

Service Manual

Model: FR-4501K/FR-4501N/FR-4502K
FR-4502N/FR-4503N/FR-4504K
FR-4505K

DAEWOO

PRECAUTIONS TO BE OBSERVED BEFORE AND DURING SERVICING TO AVOID POSSIBLE EXPOSURE TO EXCESSIVE MICROWAVE ENERGY

SAFETY AND PRECAUTIONS

- 1) For starters, be sure to check any chances of the leakage of electricity."
- 2) You could handle a part in the vicinity of electricity after unplugging.
- 3) You should put on rubber gloves to prevent an electric shock on operation test.
- 4) Make sure the rated current,voltage,capacity before using an instrument."
- 5) Keep your wet hands away from the metal goods in the freezer compartment not to be frostbitten.
- 6) Be careful not to let water permeate the electric part in the machine room.
- 7) With door open during your working,you might be damaged by door."
- 8) You should give a title to the refrigerator for your safe after removing the breakable goods inside the refrigerator.
- 9) You'd better use cotton gloves if you fix it up around the evaporator

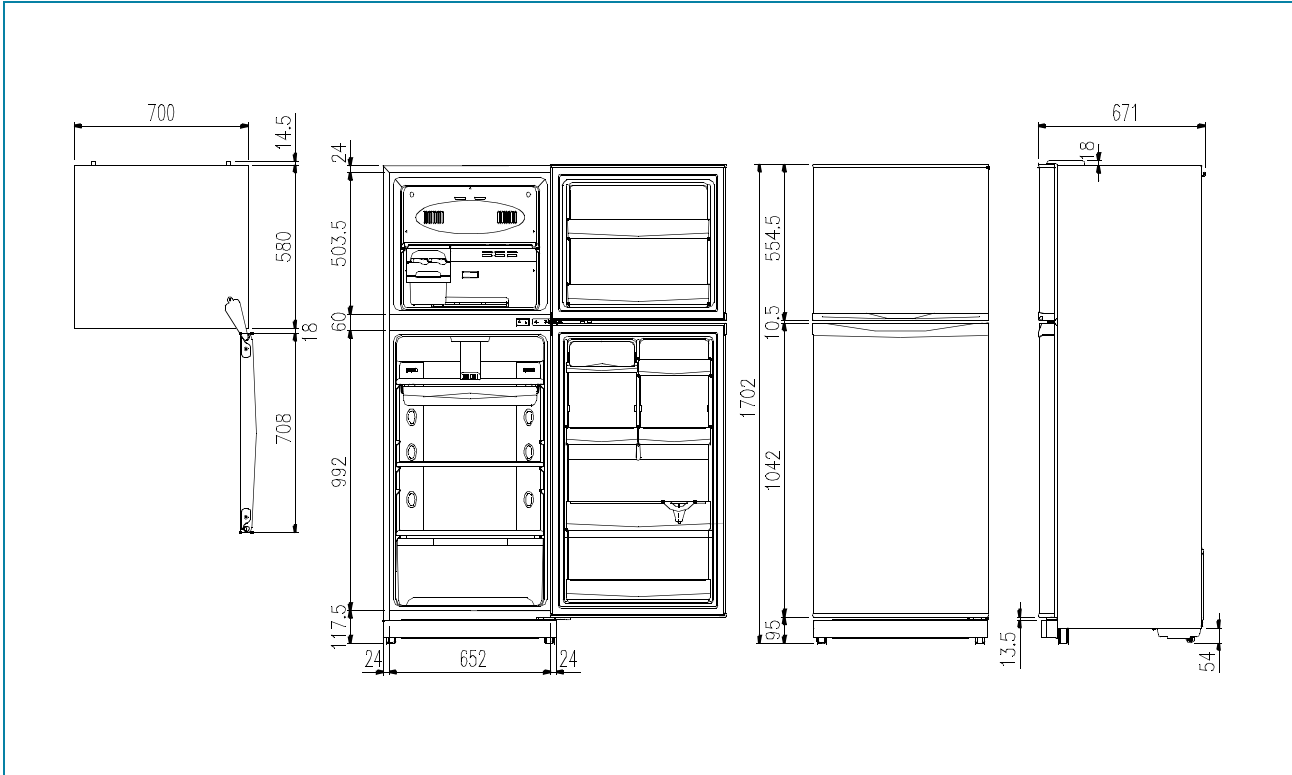
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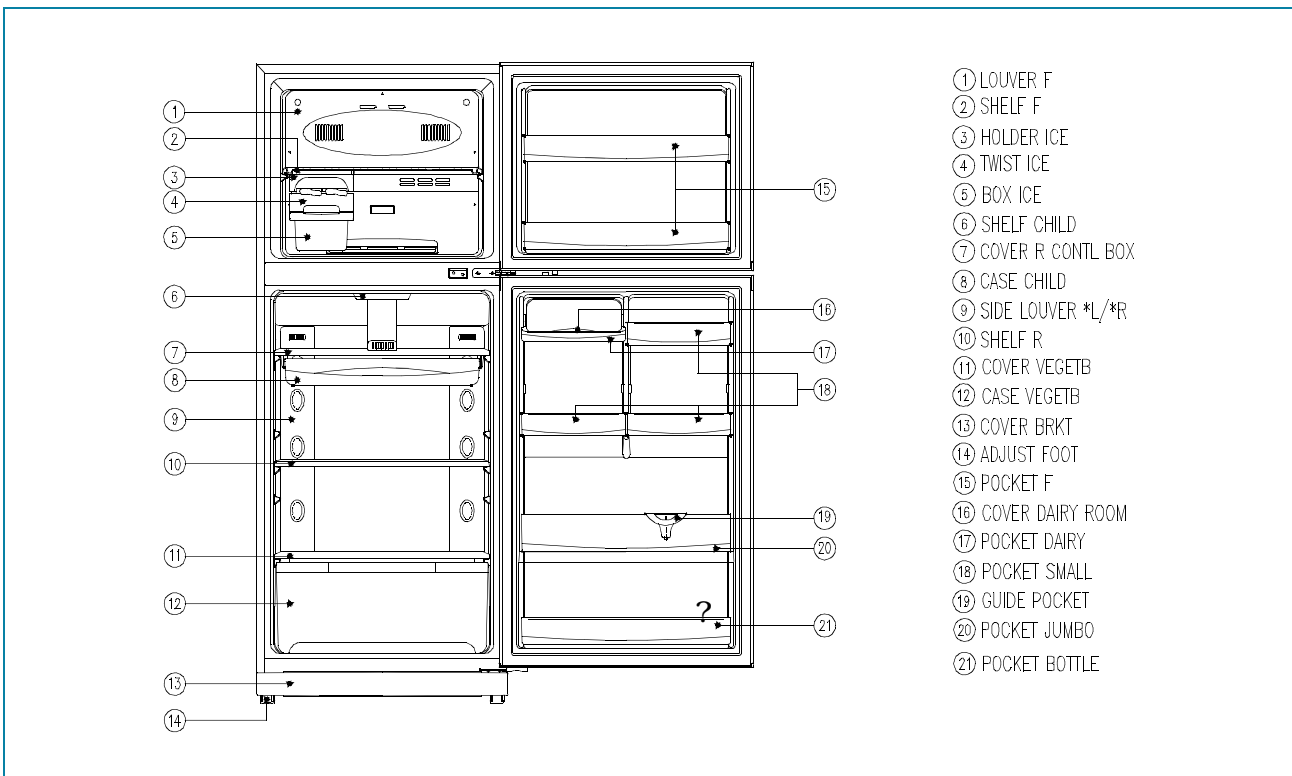
EXTERNAL VIEW

