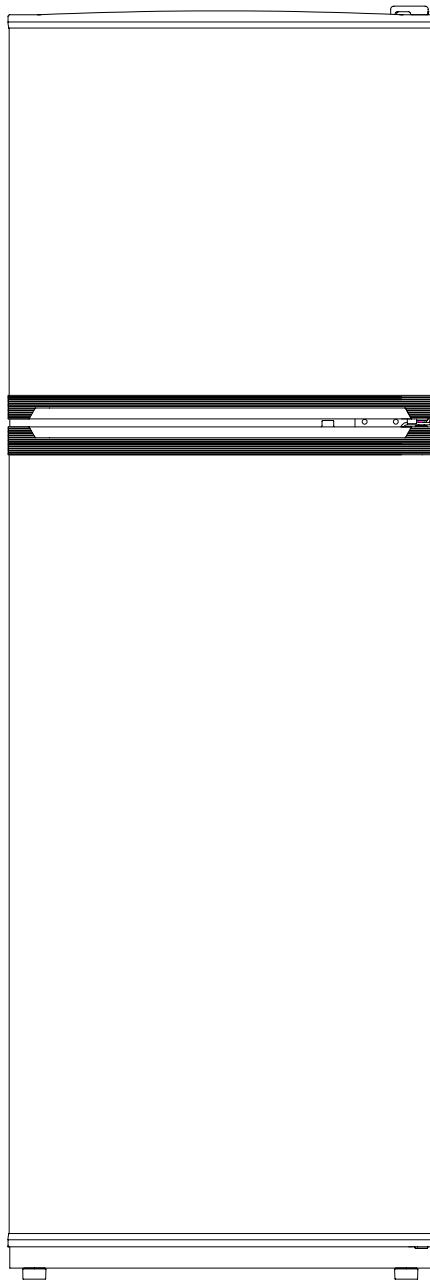


SERVICE MANUAL

Model : FR-291



1. SPECIFICATION

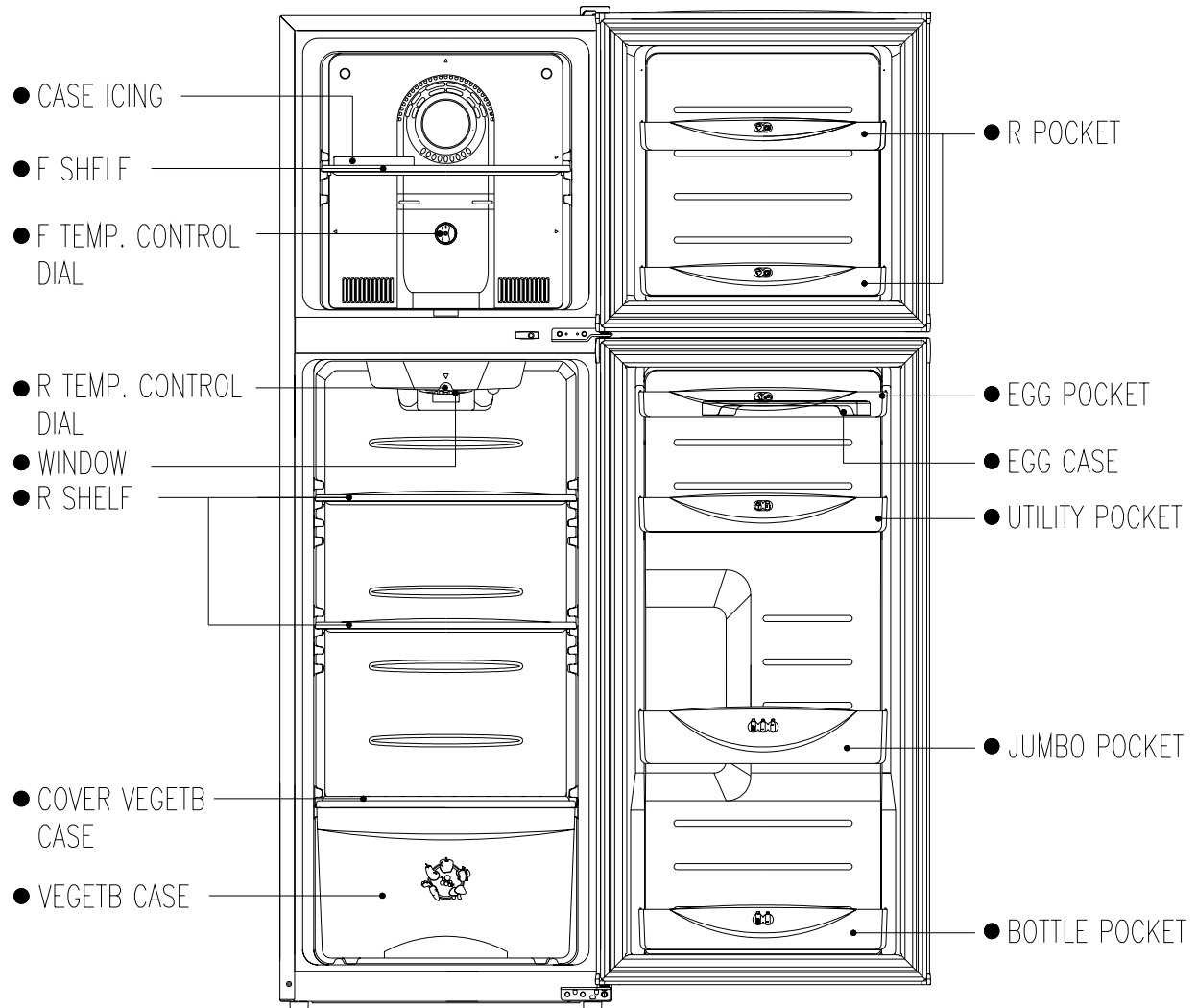
1. MAJOR ACCESSORIES

	NAME	Q'TY
FREEZER ROOM	ICING CASE	1
	FREEZER SHELF	1
	FREEZER POCKET	2
REFRIGERATOR ROOM	REF. SHELF	2
	COVER VEGETB CASE	1
	VEGETABLE CASE	1
	EGG CASE	1
	EGG POCKET	1
	UTILITY POCKET	1
	JUMBO POCKET	1
BOTTLE POCKET	1	

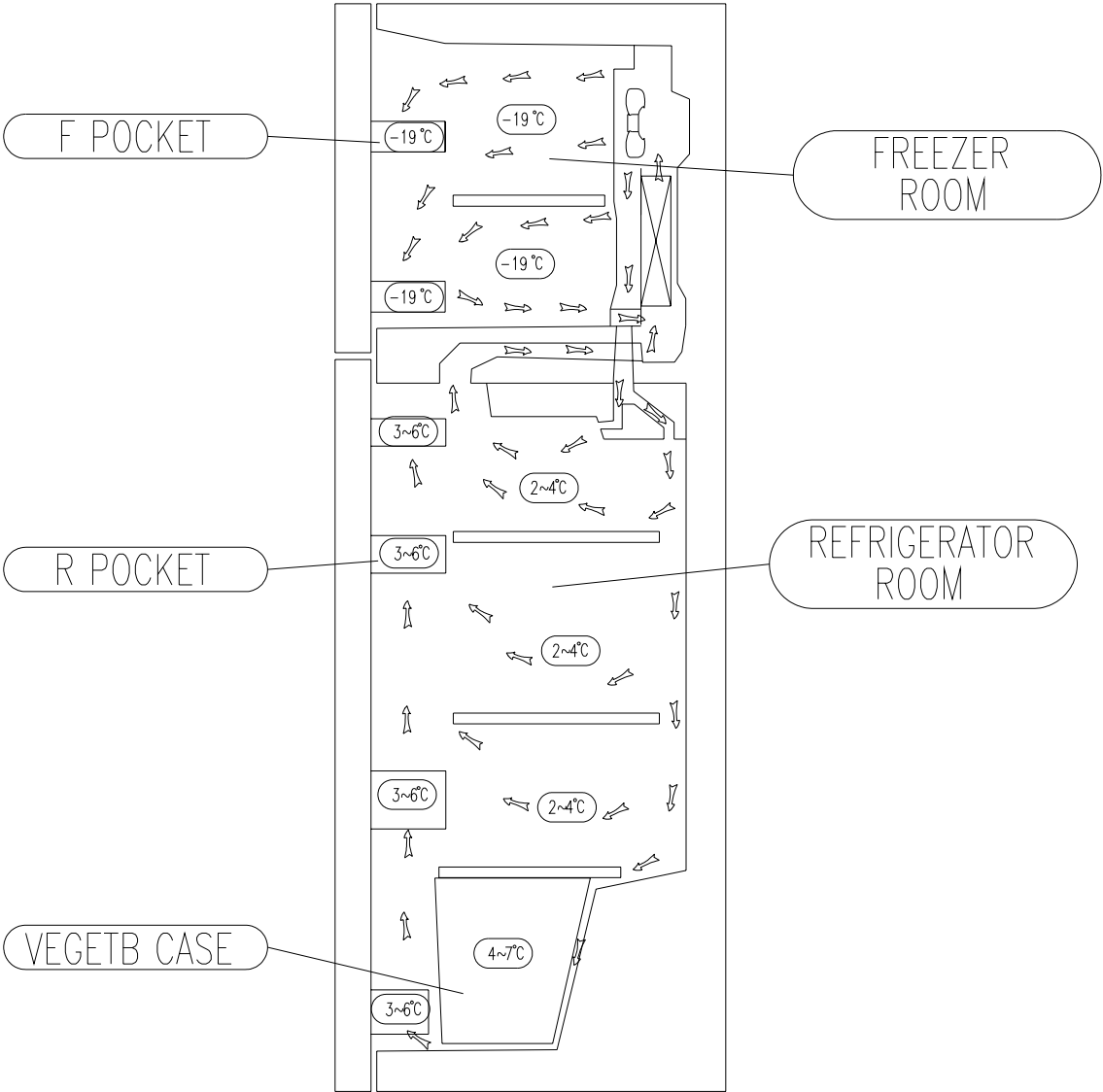
2. QUALITY SPECIFICATION

표시 구분	표시 내용		FR-290
CAPACITY (L)	GROSS	FREEZER	63L
		REFRIGERATOR	170L
		TOTAL	233L
	STORAGE	FREEZER	62L
		REFRIGERATOR	159L
		TOTAL	222L
EXTERNAL DIMENSION	WIDTH		545
	DEPTH		584
	HEIGHT		1620
COOLING & CONTROL SYSTEM	DEFROST SYSTEM		FORCED
	DEFROST CONTROL		AUTOMATIC START & STOP
	COMPRESSOR		YX58LHP5
	REFRIGERANT(g)		R-134a, 75 g
	REFRIGERATOR DEGREE		***
ELECTRIC CHARACTER	INPUT VOLTAGE		230V
	COMPRESSOR		95W
	HEATER		190W
	ELECTRIC CONSUMPTION		390 KWh/Year
WEIGHT			48 Kg

