

SPLIT TYPE AIR CONDITIONER (R22)

SERVICE MANUAL

KF -1802GWE

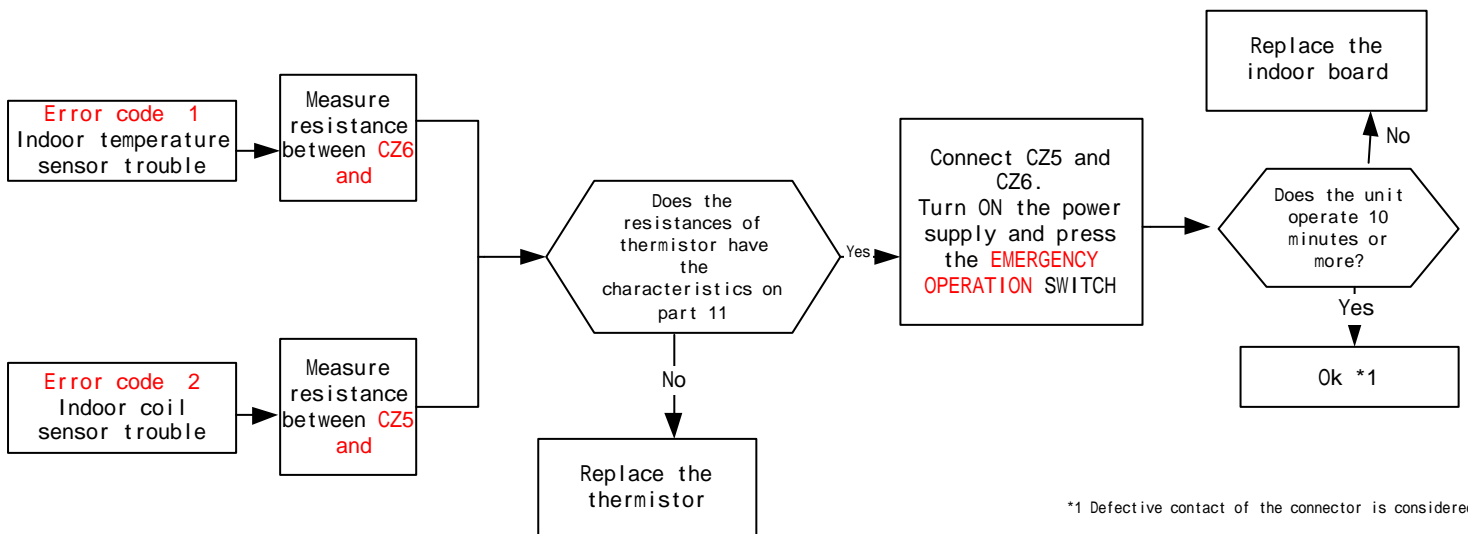
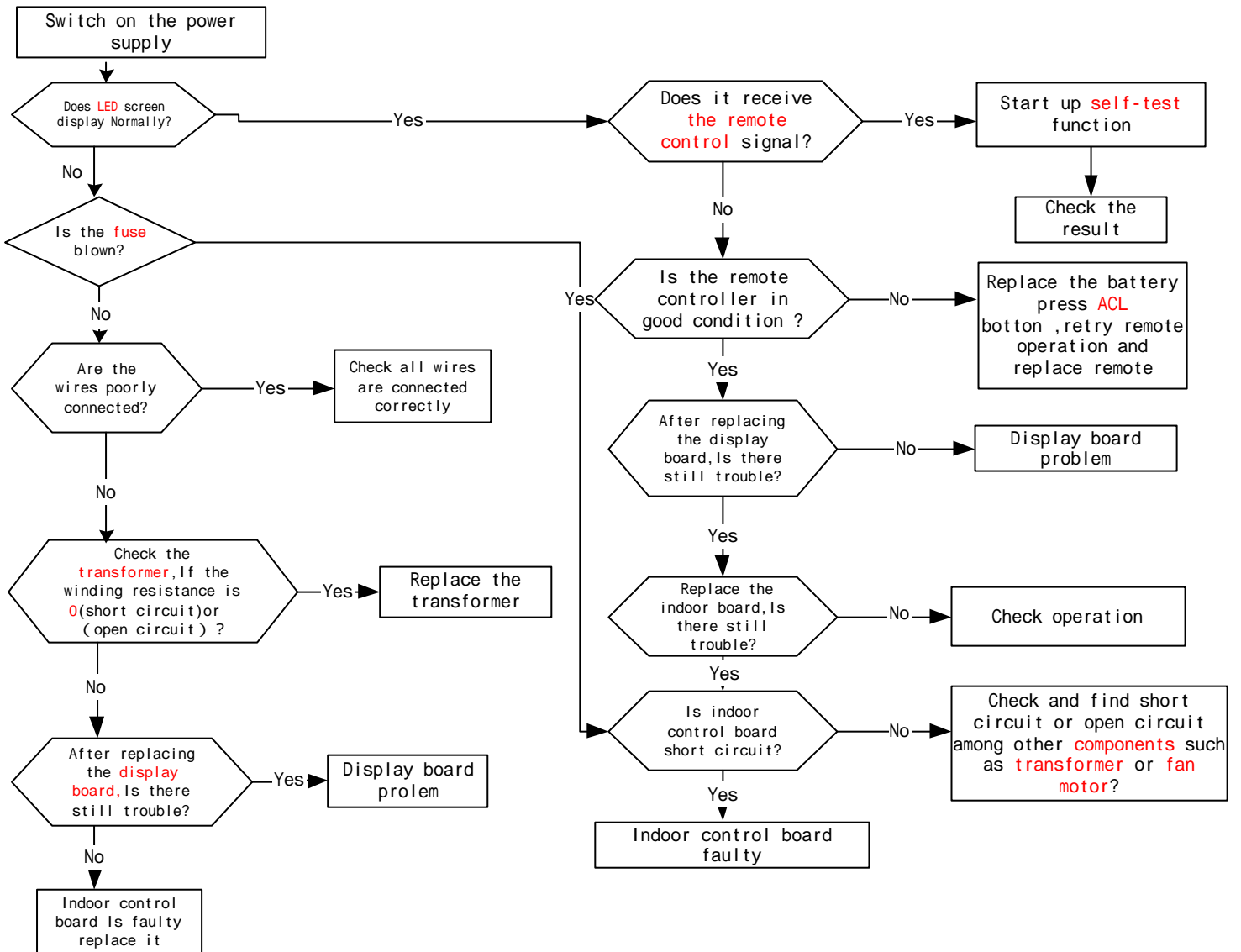
KF -2302GWE

CONTENTS

1.PART NAMES AND FUNCTIONS
2.SPECIFICATION
3.OUTLINES AND DIMENSIONS
4.WIRING DIAGRAM
5.REFRIGERANT SYSTEM DIAGRAM
6.PERFORMANCE DATA
7.CONTROL MODE
8.TROUBLESHOOTING
9.SERVICE FLOW CHART
10.ELECTRICCONTROLBOARD
11.SENSOR PARAMETER.....
12.DISASSEMBLY INSTRUCTIONS.....
13.PARTS LIST.....

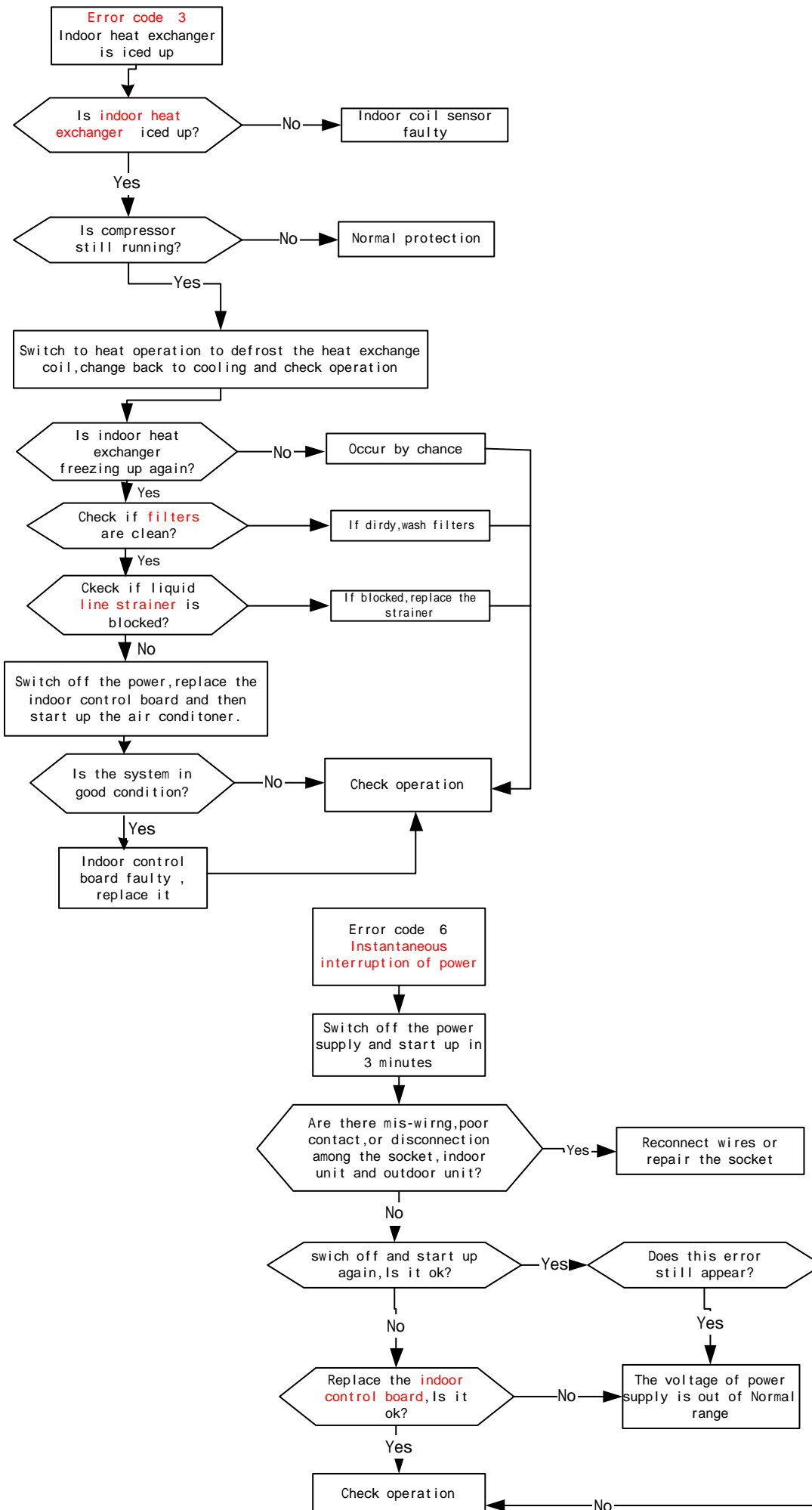
Hisense Corporation

9.SERVICE FLOW CHART

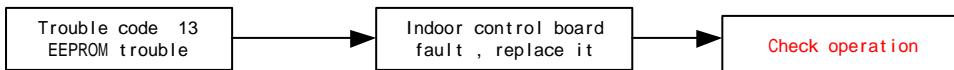
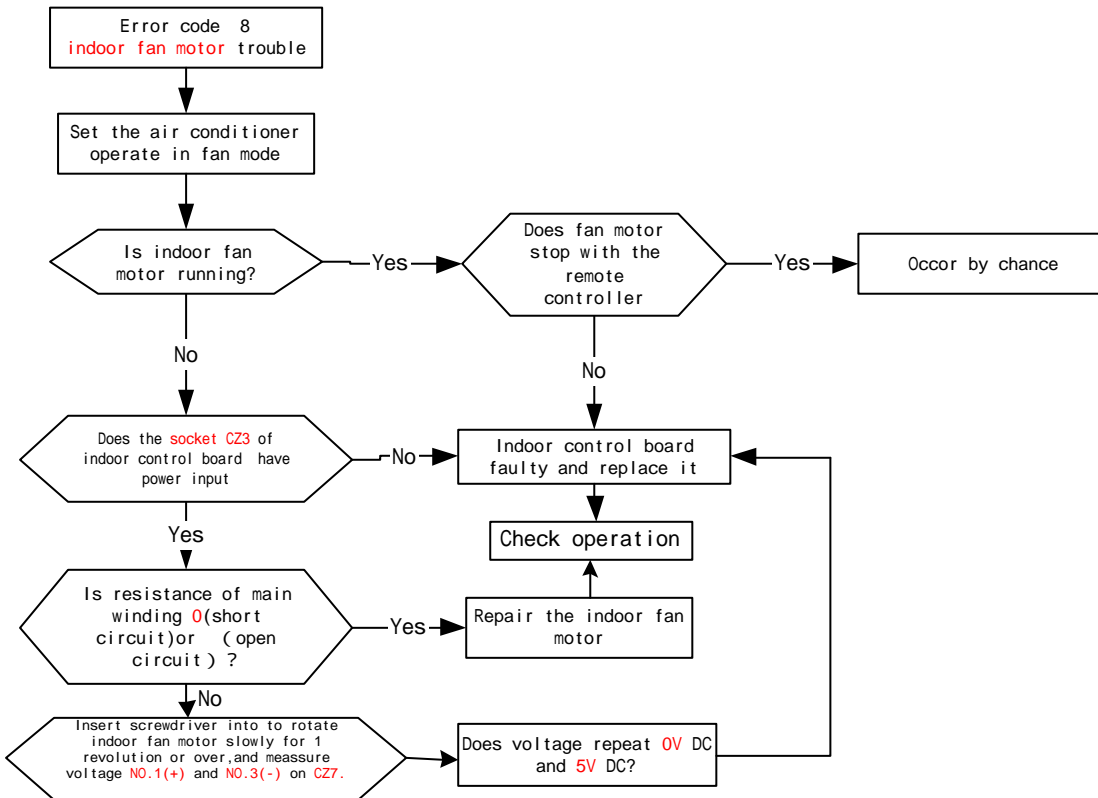
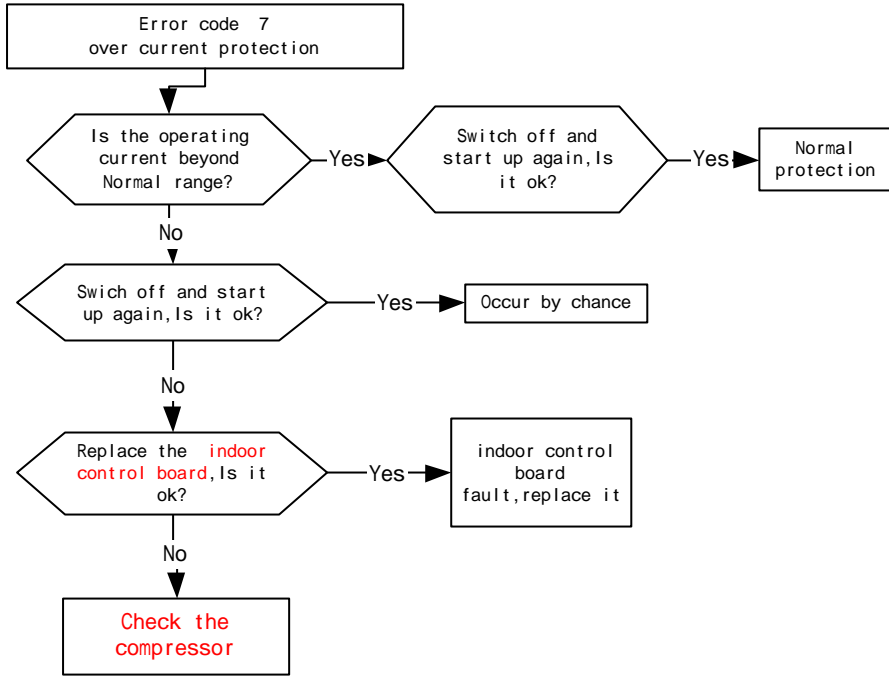