1. FR-4501K

1) EXTERNAL SIZE

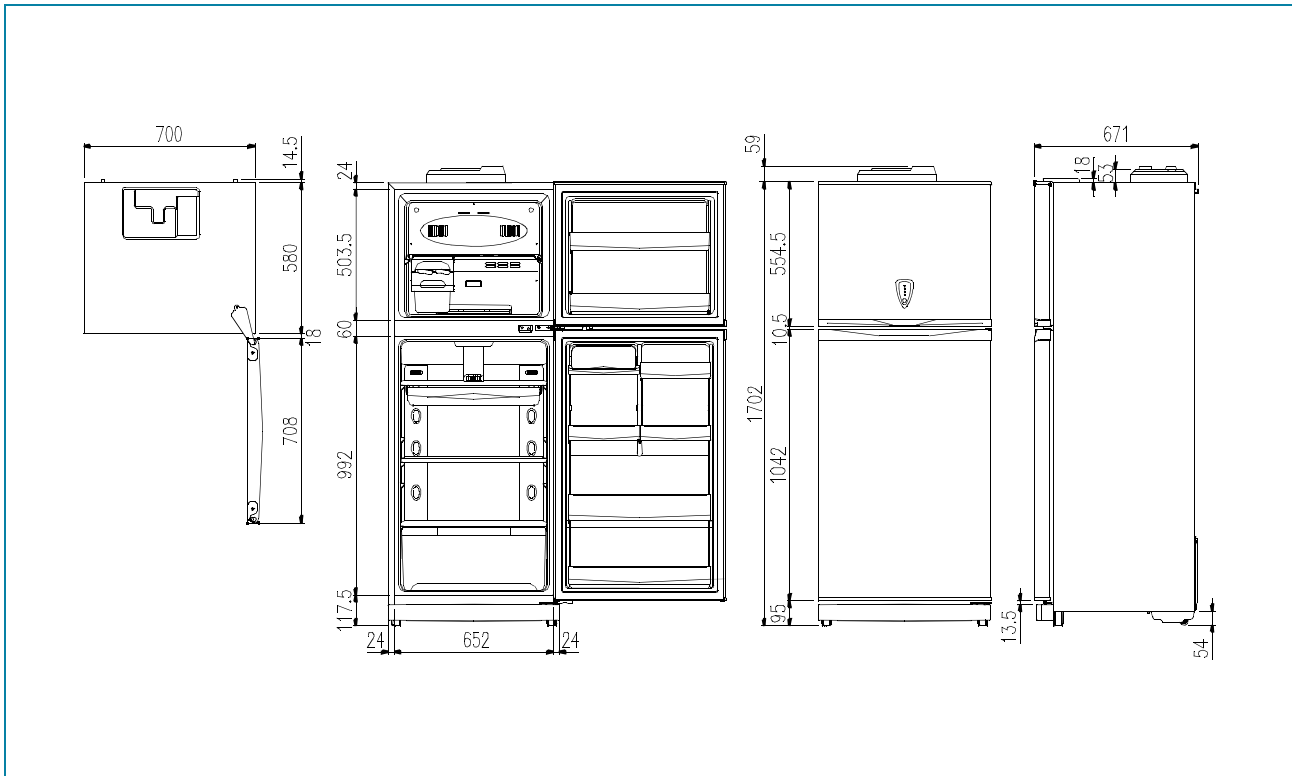


2) NAME OF PARTS

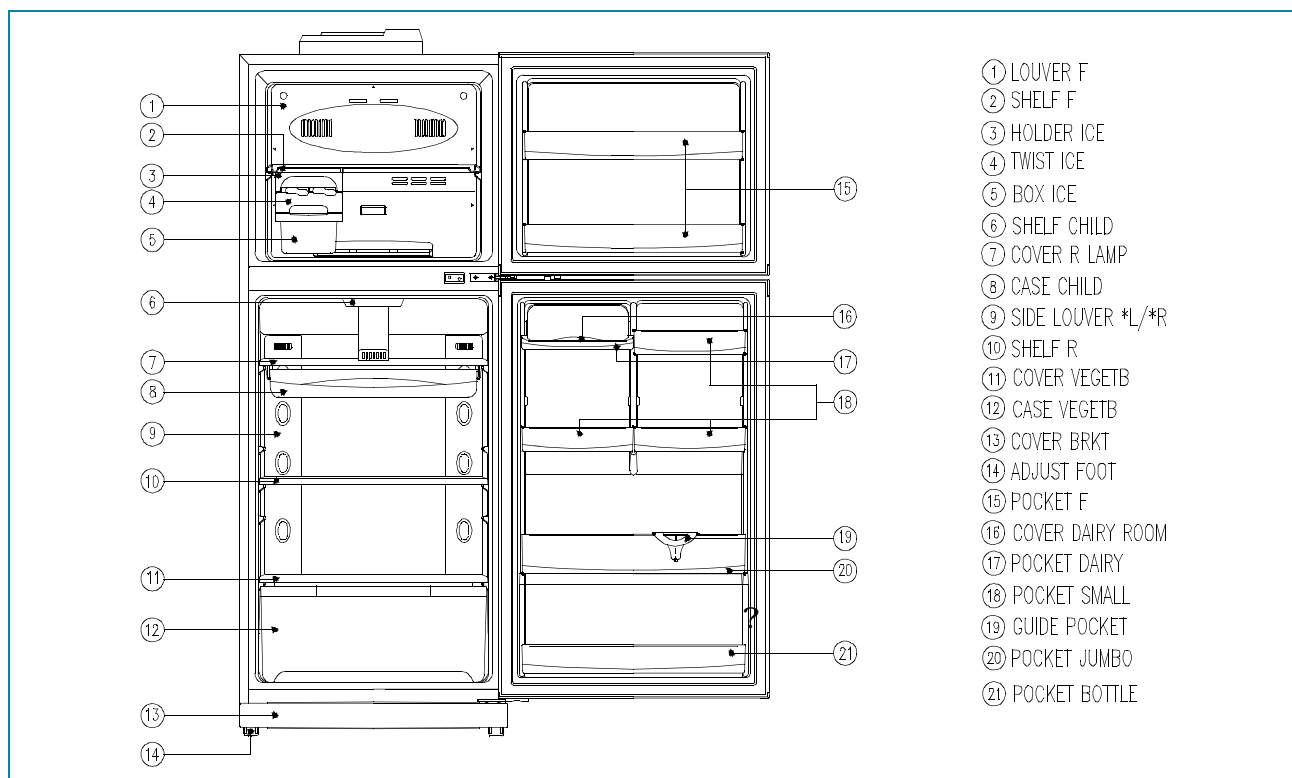


2. FR-4501N

1) EXTERNL SIZE

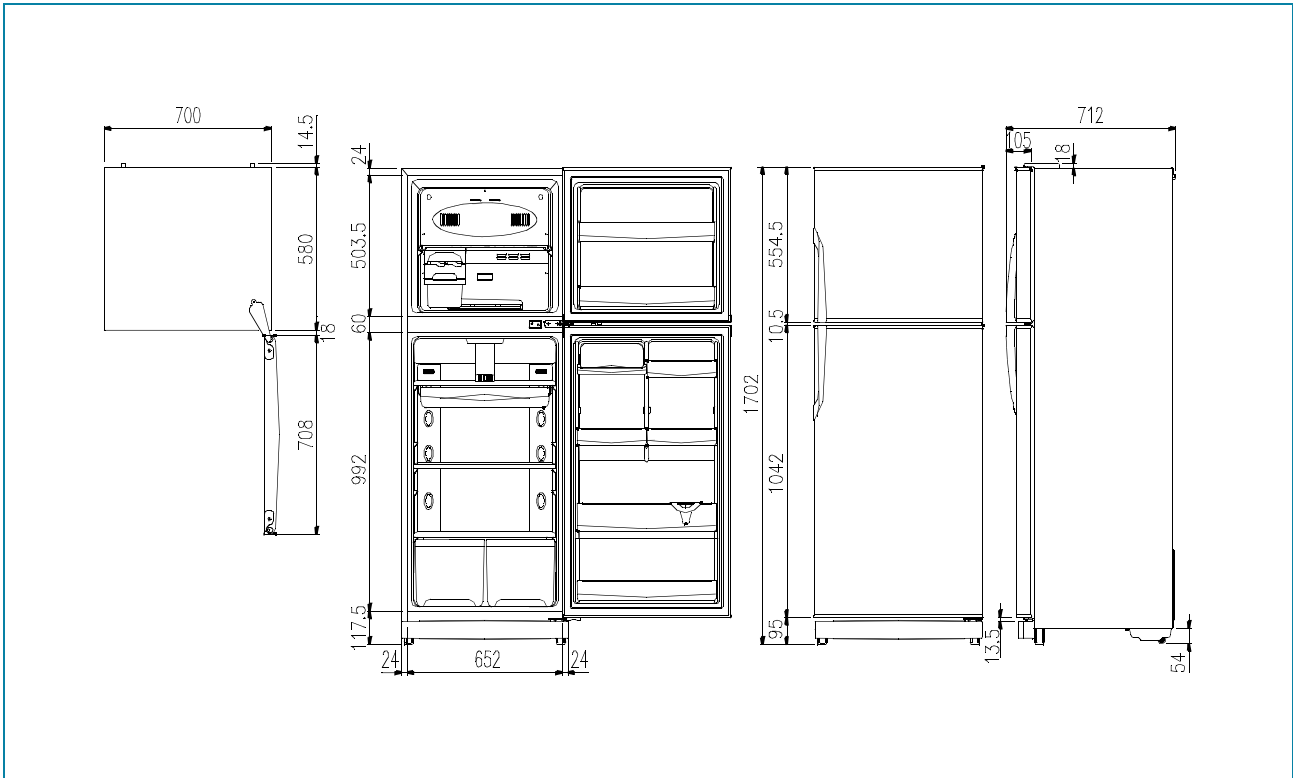


2) NAME OF PARTS

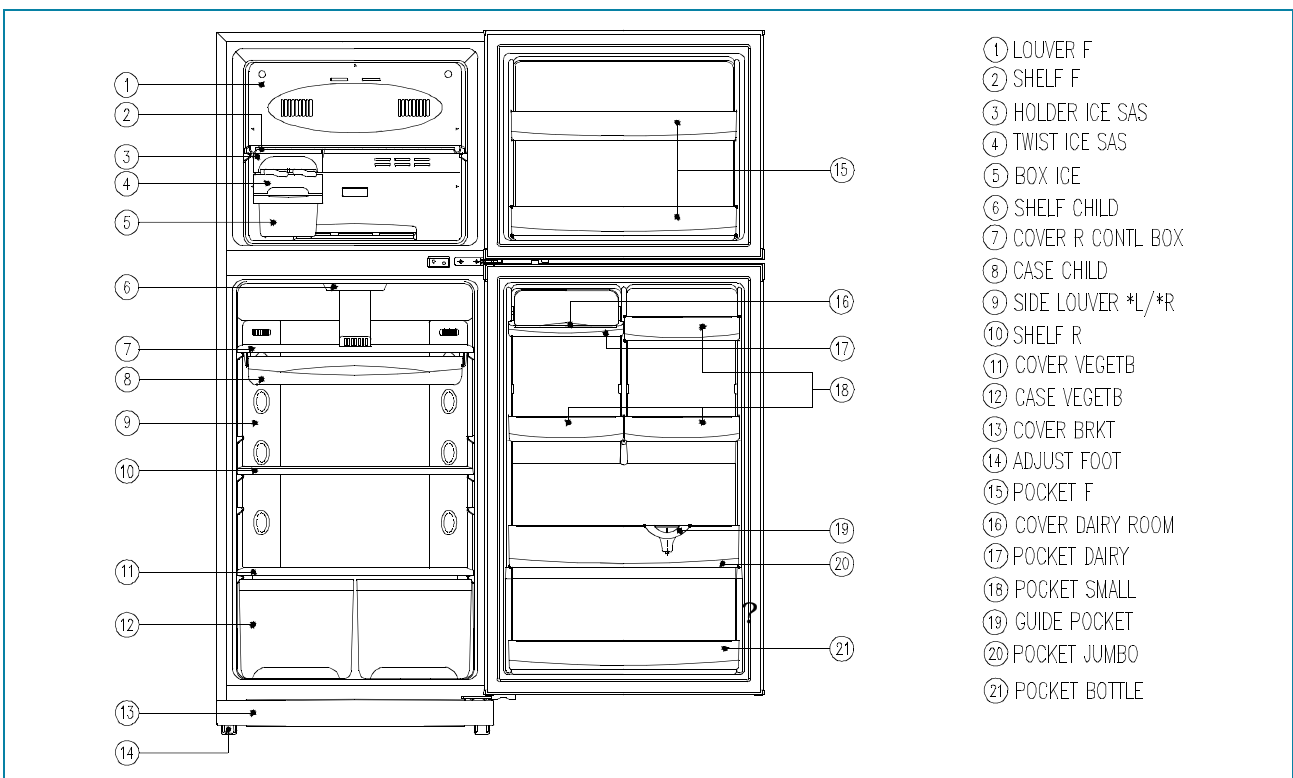


3. FR-4502K

1) EXTERNAL SIZE

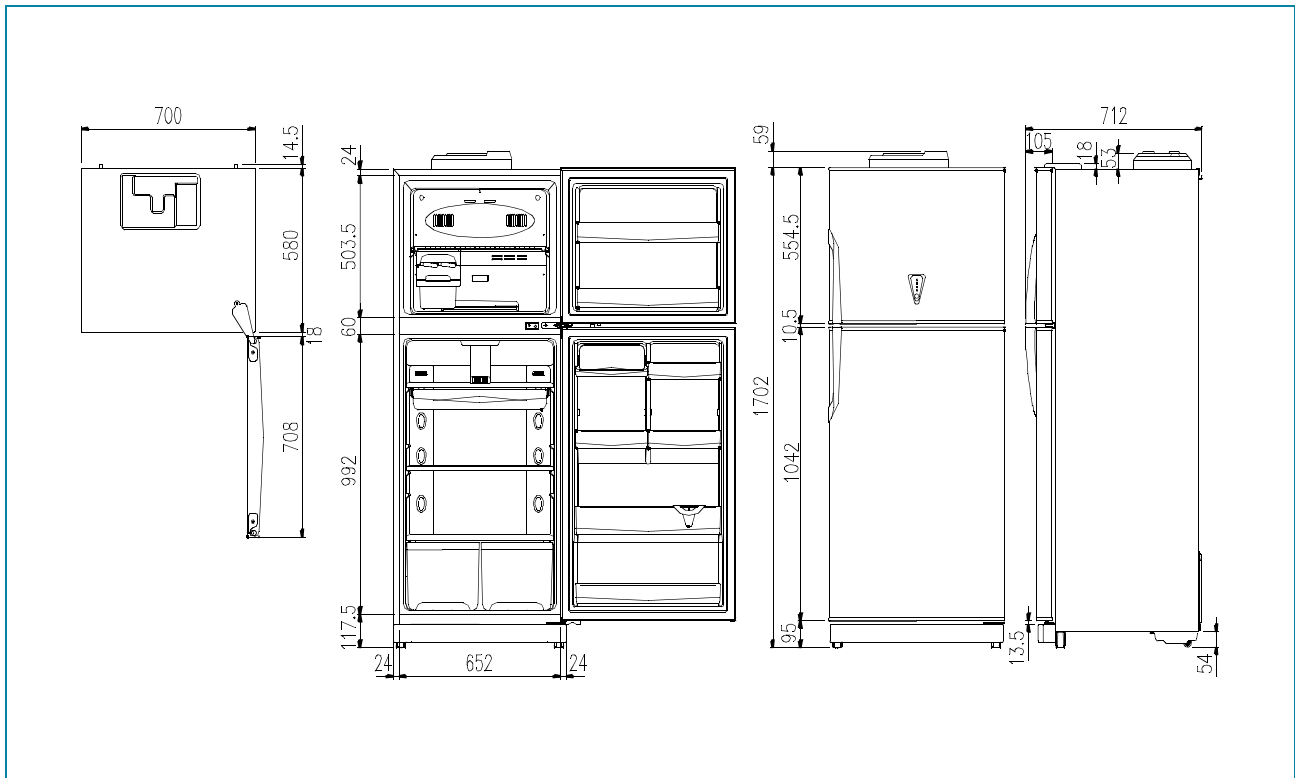


2) NAME OF PARTS

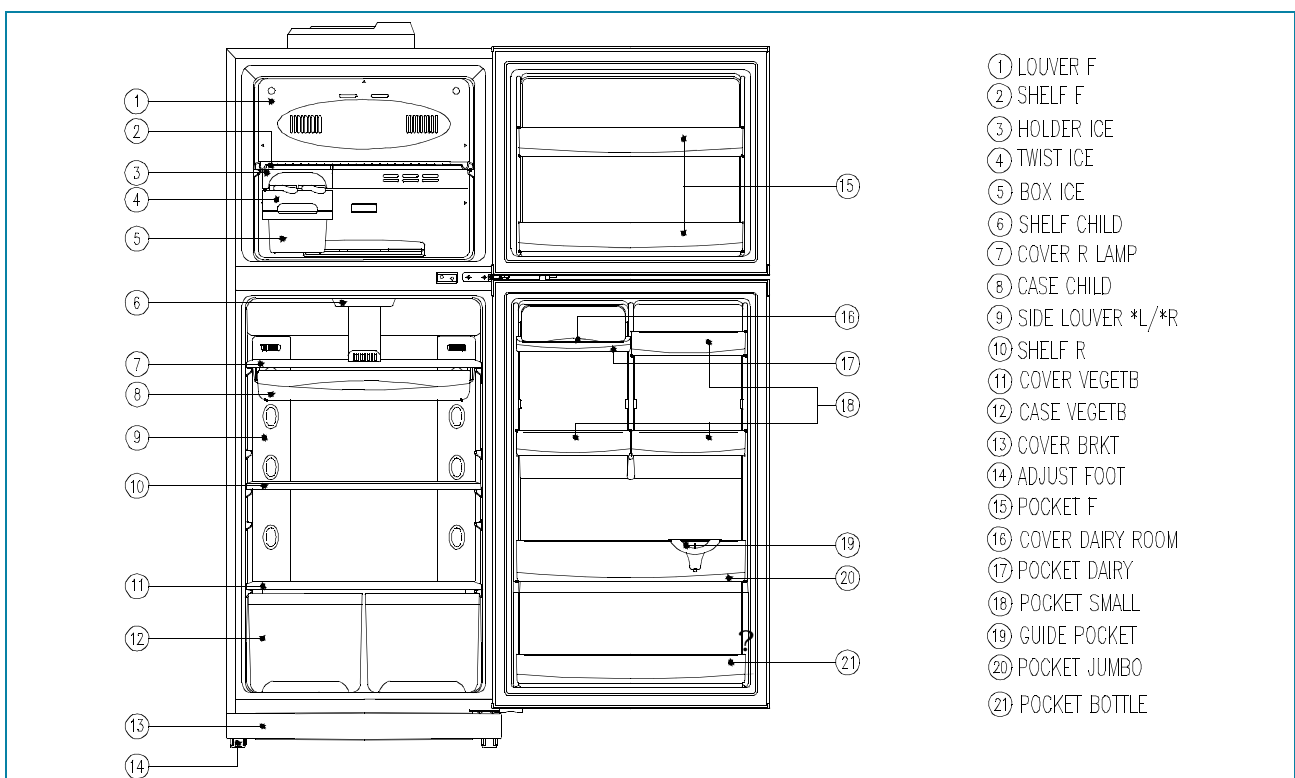


4. FR-4502N

1) EXTERNAL SIZE

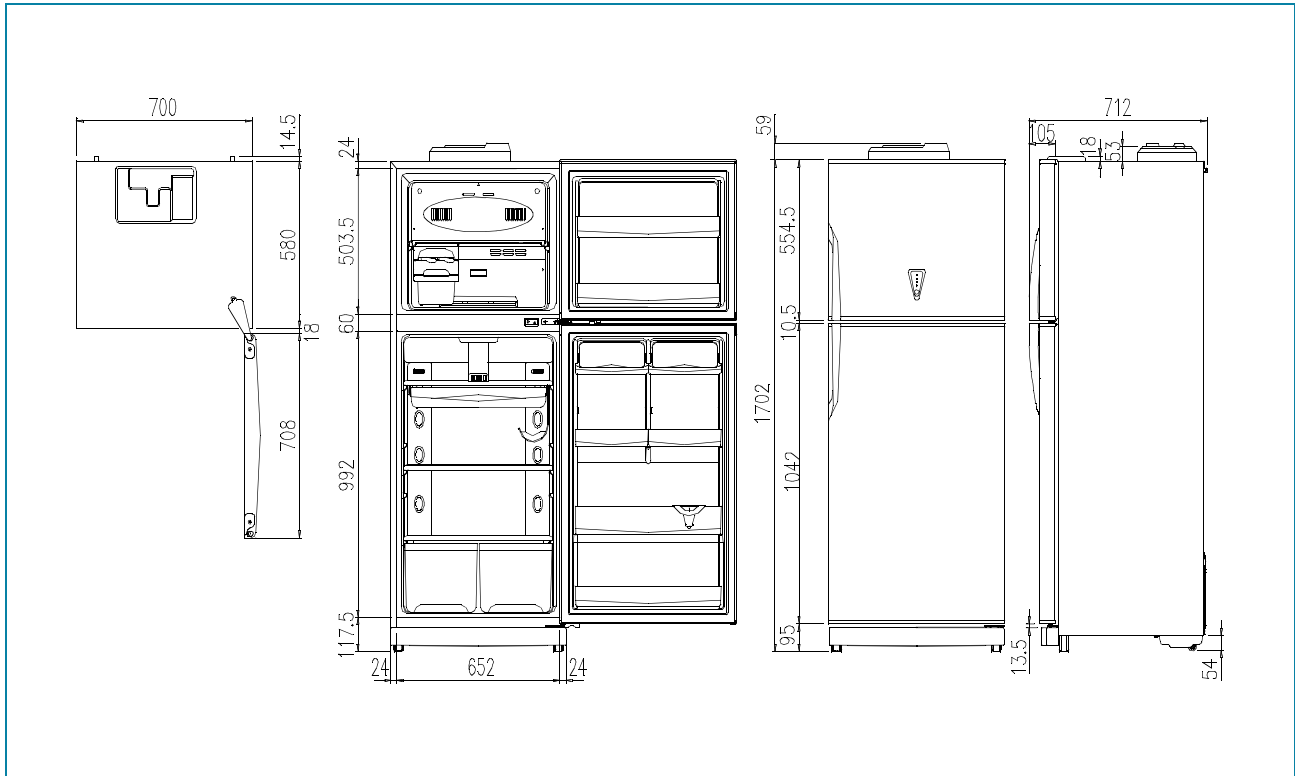


2) NAME OF PARTS

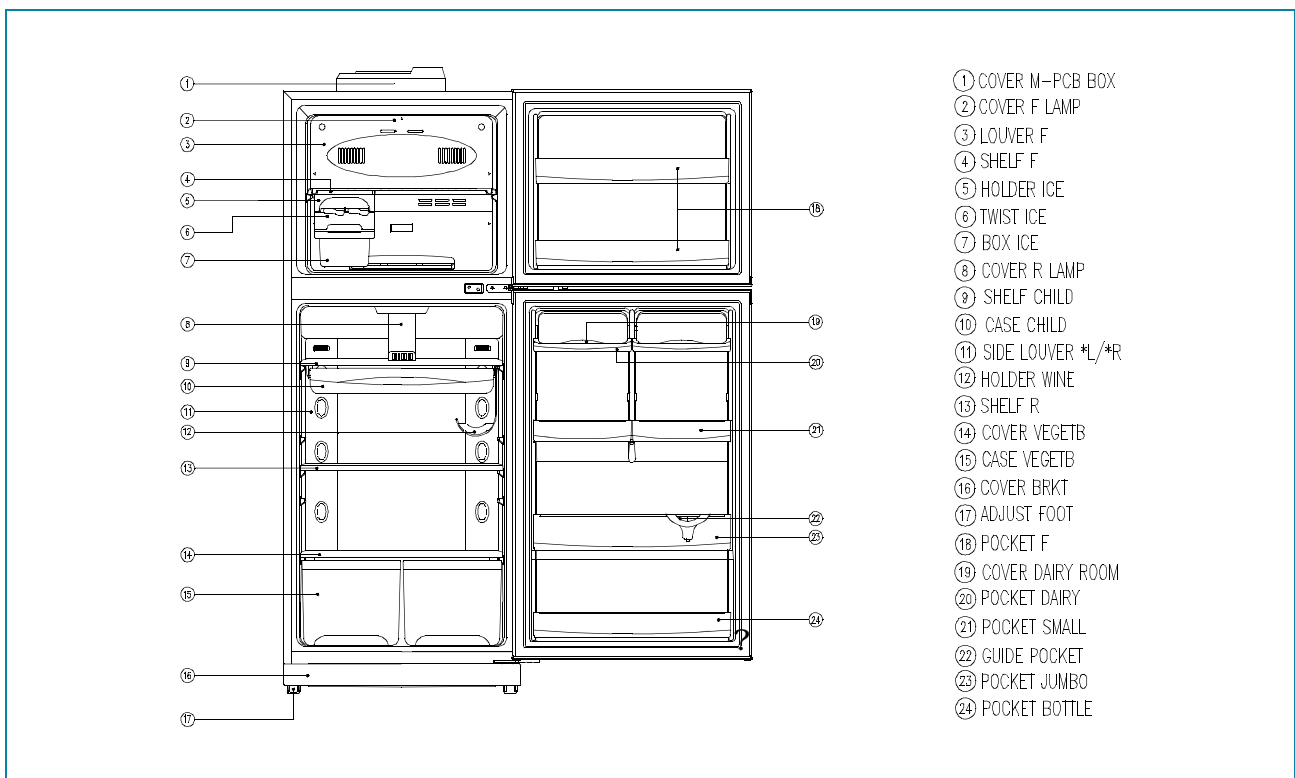


5. FR-4503N

1) EXTERNAL SIZE

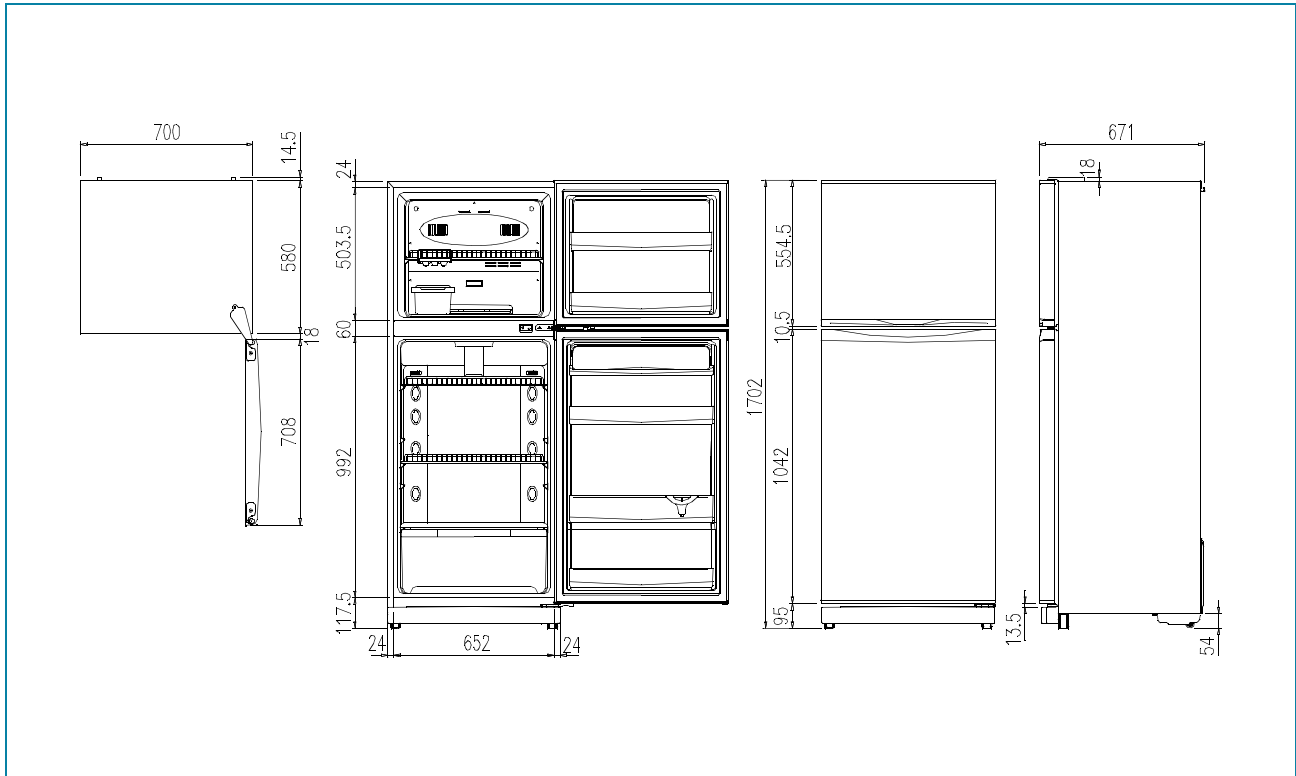


2) NAME OF PARTS

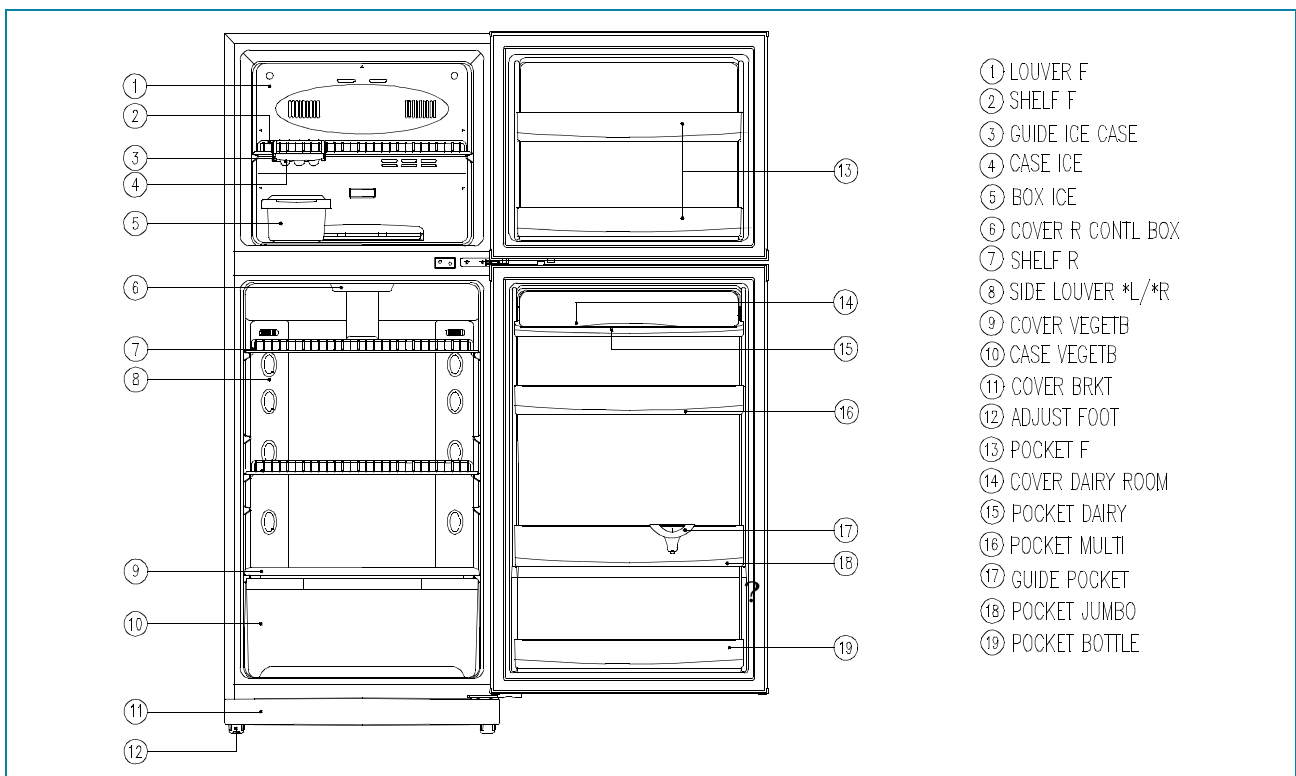


6. FR-4504K

1) EXTERNAL SIZE

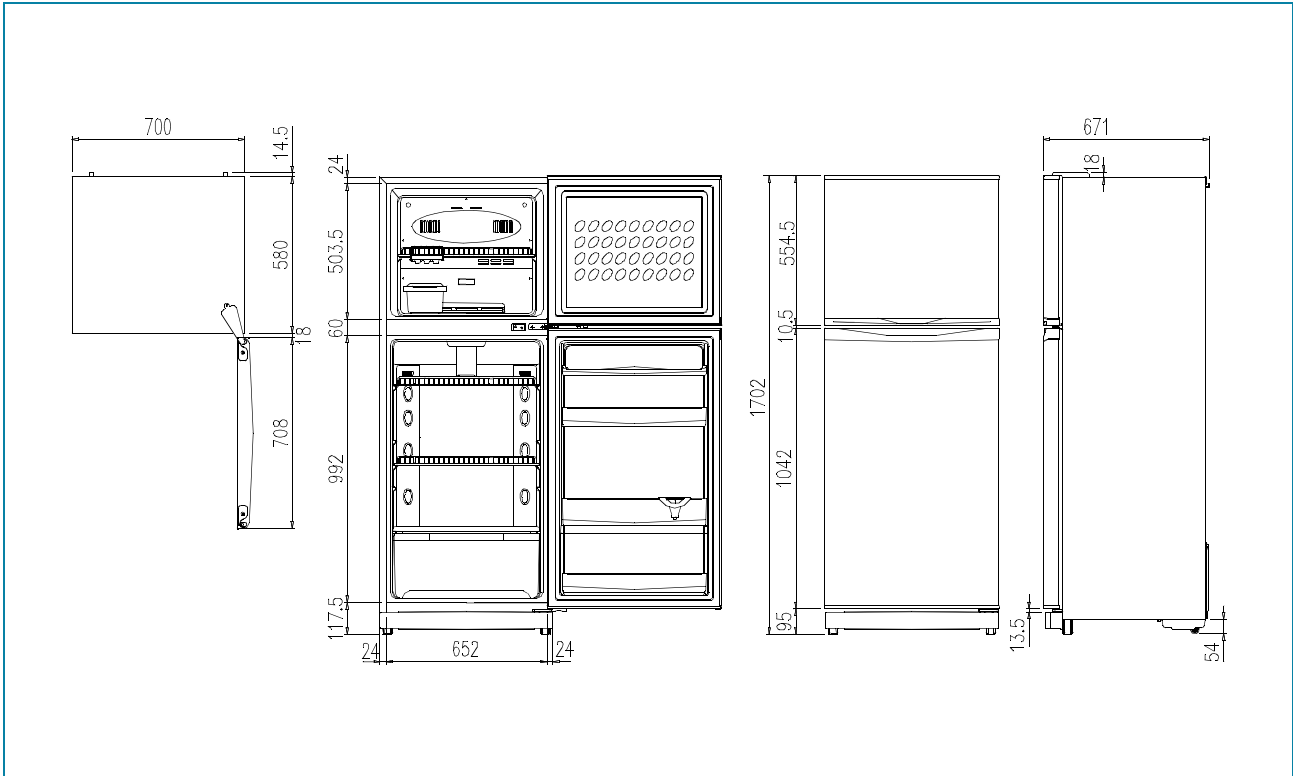


2) NAME OF PARTS

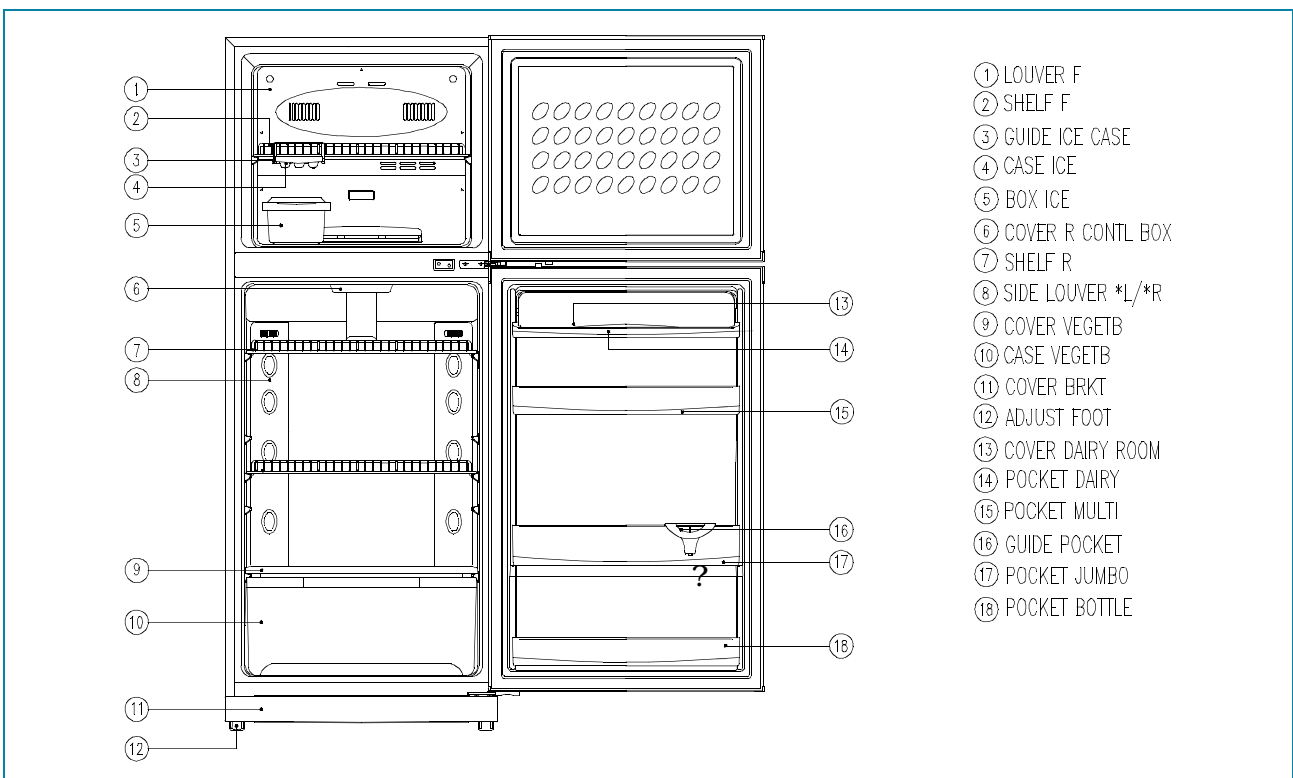


7. FR-4505K

1) EXTERNAL SIZE



2) NAME OF PARTS



SPECIFICATIONS

1. OUTLINE

DIVISION		CONTENTS		
MODEL NAME		FR-4501K,FR-4502K FR-4504K,FR-4505K	FR-450N,FR-4502N	FR-4503N
USABLE CAPACITY	FREEZER	101℔§	101℔§	101℔§
	REFRIGERATOR	273℔§	273℔§	273℔§
	TOTAL	374℔§	374℔§	374℔§
EXTERNAL DIMENSION	WIDHT	708mm	710.5mm	710.5mm
	DEPTH	671mm	671mm	712mm
	HEIGHT	1715mm	1759mm	1759mm
REFRIGERANT	R134a	90g	90g	90g
COOLING & CONTROL SYSTEM	COOLING SYSTEM	Fan Cooling System	Fan Cooling System	Fan Cooling System
	DEFROST SYSTEM	Fin Evaporator Forced	Fin Evaporator Forced	Fin Evaporator Forced
	DEFROST CONTROL	Automatic Start & Stop	Automatic Start & Stop	Automatic Start & Stop
NET WEIGHT (kg)				

SPECIFICATIONS

2. ELECTRIC PARTS

1) COMPRESSOR

REFRIGERANT	R-12						
VOLTAGE(V/Hz)	110/60	115, 120/60	127/60	220/60	220/50	230/50	240/50
COMP MDEL	X	X	CL23YE-2	PL21YE-4	SL27YE-5	←	←
PART CODE	X	X	3957123A20	3956121A40	3954127A50	←	←