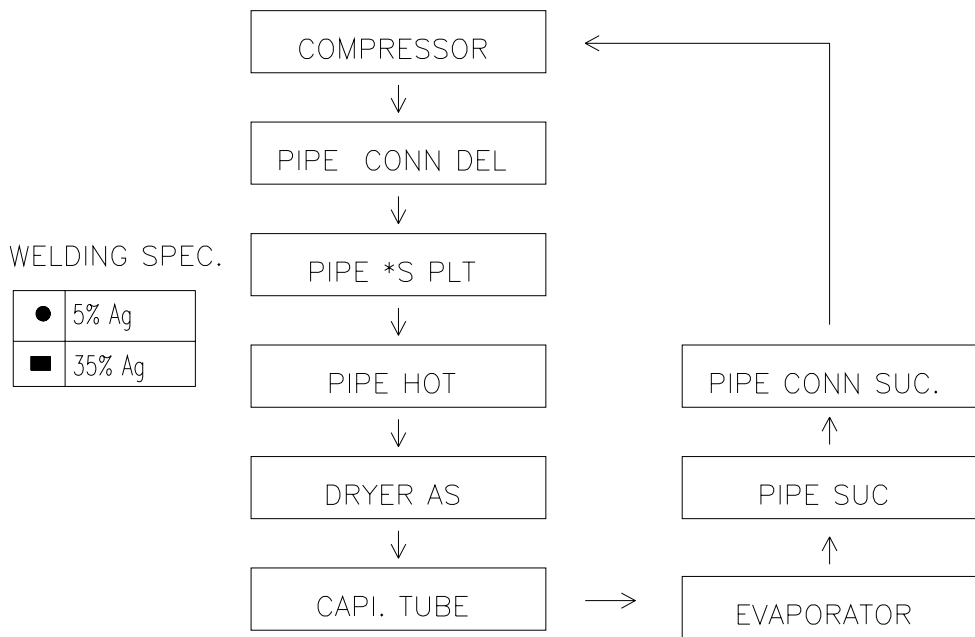
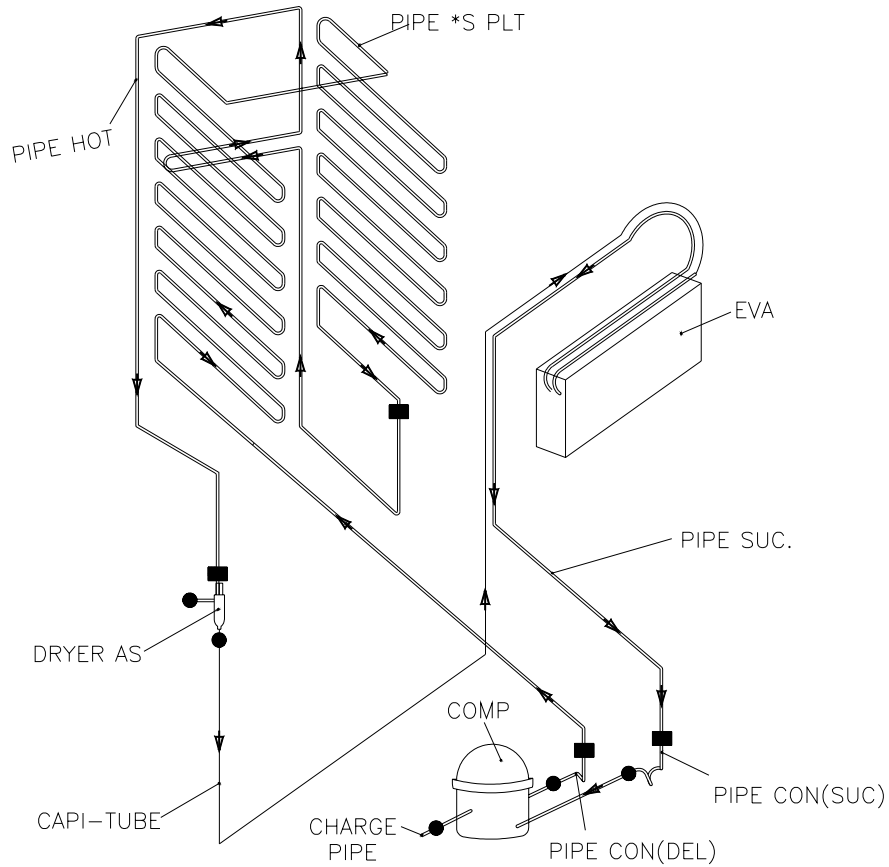
2. NAME OF PARTS