*1 Defective contact of the connector is considered

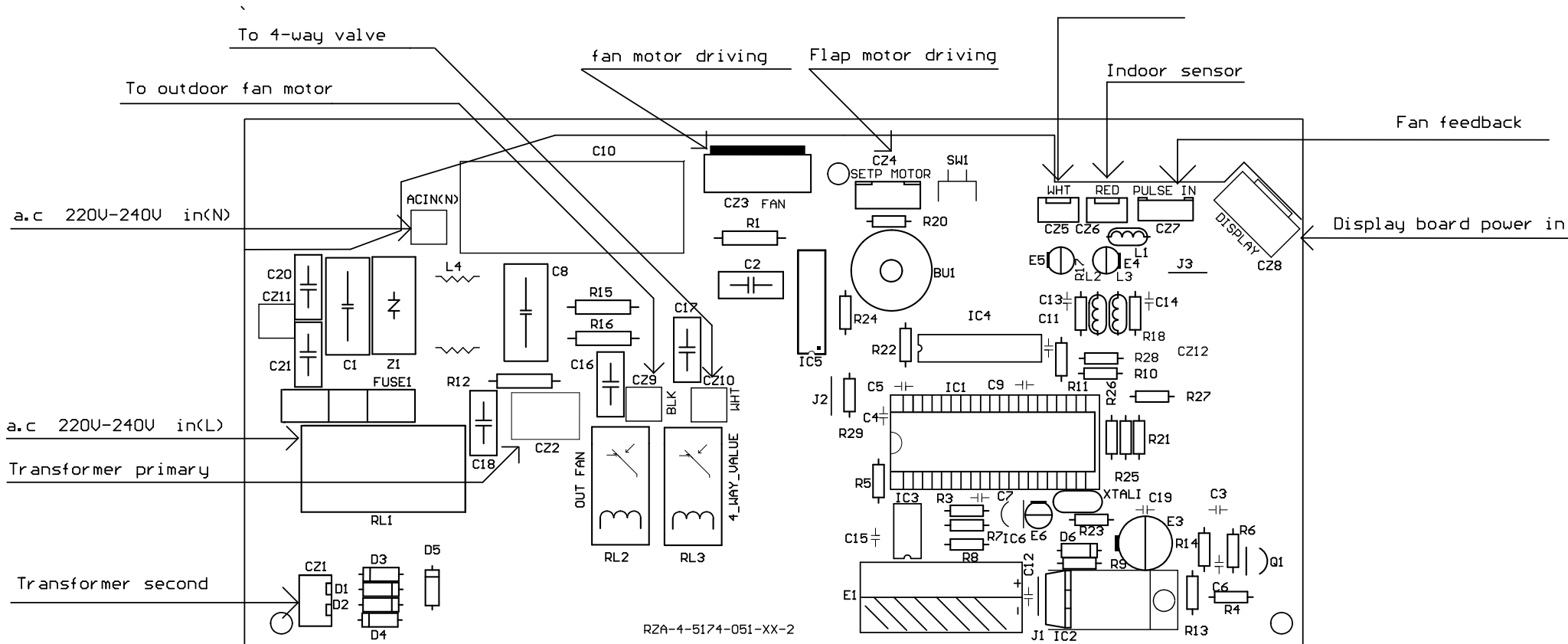
9.SERVICE FLOW CHART



9.SERVICE FLOW CHART



10. ELECTRIC CONTROL BOARD



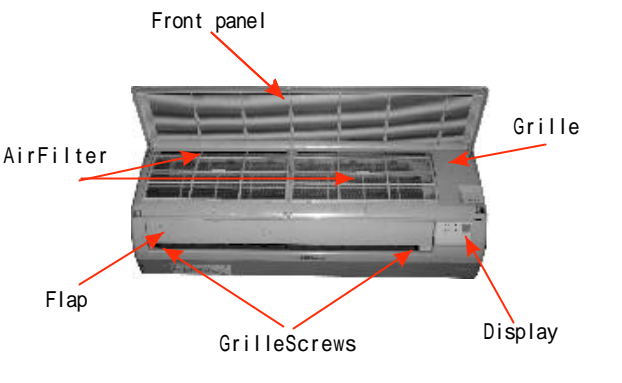
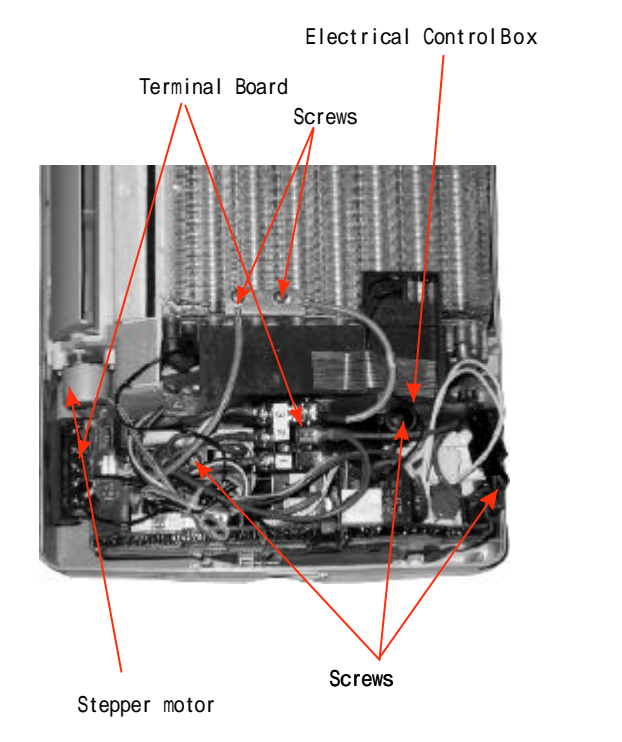
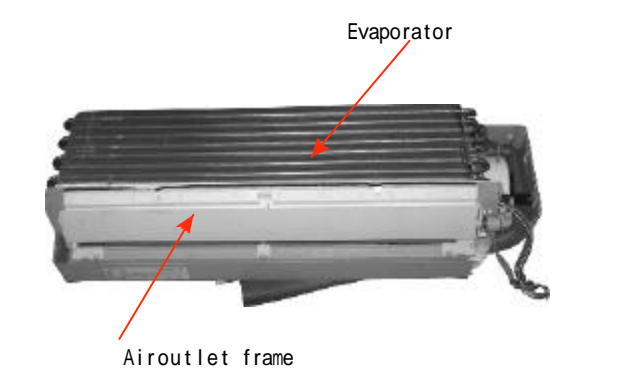
11.SENSOR PARAMETER

THE PARAMETER OF THE TEMPERATURE SENSOR

T()	R(Ko)	V(v)	T()	R(Ko)	V(v)	T()	R(Ko)	V(v)
-10	23.95	0.8202	16	7.549	1.9185	41	2.936	3.0775
-9	22.82	0.8539	17	7.249	1.9667	42	2.835	3.1188
-8	21.75	0.8885	18	6.962	2.0151	43	2.739	3.159
-7	20.74	0.9237	19	6.688	2.0636	44	2.646	3.199
-6	19.79	0.9596	20	6.427	2.112	45	2.556	3.2387
-5	18.88	0.9966	21	6.178	2.1603	46	2.471	3.2771
-4	18.02	1.0343	22	5.939	2.2089	47	2.388	3.3155
-3	17.2	1.0731	23	5.712	2.257	48	2.309	3.3528
-2	16.43	1.1122	24	5.494	2.3053	49	2.233	3.3896
-1	15.7	1.152	25	5.286	2.3533	50	2.159	3.4262
0	15	1.1929	26	5.086	2.4014	51	2.089	3.4615
1	14.34	1.2342	27	4.896	2.4489	52	2.021	3.4965
2	13.71	1.2765	28	4.714	2.4963	53	1.956	3.5306
3	13.11	1.3195	29	4.539	2.5436	54	1.893	3.5644
4	12.55	1.3623	30	4.372	2.5904	55	1.832	3.5977
5	12.01	1.4063	31	4.212	2.6369	56	1.774	3.6299
6	11.5	1.4506	32	4.059	2.683	57	1.718	3.6616
7	11.01	1.4959	33	3.912	2.7288	58	1.664	3.6926
8	10.55	1.541	34	3.772	2.7738	59	1.612	3.7231
9	10.1	1.5878	35	3.637	2.8188	60	1.562	3.7528
10	9.684	1.6338	36	3.508	2.8631	61	1.513	3.7824
11	9.284	1.6805	37	3.384	2.907	62	1.467	3.8106
12	8.903	1.7276	38	3.265	2.9504	63	1.422	3.8386
13	8.54	1.7749	39	3.151	2.9932	64	1.379	3.8658
14	8.194	1.8226	40	3.041	3.0358	65	1.337	3.8927
15	7.864	1.8704						

12. DISASSEMBLY INSTRUCTIONS

● KF-1802GE

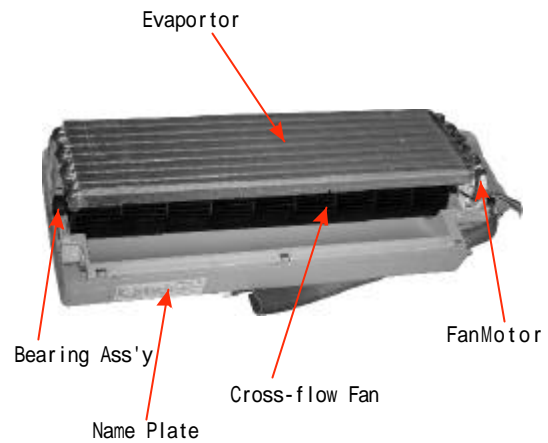
OPERATION PROCEDURE	PHOTOS
<p>1. Remove the grille</p> <ol style="list-style-type: none"> 1) Open the screw cover in the grille. 2) Take out the screws of the grille. 3) Hold the both sides of the front panel and drag it towards oneself, showing the switching board of the indoor unit. 4) Remove the grille. 	 <p>Labels in photo: Front panel, Air Filter, Flap, Grille Screws, Grille, Display</p>
<p>2. Remove the electrical control box</p> <ol style="list-style-type: none"> 1) Take out the screws of the electrical box and remove the box. 2) Take out the screws of the terminal and remove the terminal board. 3) Disconnect all connectors on the printed circuit board. 4) Remove the printed circuit board and check-up it. 	 <p>Labels in photo: Terminal Board, Screws, Electrical Control Box, Stepper motor, Screws</p>
<p>3. Remove the air outlet frame</p>	 <p>Labels in photo: Evaporator, Air outlet frame</p>

12. DISASSEMBLY INSTRUCTIONS

● KF-1802GE

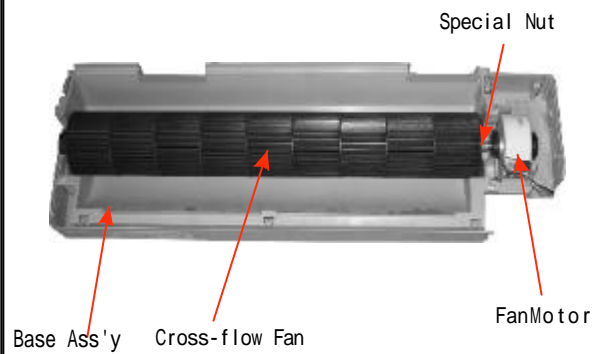
4. Remove the evaporator

- 1) Disconnect the evaporator and the other parts, take out the screws of the evaporator.
- 2) Remove the evaporator.



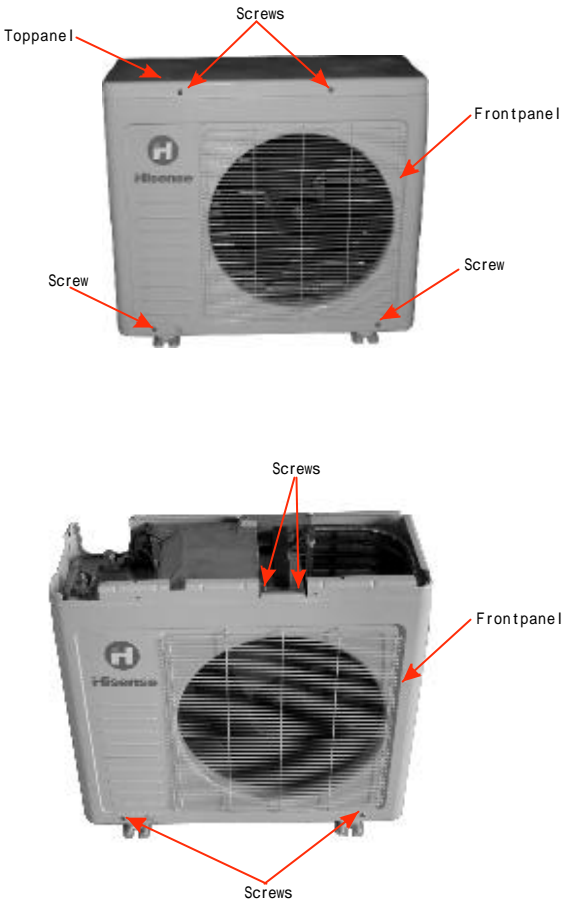
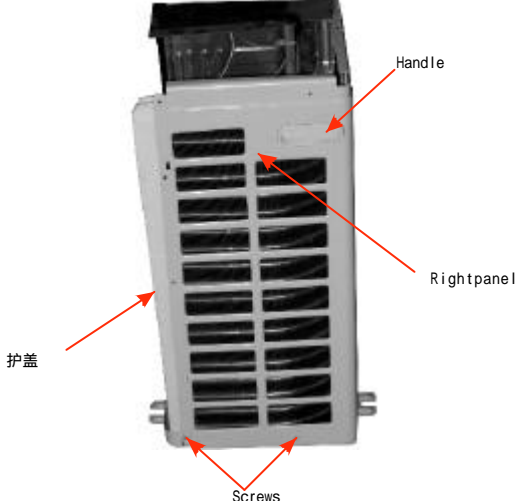
5 Remove the fan motor and the cross-flow fan

- 1) Take out the screw of the fan motor and disconnect the motor with the fan.
- 2) Remove the fan motor and the bearing ass'y.
- 3) Remove the cross-flow fan.