STARTING TYPE	X	X	CSIR	RSCR	RSIR	←	←

REFRIGERANT	R-134a						
VOLTAGE(V/Hz)	110/60	115, 120/60	127/60	220/60	220/50	230/50	240/50
COMP MDEL	HEL18YH-1	←	HEL21YH-1	X	HPL23YH-5	←	←
PART CODE	3953118S10	←	3953121S10	X	3956123S50	←	←
STARTING TYPE	RSCR	←	RSCR	X	RSCR	←	←

2) RELAY

REFRIGERANT		R-12						
VOLTAGE(V/Hz)		110/60	115, 120/60	127/60	220/60	220/50	230/50	240/50
ASSY	TYPE NAME	X	X	414THBYY-52	197SHBYY-52	232THBYY-52	←	←
	PART CODE	X	X	3018120700	3018118130	3018119970	←	←
PTC	RESISTANCE	X	X	S068	S330	S220	←	←
OVER LOAD	PART NAME	X	X	414THB	197SHB	232THB	←	←

REFRIGERANT		R-134a						
VOLTAGE(V/Hz)		110/60	115, 120/60	127/60	220/60	220/50	230/50	240/50
ASSY	TYPE NAME	308NHBYY-52	←	317NHBYY-52	X	181SHBYY-52	←	←
	PART CODE	3018118110	←	3018119950	X	3018116610	←	←
PTC	RESISTANCE	S068	←	S068	X	S330	←	←
OVER LOAD	PART NAME	308NHB	←	317NHB	X	181SHB	←	←

3) STARTING CAPACITOR

REFRIGERANT	R-12						
VOLTAGE(V/Hz)	110/60	115, 120/60	127/60	220/60	220/50	230/50	240/50
PART CODE	X	X	3016400100	X	X	X	X
RATED VOLTAGE	X	X	200V	X	X	X	X
RATED CAPACITANCE	X	X	100μF	X	X	X	X

SPECIFICATIONS

REFRIGERANT	R134a						
VOLTAGE(V/Hz)	110/60	115, 120/60	127/60	220/60	220/50	230/50	240/50
PART CODE	X	X	X	X	X	X	X
RATED VOLTAGE	X	X	X	X	X	X	X
RATED CAPACITANCE	X	X	X	X	X	X	X

4) RUNNING CAPACITOR

REFRIGERANT	R-12						
VOLTAGE(V/Hz)	110/60	115, 120/60	127/60	220/60	220/50	230/50	240/50
PART CODE	X	X	X	400EL15110	X	←	←
RATED VOLTAGE	X	X	X	350V	X	←	←
RATED CAPACITANCE	X	X	X	5μF	X	←	←

REFRIGERANT	R134a						
VOLTAGE(V/Hz)	110/60	115, 120/60	127/60	220/60	220/50	230/50	240/50
PART CODE	3016801910	←	400EL15130	X	3016401010	←	←
RATED VOLTAGE	200V	←	230V	X	350V	←	←
RATED CAPACITANCE	12μF	←	10μF	X	5μF	←	←