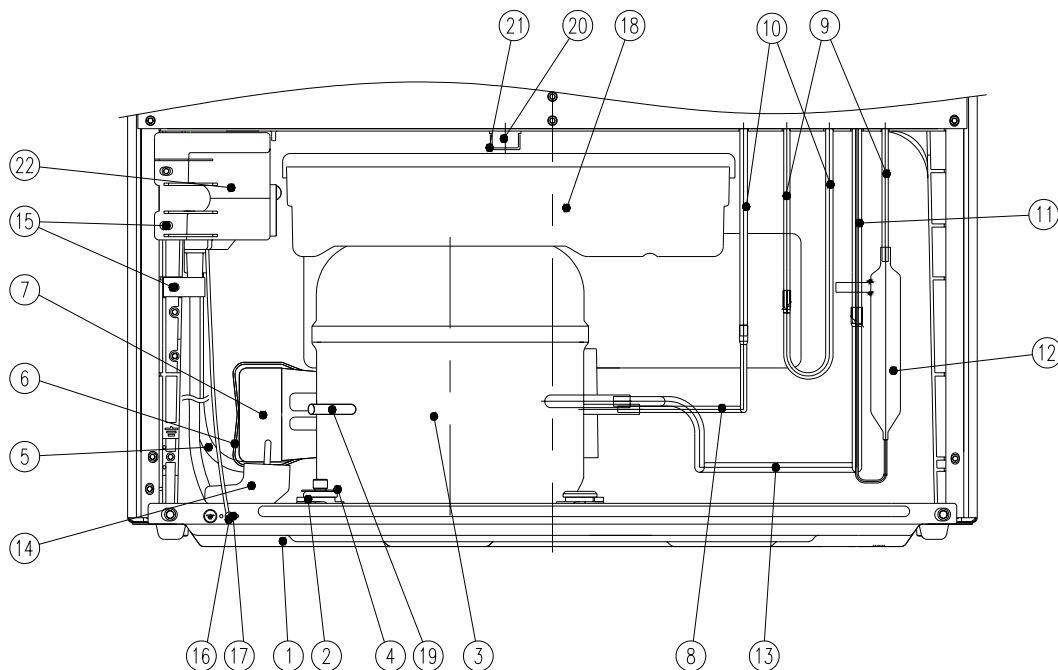
3. AIR FLOW DIAGRAM



4. REFRIGERANT CYCLE DIAGRAM



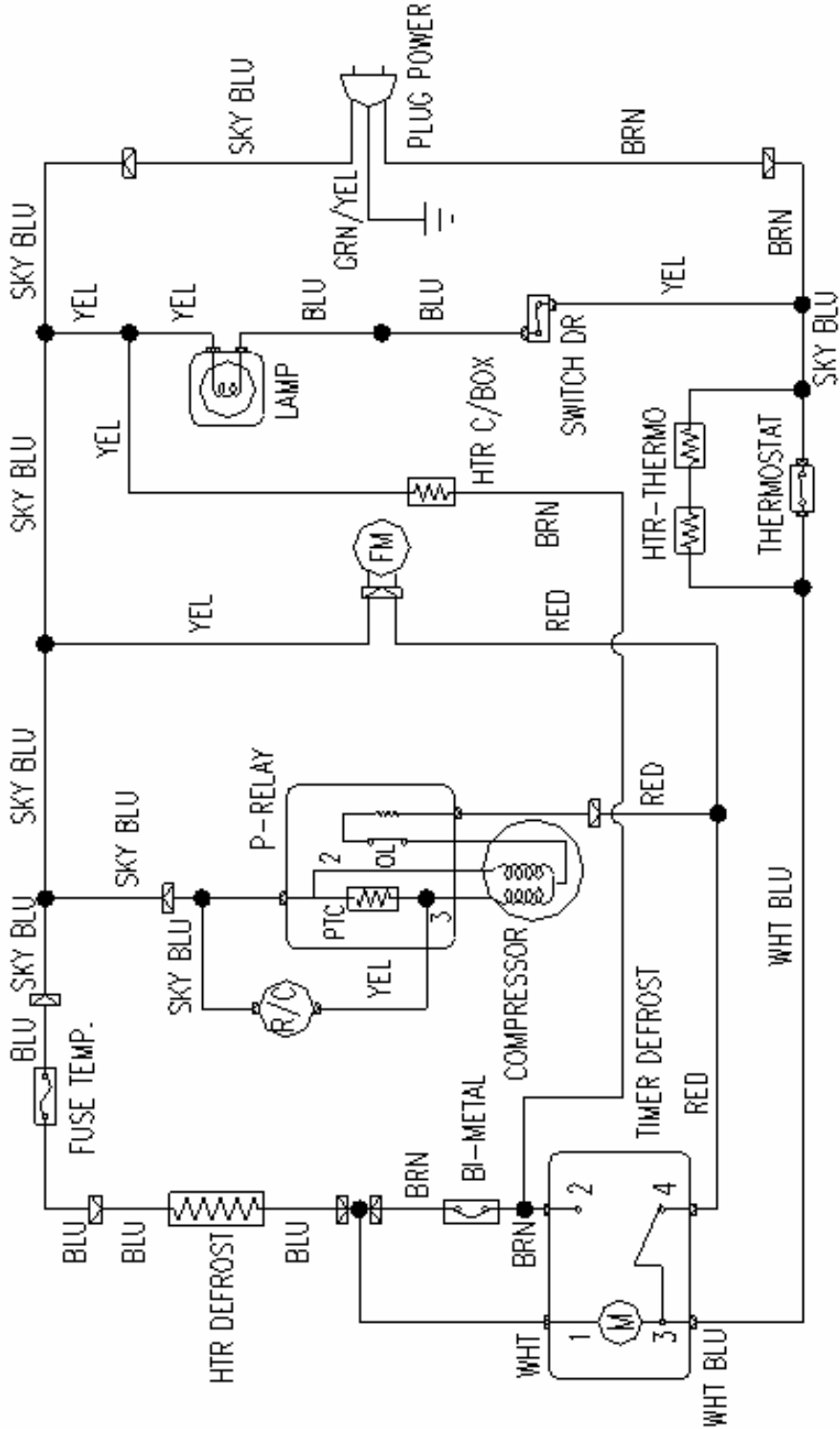
5. MACHINE ROOM VIEW AND PART LIST



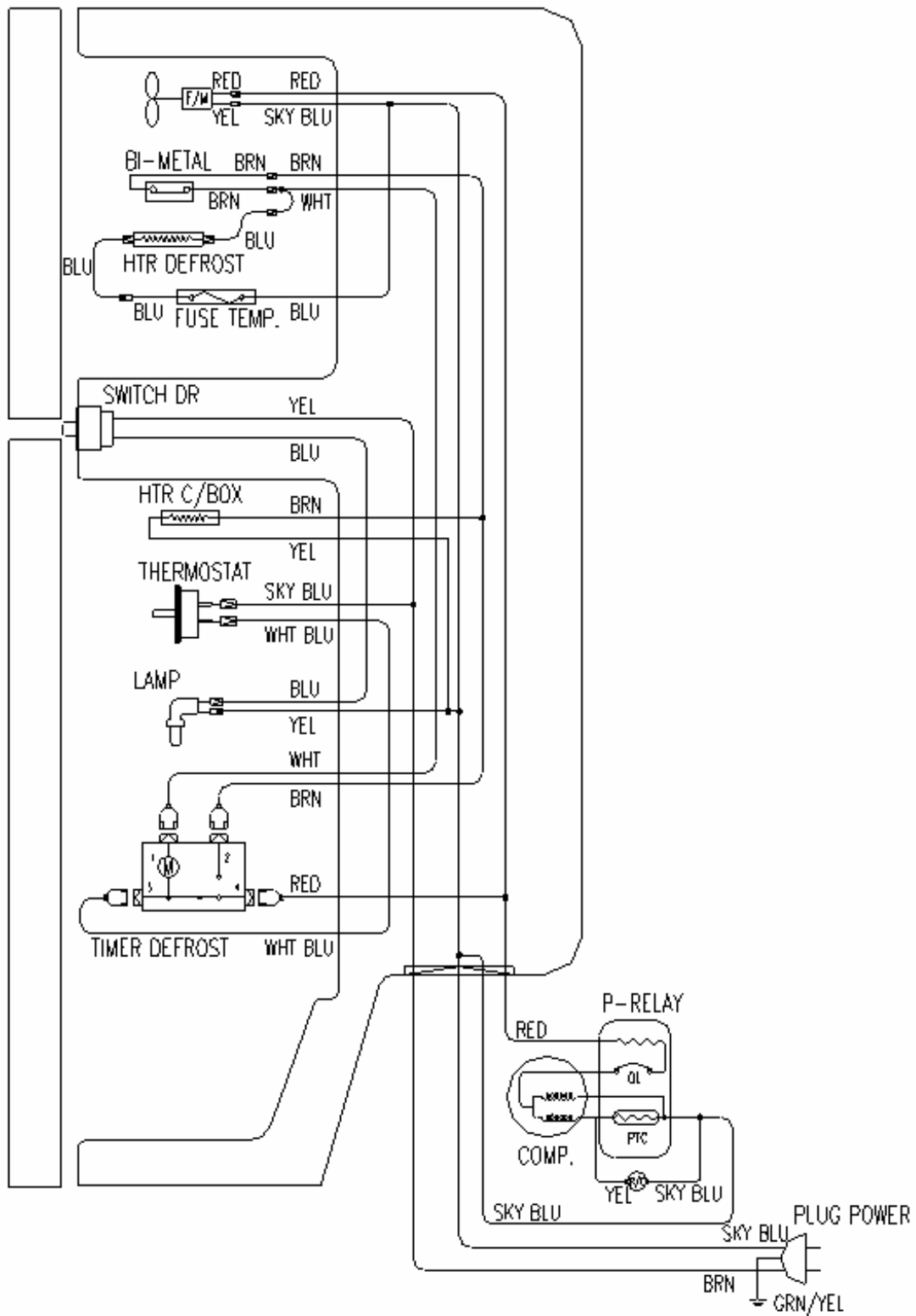
NO	PART NAME	PART CODE	Q'TY	MATERIAL	SPEC.	REMARKS
1	BASE COMP SAS	3010342100	1	GI, T1.0		
2	ABSORBER COMP	3010103400	4	NR	H=40	
3	COMPRESSOR	3956146740	1	JX46LCP4		---
4	SPECIAL WASHER	4019H09030	2	SK-5 T0.8		
5	SWITCH P-RELAY AS	3018128900	1			
6	CLAMP BAND RELAY	3816100110	1	SK-5 T0.7	T0.7 ZN-3-A	
7	COVER RELAY	3811400503	1			
8	PIPE CONN DEL	3014417910	1	DCUT1-0	ø4.76xT0.7xL200	
9	PIPE HOT	3014462900	1	TSW	ø4xT0.5xL6434	
10	PIPE *S PLT	3014462700	1	TSW	ø4.76xT0.7xL15914	
11	PIPE SUC AS	3014463000	1	-		
12	DRYER AS	3016808200	1	XH-9	10g	
13	PIPE CONN SUC	3014417910	1	DCUT1-0	ø6.0xT0.5xL373	
14	CORD POWER AS	3011347000	1		CP-2PIN	
15	SCREW TAPPING	7112401211	2	MFZN	T1TRS 4x12	
16	SCREW MACHINE	7002401065	1	BSNI	TRS 4x10	
17	WASHER TOOTHED	7402204011	1	MFZN	TE-B-4	
18	CASE VAPORI	3011187400	1	PP		
19	PIPE SERVICE	4019L02020	1	DCUT1-0		
20	HOSE DRN A	3013225100	1	PP		
21	CAP DRN HOSE B	3010928000	1	NBR		
22	COVER HOUSING	3001400400	1	PP		