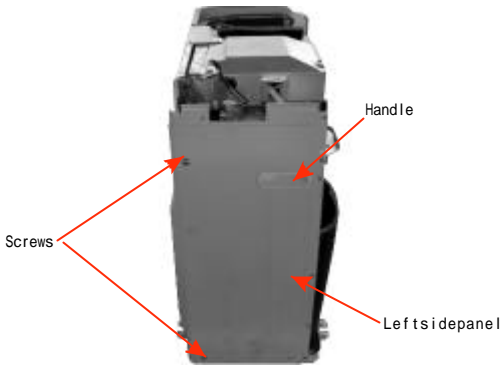
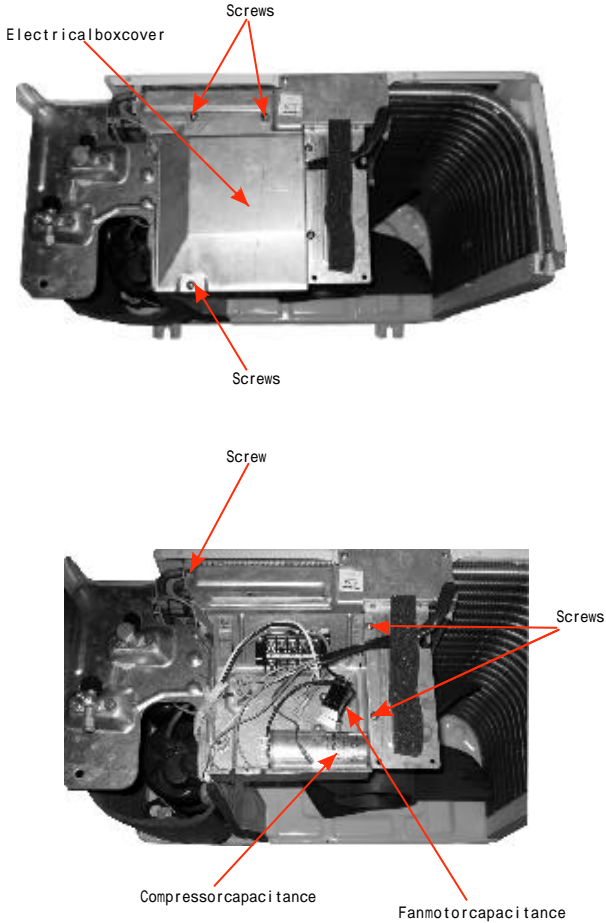
12. DISASSEMBLY INSTRUCTIONS

●KF-1802WE

OPERATION PROCEDURE	PHOTOS
<p>1. Remove the top panel and the front panel</p> <ol style="list-style-type: none">1) Take out the screws of the top panel.2) Remove the top panel.3) Take out the screws of the front panel.4) Remove the front panel.	 <p>The top photograph shows the air conditioner with the top panel being removed. Red arrows point to the top panel, the screws being removed from it, and the front panel. The bottom photograph shows the air conditioner with the front panel being removed. Red arrows point to the screws being removed from the front panel and the front panel itself.</p>
<p>2. Remove the right panel and the left panel</p> <ol style="list-style-type: none">1) Take out the screws of the right side panel then remove the right panel.2) Take out the screws of the left side panel and then remove the panel.	 <p>The photograph shows the air conditioner with the right side panel being removed. Red arrows point to the handle, the right panel, the protective cover (护盖), and the screws being removed from the right panel.</p>

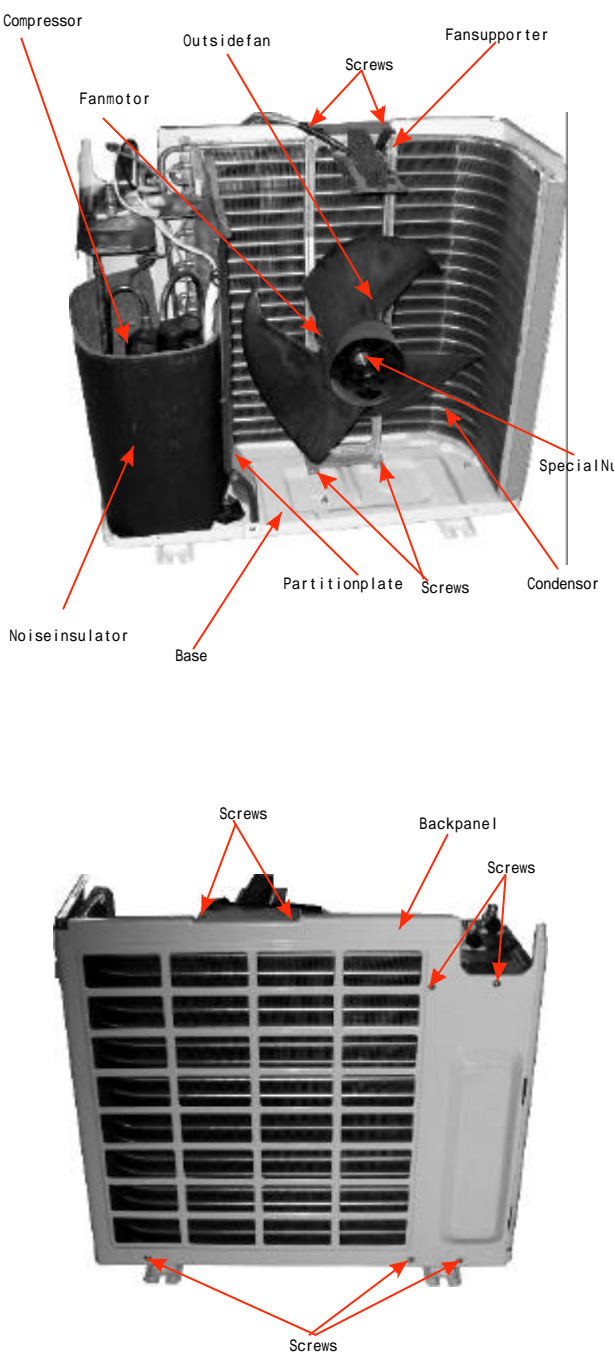
12. DISASSEMBLY INSTRUCTIONS

●KF-1802WE

OPERATION PROCEDURE	PHOTOS
<p>3. Remove the left side panel</p> <p>1) Take out the screws of the left side panel.</p> <p>2) Remove the left side panel.</p>	
<p>4. Remove the electrical control box</p> <p>1) Take out the screws of the electrical control box cover and remove the cover.</p> <p>2) disconnect the electrical box and these separate plate.</p> <p>3) Take out the screws of the electrical control box and remove the electrical control box.</p>	

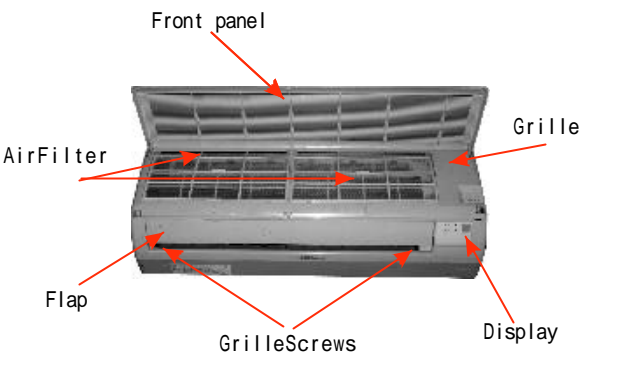
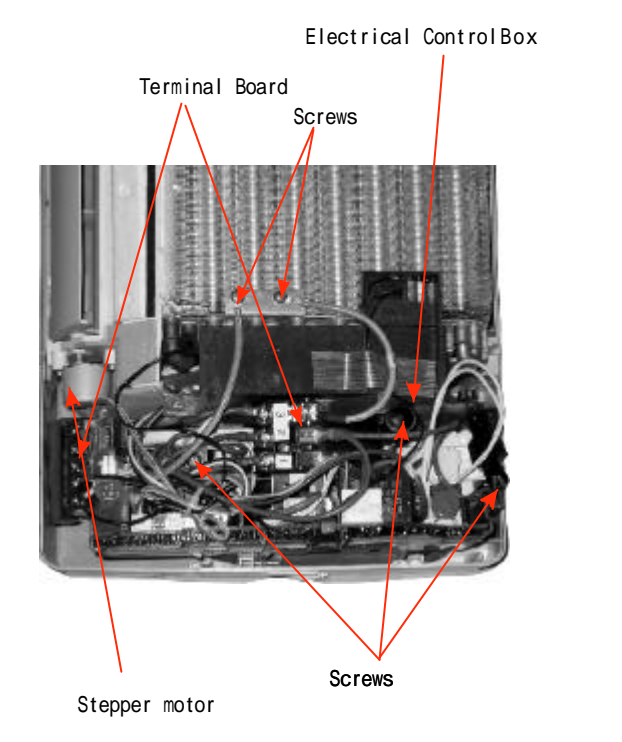
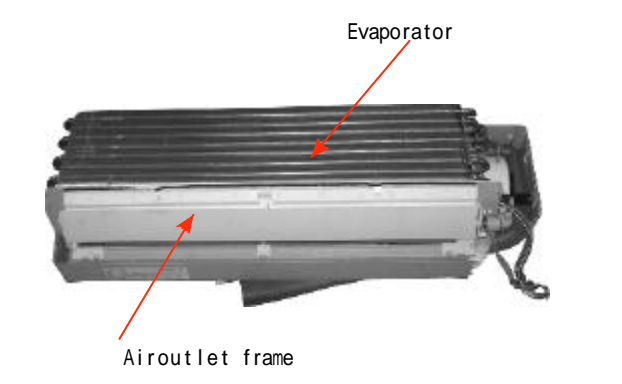
12. DISASSEMBLY INSTRUCTIONS

●KF-1802WE

OPERATION PROCEDURE	PHOTOS
<p>3. Remove the outside fan and the fan supportor</p> <ol style="list-style-type: none">1) Take out the special nut of the outside fan and remove the fan.2) Take out the screws of the fan motor and remove the motor.3) Take out the screws of the fan supportor and remove the supportor.4) Take out the screws of the back panel and remove the back panel.	 <p>The top photograph shows the internal components of the air conditioner. Red arrows point to various parts: Compressor, Outside fan, Fan motor, Fan supportor, Noise insulator, Base, Partition plate, Screws, Special Nut, and Condensor. The bottom photograph shows the back panel of the air conditioner. Red arrows point to the Screws and the Back panel.</p>

12. DISASSEMBLY INSTRUCTIONS

● KF-2302GE

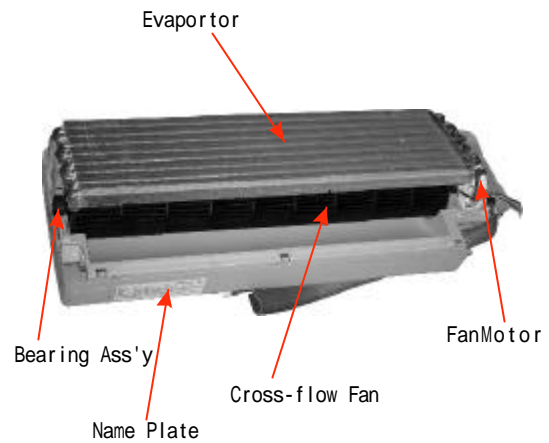
OPERATION PROCEDURE	PHOTOS
<p>1. Remove the grille</p> <ol style="list-style-type: none"> 1) Open the screw cover in the grille. 2) Take out the screws of the grille. 3) Hold the both sides of the front panel and drag it towards oneself, showing the switching board of the indoor unit. 4) Remove the grille. 	 <p>Labels in photo: Front panel, Air Filter, Flap, Grille Screws, Grille, Display</p>
<p>2. Remove the electrical control box</p> <ol style="list-style-type: none"> 1) Take out the screws of the electrical box and remove the box. 2) Take out the screws of the terminal and remove the terminal board. 3) Disconnect all connectors on the printed circuit board. 4) Remove the printed circuit board and check-up it. 	 <p>Labels in photo: Terminal Board, Screws, Electrical Control Box, Stepper motor, Screws</p>
<p>3. Remove the air outlet frame</p>	 <p>Labels in photo: Evaporator, Air outlet frame</p>

12. DISASSEMBLY INSTRUCTIONS

● KF-2302GE

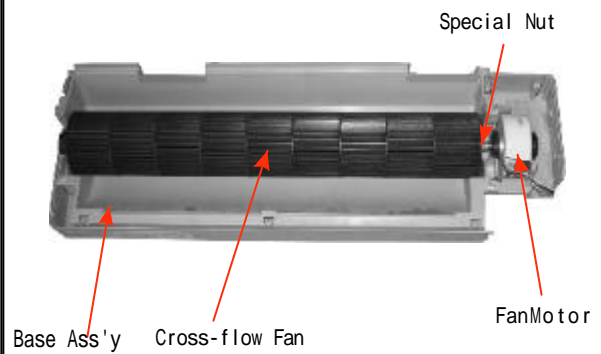
4. Remove the evaporator

- 1) Disconnect the evaporator and the other parts, take out the screws of the evaporator.
- 2) Remove the evaporator.



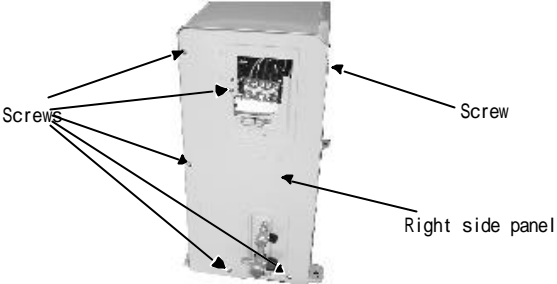
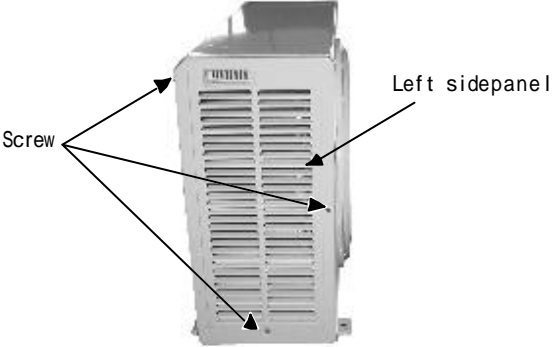

5 Remove the fan motor and the cross-flow fan

- 1) Take out the screw of the fan motor and disconnect the motor with the fan.
- 2) Remove the fan motor and the bearing ass'y.
- 3) Remove the cross-flow fan.



12. DISASSEMBLY INSTRUCTIONS

KF-2302WE

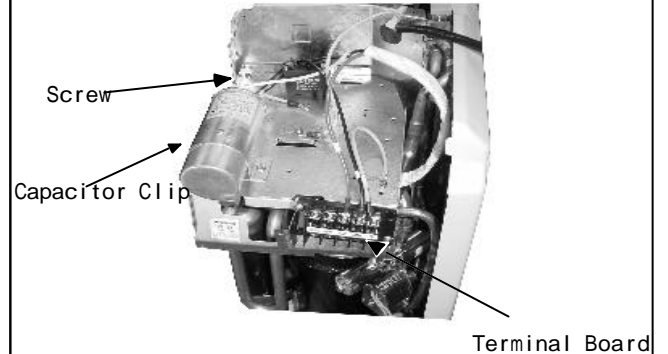
<p>1. Remove the right side panel</p> <ol style="list-style-type: none">1) Take out the screws of the side panel and remove the side panel.2) Take out the screws of the right side panel.3) Remove the right side panel.	 <p>Screws</p> <p>Screw</p> <p>Right side panel</p>
<p>2. Remove the left side panel</p> <ol style="list-style-type: none">1) Take out the screws of the left side panel.2) Remove the left side panel.	 <p>Screw</p> <p>Left side panel</p>
<p>3. Remove the front panel</p> <ol style="list-style-type: none">1) Take out the screws of the front panel.2) Remove the front panel.	 <p>Screw</p>

12. DISASSEMBLY INSTRUCTIONS

KF-2302WE

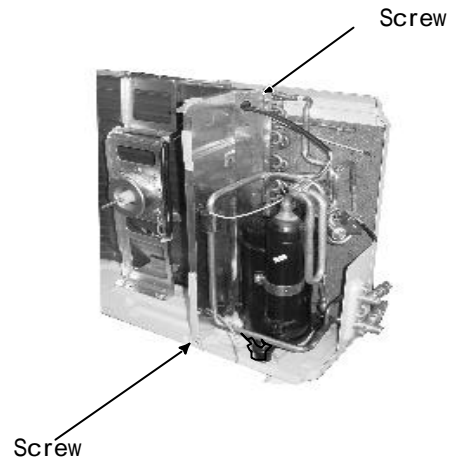
4. Remove the electrical board

- 1) Disconnect all the circuitries of the terminal board and the capacitor.
- 2) Take out the screws of the electrical board.
- 3) Remove the electrical board.