5) F-FAN MOTOR

REFRIGERANT	R-12, R-134a						
VOLTAGE(V/Hz)	110/60	115, 120/60	127/60	220/60	220/50	230/50	240/50
TYPE NAME	S6111EDF01	←	S6111EDF01	S6111EDF01	S6111WDF01	←	←
PART CODE	3015900741	←	3015900750	3015900701	3015900731	←	←
REVOLUTION	2200 RPM	←	←	←	←	←	←

6) C-FAN MOTOR

REFRIGERANT	R-12, R-134a						
VOLTAGE(V/Hz)	110/60	115, 120/60	127/60	220/60	220/50	230/50	240/50
TYPE NAME	RF111EAC03	←			S6111CEC05	←	←
PART CODE	3015903921	←	3015910100	3015910010	3015909800	←	←
REVOLUTION	2100 RPM	←	←	←	←	←	←

7) DEFROST HEATER

REFRIGERANT	R-12, R-134a						
VOLTAGE(V/Hz)	110/60	115, 120/60	127/60	220/60	220/50	230/50	240/50
SPEC (W)	148W	←	←	148W	←	←	←
PART CODE	3012807200	←	←	3012807100	←	←	←

8) LAMP ASSEMBLY

REFRIGERANT	R-12, R-134a						
VOLTAGE(V/Hz)	110/60	115, 120/60	127/60	220/60	220/50	230/50	240/50
SPEC (W)	15W	←	←	15W	←	←	←
PART CODE	3013600050	←	←	3013600020	←	←	←

9) TEMPERATURE FUSE

REFRIGERANT	R-12, R-134a						
VOLTAGE(V/Hz)	110/60	115, 120/60	127/60	220/60	220/50	230/50	240/50
OPERATING TEMP	77°C	←	←	←	←	←	←
PART CODE	3017201200	←	←	←	←	←	←

10) DOOR S/W

REFRIGERANT	R-12, R-134a						
VOLTAGE(V/Hz)	110/60	115, 120/60	127/60	220/60	220/50	230/50	240/50
TYPE NAME	DSD-5	←	←	←	←	←	←
PART CODE	3018100050	←	←	←	←	←	←

11) DRYER

REFRIGERANT	R-12						
VOLTAGE(V/Hz)	110/60	115, 120/60	127/60	220/60	220/50	230/50	240/50
SPEC (gr)	10	←	←	←	←	←	←
PART CODE	3016805600	←	←	←	←	←	←

REFRIGERANT	R-134a						
VOLTAGE(V/Hz)	110/60	115, 120/60	127/60	220/60	220/50	230/50	240/50
SPEC (gr)	15	←	←	←	←	←	←
PART CODE	3016805500	←	←	←	←	←	←

FOR FR-4501K, FR-4502K, FR-4504K, FR-4505K

12) THERMOSTAT

REFRIGERANT	R-12, R-134a						
VOLTAGE(V/Hz)	110/60	115, 120/60	127/60	220/60	220/50	230/50	240/50
TYPE NAME	BU276	←	←	←	←	←	←
PART CODE	3018302100	←	←	←	←	←	←

SPECIFICATIONS

13) DEFROST TIMER

REFRIGERANT	R-12, R-134a						
VOLTAGE(V/Hz)	110/60	115, 120/60	127/60	220/60	220/50	230/50	240/50
TYPE NAME	TMDEX09UD1	←	←	TMDE807UF1	←	←	←
PART CODE	3018120030	←	←	3018120020	←	←	←

14) BIMETAL THERMO

REFRIGERANT	R-12, R-134a						
VOLTAGE(V/Hz)	110/60	115, 120/60	127/60	220/60	220/50	230/50	240/50
TYPE NAME	ST-3	←	←	←	←	←	←
PART CODE	3018120300	←	←	←	←	←	←

FOR FR-4501N, FR-4502N, FR-4503N

15) PCB TRANSFORMER

REFRIGERANT	R-12, R-134a						
VOLTAGE(V/Hz)	110/60	115, 120/60	127/60	220/60	220/50	230/50	240/50
TYPE NAME	S-ETP	←	←	S-ETP	←	←	←
PART CODE	5EPK048091	←	←	5EPK048090	←	←	←

16) MAIN PCB ASSY

REFRIGERANT	R-12, R-134a						
VOLTAGE(V/Hz)	110/60	115, 120/60	127/60	220/60	220/50	230/50	240/50
TYPE NAME	S-ETP	←	←	S-ETP	←	←	←
PART CODE	3014302060	←	←	3014301060	←	←	←

17) FUSE (PCB)

REFRIGERANT	R-12, R-134a						
VOLTAGE(V/Hz)	110/60	115, 120/60	127/60	220/60	220/50	230/50	240/50
RATED CURRENT	1.6A	←	←	←	←	←	←
PART CODE	5F3GB1682R	←	←	←	←	←	←

2-1. DOOR COLOT

1) ASSEMBLY URETHAN FREEZER DOOR

1. NON-KEY TYPE & KEY TYPE

Refrigerant		R-12				Remark
		White	Light Gray	Bright Beige	Silver	
COLOR TYPE	Embo PCM	3010015100	X	3010015100	X	
	High-glossy Laminasheet					
	Normal PCM		X		X	

Refrigerant		R-134a				Remark
		White	Light Gray	Bright Beige	Silver	
COLOR TYPE	Embo PCM		X		X	
	High-glossy Laminasheet	3010015100	3010015100	3010015100	3010015100	
	Normal PCM		X		X	

2) ASSEMBLY URETHAN REFRIGERATOR DOOR

1. NON-KEY TYPE

Refrigerant		R-12				Remark
		White	Light Gray	Bright Beige	Silver	
COLOR TYPE	Embo PCM		X		X	
	High-glossy Laminasheet					
	Normal PCM		X		X	



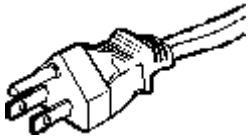
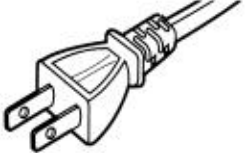

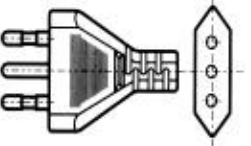
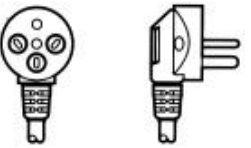
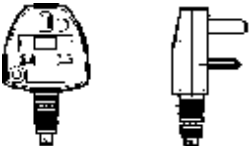

Refrigerant		R-134a				Remark
		White	Light Gray	Bright Beige	Silver	
COLOR TYPE	Embo PCM		X		X	
	High-glossy Laminasheet					
	Normal PCM		X		X	

2. KEY TYPE

Refrigerant		R-12				Remark
		White	Light Gray	Bright Beige	Silver	
COLOR TYPE	Embo PCM		X		X	
	High-glossy Laminasheet					
	Normal PCM		X		X	

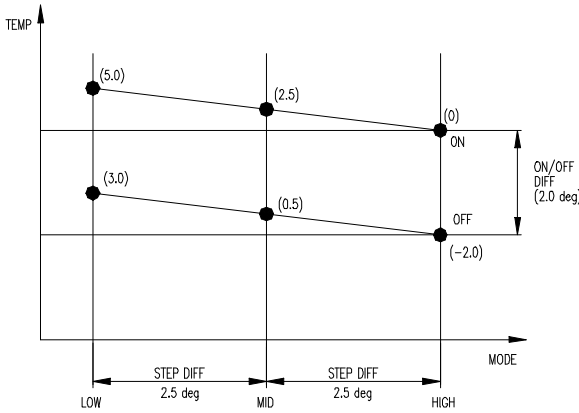
Refrigerant		R-134a				Remark
		White	Light Gray	Bright Beige	Silver	
COLOR TYPE	Embo PCM		X		X	
	High-glossy Laminasheet					
	Normal PCM		X		X	

3. POWER CORD

NO	SHAPE OF POWER CORD	PART CODE	DESCRIPTION	REMARK
1		3011315000	CP-2PIN	For european country
2		3010097000	CP-2PIN	For other country
3		4006D17101	KP-30	For America & El Salvador
4		3010096800	KP-211	For Japan & Taiwan
5		3011300801	BP-3PIN	
6		3011303010	# 267	For Chile
7		3011315310		For Israel
8		3011303050	BS-1363A	"For U.K, Middle Asia Singapore & Malaysia"
9		3011301200	KP-551/550	For China & Australia

OPERATION AND FUNCTIONS

NO	CONTROL FUNCTION	CONTROL OBJECTS	CONTENTS	REMARK
1	Display	LED	<div data-bbox="683 568 1145 1323" data-label="Image"> </div> <p data-bbox="582 1413 759 1442">1. TEMP BUTTON</p> <ol data-bbox="600 1447 1185 1644" style="list-style-type: none"> 1) Temperature of Refrigerator can be controlled as changin control mode according to customer's desire. 2) Initial mode is "Mid" and whenever pressing TEMP buton, control mode proceeds as follows. Low -> Mid -> High -> Quick -> Low 3) If TEMP.button is pressed, control mode is set in 3 Sec. <p data-bbox="587 1682 748 1711">2. QUICK MODE</p> <ol data-bbox="600 1715 1214 1899" style="list-style-type: none"> 1) If QUICK mode is set by TEMP.button, QUICK LED is on. 2) Maximum time of QUICK mode is 40 min. 3) If Refrigerator sensor (R-S) is below -3.0°C in QUICK mode, QUICK mode can be finished immediately within 40min. 4) If QUICK mode is finished, it returns to the dial mode before QUICK mode. 	

NO	CONTROL FUNCTION	CONTROL OBJECTS	CONTENTS	REMARK																		
2	Control of Temp	COMP F-FAN	<p>1. How to control Temperature of Refrigerator</p> <p>1) Whenever TEMP.button is pressed, control mode is circulated as follows: LOW -> MID -> HIGH -> QUICK -> LOW</p> <p>2) LEDs will indicate control mode according to TEMP.button.</p> <p>3) Comp and F-fan are controlled by R-Sensor.</p> <p>2. ON/OFF point of each control mode</p> <p>1) Comp and F-fan are controlled ON/OFF point of each control mode. (ON/OFF point of R-SENSOR)</p> <p>2) F-FAN is delayed for 1 min. after COMP is ON/OFF.</p> <p>3) ON/OFF DIFF. Of Refrigerator = 2.0 deg.</p> <p>4) STEP DIFF. Of Refrigerator = 2.5 deg.</p> <table border="1" data-bbox="608 1240 1201 1350"> <thead> <tr> <th>CONTROL</th> <th>LOW</th> <th>MID</th> <th>HIGH</th> <th>QUICK</th> <th>REMARK</th> </tr> </thead> <tbody> <tr> <td>ON (°C)</td> <td>5.0</td> <td>2.5</td> <td>0</td> <td></td> <td></td> </tr> <tr> <td>OFF (°C)</td> <td>3.0</td> <td>0.5</td> <td>-2.0</td> <td>-3.0 / 40 min.</td> <td></td> </tr> </tbody> </table> 	CONTROL	LOW	MID	HIGH	QUICK	REMARK	ON (°C)	5.0	2.5	0			OFF (°C)	3.0	0.5	-2.0	-3.0 / 40 min.		
CONTROL	LOW	MID	HIGH	QUICK	REMARK																	
ON (°C)	5.0	2.5	0																			
OFF (°C)	3.0	0.5	-2.0	-3.0 / 40 min.																		

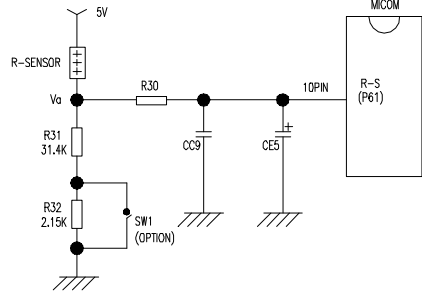
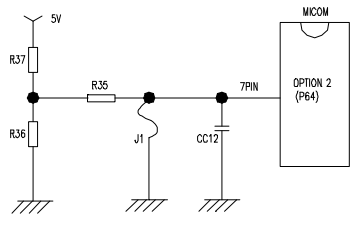
OPERATION AND FUNCTIONS

NO	CONTROL FUNCTION	CONTROL OBJECTS	CONTENTS	REMARK
3	Defrost Period	Defrost mode	<p>1. Determination of Defrosting Period</p> <p>1) Total Run-tim of Comp : 10,11,12,13,14,15 hours</p> <p>2) Run-ratio of Comp : over 80%</p> <p>3) Total times of Door opening : over 3 times</p> <p>4) Total time (Comp On + Comp Off): 60 hours</p> <p>2. Explanation</p> <p>1) Derosting starts with the following conditions, in case total comp-run time passes 9 hours</p> <ul style="list-style-type: none"> - when an Error occurs - when running-rate of Comp is more than 80% - when total Door-opening times is more than 3 times <p>2) Defrosting starts unconditionally at each hour after total Comp-run time passes 9 hours if terms of 1) is occurred.</p> <p>3) Defrosting starts immediately when Total run-time is more than 15hours under the condition of 1),2) is not satisfied.</p> <p>4) Defrosting starts immediately when Total time is more than 15 hours under the condition of 1),2),3) is not satisfied.</p>	
4	Defrosting Mode	Comp Fan Heater	<p>1. Normal Defrosting</p> <p>1) Starting by Defrosting Period</p> <p>2) How to proceed : using heater</p> <p>3) Defrosting mode and procedure</p> <div style="display: flex; align-items: center; margin-left: 40px;"> <div style="border: 1px solid black; padding: 5px; margin-right: 10px;">PRE-COOL</div> <div style="text-align: center; margin-right: 10px;">↓</div> <div style="border: 1px solid black; padding: 5px;">HEATER Defrosting</div> </div> <p style="margin-left: 40px;">ç Proceeding time: 40min</p> <p style="margin-left: 40px;">ë Control Object: Comp On FAN ON,Heater Off</p> <p style="margin-left: 40px;">ẽ Terminating Condition: if R-sensor temp. is below -4°C even though it passes 40 min.</p> <p style="margin-left: 40px;">ẽ Limit Proceeding time</p> <ul style="list-style-type: none"> - 30 min.: D1 ERROR D-Sensor disconnection/ short-circuit - 80 min.: F3 ERROR Normal Control state <p style="margin-left: 40px;">ë Control Object: Comp Off, FAN OFF,Heater On</p> <p style="margin-left: 40px;">ï Terminating Condition: if D-sensor temp. is over 10°C</p>	

NO	CONTROL FUNCTION	CONTROL OBJECTS	CONTENTS	REMARK																														
			<div style="display: flex; flex-direction: column; align-items: center;"> <div style="margin-bottom: 10px;"> <p>↓</p> <div style="border: 1px solid black; padding: 5px; text-align: center;">PAUSE</div> <p>↓</p> </div> <div style="margin-bottom: 10px;"> <div style="border: 1px solid black; padding: 5px; text-align: center;">Fan Delay</div> <p>↓</p> </div> <div style="margin-bottom: 10px;"> <div style="border: 1px solid black; padding: 5px; text-align: center;">Normal Run</div> </div> </div> <p> ğ Proceeding time: 4min ě Control Object: Comp Off, FAN Off, Heater Off </p> <p> ğ Proceeding time: 4min ě Control Object: Comp On, FAN Off, Heater Off </p> <p>4) Output Control and Limit Time of each Defrosting mode</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="width: 10%;">MODE</th> <th style="width: 15%;">PRE-COOL</th> <th style="width: 20%;">Heater Defrosting</th> <th style="width: 10%;">Pause</th> <th style="width: 10%;">Fan Delay</th> <th style="width: 10%;">REMARK</th> </tr> </thead> <tbody> <tr> <td>COMP</td> <td>ON</td> <td>OFF</td> <td>OFF</td> <td>ON</td> <td></td> </tr> <tr> <td>F-FAN</td> <td>ON</td> <td>OFF</td> <td>OFF</td> <td>OFF</td> <td></td> </tr> <tr> <td>HTR</td> <td>OFF</td> <td>OFF</td> <td>OFF</td> <td>OFF</td> <td></td> </tr> <tr> <td>Limit Time</td> <td>40 min.</td> <td>1) 30 SECONDS 2) 30 MINUTES 3) 80 MINUTES</td> <td>4 min.</td> <td>4 min.</td> <td></td> </tr> </tbody> </table> <p>2. Forced Defrosting</p> <ol style="list-style-type: none"> 1) Start: Defrosting starts by pressing Temp.control s/w five times in a row when door is open. 2) End : No function 3) Process: using Heater 4) Defrosting mode and procedure: same as Normal Defrosting(Skip pre-cool mode) 5) Heater is On during initial 30 seconds without concerning D-sensor Temp. 	MODE	PRE-COOL	Heater Defrosting	Pause	Fan Delay	REMARK	COMP	ON	OFF	OFF	ON		F-FAN	ON	OFF	OFF	OFF		HTR	OFF	OFF	OFF	OFF		Limit Time	40 min.	1) 30 SECONDS 2) 30 MINUTES 3) 80 MINUTES	4 min.	4 min.		
MODE	PRE-COOL	Heater Defrosting	Pause	Fan Delay	REMARK																													
COMP	ON	OFF	OFF	ON																														
F-FAN	ON	OFF	OFF	OFF																														
HTR	OFF	OFF	OFF	OFF																														
Limit Time	40 min.	1) 30 SECONDS 2) 30 MINUTES 3) 80 MINUTES	4 min.	4 min.																														
5	Initial Defrosting	COMP F-FAN HTR	<ol style="list-style-type: none"> 1. If D-sensor temp. $\leq 3.5^{\circ}\text{C}$ in the initial power input, normal defrosting mode begins without concerning Comp run-time (include Pre-cool mode) 2. Defrosting begins after doing Comp restart prevention function with dealy for six min. in initial defrosting mode. 3. Comp will be On immediately if D-sensor temp. $\geq 3.5^{\circ}\text{C}$ in initial power input. (No dealy for six min.) 																															
6	Prevention of Comp	COMP F-FAN	<ol style="list-style-type: none"> 1. In order to protect Comp after Comp ioff, it won't re-start for six min. though R-sensor becomes On. 																															