6. WIRE DIAGRAM & SOLID WIRE DIAGRAM

1) WIRE DIAGRAM



2) SOLID WIRE DIAGRAM



7. MAIN COMPONENTS

1. COMPRESSOR

	FR – 290
MODEL	YX58LHP5
STARTING TYPE	RSCR
VOLTAGE	230V / 50Hz
MAIN COIL RESISTANCE	23.72Ω
SUB COIL RESISTANCE	17.89Ω

2. RELAY

	FR – 290	
MODEL	4TM149SHBYY-52	
PTC	RESISTANCE	22Ω
	MAX. VOLTAGE	320V
	MIN VOLTAGE	8A
OL CURRENT	4.0A	

3. RUNNING CAPACITOR

	FR – 290
VOLTAGE	AC 400V
RATED CAPACITY	4 μF

4. LAMP

	FR – 290
VOLTAGE	AC 240V / 15W

5. POWER CORD

	FR – 290
TYPE	3x0.75 mm ²
LENGTH	1.95m

6. TEMPERATURE FUSE

	FR – 290
VOLTAGE	250V
CURRENT	10A
WORKING TEMP.	77 °C

7. Bi-METAL

	FR – 290
MODEL	PST - 3
OFF TEMP.	12 ± 3 °C

7. DEFROST TIMER

	FR – 290
MOEDL	CF-3001-59
CYCLE TIME	12 HR ± 10.8 MIN

8. DEFROST HEATER

	FR – 290
RATING	AC 230V / 190W
RESISTANCE	269 Ω

9. FAN MOTOR

	FR – 290
MODEL	DAI-6122-DESF
TYPE	SHADED POLE
RATING	230V/50HZ
INPUT	5.0W
POLE	2 POLE
RPM	2200 \pm 150 rpm

10. R-THERMOSTAT

	FR – 290
MODEL	GNF-175D-01F
RATING	AC 250V/60Hz
ON/OFF TEMP.	4/0 \pm 1.5 $^{\circ}$ C

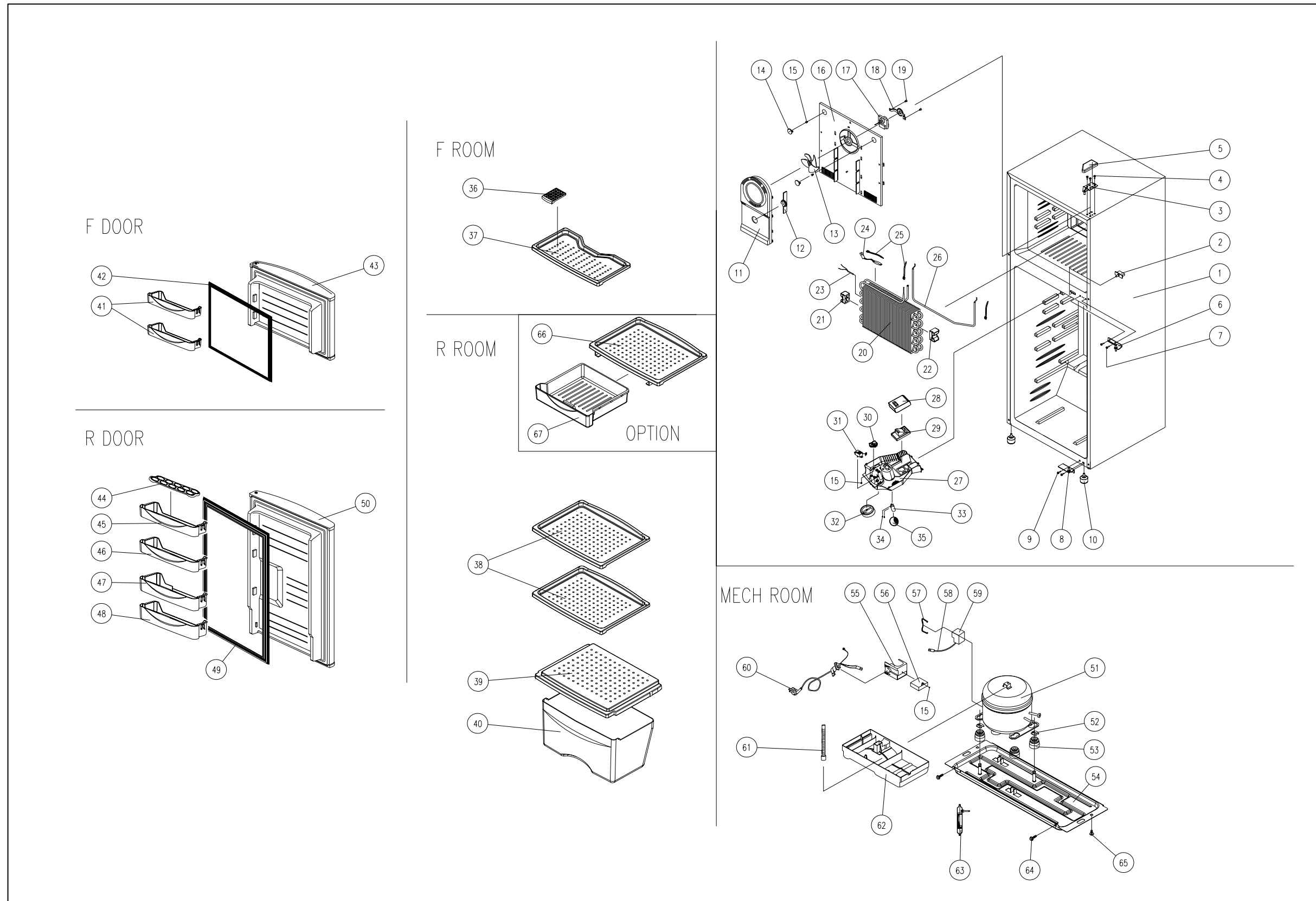
11. DOOR SWITCH

	FR – 290
TYPE	1 BUTTON 2 PIN
RATING	AC 250V/0.5A
MODEL	WDS 001C-01

12. CONTL BOX HEATER

	FR – 290
RATING	AC 220V / 4W
RESISTANCE	12100 Ω

8. EXPLODED VIEW & PART LIST



NO	PART CODE	PART NAME	Q'TY	REAMRK
1	3010815700	CABINET URT AS	1	
2	3011755200	DOOR S/W AS	1	WDS001C-01
3	3012924600	HINGE *T AS	1	
4	3016000301	SPECIAL BOLT	3	M5 x L14
5	3001400000	COVER *T HI	1	PP
6	3012924500	HINGE *M AS	1	
7	3016004000	SPECIAL BOLT	2	M6 x L10
8	3012924700	HINGE *U AS	1	
9	7650602511	BOLT HEX	2	M6 x L25
10	3012105300	FOOT ADJ AS	2	PP+INSERT
11	3001400200	COVER FAN A	1	HIPS
12	3013412000	KNOB F CONTL	1	HIPS-c
13	4017Z42312	FAN	1	ABS ID3.17 Ø100
14	3001400600	COVER SCREW	2	HIPS
15	7112401211	SCREW TAPPING	4	T1TRS 4x12 MFZN
16	3018921800	LOUVER F	1	PP-c