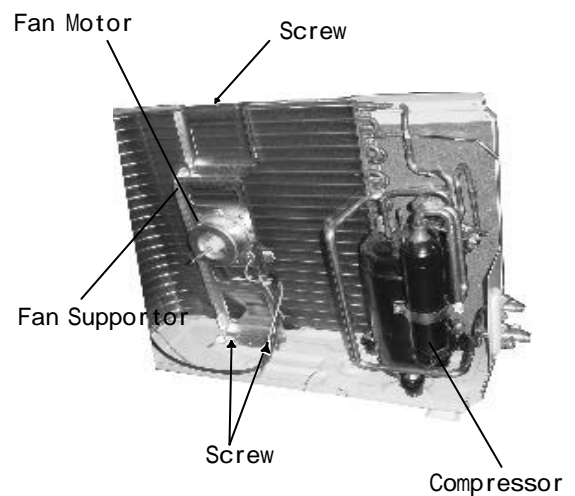
5. Remove the separator support plate

- 1) Disconnect the separator support plate and the other parts, take out the screws of the separator support plate and remove the separator support plate.

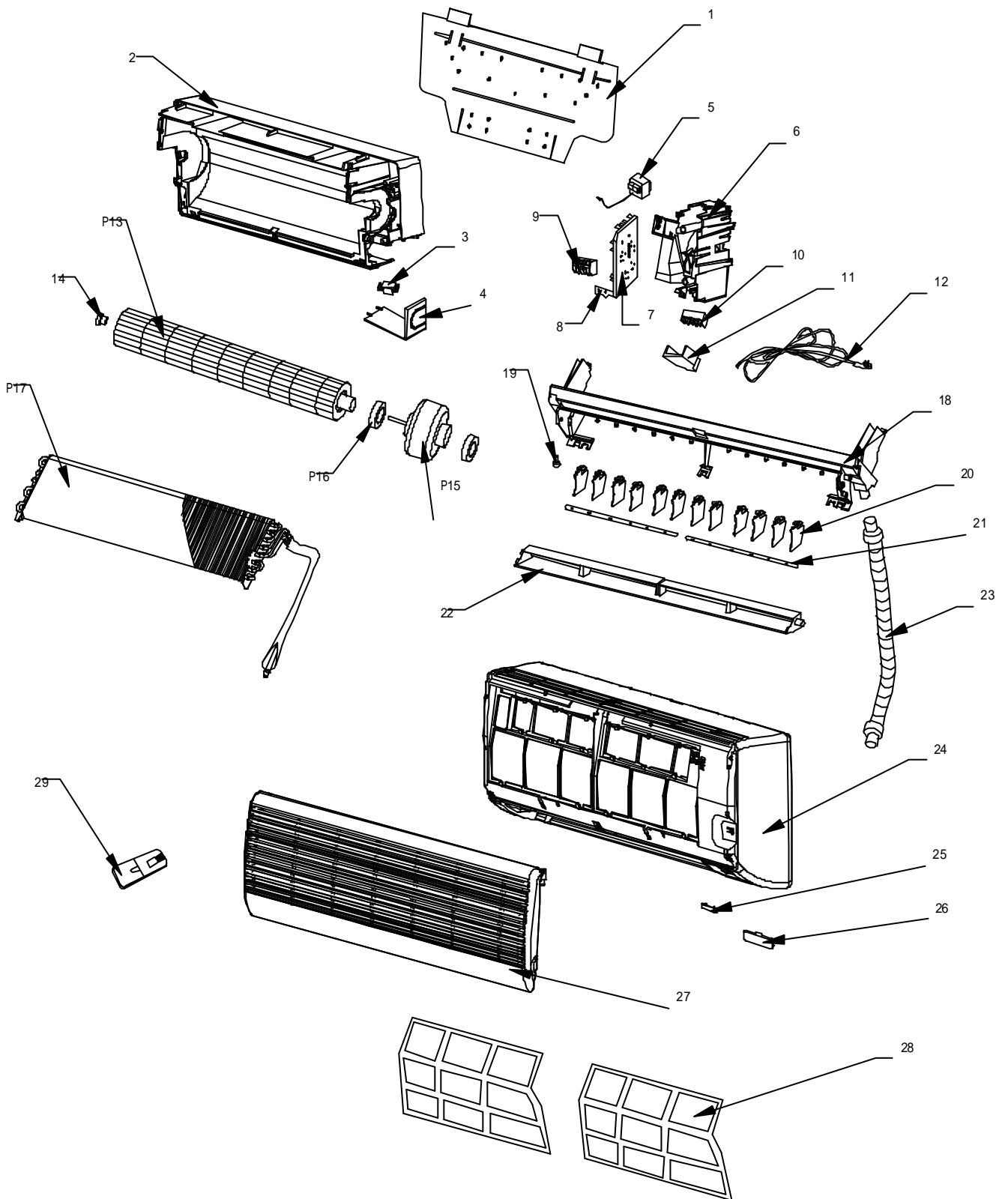


6. Remove the outside fan

- 1) Take out the screws of the outside fan.
- 2) Remove the outside fan.
- 3) Take out the screws of the fan supportor and remove the fan supportor.



13. PARTS LIST



13. PARTS LIST

ATTENTION !

INDOOR UNIT(KF-1802GE)

To ensure correct parts supply, please let us know followings. When you make service parts order:

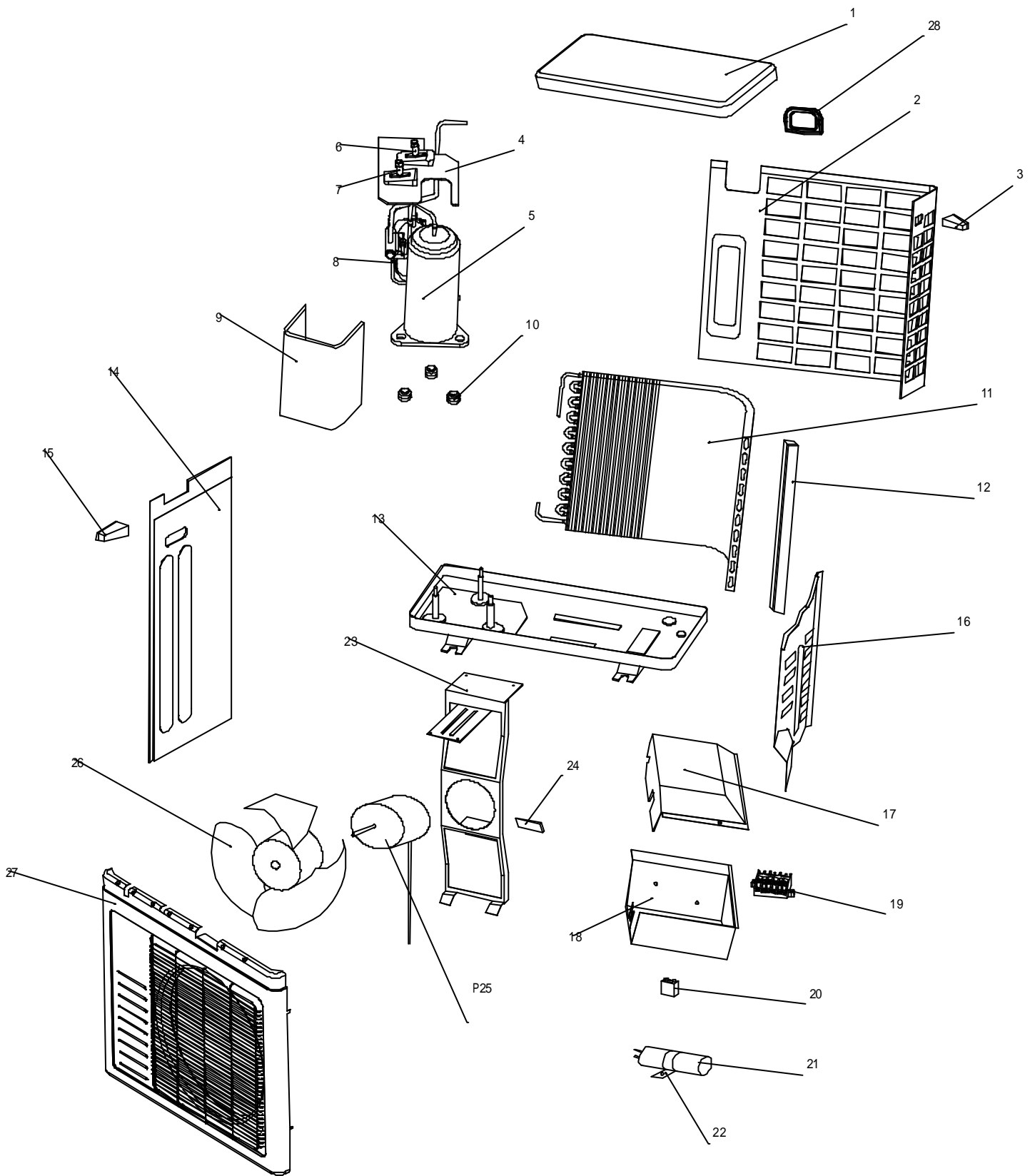
1.Part NO. 2.Description 3.Q'ty

Key No.	Part No.	Description	Q'ty
1	RZA-2-2230-105-XX-0	Installation Plate	1
2	RZA-0-2201-109-XX-2	Base Ass'y	1
3	RZA-0-2487-015-XX-0	Mounting Plate Ass'y	1
4	RZA-2-2369-029-XX-0	Down Right Cover	1
5	RZA-0-5263-028-XX-0	Power Transformer	1
6	RZA-0-5316-021-XX-1	Electrical Control Box Ass'y	1
7	RZA-0-5172-247-XX-0	Printed Circuit Board Ass'y	1
8	RZA-0-5172-249-XX-0	Display Board	1
9	RZA-0-5306-045-XX-0	Terminal	1
10	RZA-0-5306-046-XX-0	Terminal	1
11	RZA-2-2369-030-XX-0	Terminal Cover	1
12	RZA-0-5250-025-XX-D	Power Cable	1
13	RZA-0-2509-106-XX-0	Cross-Flow Fan Ass'y	1
14	RZA-0-2510-102-XX-0	Bearing Ass'y	1
15	RZA-0-0000-046-XX-1	Fan Motor Ass'y	1
16	RZA-2-2511-006-XX-0	Rubber Ring	2
17	RZA-0-4116-088-XX-1	Evaporator Ass'y	1
18	RZA-0-1504-033-XX-0	Air Outlet Ass'y	1
19	RZA-2-2348-005-XX-0	Drainage Stopper	1
20	RZA-2-1519-023-XX-0	Vane	12
21	RZA-2-1514-031-XX-0	Vane Connector	2
22	RZA-2-1523-022-XX-0	Flap	1
23	RZA-0-1303-102-XX-0	Drainage Hose Ass'y	1
24	RZA-2-1501-020-XX-1	Grill	1
25	RZA-2-2258-019-XX-0	Receiver	1
26	RZA-2-2369-028-XX-0	Down Right Cover	1
27	RZA-2-1601-017-XX-0	Front Panel	1
28	RZA-0-2305-009-XX-0	Air Filter	2

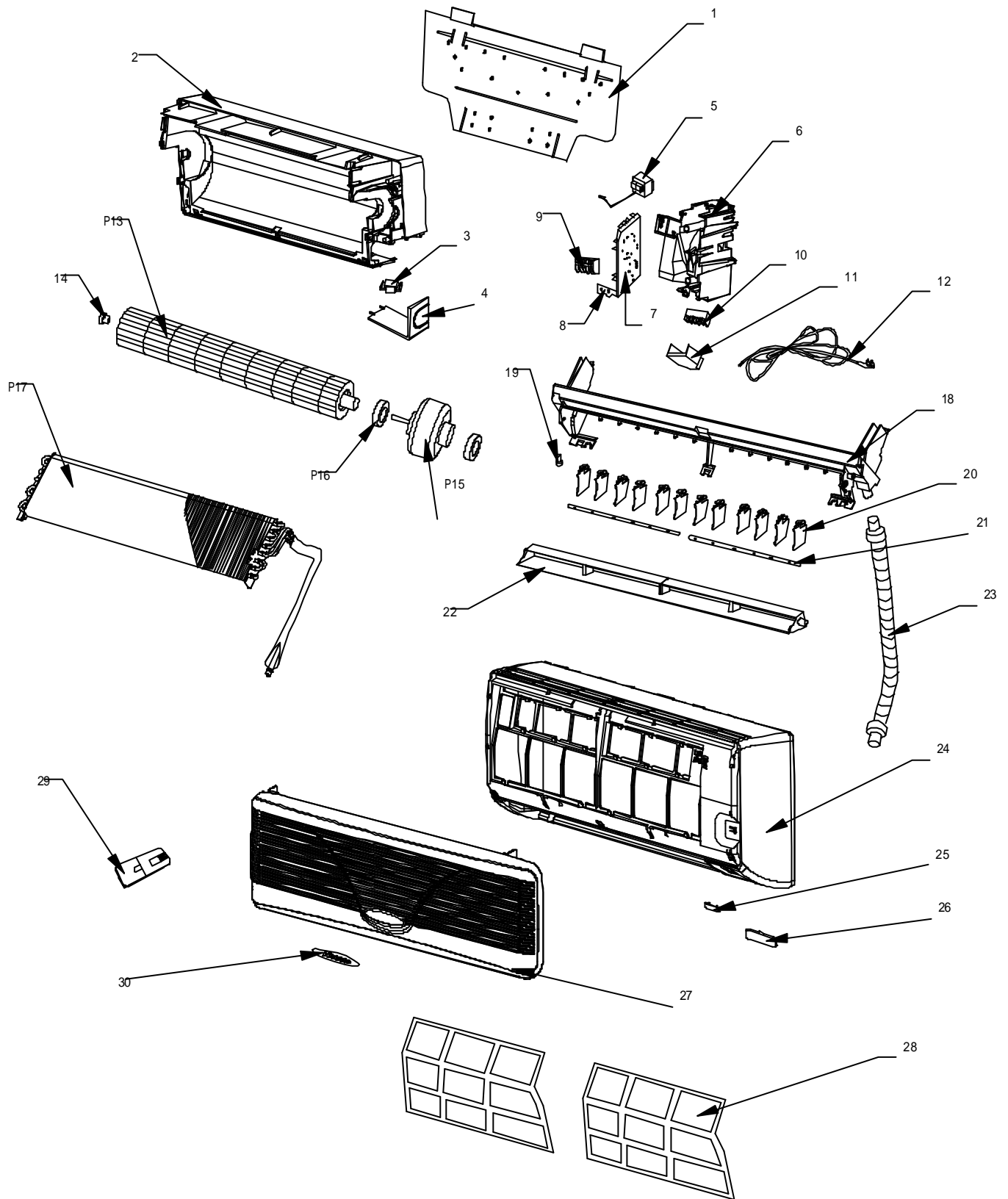
NOTE: 1.Metal and plastic parts will be supplied basically with necessary heat insulation pads or packing.

2.Each key number with an asterisk(*)means the recommended service parts.

13. PARTS LIST



13. PARTS LIST



13. PARTS LIST

ATTENTION !