OPERATION AND FUNCTIONS

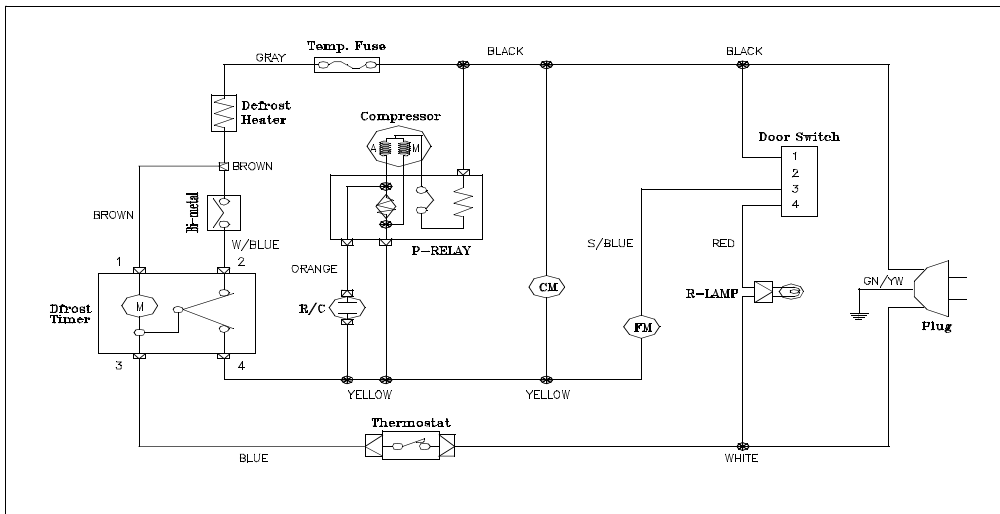
NO	CONTROL FUNCTION	CONTROL OBJECTS	CONTENTS	REMARK
7	Error Display	LED	<p>1. ERROR DISPLAY</p> <p>1) How to start: Push Temp. control s/w for five secs. In Continuous -run mode.</p> <p>2) How to end: It returns automatically after 20 secs in Error mode with out concentering Error.</p> <p>2. DISPLAY AND HOW TO CONTROL</p> <p>1) D1 ERROR</p> <ul style="list-style-type: none"> - Starting Condition: D-Sensor Disconneciton/Shortcircuit - Display: Flickering "LOW" LED - How to control: return to limit time (30min.) <p>2) R1 ERROR- Starting Condition: R-Sensor Discon-nection/Shortcircuit</p> <ul style="list-style-type: none"> - Display: Flickering "MID" LED - How to control: control continuously Comp,F-fan to be On(30min.) and Off(30min.) <p>3) F3 ERROR - Starting Condition: Heater 80min. ends</p> <ul style="list-style-type: none"> - Display: Flickering "HIGH" LED - How to control: impossible to control in case of Heater Defrostng,Temp.Fuse problem,HTR Disconnection <p>4) C1 ERROR- Starting Condition: Even if Comp has run for 120min. continuously,when D-sensor is \uparrow -5°C</p> <ul style="list-style-type: none"> - Display: Flickering "QUICK" LED - How to control: impossible to contro in case of Cycle error <p>5) If there's no error when it enters Error mode, All LEDs will be OFF. HTR disconnection.</p>	
8	Time Delay of Electric Devices		<p>1. F-FAN time delay in Comp On/Off</p> <p>1) During normal running: F-fan will be On/Off 1 min. after Comp On/Off</p> <p>2) When initial power input: F-Fan will be ON 4 mins. After Comp On</p> <p>2. F-FAN TIME DELAY BY DOOR S/W</p> <p>1) After 6 mins.of initial power input OPEN DR S/W -> CLOSE : F-fan work delay for 20 secs.</p> <p>2) Before 6 mins.of initial power input OPEN DR S/W -> CLOSE : F-fan work for 20 secs. immediately.</p> <p>3) when it has nothing to do with Initial power input. OPEN DR S/W ->CLOSE: F-fan changes into be Off. immediately.</p>	

NO	CONTROL FUNCTION	CONTROL OBJECTS	CONTENTS	REMARK																										
9	Option Circuit 1(Weak Refrigeration)		<p>1. Option for Weak Refrigeration, Service Reference 1) When Weak Refrigeration occur, it's easy to find solution by this. 2) Regulation of R-Sensor Off point (-1.5 deg Down) 2. In case of Weak Refrigeration, take action as followings.</p>  <p>1) Resistance(R31) :Standard Resistance of R-Sensor middle-off point in case of Normal Run (31.4kΩ = -10°C) (25.2kΩ = 4.0°C) When change resistance 31.4kΩ into 25.2kΩ R-sensor middle-off point will be 5.0 deg 2) Resistance (R32): Standard resistance to make R-Sensor Off Point in case of Weak Refrigeration. - R32 2.15kΩ : R-Sensor Off Point will be down by 1.5deg - R32 6.19kΩ : R-Sensor Off Point will be down by 4.0deg 3) SW 1: If SW1 is off in Service, R Sensor Off Point will be down by 1.5deg. R31 + SW 1 ON: Middle Off Point: 0.5°C (In Normal Run) R31 + SW 1 OFF: Middle Off Point:-1.0°C (In Weak Refrigeration)</p>																											
10	Option Circuit 2 (Prevention Strong Refrigeration)		<p>1. Prevention of Strong Refrigeration Option (change Middle - off point)</p>  <table border="1" data-bbox="710 1601 1117 1724"> <thead> <tr> <th rowspan="2">NO</th> <th colspan="2">CONTROL</th> <th rowspan="2">Application (MAIN PCB)</th> <th rowspan="2">MICOM Input Voltage</th> <th rowspan="2">REMARK</th> </tr> <tr> <th>Middle-On Point</th> <th>Middle-Off Point</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>2.5°C</td> <td>0.5°C</td> <td>—</td> <td>0 V</td> <td></td> </tr> <tr> <td>2</td> <td>4.0°C</td> <td>2.0°C</td> <td>Remove J1</td> <td>2.5 V</td> <td></td> </tr> <tr> <td>3</td> <td>5.5°C</td> <td>3.5°C</td> <td>Remove J1,R36</td> <td>5 V</td> <td></td> </tr> </tbody> </table>	NO	CONTROL		Application (MAIN PCB)	MICOM Input Voltage	REMARK	Middle-On Point	Middle-Off Point	1	2.5°C	0.5°C	—	0 V		2	4.0°C	2.0°C	Remove J1	2.5 V		3	5.5°C	3.5°C	Remove J1,R36	5 V		
NO	CONTROL		Application (MAIN PCB)		MICOM Input Voltage	REMARK																								
	Middle-On Point	Middle-Off Point																												
1	2.5°C	0.5°C	—	0 V																										
2	4.0°C	2.0°C	Remove J1	2.5 V																										
3	5.5°C	3.5°C	Remove J1,R36	5 V																										
11	Continuous Run	Comp F-FAN Heater	<p>1) How to start: If push the Temp. control s/w 30 times,it will start. 2) How to add one more run: Push Temp. control s/w 30 times in Continuous-run mode. 3) How to end: It will end automatically after 21 hours(Limit time: 21hour) If it is added one more run and you you'd like to finish it , push Temp. control s/w 30 times. 4) Display : Let all the LEDs ON. 5) How to control: Comp/F-fan/C-fan ON,HTR OFF</p>																											

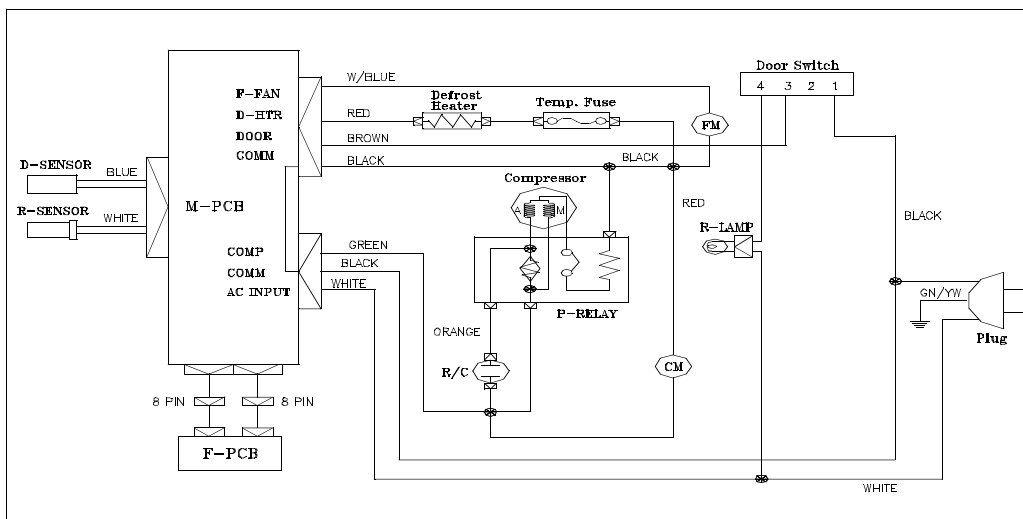
DIAGRAM

1. WIRING DIAGRAM

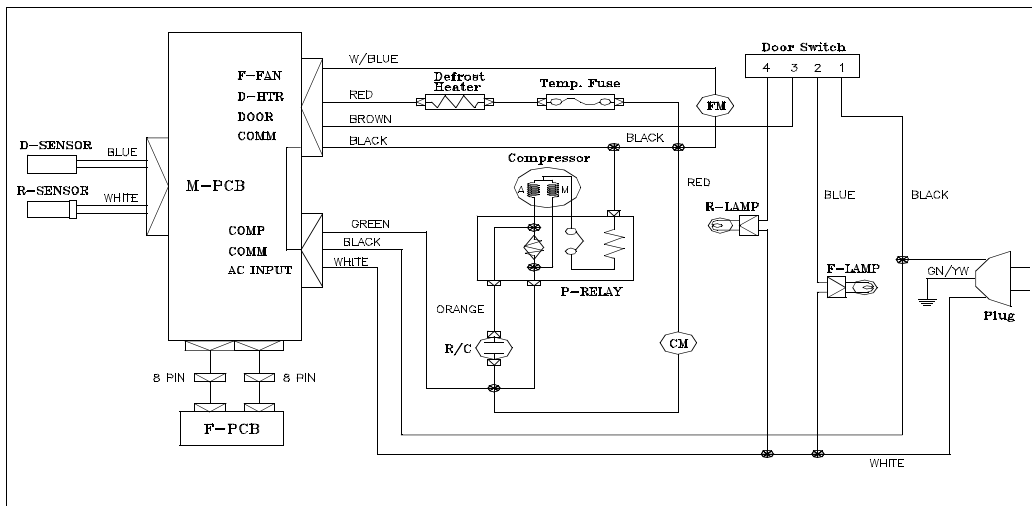
1) FR-4501K, FR-4502K, FR-4504K, FR-4505K



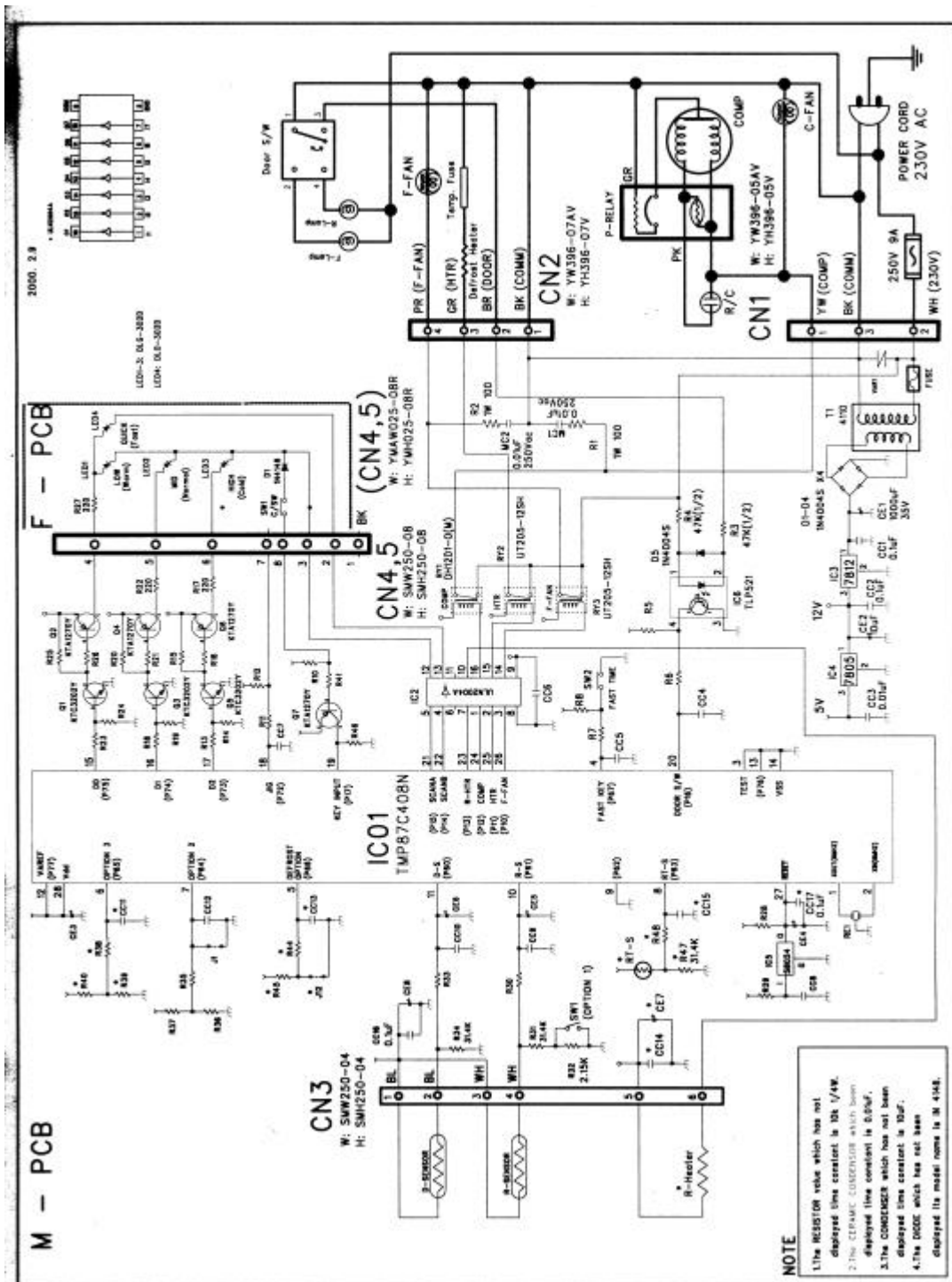
2) FR-4501N, FR-4502N



3) FR-4503N



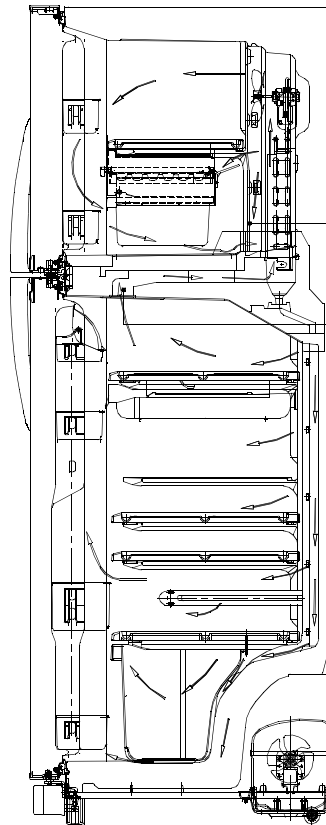
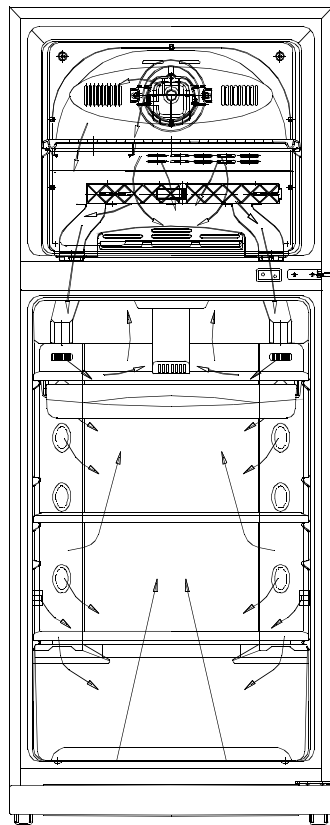
2. CIRCUIT WIRING DIAGRAM



3. AIR FLOW DIAGRAM

FREZER

Please don't put bottles
such as beer beverage etc.
It might be blown out because of freezing.