17	3015917200	MOTOR F AS	1	230V/50Hz
18	3012024600	FIXTURE MOTOR A	1	PP
19	7122401211	SCREW TAPPING	2	T2TRS 4x12
20	3017062000	EVA SAS	1	
21	3014120100	PAD EVA *L	1	F-PS
22	3014120200	PAD EVA *R	1	F-PS
23	3017202500	FUSE TEMP AS	1	105T,AC250V/10A
24	3018128700	SWITCH BIMETAL	1	PST-3SW-
25	4016N03280	CLAMP CABLE	3	NYLON-66, W3.6xL146
26	3012820200	HEATER SHEATH SAS	1	AC 220V, 175W
27	3010549100	BOX CONTL	1	HIPS
28	3013358100	INSU R DUCT *T	1	F-PS
29	3013358200	INSU R DUCT *U	1	F-PS
30	3018129000	SWITCH TIMER	1	220V/60Hz, 12HR
31	3018304900	THERMOSTAT	1	
32	3013412100	KNOB R CONTL	1	HIPS
33	3017906700	SOCKET R LAMP AS	1	220V/15W
34	7112401011	SCREW TAPPING	2	T1TRS 4x10 MFZN

35	3015511000	WINDOW R	1	GPPS
36	3011187300	CASE ICING	1	PP
37	3017843700	SHELF F	1	GPPS
38	3017843600	SHELF R	2	GPPS
39	3001400700	COVER VEGETB CASE	1	GPPS
40	3011187600	CASE VEGETB	1	GPPS
41	3019027900	POCKET F	2	GPPS
42	3012319500	GASKET F DR AS	1	PVC-S+MAGNET
43	3011766900	DOOR F URT AS	1	
44	3011187200	CASE EGG	1	PP
45	3019027800	POCKET EGG	1	GPPS
46	3019028200	POCKET UTILITY	1	GPPS
47	3019028000	POCKET JUMBO	1	GPPS
48	3019028100	POCKET R	1	GPPS
49	3012319600	GASKET R DR AS	1	PVC-S+MAGNET
50	3011767000	DOOR R URT AS	1	
51	3956158K50	COMPRESSOR	1	YX58LHP5
52	4019H09030	SPECIAL WASHER	2	SK-5, T0.8
53	3010103400	ABSORBER WASHER	4	NR H=40
54	3010342100	BASE COMP SAS	1	GI, T1.0
55	3001400400	COVER HOUSING	1	HIPS(n)
56	3016404700	CAPACITOR RUNNING	1	400VAC, 4 μ F, CLASS C
57	3816100110	CLAMP BAND RELAY	1	
58	3018130300	SWITCH P RELAY AS	1	4TM149SHBYY-52
59	3811400503	COVER RELAY	1	PP
60	3011348100	CORD POWER AS	1	
61	3013225100	HOSE DRN A	1	PP
62	3011187400	CASE VAPORI	1	PP
63	3016808200	DRYER AS	1	XH-9, 10g
64	3016003300	SPECIAL BOLT	2	M6.5x20
65	7650601511	BOLT HEX	2	M6x15
66	3017843500	SHELF CHILLED CASE	1	GPPS
67	3011112011	CASE CHILLED	1	GPPS

