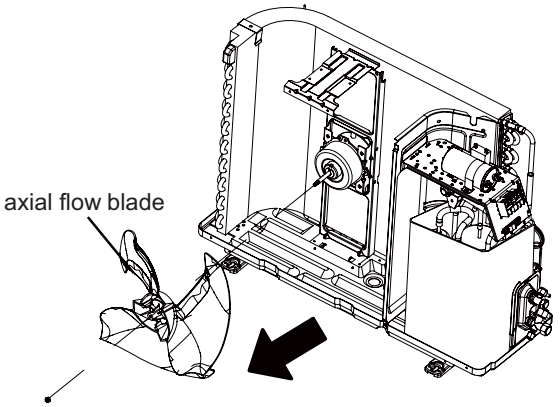
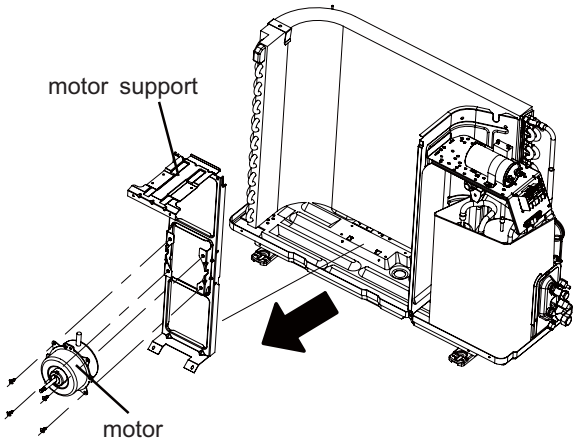
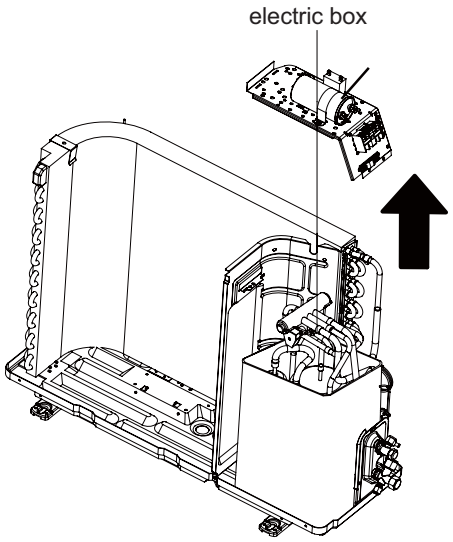
Steps	Procedure	
	12. Remove magnet coil	
	Remove the screw fixing the magnet coil and then remove the coil.	
	13. Remove valves and 4-way valve subassembly	
	Unsolder welding joint connecting the capillary, the valve and the outlet pipe of condenser to remove the capillary. Do not block the capillary 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.	

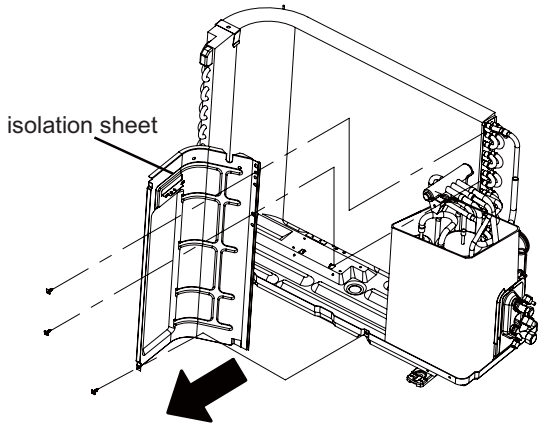
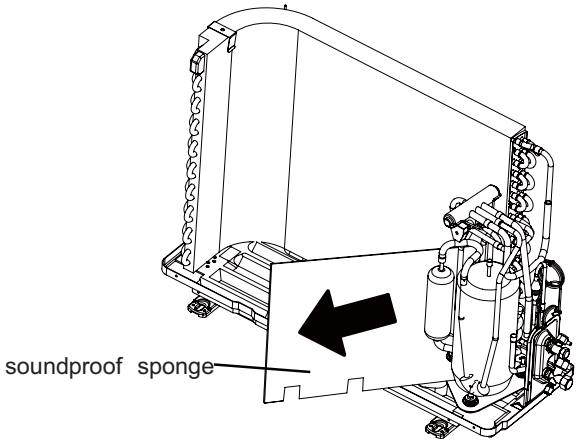
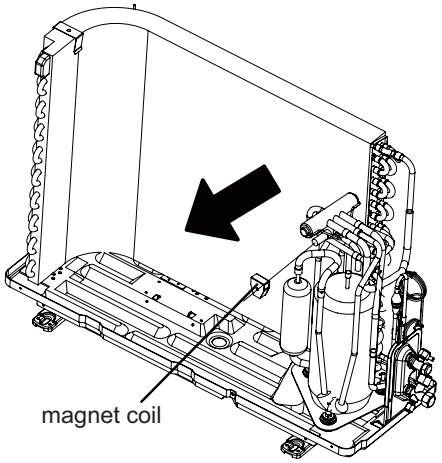
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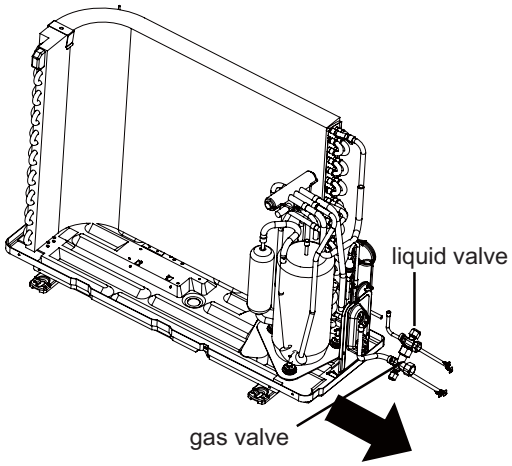
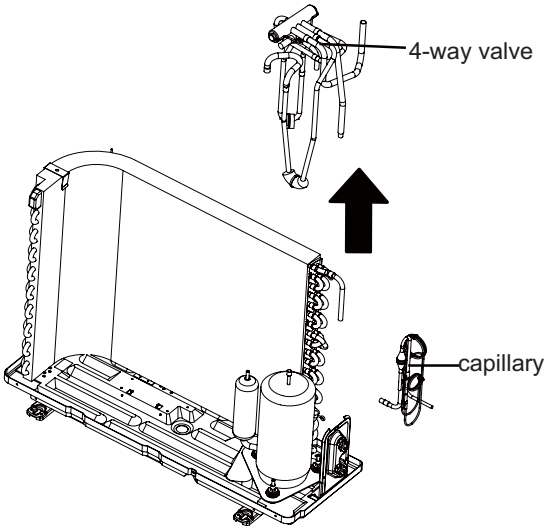
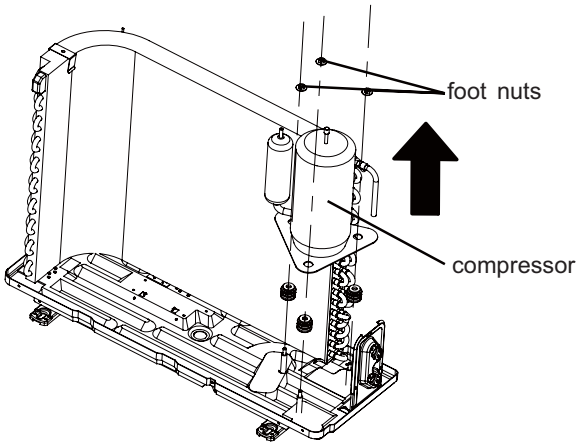
Take GWH12MB-K3NNA4A/O for example