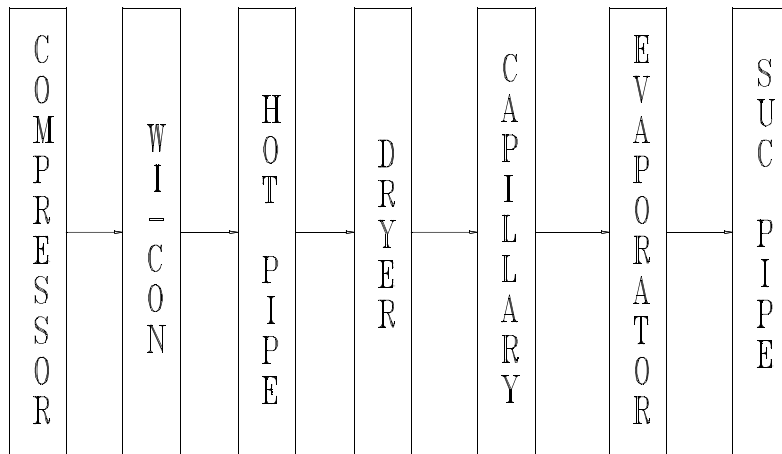
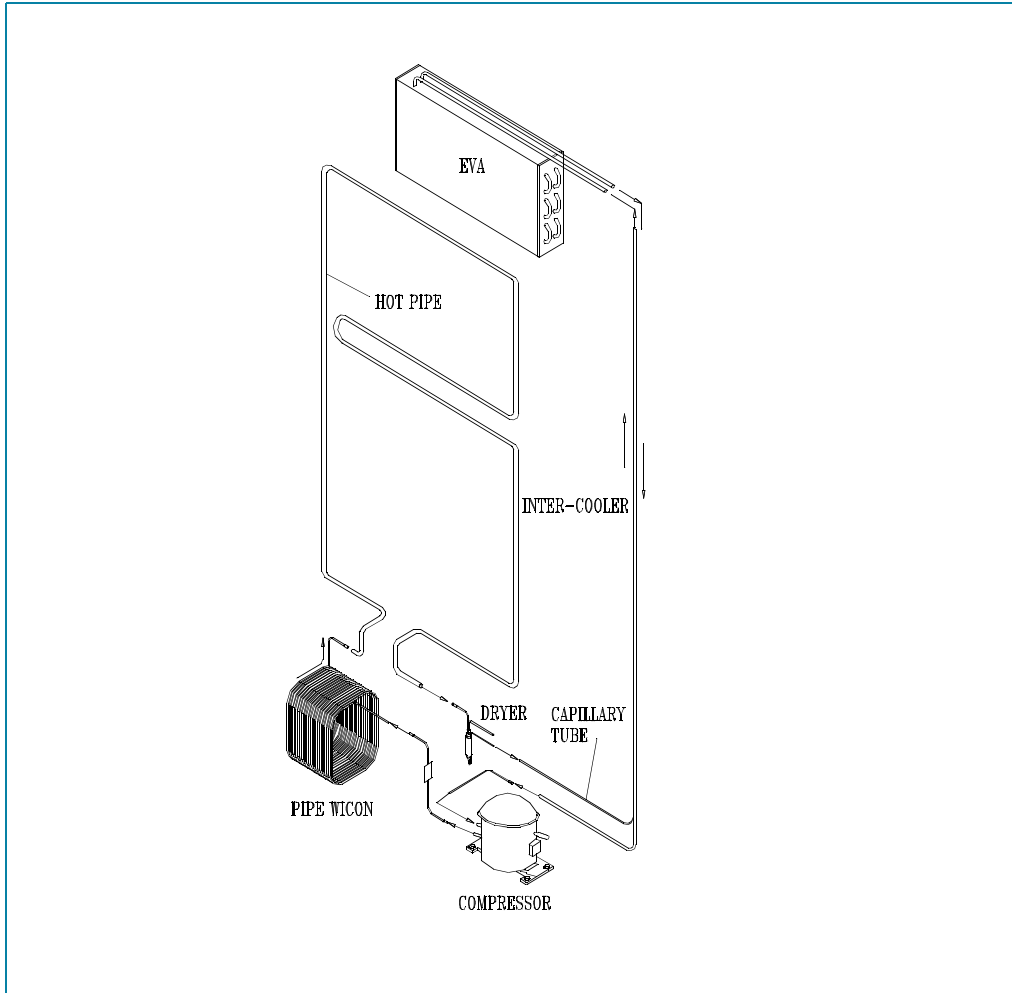
Inlet of cooling air

It should not be blocked with food etc.
as it is the inlet where cooling air returns.

Multiple outlet of cooling air

Please don't put in vegetable etc.
which contain moisture.
It might be frozen because of low temperature.

4. REFERFIGERANT CYCLE DIAGRAM



DISASSEMBLY AND ASSEMBLY

If there is COVER F LAMP on the ceiling, you must take off it first. In case there's NOT, you should follow how to remove LOUVER F section.

1) COVER F LAMP DISASSEMBLY

ç At first, take off WINDOW LAMP.



ē Turn the LAMP to the left and remove it.



ē Using (+) screw driver, unfasten the screw in the center of COVER F LAMP.



ē With force, pull the COVER downwards to remove it.



2) LOUVER F DISASSEMBLY

- ☞ Remove the hole cap on top left using your finger.



- ☞ Using (+) type screw driver, unfasten the screw in the hole.
- ☞ Do the same job at another hole cap, screw on top right.



- ☞ Remove the Louver F using screw driver as picture.



3) COVER R CONTL BOX DISASSEMBLY

- ☞ Remove WINDOW LAMP at first.



DISASSEMBLY AND ASSEMBLY

ē Turn the LAMP to the left and remove it.



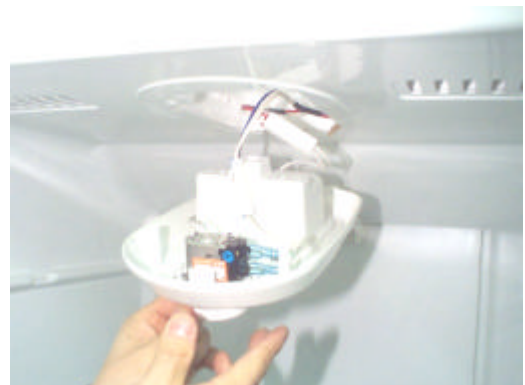
ē Using (+) screw driver, unfasten the screw in the center of COVER R CONTL BOX.



ē Using (+) screw driver, unfasten the screw in the back of LINER.



ē With force, take off COVER R CONTL BOX downwards.



4) COVER R LAMP DISASSEMBLY

ċ Remove WINDOW LAMP at first.



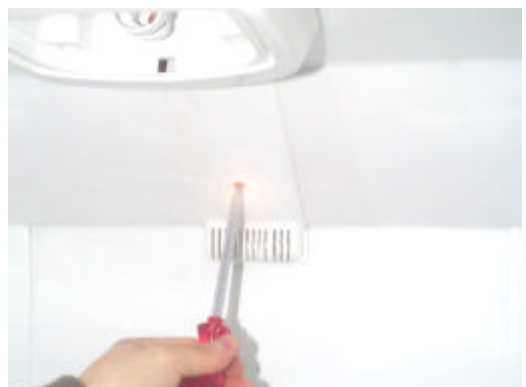
ē Turn the LAMP to the left and remove it.



ē Using (+) screw driver, unfasten the screw in the center of COVER R CONTL BOX.



ē Using (+) screw driver, unfasten the screw in the back of LINER



DISASSEMBLY AND ASSEMBLY

- With force, take off COVER R LAMP downwards.



5) FRONT CONTROL PANEL DISASSEMBLY

- Place any sheet at bottom - left of panel to protect surface of it.
- Insert small sharp tool into the gap to lift paner windows up.
- Pull window out smoothly.



- Remove 2 screws.



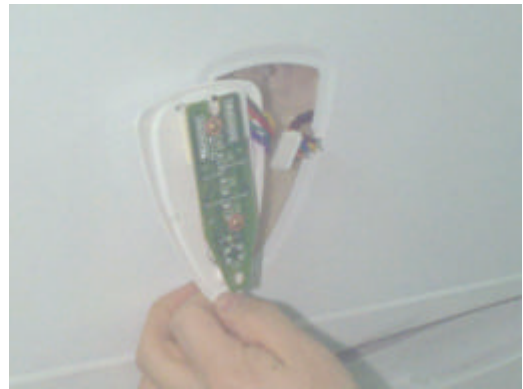
- Lift up paner to remove



- i Remove connector.



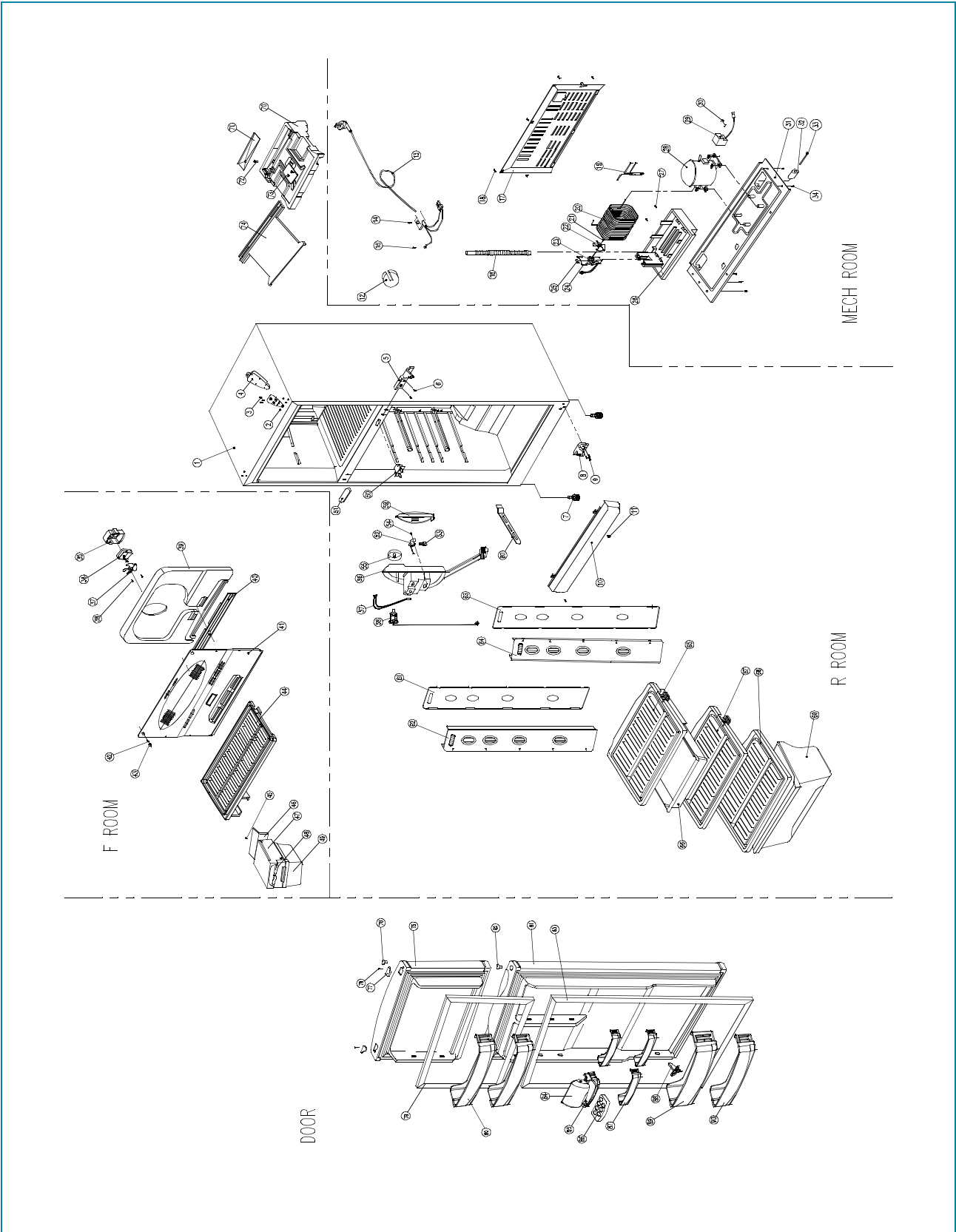
- i Remove screws on the back of panel.