9. Methods of exchanging main parts.

1. F LOUVER PART



- Remove the screw cap, and unscrew the fixing screw(2EA).



- Pull the louver forward, grasping at the fan cover and upper corner of louver.



- Disassemble fan motor harness and remove Louver As..

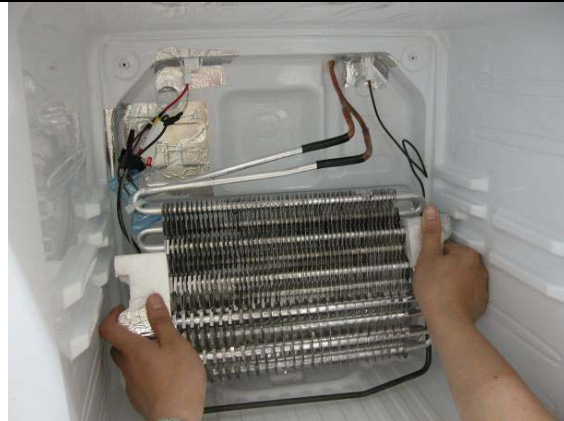


- Unscrew the fixing screw at the back of louver(hidden under Al tape).
- To remove the fan cover, pull the bottom of fan cover.

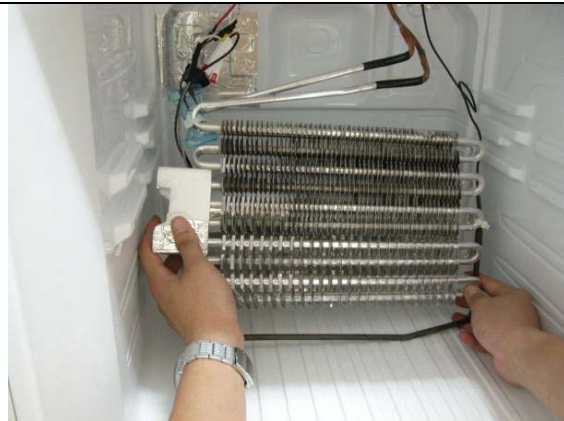
2. EVAPORATOR PART



- Pull the suction pipe and capi. Tube forward, with care not to bend the pipes sharply.



- Hold up evaporator and pull it forward.



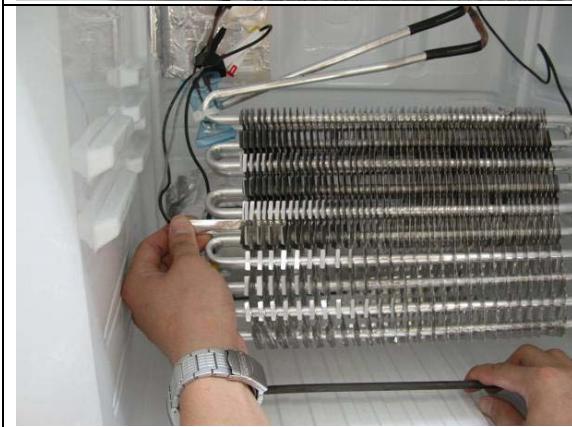
- Remove the evaporator pad.



- To remove defrost heater, cut the clamp cable first, disassemble the harness then pull down the heater.
- The assembling procedure of new heater is the reverse of disassemble steps.



- To exchange the Bi-Metal, first cut the clamp cable then disassemble the harness.



- Extract the Temp. Fuse in the evaporator then disassemble the harness .
- The new Temp. Fuse should be located in the same position in the evaporator.

3. CONTROL BOX PART



- To remove the temperature control dial, Pull it down.



- Unscrew the fixing screw(1EA) .



- Pull down the control box, then disassemble the harness.



- Remove the lamp cover with screwdriver etc. pushing the front hooker part of the cover then lift up the cover.



- Unscrew the fixing screw of the lamp socket.



- Pull the lamp forward, then disassemble the connector.
- The assembling procedure of new lamp is the reverse of disassemble steps.

4. DOOR SWITCH PART



- In removing the door switch, push the door switch left, insert a pointed rods as screw-driver in the right gap, and push the rod left and pull the door switch forward.
- Be careful not to harm the surface of cabinet . (Use name plate etc. under the pointed rod)



- Pull the door switch forward and remove the harness.



- In inserting new door switch, insert the left part of the switch in the hole then push the right part of refrigerator.