INDOOR UNIT(KF-2302GE)

To ensure correct parts supply, please let us know followings. When you make service parts order:

1.Part NO. 2.Description 3.Q'ty

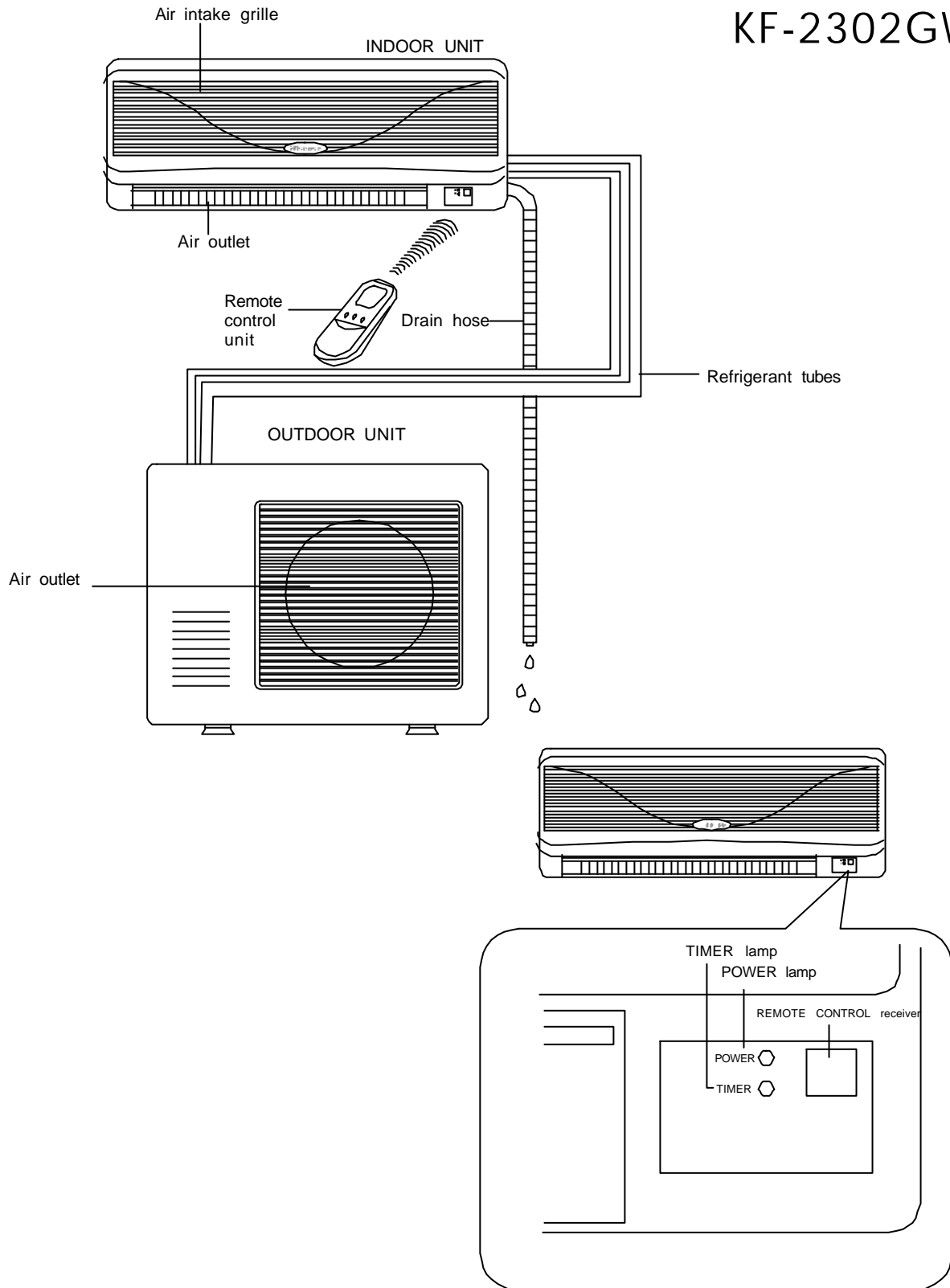
Key No.	Part No.	Description	Q'ty
1	RZA-2-2230-105-XX-0	Installation Plate	1
2	RZA-0-2201-109-XX-2	Base Ass'y	1
3	RZA-0-2487-015-XX-0	Mounting Plate Ass'y	1
4	RZA-2-2369-029-XX-0	Down Right Cover	1
5	RZA-0-5263-028-XX-0	Power Transformer	1
6	RZA-0-5316-021-XX-1	Electrical Control Box Ass'y	1
7	RZA-0-5172-388-XX-0	Printed Circuit Board Ass'y	1
8	RZA-0-5172-249-XX-0	Display Board	1
9	RZA-0-5306-045-XX-0	Terminal	1
10	RZA-0-5306-046-XX-0	Terminal	1
11	RZA-2-2369-030-XX-0	Terminal Cover	1
12	RZA-0-5250-007-XX-2	Power Cable	1
13	RZA-0-2509-106-XX-0	Cross-Flow Fan Ass'y	1
14	RZA-0-2510-102-XX-0	Bearing Ass'y	1
15	RZA-0-0000-046-XX-1	Fan Motor Ass'y	1
16	RZA-2-2511-006-XX-0	Rubber Ring	2
17	RZA-0-4116-106-XX-1	Evaporator Ass'y	1
18	RZA-0-1504-033-XX-0	Air Outlet Ass'y	1
19	RZA-2-2348-005-XX-0	Drainage Stopper	1
20	RZA-2-1519-023-XX-0	Vane	12
21	RZA-2-1514-031-XX-0	Vane Connector	2
22	RZA-2-1523-022-XX-0	Flap	1
23	RZA-0-1303-102-XX-0	Drainage Hose Ass'y	1
24	RZA-2-1501-019-XX-1	Grill Ass'y	1
25	RZA-2-2258-019-XX-0	Receiver	1
26	RZA-2-2369-028-XX-0	Down Right Cover	1
27	RZA-2-1601-013-XX-0	Front Panel	1
28	RZA-0-2305-009-XX-0	Air Filter	2
29	RZA-0-0054-001-XX-0	Remote Controller	1
30	RZA-6-1139-016-XX-0	Brand Mark	1

NOTE:1.Metal and plastic parts will be supplied basically with necessary heat insulation pads or packing.

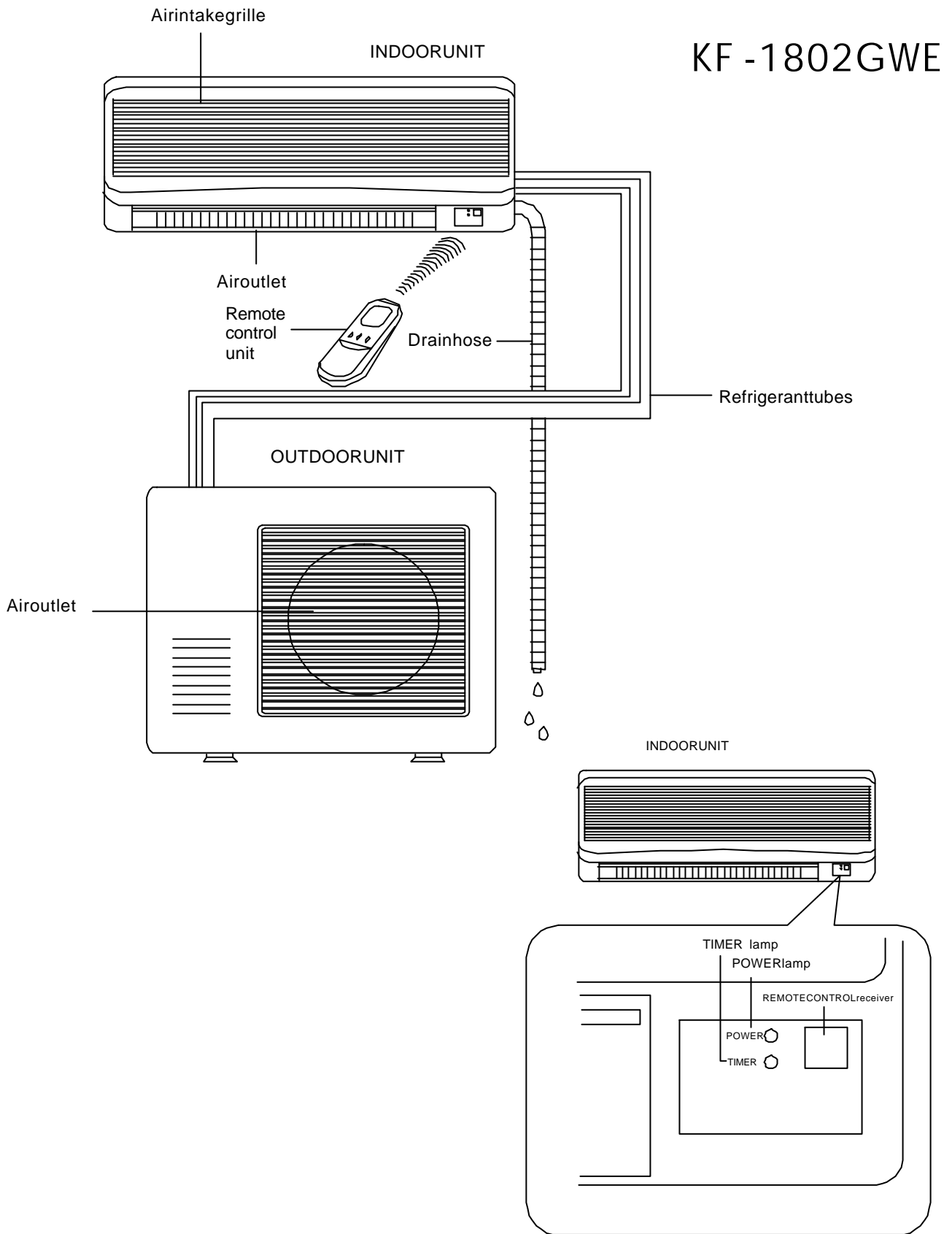
2.Each key number with an asterisk(*)means the recommended service parts.

1. PART NAMES AND FUNCTIONS

KF-2302GWE

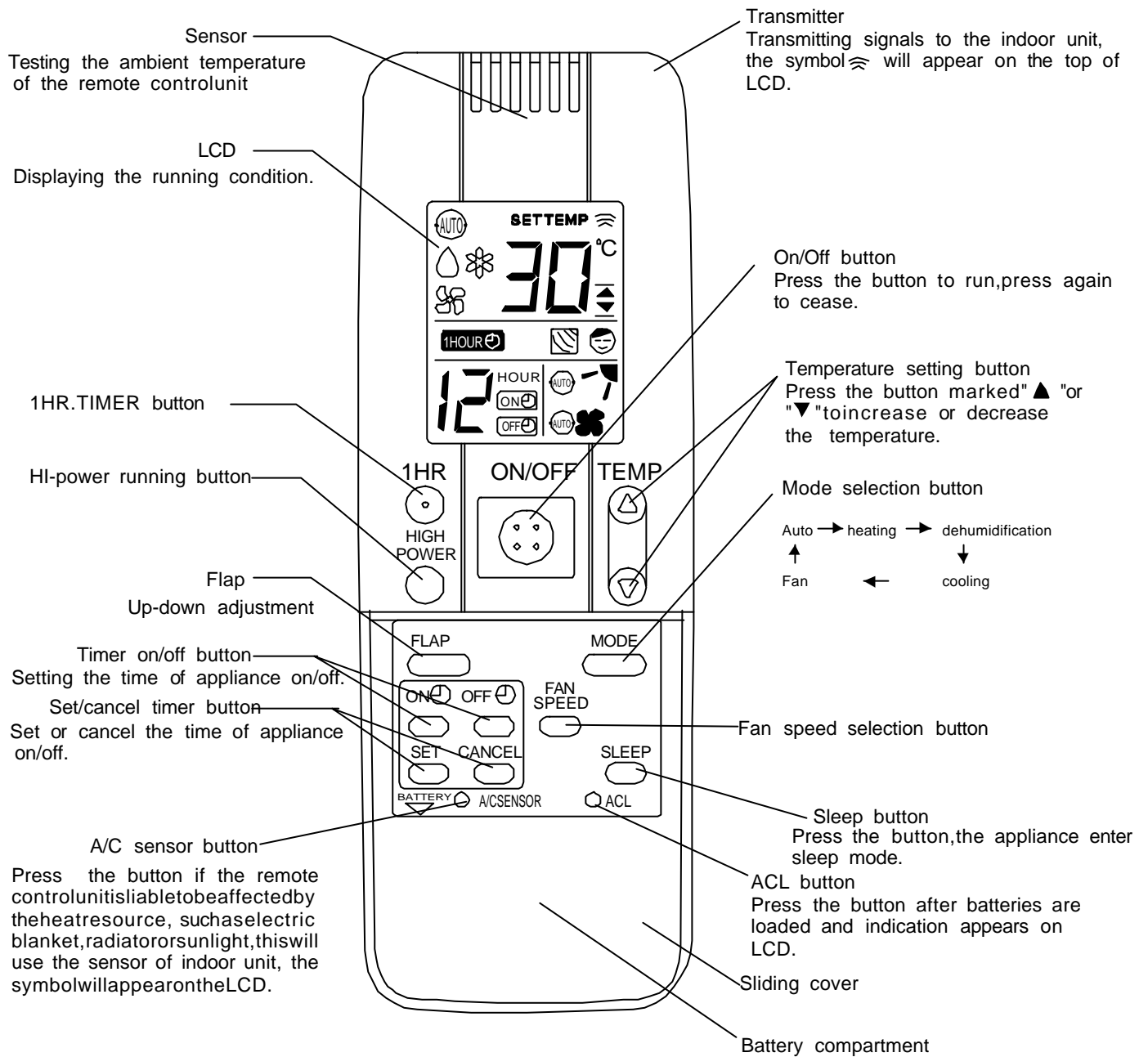


1. PART NAMES AND FUNCTIONS



1. PART NAMES AND FUNCTIONS

REMOTE CONTROL UNIT



COMMON SENSE

- Remove the batteries in the remote Controller when it is not used for a long period.
- Replace the batteries when the indication on the LCD of the remote controller is feint, or the Remote controller can not be set or operated.
- Properly dispose of used batteries.
- Keep the remote controller away from cold or hot air, sunlight or heat sources.
- Contact the local distributor if the receiver in the appliance does not work in a room illuminated by fluorescent tubes.
- Remote controller must be used within its effective range or the timer and the temperature control will not function properly.
- Control will fail if two of the same model appliances are installed in the same time.
- If the remote controller is fixed on the wall, press the ON/OFF button to ensure that the appliance is receiving a signal from the device.

2. SPECIFICATION

Model			KF-1802GWE		
Function			Cooling	Heating	
Power supply			a.c 220V~230V/50Hz		
Capacity	Capacity	kW	1.8	-	
	Dehumidification	l/h	0.70	-	
	Air flow	m ³ /h	330		
Electrical data	Power outlet	A	10		
	Running current	A	3.4		
	Power input	kW	0.70		
	Auxiliary heater	A(KW)	-		
	Power factor	%	97%		
	Starting current	A	15.5		
	Compressor motor current	A	3.3		
	Fan motor current	A	0.22		
EER.			2.60		
Compressor	Model	KH122VLHC			
	Output	W	-		
	Winding resistance (at20)		Main:4.81/Aux.7.67		
Indoor fan motor	Model	YYW16 - 4 - 411			
	Winding resistance (at20)		343 (main)/ 296(aux)		
Outdoor fan motor	Model	YDK18 - 6I-1			
	Winding resistance (at20)		458 (main)/ 200(aux)		
Dimensions	Indoor unit	Width	mm	754	
		Height	mm	245	
		Depth	mm	175	
	Outdoor unit	Width	mm	618	
		Height	mm	312	
		Depth	mm	545	
Weight	Indoor unit	kg	6.5		
	Outdoor unit	kg	24.0		
Refrigerant piping	Liquid pipe	mm	6.35		
	Gas pipe	mm	9.52		
Connection method			-		
Special remarks	Air direction		6		
	Sound level (Hi)	Indoor unit	dB	30	
		Outdoor unit	dB	47	
	Fan speed (Hi)	Indoor unit	rpm	1250	
		Outdoor unit	rpm	780	
	Fan speed regulator	Indoor unit	3		
		Outdoor unit	1		
	Refrigerant filling capacity(R410A)		kg	0.47	
	Thermitstor	RT1(at25)	k	5	
		RT2(at25)	k	5	
RT3(at0)		k	-		