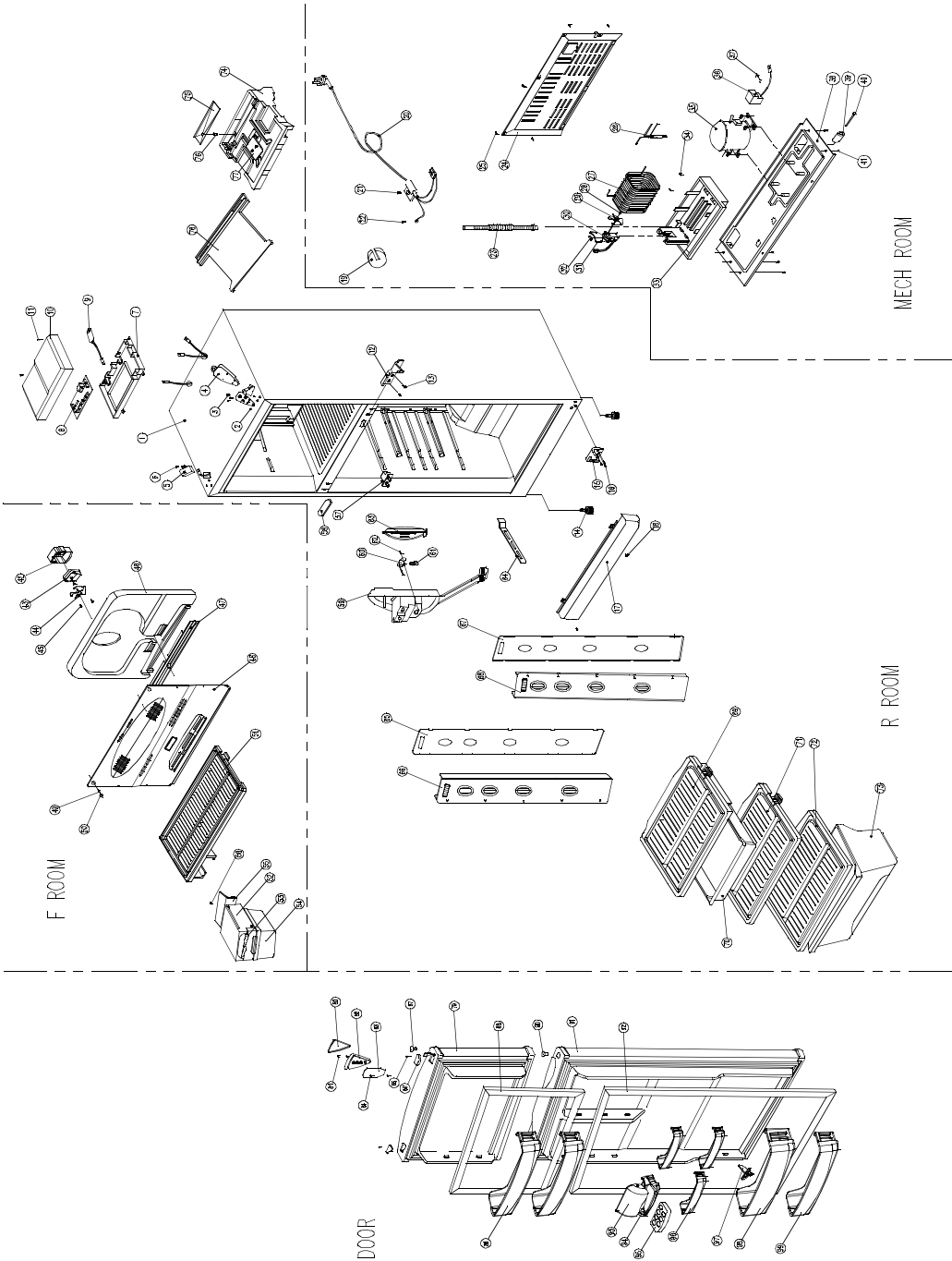
EXPLODED VIEW AND PARTS LIST

1. TOTAL EXPLODED VIEW

1) FR-4501K

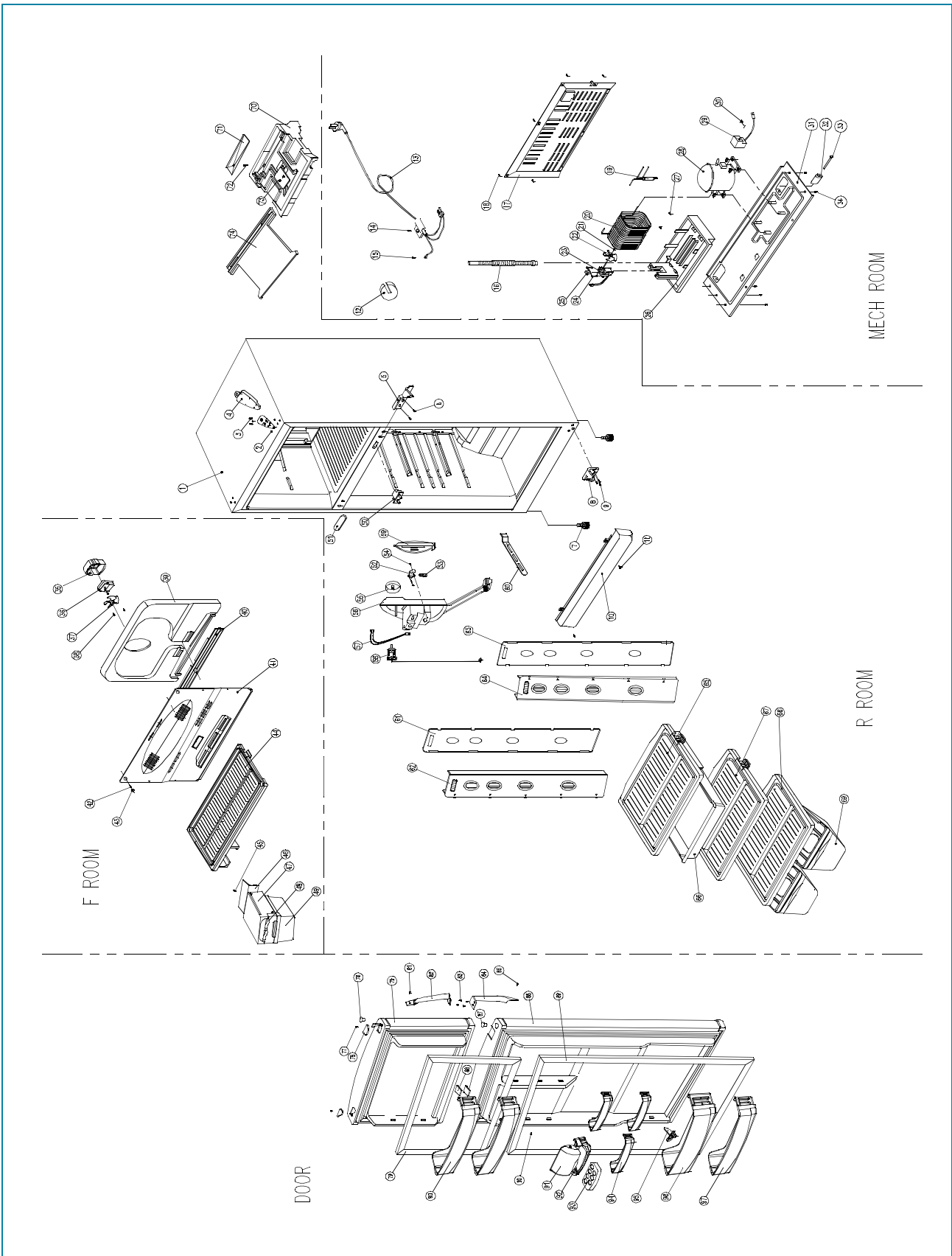


2) FR-4501N

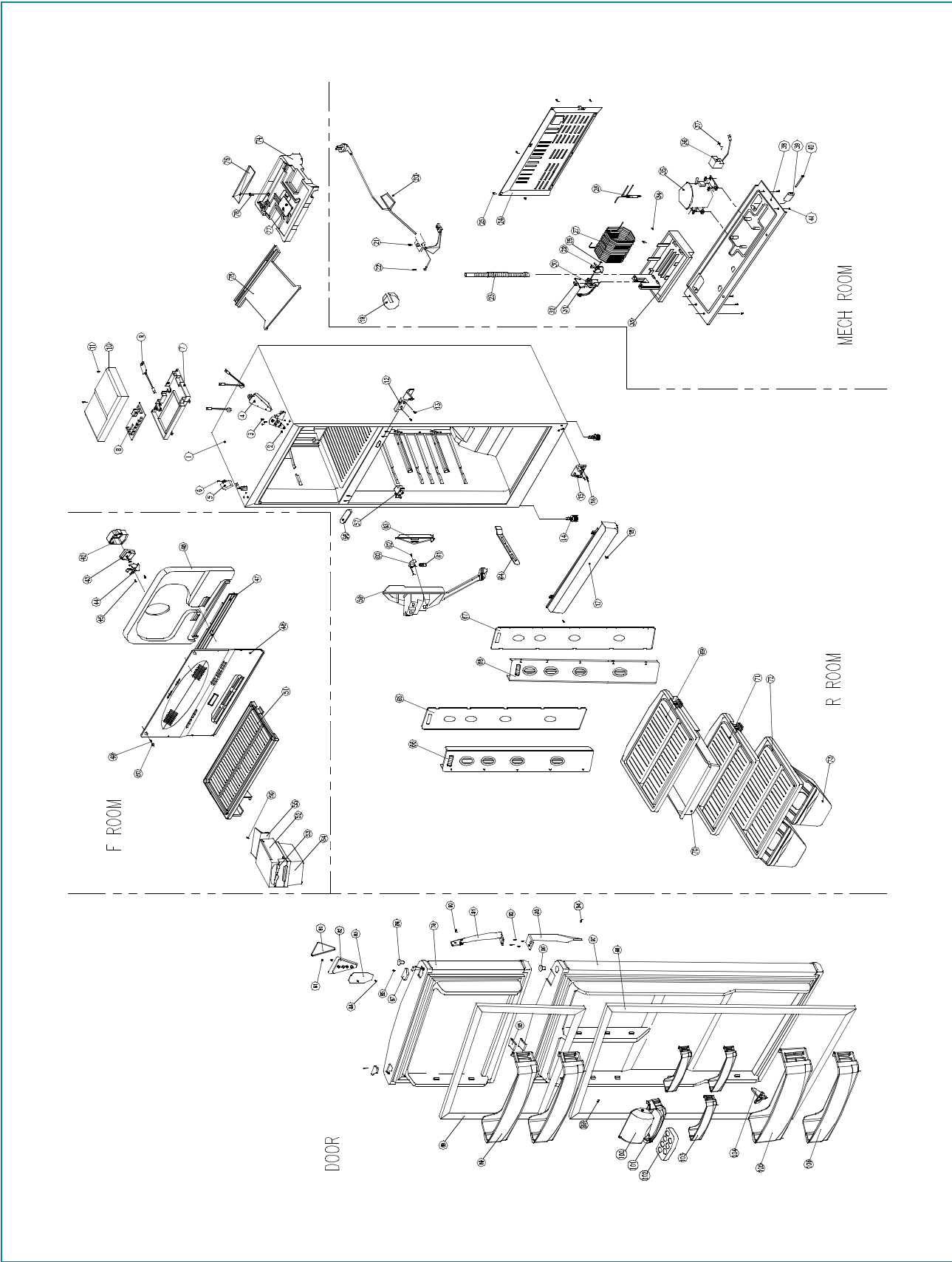


EXPLODED VIEW AND PARTS LIST

3) FR-4502K

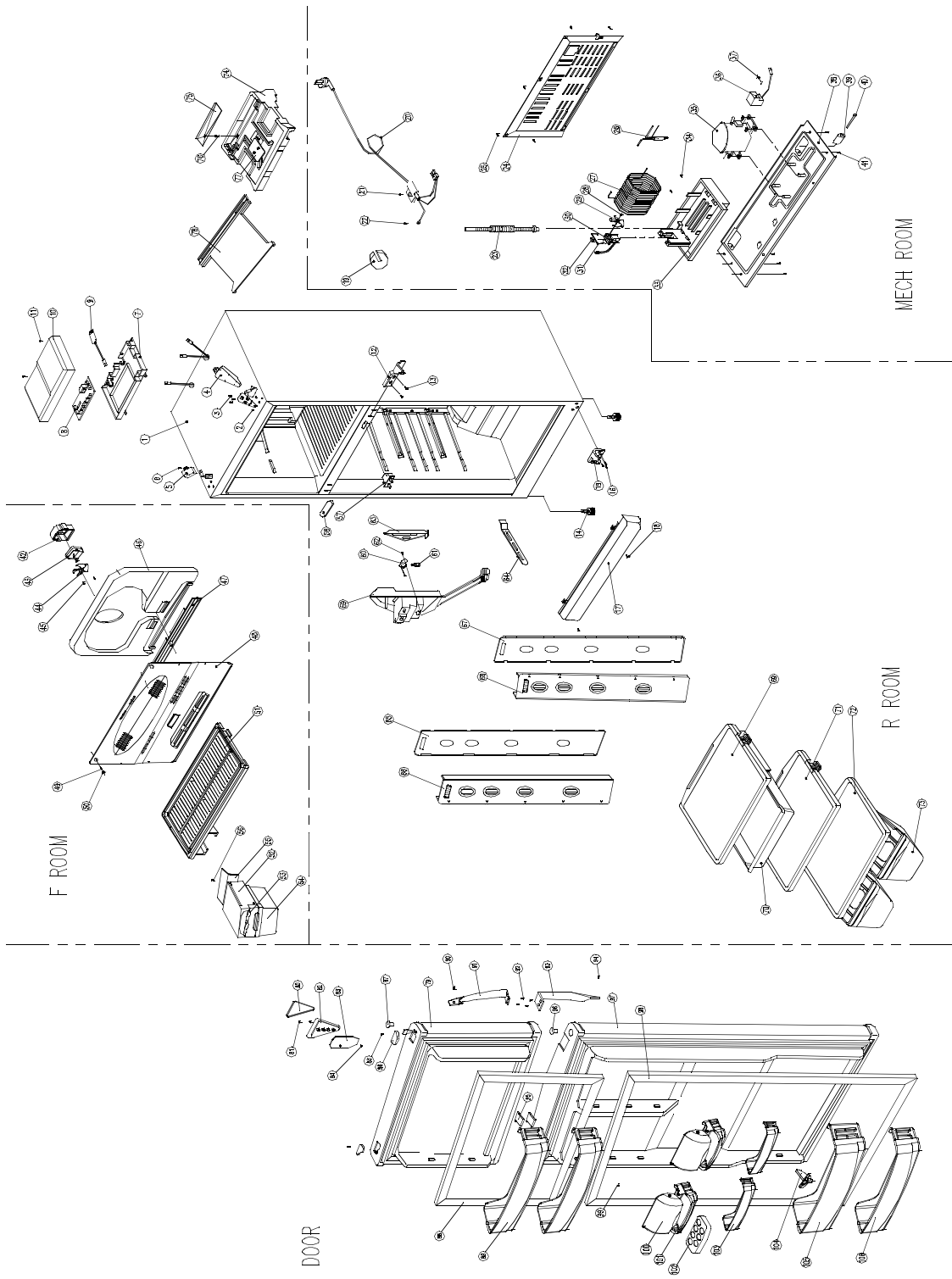


4) FR-4502N

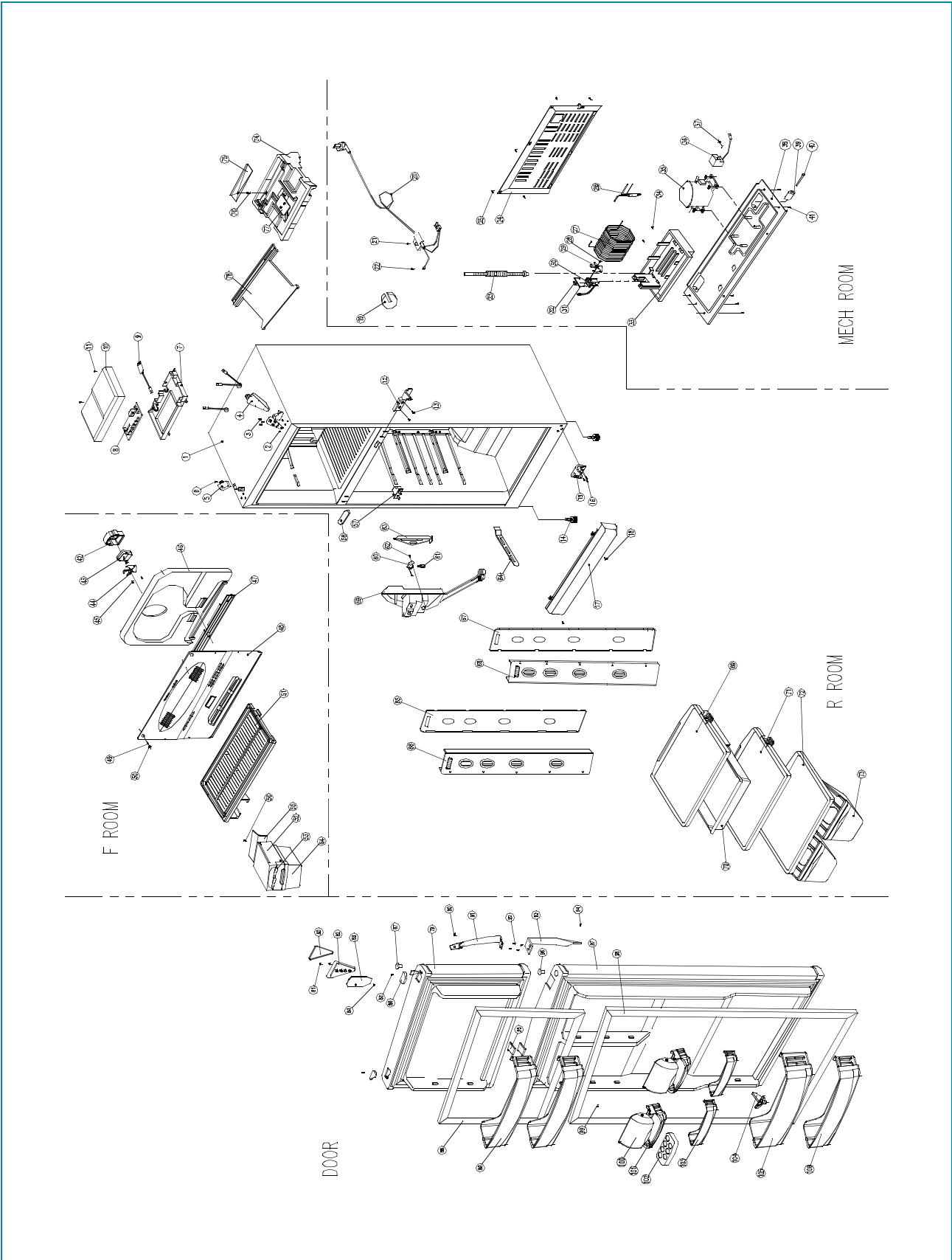


EXPLODED VIEW AND PARTS LIST

5) FR-4503N

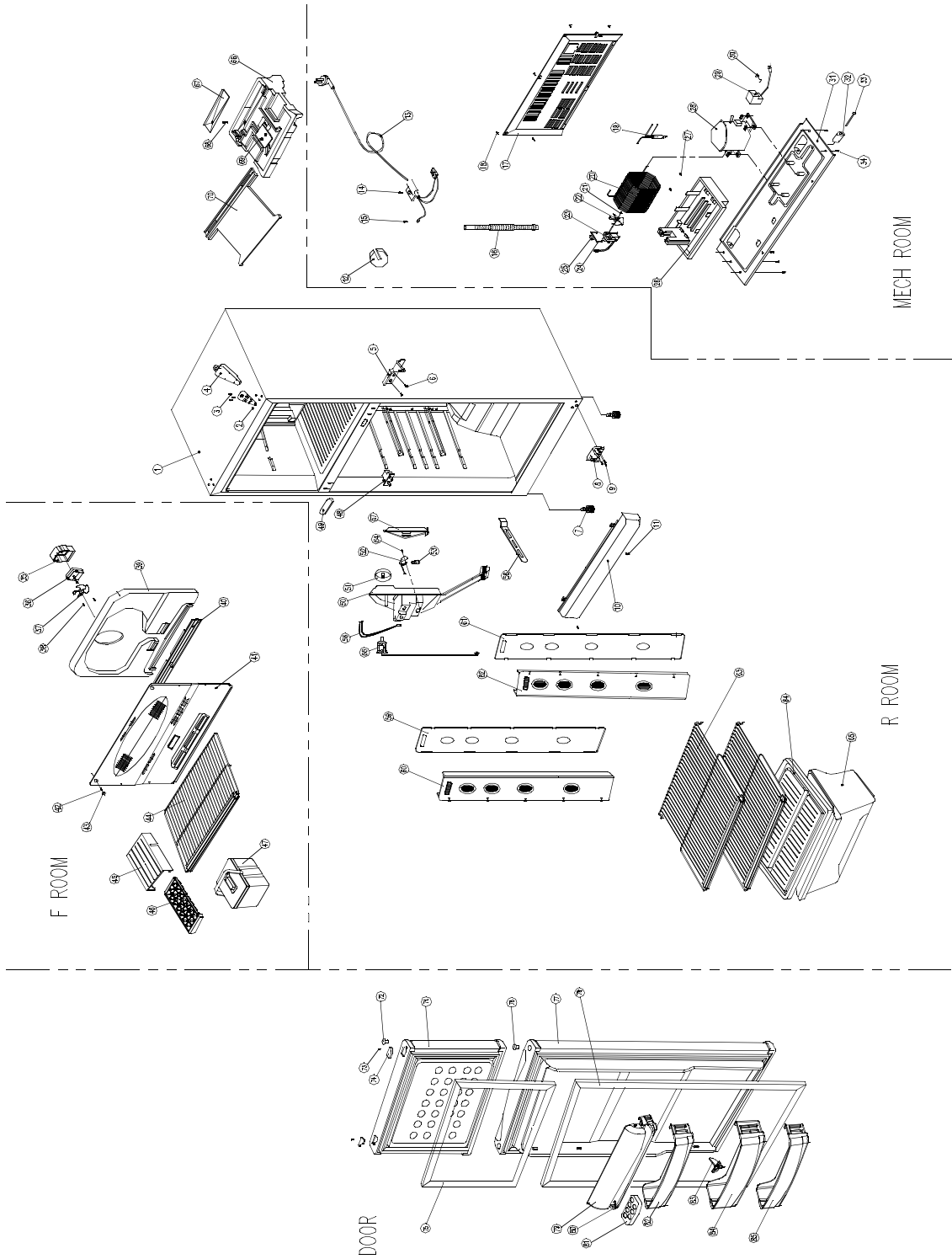


6) FR-4504K



EXPLODED VIEW AND PARTS LIST

7) FR-4505K



2. TOTAL PARTS LIST

1) FR-4501K(In case of NO. 75,81 refer to 42page)