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.
	

Steps	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.	

Appendix:

Appendix 1: Reference Sheet of Celsius and Fahrenheit

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

Set temperature

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

Ambient temperature

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

Appendix 2: Configuration of Connection Pipe

1.Standard length of connection pipe
● 5m, 7.5m, 8m.
2.Min. length of connection pipe is 3m.
3.Max. length of connection pipe and max. high difference.

4.The additional refrigerant oil and refrigerant charging required after prolonging connection pipe
● After the length of connection pipe is prolonged for 10m at the basis of standard length, you should add 5ml of refrigerant oil for each additional 5m of connection pipe.
● The calculation method of additional refrigerant charging amount (on the basis of liquid pipe):

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

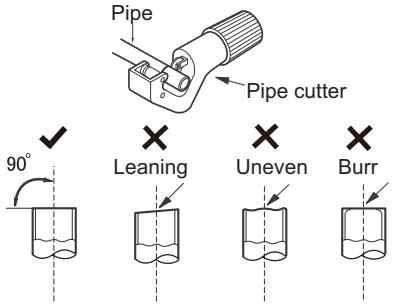
● When the length of connection pipe is above 5m, add refrigerant according to the prolonged length of liquid pipe. The additional refrigerant charging amount per meter is different according to the diameter of liquid pipe. See the following sheet.
● Additional refrigerant charging amount = prolonged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

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

Appendix 3: Pipe Expanding Method

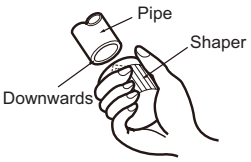
⚠ **Note:**

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



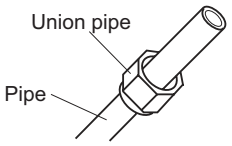
A:Cut the pip
- Confirm the pipe length according to the distance of indoor unit and outdoor unit.
- Cut the required pipe with pipe cutter.

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



C:Put on suitable insulating pipe

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

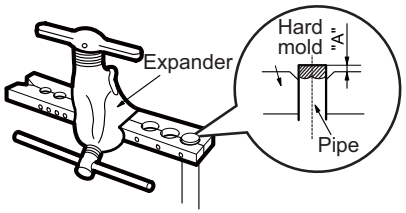


E:Expand the port
- Expand the port with expander.

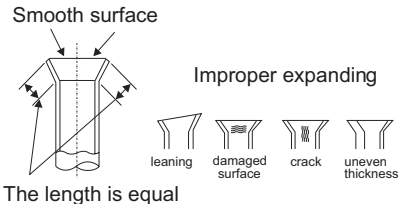
⚠ **Note:**

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

Outer diameter(mm)	A(mm)	
	Max	Min
Φ6 - 6.35 (1/4")	1.3	0.7
Φ9.52 (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 Ambient Temperature Sensor

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

Temp(°C)	Resistance(kΩ)		Temp(°C)	Resistance(kΩ)		Temp(°C)	Resistance(kΩ)		Temp(°C)	Resistance(kΩ)
-19	138.1		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 Ambient Temperature Sensor for Indoor and Outdoor Units(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 Ambient Temperature Sensor for Indoor and Outdoor Units(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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