NOTE :Test conditions : Cooling : Indoor: DB27 / WB19

Heating: Indoor: DB20 / WB15

Outdoor DB35 / WB24

Outdoor DB7 / WB 6

2. SPECIFICATION

Model			KF-2302GWE		
Function			Cooling	Heating	
Power supply			a.c 220V~230V/50Hz		
Capacity	Capacity	kW	2.3		
	Dehumidification	l/h	0.98		
	Air flow	m ³ /h	340		
Electrical data	Power outlet	A	10		
	Running current	A	4.0		
	Power input	kW	0.84		
	Auxiliary heater	A(KW)	-		
	Power factor	%	96%		
	Starting current	A	22		
	Compressor motor current	A	3.95		
Fan motor current	A	0.33			
EER.			2.75		
Compressor	Model	KH145VORC			
	Output	W	-		
	Winding resistance (at20)		Main:3.99/Aux : 6.43		
Indoor fan motor	Model	YYW16 - 4 - 411			
	Winding resistance (at20)		343 (main)/ 296(aux)		
Outdoor fan motor	Model	UE6-C21C4			
	Winding resistance (at20)		296 (main)/ 283(aux)		
Dimensions	Indoor unit	Width	mm	754	
		Height	mm	245	
		Depth	mm	175	
	Outdoor unit	Width	mm	618	
		Height	mm	545	
		Depth	mm	312	
Weight	Indoor unit	kg	6.5		
	Outdoor unit	kg	30.0		
Refrigerant piping	Liquid pipe	mm	6.35		
	Gas pipe	mm	9.52		
Connection method					
Special remarks	Air direction			6	
	Sound level (Hi)	Indoor unit	dB	38	
		Outdoor unit	dB	48	
	Fan speed (Hi)	Indoor unit	rpm	1250	
		Outdoor unit	rpm	780	
	Fan speed regulator	Indoor unit	3		
		Outdoor unit	1		
	Refrigerant filling capacity(R410A)		kg	0.52	
	Thermitstor	RT1(at25)	k	5	
		RT2(at25)	k	5	
RT3(at0)		k	-		

NOTE :Test conditions : Cooling : Indoor: DB27 / WB19

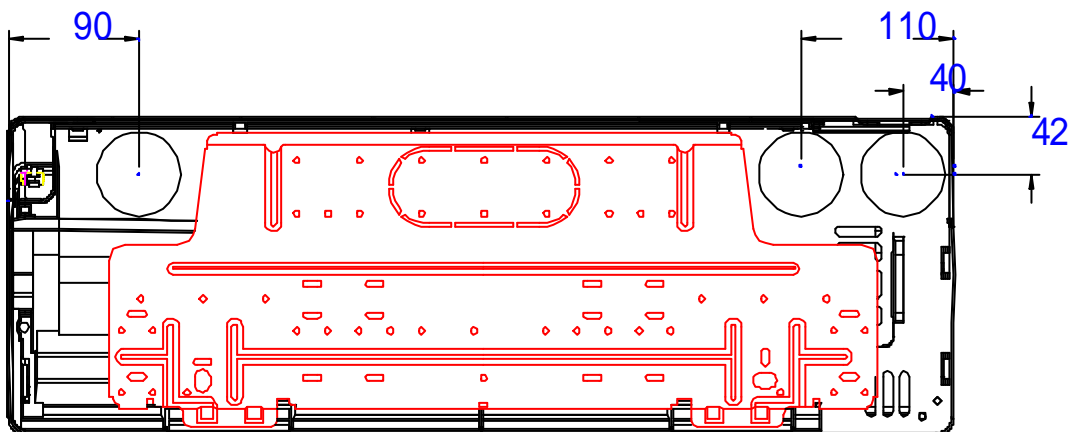
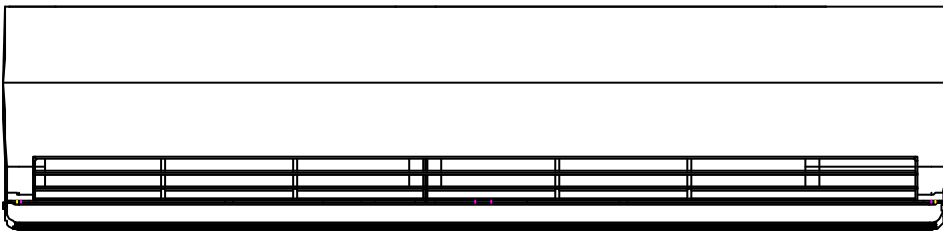
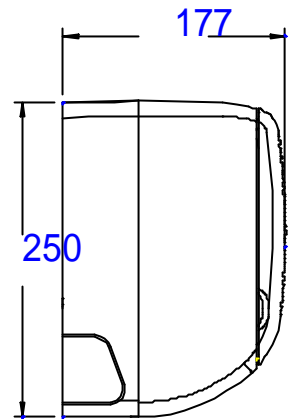
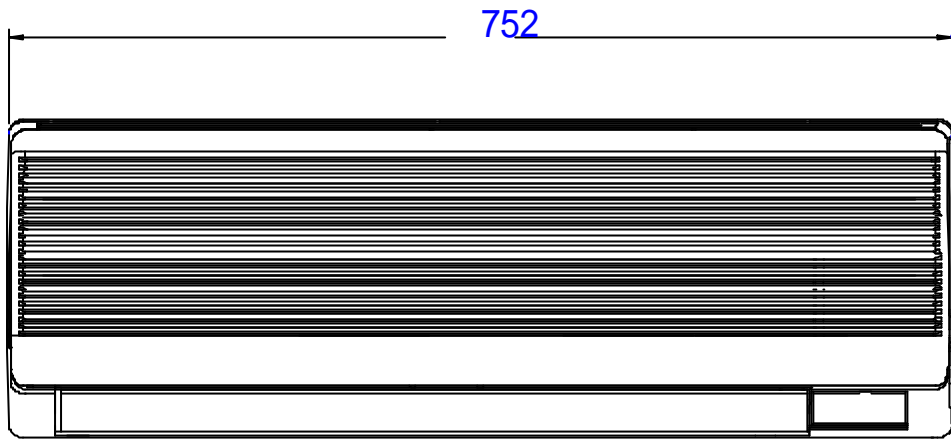
Heating: Indoor: DB20 / WB15

Outdoor DB35 / WB24

Outdoor DB7 / WB 6

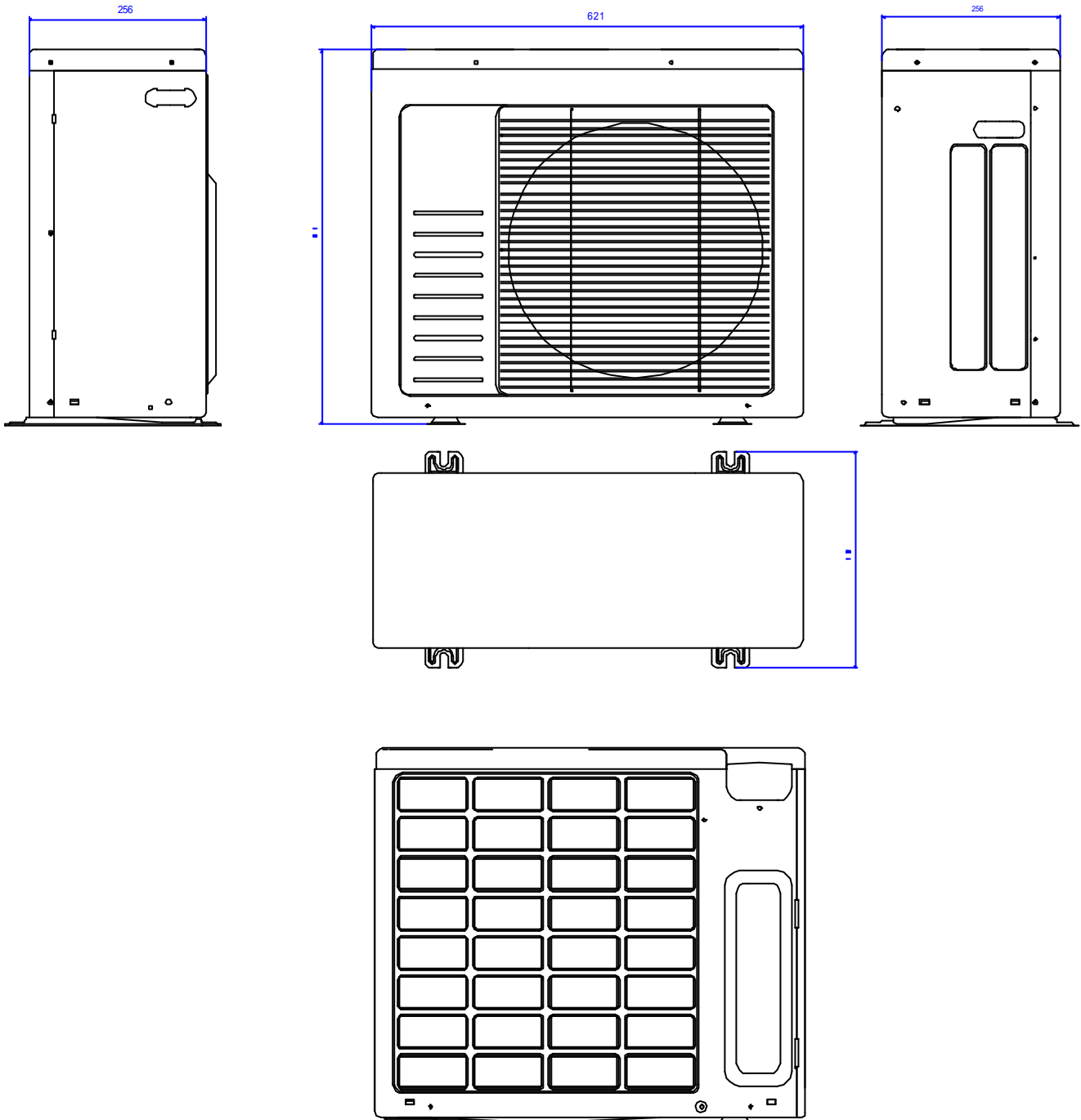
3.OUTLINES AND DIMENSIONS

KF-1802GE



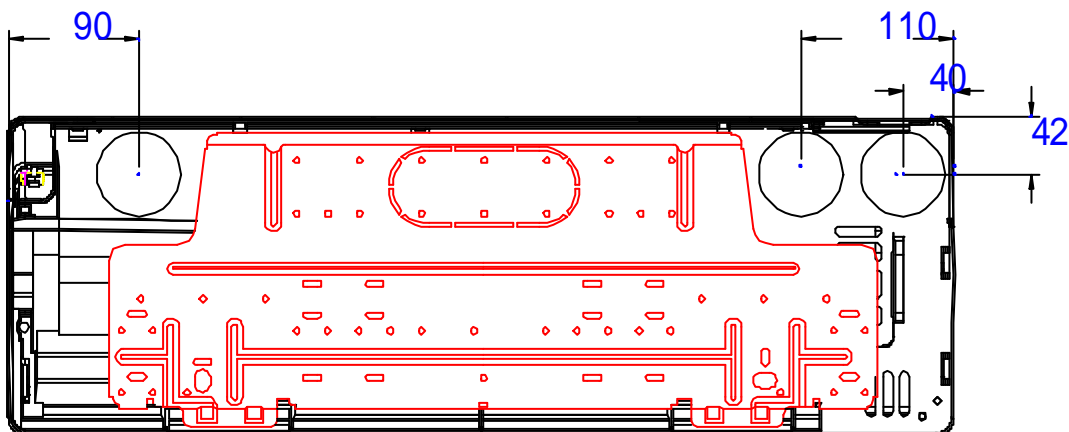
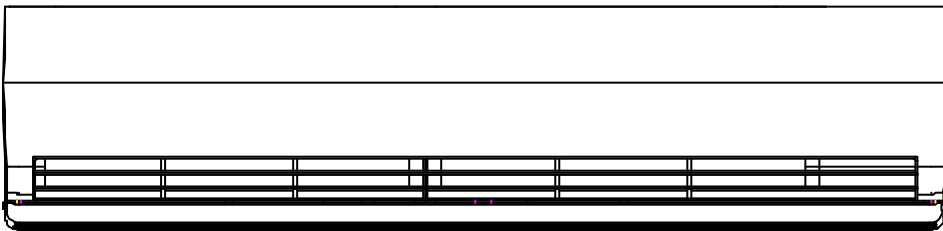
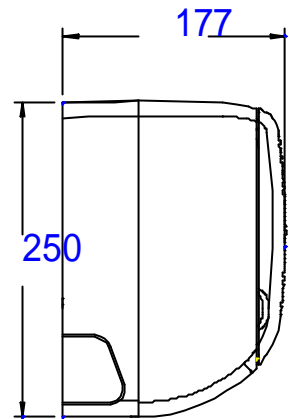
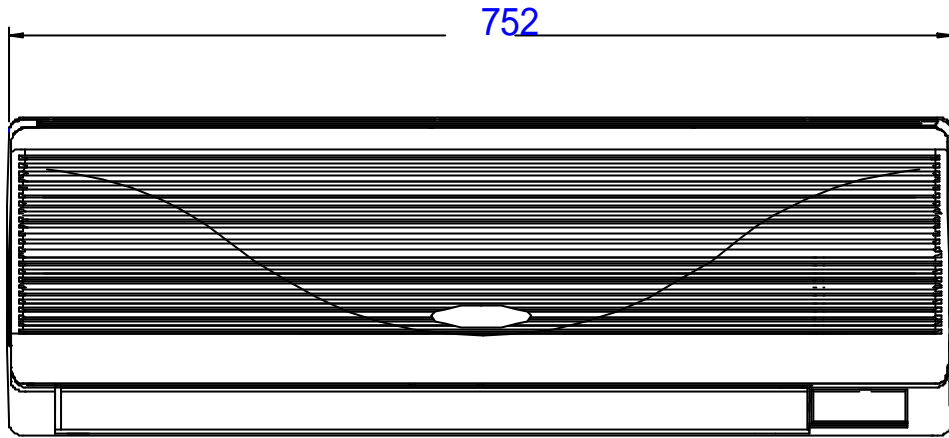
3.OUTLINES AND DIMENSIONS

KF-1802WE



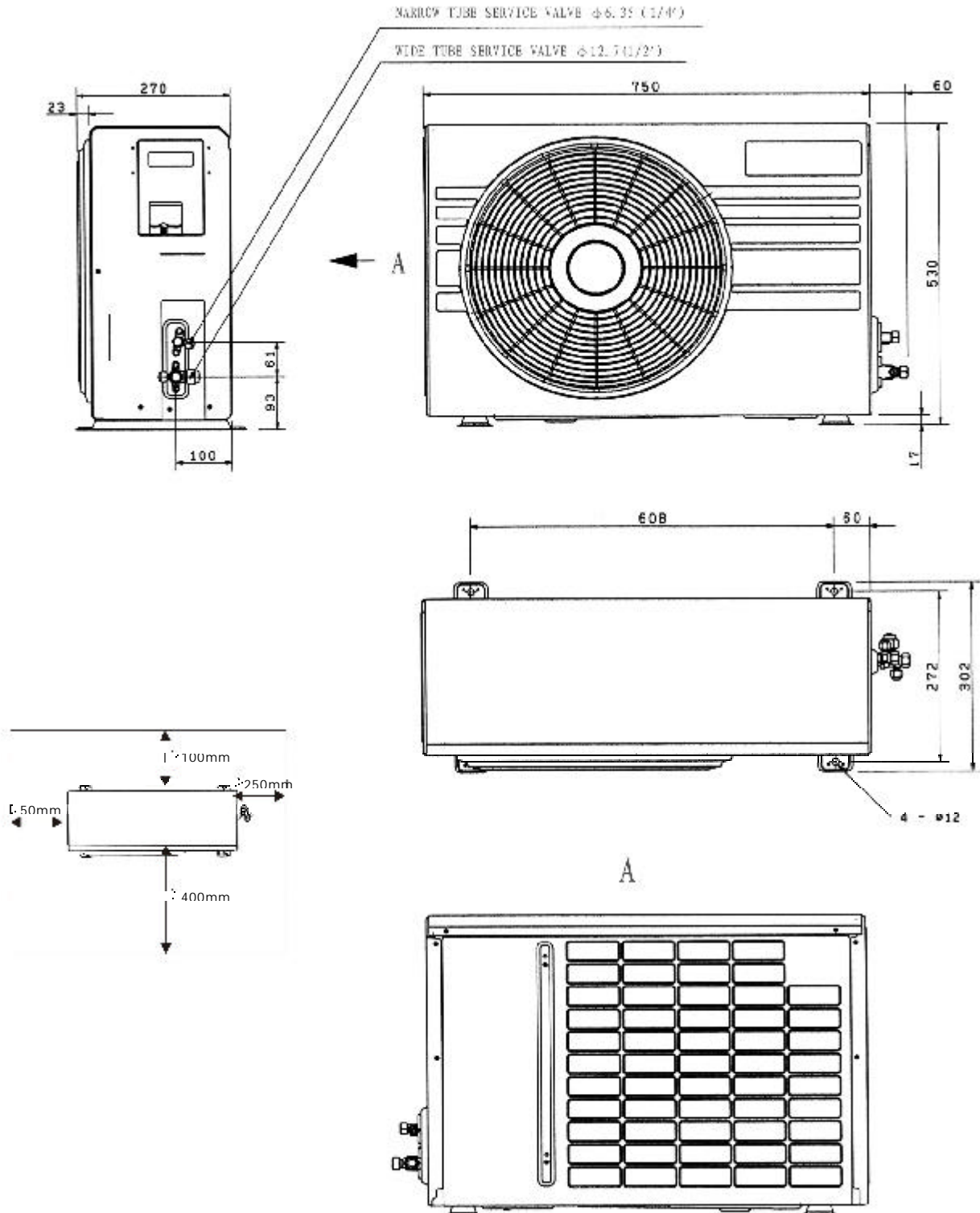
3.OUTLINES AND DIMENSIONS

KF-2302GE



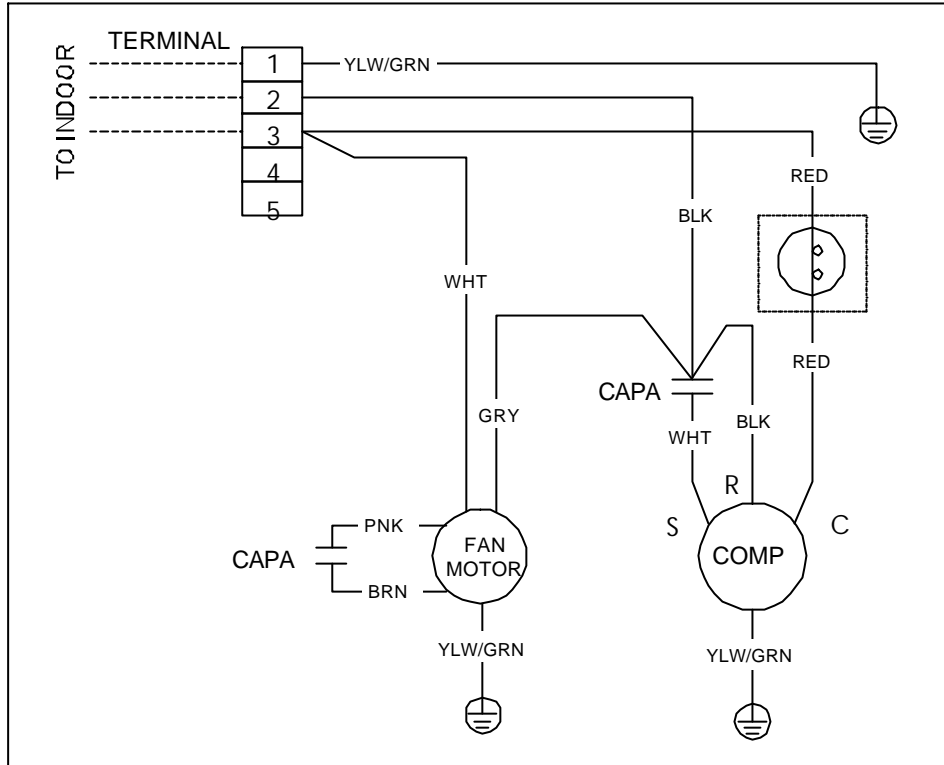
3.OUTLINES AND DIMENSIONS

KF-2302WE

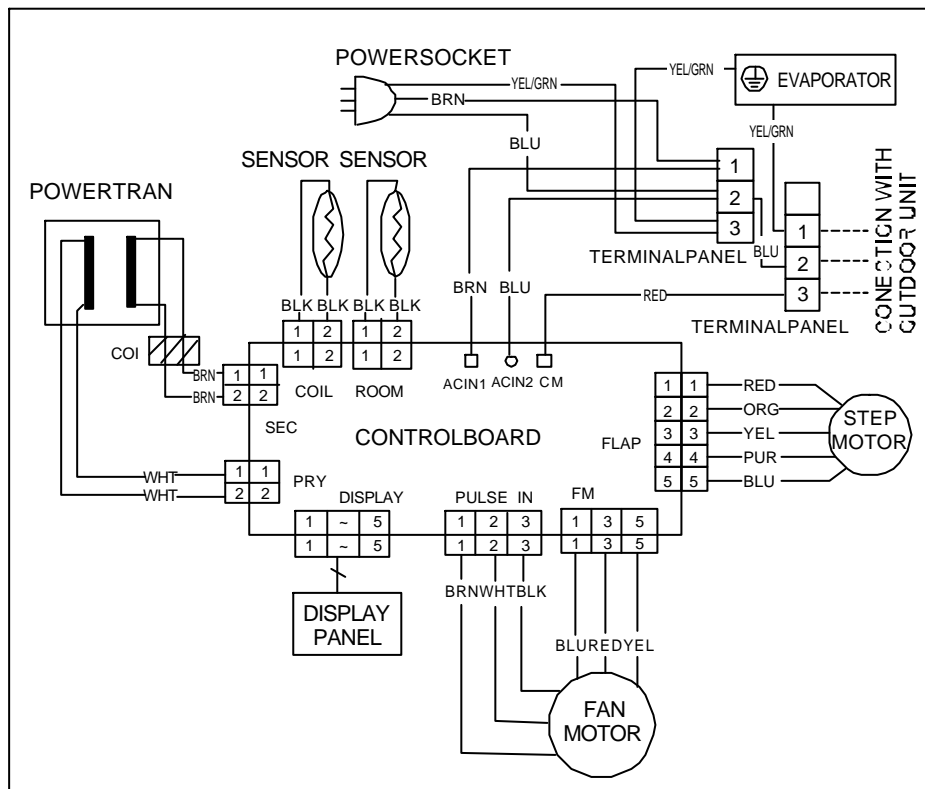


4. WIRING DIAGRAM

Outdoor



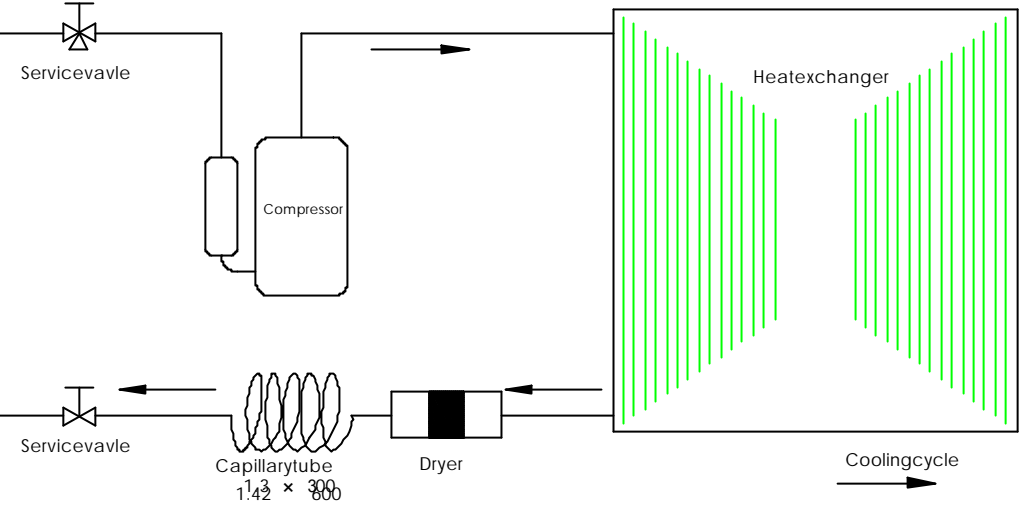
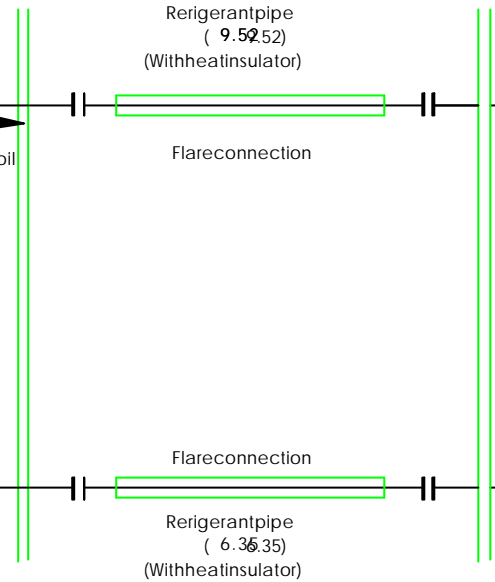
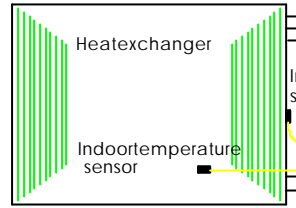
Indoor



5. REFRIGERANT SYSTEM DIAGRAM

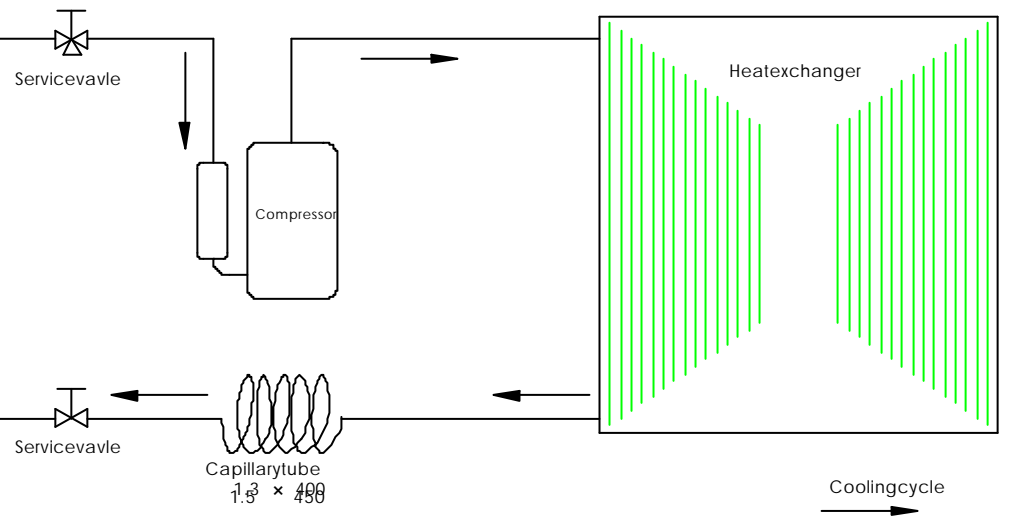
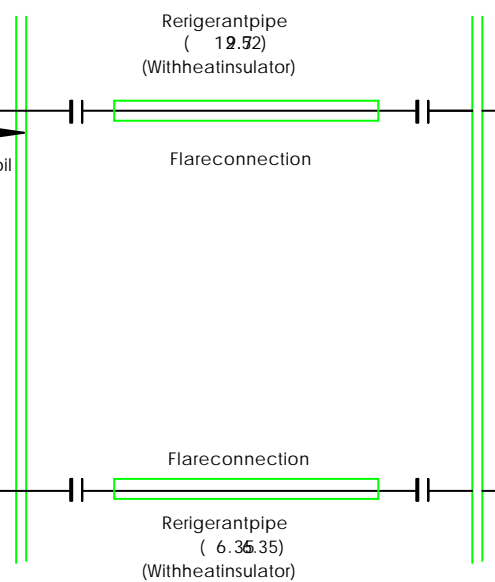
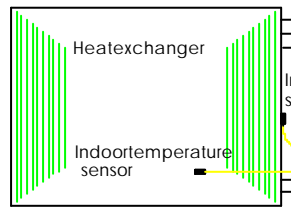
KF-1802GWE

INDOOR UNIT



KF-2302GWE

INDOOR UNIT

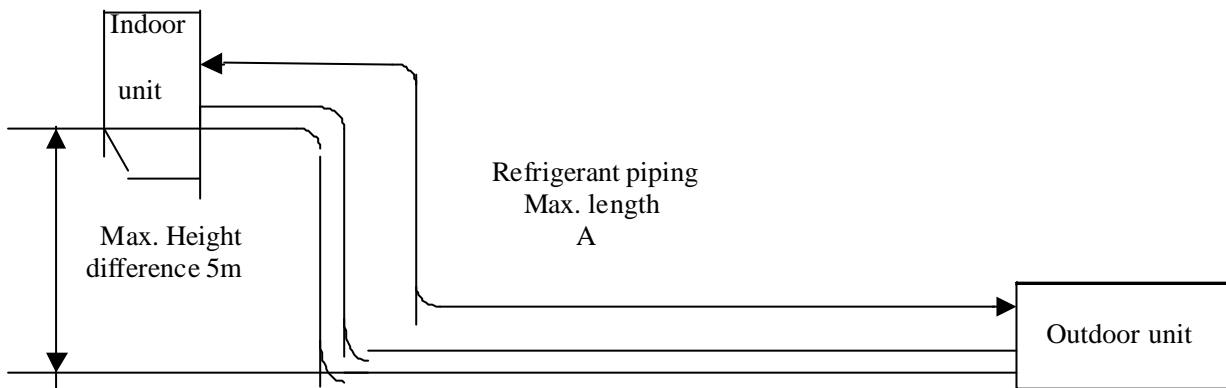


5.REFRIGERANT SYSTEM DIAGRAM

MAX. REFRIGERANT PIPING LENGTH

Modles	Refrigerant Piping Max. Length : m A	Piping size O.D : mm		Length of connecting pipe : m	
		Gas	Liquid	Indoor unit	Outdoor unit
KF-1802GWE	15	9.52	6.35		
KF-2302GWE	15	9.52	6.35		

MAX. HEIGHT DIFFERENCE



ADDITIONAL; REFRIGERANT CHARGE(R-22 : g)

Modles	Outdoor unit precharged (up to 7m)	Refrigerant piping length (one way)		
		7m	10m	15m
KF-1802GWE	470	0	75	200
KF-2302GWE	520	0	75	200

Calculation : $Xg=25g/m * (A-7)m$

5. REFRIGERANT SYSTEM DIAGRAM

EVACUATION PROCEDURES

Connect the refrigerant pipes (both the liquid and gas pipes) between the indoor and the outdoor units.

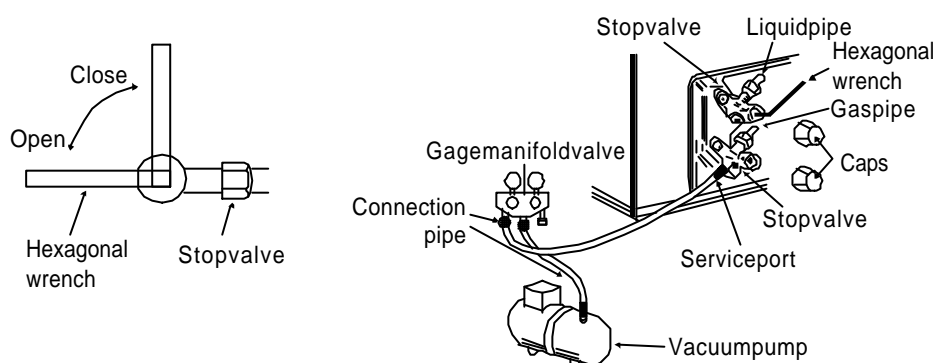
Remove the service port cap of the stop valve on the side of the outdoor unit gas pipe. (The stop valve will not work in its initial state fresh out of the factory (totally closed with cap)).

Connect the gag manifold valve and the vacuum pump to the service port of the stop valve on the gas pipe side of the outdoor unit.

Run the vacuum pump for more than 15 minutes and at this time confirm that the pressure gage indicates -0.1 Mpa (-76 cmHg).

Check the vacuum with the gag manifold valve, then close the gag manifold valve, and stop the vacuum pump.

Leave it as is for one or two minutes. Make sure the pointer of the gag manifold valve remains in the same position.



Remove the gag manifold valve quickly from the service port of the stop valve.

After refrigerant pipes are connected and evacuated, fully open all stop valves on gas and liquid pipe sides. Operating without fully opening lowers the performance and causes trouble.

Pipe length
7m maximum
No gas charge is
needed.

Pipe length
exceeding 7m
Charge the prescribed
amount of gas.

Tighten the cap to the service port to obtain the initial status.

Retighten the cap.

Leak test

7. CONTROL MODE

Note: This manual is for new refrigerant (R22) air conditioners, including the models KF-1802GWE, KF-2302GWE.

MICROPROCESSOR CONTROL

1. Display panel

1.1 Description of pattern

1.2 The display screen consists of 4 LEDs, indicating power, timer, operation and high power respectively.

1.3 Power indicator. When the air conditioner runs, the power indicator lamp lights up; Compressor operation indicator. When the compressor runs, the operation indicator lamp lights up;

1.4 Timer indicator. When the timer function works, the timer indicator lamp lights up;

1.5 High power indicator. When the air conditioner works in the high efficient mode, the high efficient indicator lamp lights up.

2. Temporary Switch

2.1 Press the temporary switch to start the unit, and press it once again to stop the unit; the control unit makes a judge according to the room temperature to select the corresponding run mode. Once a run mode is selected, it will not be changed unless the unit is cut off and powered on again.

A. When the room temperature $> 26^{\circ}\text{C}$, the unit starts in the cooling mode; the indoor controlled temperature is set at 26°C , and the indoor fan speed is set to automatic mode;

B. When the room temperature $\leq 26^{\circ}\text{C}$, the air blowing mode starts, and the indoor fan speed is set to automatic;

2.2 When the air conditioner is powered on, hold down the temporary switch for 5 seconds or longer, the control unit starts the test operation, when the system is forced to run in the cooling mode regardless of the room temperature.

2.3 Hold down the temporary switch and then turn on the air conditioner, the buzzer on the indoor unit rings two times, and the unit enters the self-test status.

2.4 If a signal has been received from the remote controller during the temporary run, the system will operate according to the commands of the remote signal.

3. Automatic mode

3.1 When the remote controller is set to start the unit in the automatic mode, the air conditioner judges according to the differences between the room temperature and temperature setting and selects a run mode.

7. CONTROL MODE

Indoor temperature temperature setting, the unit runs in the cooling mode;

Indoor temperature temperature setting, the unit runs in the cooling mode;

3.2 The run mode is determined when the unit gets started at the first time. Once a mode is selected, it will not change within 30 minutes.

3.3 If the difference between the room temperature and temperature setting is above 3 , the run mode can be changed immediately.

3.4 When the unit is turned off and restarted with the remote controller, these conditions remain valid.

3.5 When powered off and powered on again, the air conditioner will reselect a run mode.

3.6 The indoor and outdoor fan speed and compressor control in the automatic mode are same as that in cooling mode.

4 Cooling mode

4.1 In the cooling mode, the temperature setting is selected by using the remote controller. The temperature control ranges from 16-30 .

When powered on for the first time, the compressor can be started immediately. After turning off, the compressor must not be restarted until at least 3 minutes later.

After turning on, the compressor must run for at least 5 minutes.

Indoor fan speed:

Fan speed	High power	High	Low	Mute	Ultre-low
Model					
KF-2302GWE	1320	1280	1180	1100	900
KF-1802GWE	1300	1250	1150	1050	900

Automatic

	$T_{\text{setting}} - T_{\text{room}}$	Fan speed		$T_{\text{setting}} - T_{\text{room}}$	Fan speed
Direction of Temperature Difference	0	Mute	Direction of Temperature Difference	0	Mute
	1	Low		1	Low
	2	Low		2	Low
	3	Low		3	Low
	4	Low		4	High
	5	High		5	High

7. CONTROL MODE

4.2 Outdoor fan speed

Single-speed motor starts or stops as soon as the compressor starts or stops..

4.3 Anti-freezing for evaporator

When the indoor coil temperature -1°C and maintains for 5 minutes, both the compressor and outdoor fan are interrupted. The resumption condition is that the indoor coil temperature 7°C .

5. Dehumidification mode

5.1 In the dehumidification mode, the temperature setting is selected by using the remote controller. The temperature control ranges from $16-30^{\circ}\text{C}$.

The control unit selects a run mode according to the temperature difference between the room temperature and temperature setting.

5.2 When the room temperature is above 2°C higher than the temperature setting, the system runs in the cooling mode.

5.3 When the difference between the room temperature and temperature setting is equal to or lower than 2°C , the system starts in the dehumidification mode. In the dehumidification mode, both the compressor and outdoor fan operate in the cycle of 10 minutes run and 6 minutes stop.

5.4 When dehumidification, the outdoor fan starts or stops as soon as the compressor starts or stops.

6. Fan mode

When select the fan mode, only both the indoor fan and flap operate in a preset mode. If the fan speed is set to automatic, the fan runs at the low speed.

7. Flap control

7.1 Press the up and down flap button, the flap's position is switched over between the 8 statuses, i.e. automatic flap, flap orientation where the flap plate opens to 6 positions 1, 2, 3, 4, 5, 6 from down to up, and flap swing.

7.2 Automatic flap: In the heating mode, the flap swings between position 1 and position 4; In the cooling or dehumidification mode, the flap swings between position 3 and position 6; In the fan mode, the flap is located at position 5.

7.3 Flap orientation: The flap is set at a certain position by using the remote controller.

7.4 Flap swing: The flap swings between position 1 and position 6.

The default status is the automatic flap?

7.5 When powered on and off for the first time, the flap plate turns to the maximum angle to ensure that the flap is closed; When the unit starts, the flap plate moves to the maximum angle, and returns to the preset position after the flap is completely closed.

7. CONTROL MODE

7.6 When powered on and off for the first time, the flap plate turns to the maximum angle to ensure that the flap is closed; When the unit starts, the flap plate moves to the maximum angle, and returns to the preset position after the flap is completely closed.

8. Man-machine communication

8.1 The indoor control unit has two thermal sensors for detecting the room temperatures, one is installed in the remote controller, and the other at the air intake of the indoor unit. The default air outlet setting is subject to the remote controller's detection. The remote controller detects the room temperature once every 20 seconds, and automatically transmits the signal at 3-minute intervals or when it has detected a change in the room temperature. If the indoor control unit has not received a remote signal for more than 10 minutes, the control function will be automatically switched over to the temperature sensor at the air intake.

8.2 Neither turning on nor turning off operations will cancel the interface communication function.

8.3 In default, the air conditioner is set to start the interface communication function.

9 Timer function

9.1 Timer on: When set to start in the set time with the remote controller, the air conditioner enters in the timer on status. When the set time is up, the air conditioner turns on and operates according to the preset conditions after receiving the signal from the remote controller. If the air conditioner has not received the signal of the remote controller when the set time is up, it will automatically start and operate according to the preset conditions.

9.2 Timer off: When set to stop in the set time with the remote controller, the air conditioner enters the timer off status. When the set time is up, the air conditioner turns off after receiving the signal from the remote controller. If the air conditioner has not received the signal of the remote controller when the set time is up, it will turn off automatically.

9.3 Neither turning on nor turning off operations will cancel the timer function.

10 Sleep function

10.1 In the cooling mode, press the sleep button on the remote controller to start or cancel the sleep function in sequence.

10.2 In the cooling mode, 1 hour after the sleep mode starts, the setting temperature will rise by 1 . The unit will continue to run for further 7 hours and then automatically stops.

7.CONTROL MODE

10.3 In default, the preset status is to cancel the sleep function. Turning off the unit will also cancel the sleep function.

Note: This function is subject to the description in the User's Manual.

11 High power run function

In the high power run mode, the indoor fan speed is switched over to the high power run and the high power indicator lamp on the display panel lights up.

8. TROUBLESHOOTING

When the air conditioner works in the abnormal condition, please press the sensor button of the remote controller one time and then press this button continuously two time, the trouble (the LED lamp flickers) will be displayed on the display panel.

Trouble Description	Trouble Code	LED Display			
		High Power	Operation	Timer	Power
Room temperature sensor abnormal	1				
Indoor heat exchanger temperature sensor abnormal	2				
Indoor heat exchanger frozen	3				
Instantaneous interruption of power	6				
Compressor overcurrent	7				
Fan motor locked	8				
Trouble with indoor unit E ² PROM	13				

1. Compressor overcurrent protection

Depends on the overcurrent protection value of the overload protection device in a model.

2. Indoor heat exchanger anti-froze protection

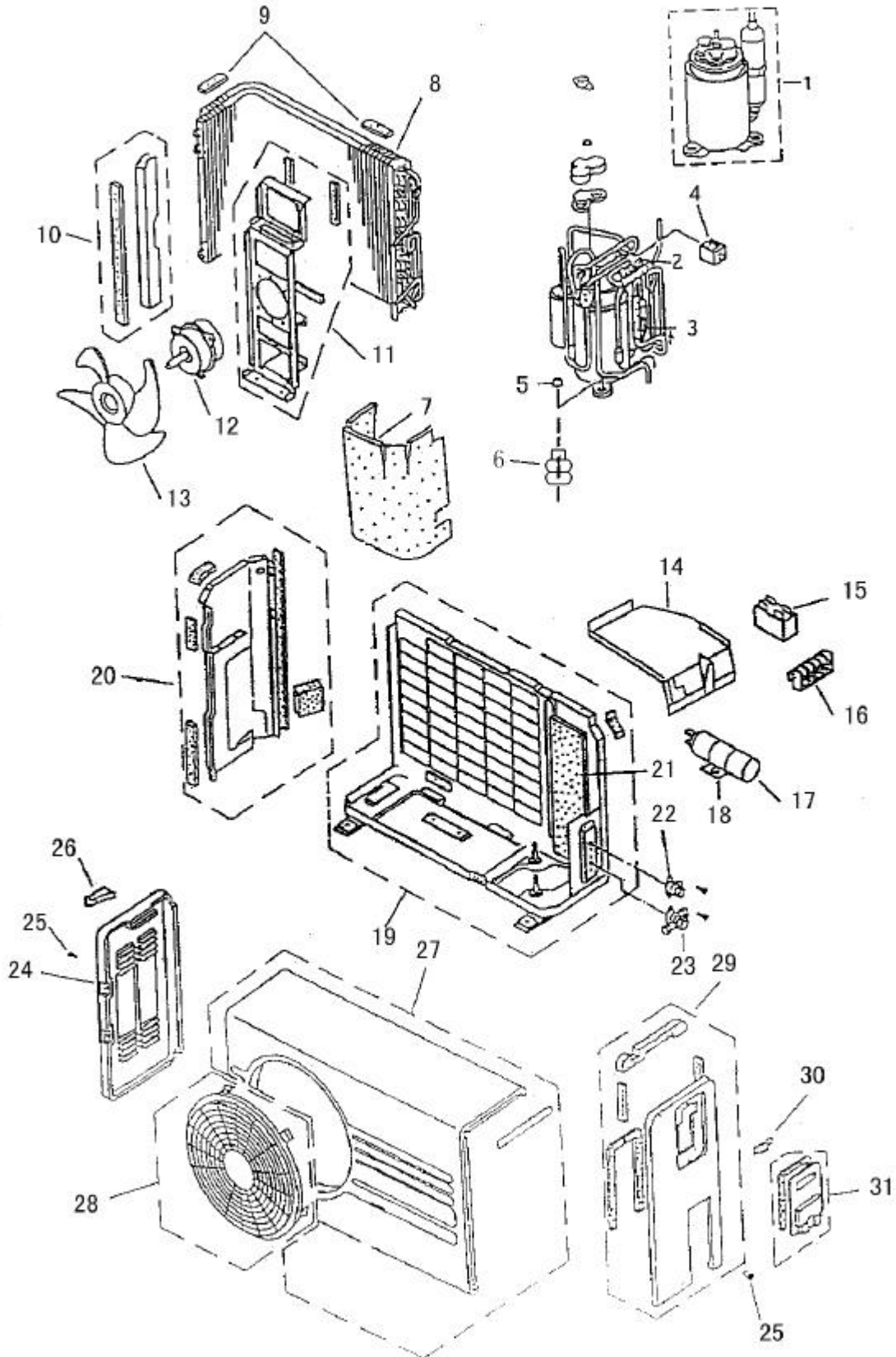
Refer to the cooling mode.

3. Time-delay start protection: After turning off, the compressor will not be restarted until 3 minutes later to protect the system.

4. Indoor fan motor in trouble: If the indoor micro-processor, according to the position signal of the indoor fan motor's rotor, judges that the motor is in stoppage, locked or shaking abnormally, it will cut off the indoor fan motor's drive signal, and restarts the motor 3 minutes later; if the trouble occurs 4 times within 30 minutes, the air conditioner turns off and displays the trouble code. The unit will not restart unless powered on again.

13. PARTS LIST

KF-2302WE



13. PARTS LIST

To ensure correct parts supply, please let us know in advance when you make service parts order.

1.Part NO. 2.Description 3.Q'ty

Key No.	Part No.	Description	Q'ty
1	RZA-2-2369-031-XX-1	Top Panel	1
2	RZA-2-1108-002-XX-1	Back Panel	1
3	RZA-2-2303-003-XX-0	Handle	1
4	RZA-2-2222-010-XX-2	Valve Mounting Plate	1
5	RZA-0-4526-037-XX-0	Compressor Ass'y	1
6	RZA-0-4518-007-XX-1	3/8Valve Ass'y	1
7	RZA-0-4515-014-XX-0	1/4 Valve Ass'y	1
8	RZA-0-4206-368-XX-1	Tube Ass'y	1
9	RZA-2-2476-056-XX-0	Noise Defending Gasket	1
10	RZA-2-2390-002-XX-0	Rubber Washer	3
11	RZA-0-4102-143-XX-0	Condenser Ass'y	1
12	852-0-2309-151-00-0	Barrier Ass'y	1
13	RZA-0-2202-072-XX-1	Base Ass'y	1
14	RZA-2-1104-006-XX-1	Left Side Panel	1
15	RZA-2-2303-002-XX-0	Handle	1
16	RZA-0-2209-024-XX-1	Separator Support Plate	1
17	RZA-2-2369-032-XX-1	Electric Box Cover	1
18	RZA-2-5301-038-XX-1	Electrical Board Ass'y	1
19	RZA-0-5306-055-XX-0	Terminal	1
20	4-2239-561-60-2	Capacitor	1
21	RZA-4-2239-062-XX-0	Capacitor	1
22	RZA-2-5301-043-XX-2	Capacitory Clip	1
23	RZA-2-2354-006-XX-2	Fan Supporter	1
24	RZA-2-2412-230-XX-0	Damping Gasket	1
25	RZA-0-0000-082-XX-1	Fan Motor	1
26	RZA-0-2502-003-XX-0	Outside Fan	1
27	RZA-0-1101-034-XX-0	Front Panel Ass'y	1
28	RZA-2-5315-017-XX-0	Cover	1

NOTE:1.Metal and plastic parts will be supplied basically with necessary heat insulation pads or packing.
 2.Each key number with an asterisk(*)means the recommended service parts.