NO	PART CODE	PART NAME	PART DESCRIPTION	Q'TY	REMARK
1	3010031200	ASSY CAB URT	FRM(P)-371	1	
2	3012911500	HINGE*T	SPCC T2	1	
3	3012905400	SPECIAL BOLT T/U	6X22 SWCH22A(WH)	3	
4	3011449800	COVER *T HI	HIPS	1	
5	7112401211	SCREW TAPPING	T1TRS 4X12 MFZN	1	
6	3012911400	HINGE *M AS	DC-2 ZN	1	
7	3012101300	FOOT ADJUST AS	PP	2	
8	3012911300	HINGE *U AS	SPHC-H T4	1	
9	3012905400	SPECIAL BOLT T/U	6X22 SWCH22A(WH)	3	
10	3011450200	COVER CAB BRKT	PP	1	
11	7112401211	SCREW TAPPING	T1TRS 4X12 MFZN	2	
12	3010103700	ABSORBER SUC P	NR	1	
13	3011302012	CORD POWER AS		1	250V/16A
14	7112401211	SCREW TAPPING	T1TRS 4X12 MFZN	1	
15	7001400865	SCREW MACHINE	PAN 4X8 BSNI	1	
16	3013202700	HOSE DRN B	PP	1	
17	3012405800	GRILLE	SBHG1	1	
18	7112401211	SCREW TAPPING	T1TRS 4X12 MFZN	5	
19	3016805500	DRYER AS		1	
20	3014433500	PIPE WICON	TSW OD4.76XT0.7XL14560	1	
21	3011200400	CLAMP FAN	SUS304	1	
22	3011800400	FAN		1	
23		MOTOR C		1	
24	3012004400	FIXTURE C MOTR	SUS	1	
25	3010102100	ABSORBER C MOTR	"NR,FRB-5350NT"	1	
26	3011161900	CASE VAPORI	PP	1	
27	7112401211	SCREW TAPPING	T1TRS 4X12 MFZN	2	
28		COMPRESSOR		1	
29	3018116610	SWITCH P-RELAY AS		1	
30	3012610000	CLAMP BRAND RELAY	SK-5 T0.7	1	
31	3010318400	BASE COMP	SBHG1	1	
32	3016500000	CASTER *B	PP OD36XL37	2	
33	3014902900	SHAFT CASTER *B	"SPH, T1, OD6XL51"	2	
34	3016003300	SPECIAL BOLT	T2 M6.5X20	4	
35	3012007900	FIXTURE MOTR B	PP	1	
36		MOTOR F		1	
37	3011802200	FAN	ABS(OD110)	1	

EXEPLoded VIEW AND PARTS LIST

NO	PART CODE	PART NAME	PART DESCRIPTION	Q'TY	REMARK
38	7112401211	SCREW TAPPING	T1TRS 4X12 MFZN	2	
39	3013336310	INSU F LUVR	EPS	1	
40	3013402600	KNOB F CONTL	PP	1	
41	3018910400	LOUVER F	HIPS	1	
42	7112401611	SCREW TAPPING	T1TRS 4X16 MFZN	2	
43	3010924600	CAP F-LUVR	HIPS T2.3	2	
44	3017821600	SHELF F	HIPS T3.0	1	
45	7112401208	SCREW TAPPING	T1 TRS 4X10 SUS	1	
46	3012509800	GUIDE TWIST ICE	HIPS	1	
47	3013002300	HOLDER ICE SAS	HIPS	1	
48	3012201900	FRAME ICE CASE SAS		1	
49	3010518900	BOX ICE		1	
50	3018100050	SWITCH DR	DSD-5(220V)	1	
51	3010936100	CAP DV *M HI HOLE	ABS	1	
52	3017903610	SOCKET R LAMP AS		1	
53	3013600080	LAMP AS	240V/15W	1	
54	7121300811	SCREW TAPPING	T2 PAN 3X8 MFZN	1	
55	3013402500	KNOB R CONTL	ABS	1	
56	3011449900	COVER R CONTL BOX	HIPS	1	
57	3012733700	HARNESS R-THERMO AS		1	
58	3018301500	THERMOSTAT	GNF-175D	1	
59	3015505200	WINDOW LAMP	PP	1	
60	3011439500	COVER CUBIC	HIPS	4	
61	3017460900	INSU R *S *L	F-PS	1	
62	3018910200	LOUVER R *S *L	PP	1	
63	3017461000	INSU R *S *R	F-PS	1	
64	3018910300	LOUVER R *S *R	PP	1	
65	3017821800	SHELF CHILD	GPSS	1	
66	3011162300	CASE CHILD	GPSS	1	
67	3017822000	SHELF R	GPSS	1	
68	3011451400	COVER VEGETB	GPSS	1	
69	3011162400	CASE VEGETB	GPSS	1	
70	3013336000	INSULATOR F A	EPS	1	
71	3012509900	GUIDE DRN	AL 0.4T	1	
72	3014433400	PIPE DRN	AL 1.0T	1	
73	3012009400	FIXTURE R CONTL COVR	PP	1	
74	3013336100	INSULATOR F B	EPS	1	
75		ASSY F DR		1	
76	3011450400	COVER CAP HOLE B	PP	1	
77	3011450500	COVER T HI HRNS *L	PP	1	

EXPLODED VIEW AND PARTS LIST

NO	PART CODE	PART NAME	PART DESCRIPTION	Q'TY	REMARK
78	7112401211	SCREW TAPPING	T1TRS 4X12 MFZN	1	
79	3012301420	GASKET F DR AS	PVC	1	
80	3019013500	POCKET F	HIPS	2	
81		ASSY R DR		1	
82	3011450300	COVER CAP HOLE A	PP	1	
83	3012301720	GASKET R DR AS	PVC	1	
84	3011451200	COVER DARIY ROOM	GPPS	1	
85	3019012900	POCKET DAIRY	HIPS	1	
86	3011162100	CASE EGG	GPPS	1	
87	3019013100	POCKET SMALL	HIPS	3	
88	3012509600	GUIDE POCKET	HIPS	1	
89	3019013300	POCKET JUMBO	HIPS	1	
90	3019013400	POCKET BOTTLE	HIPS	1	

EXPLODED VIEW AND PARTS LIST

FR-4501K

NO	PART CODE	PART NAME	PART DESCRIPTION	Q'TY	REMARK
75	30100894A0	ASSY F DOOR	White PCM	1	CFC
	30100894B0		White High-glossy Laminasheet	1	CFC
	30100894C0		Beige PCM	1	CFC
	30100894D0		Beige High-glossy Laminasheet	1	CFC
	30100894E0		Light Gray High-glossy Laminasheet	1	CFC
	30100894F0		Daewoo Silver	1	CFC
	30100894G0		White Embo PCM	1	CFC
	30100894H0		Beige Embo PCM	1	CFC
	30100894J0		White PCM	1	HCFC
	30100894K0		White High-glossy Laminasheet	1	HCFC
	30100894L0		Beige PCM	1	HCFC
	30100894M0		Beige High-glossy Laminasheet	1	HCFC
	30100894N0		Light Gray High-glossy Laminasheet	1	HCFC
	30100894P0		Daewoo Silver	1	HCFC
	30100894Q0		White Embo PCM	1	HCFC
30100894R0		Beige Embo PCM	1	HCFC	
81	30100334A0	ASSY R DOOR	White PCM	1	CFC
	30100334B0		White High-glossy Laminasheet	1	CFC
	30100334C0		Beige PCM	1	CFC
	30100334D0		Beige High-glossy Laminasheet	1	CFC
	30100334E0		Light Gray High-glossy Laminasheet	1	CFC
	30100334H0		Daewoo Silver	1	CFC
	30100334J0		White Embo PCM	1	CFC
	30100334K0		Beige Embo PCM	1	CFC
	30100334L0		White PCM	1	HCFC
	30100334M0		White High-glossy Laminasheet	1	HCFC
	30100334N0		Beige PCM	1	HCFC
	30100334P0		Beige High-glossy Laminasheet	1	HCFC
	30100334Q0		Light Gray High-glossy Laminasheet	1	HCFC
	30100334R0		Daewoo Silver	1	HCFC
	30100334S0		White Embo PCM	1	HCFC
	30100334T0		Beige Embo PCM	1	HCFC
	30100334AK		White PCM	1	Key type CFC
	30100334BK		White High-glossy Laminasheet	1	Key type CFC
	30100334CK		Beige PCM	1	Key type CFC
	30100334DK		Beige High-glossy Laminasheet	1	Key type CFC
	30100334EK		Light Gray High-glossy Laminasheet	1	Key type CFC
	30100334HK		Daewoo Silver	1	Key type CFC
	30100334JK		White Embo PCM	1	Key type CFC
	30100334KK		Beige Embo PCM	1	Key type CFC
	30100334LK		White PCM	1	Key type HCFC
	30100334MK		White High-glossy Laminasheet	1	Key type HCFC
	30100334NK		Beige PCM	1	Key type HCFC
	30100334PK		Beige High-glossy Laminasheet	1	Key type HCFC
	30100334QK		Light Gray High-glossy Laminasheet	1	Key type HCFC
	30100334RK		Daewoo Silver	1	Key type HCFC
	30100334SK		White Embo PCM	1	Key type HCFC
	30100334TK		Beige Embo PCM	1	Key type HCFC

EXEPLoded VIEW AND PARTS LIST

2) FR-4501N(In case of NO. 79,91 refer to 46page)

NO	PART CODE	PART NAME	PART DESCRIPTION	Q'TY	REMARK
1	3010031200	ASSY CAB URT	FRM(P)-371	1	
2	3012911500	HINGE*T	SPCC T2	1	
3	3012905400	SPECIAL BOLT T/U	6X22 SWCH22A(WH)	3	
4	3011449800	COVER *T HI	HIPS	1	
5	3011449500	COVER GUIDE L/WIRE	PP	1	
6	7112401211	SCREW TAPPING	T1TRS 4X12 MFZN	1	
7	3010519800	BOX MAIN POWER	PP	1	
8		PCB MAIN AS	PP	1	
9		HARNESS RUN CON		1	
10		COVER M-PCB BOX	PP	1	
11	7112401211	SCREW TAPPING	T1TRS 4X12 MFZN	2	
12	3012911400	HINGE *M AS	DC-2 ZN	1	
13	3016001220	SPECIAL BOLT M	6X20 SWCH22A(WH)	2	
14	3012101300	FOOT ADJUST AS		2	
15	3012911300	HINGE *U AS	SPHC-H T4	1	
16	3012905400	SPECIAL BOLT T/U	6X22 SWCH22A(WH)	3	
17	3011450200	COVER CAB BRKT	PP	1	
18	7112401211	SCREW TAPPING	T1TRS 4X12 MFZN	2	
19	3010103700	ABSORBER SUC P	NR	1	
20	3011302012	CORD POWER AS		1	250V/16A
21	7112401211	SCREW TAPPING	T1TRS 4X12 MFZN	1	
22	7001400865	SCREW MACHINE	PAN 4X8 BSNI	1	
23	3013202700	HOSE DRN B	PP	1	
24	3012405800	GRILLE	SBHG1	1	
25	7112401211	SCREW TAPPING	T1TRS 4X12 MFZN	5	
26	3016805500	DRYER AS		1	
27	3014433500	PIPE WICON	TSW OD4.76XT0.7XL14560	1	
28	3011200400	CLAMP FAN	SUS304	1	
29	3011800400	FAN		1	
30		MOTOR C		1	
31	3012004400	FIXTURE C MOTR	SUS	1	
32	3010102100	ABSORBER C MOTR	"NR,FRB-5350NT"	1	
33	3011161900	CASE VAPORI	PP	1	
34	7112401211	SCREW TAPPING	T1TRS 4X12 MFZN	2	
35		COMPRESSOR		1	
36	3018116610	SWITCH P-RELAY AS		1	
37	3012610000	CLAMP BRAND RELAY	SK-5 T0.7	1	
38	3010318400	BASE COMP	SBHG1	1	

EXPLODED VIEW AND PARTS LIST

NO	PART CODE	PART NAME	PART DESCRIPTION	Q'TY	REMARK
39	3016500000	CASTER *B	PP OD36XL37	2	
40	3014902900	SHAFT CASTER *B	"SPH, T1, OD6XL51"	2	
41	3016003300	SPECIAL BOLT	T2 M6.5X20	4	
42	3012007900	FIXTURE MOTR B	PP	1	
43		MOTOR F		1	
44	3011802200	FAN	ABS(OD110)	1	
45	7112401211	SCREW TAPPING	T1TRS 4X12 MFZN	2	
46	3013336310	INSU F LUVR	EPS	1	
47	3013402600	KNOB F CONTL	PP	1	
48	3018910400	LOUVER F	HIPS	1	
49	7112401611	SCREW TAPPING	T1TRS 4X16 MFZN	2	
50	3010924600	CAP F-LUVR	HIPS T2.3	2	
51	3017821600	SHELF F	HIPS T3.0	1	
52	3013002300	HOLDER ICE SAS	HIPS	1	
53	3012201900	FRAME ICE CASE SAS		1	
54	3010518900	BOX ICE	GPPS	1	
55	3012509800	GUIDE TWIST ICE	HIPS	1	
56	7112401208	SCREW TAPPING	T1 TRS 4X10 SUS	1	
57	3018100050	SWITCH DR	DSD-5(220V)	1	
58	3010936100	CAP DV *M HI HOLE	ABS	1	
59	3011450100	COVER R LAMP	HIPS	1	
60	3017903610	SOCKET R LAMP AS		1	
61	3013600080	LAMP AS	240V/15W	1	
62	7121300811	SCREW TAPPING	T2 PAN 3X8 MFZN	1	
63	3015505200	WINDOW LAMP	PP	1	
64	3011439500	COVER CUBIC	HIPS	2	
65	3017460900	INSU R *S *L	F-PS	1	
66	3018910200	LOUVER R *S *L	PP	1	
67	3017461000	INSU R *S *R	F-PS	1	
68	3018910300	LOUVER R *S *R	PP	1	
69	3017821800	SHELF CHILD	GPPS	1	
70	3011162300	CASE CHILD	GPPS	1	
71	3017822000	SHELF R	GPPS	1	
72	3011451400	COVER VEGETB	GPPS	1	
73	3011162500	CASE VEGETB	GPPS	2	
74	3013336000	INSULATOR F A	EPS	1	
75	3012509900	GUIDE DRN	AL 0.4T	1	
76	3014433400	PIPE DRN	AL 1.0T	1	
77	3012009400	FIXTURE R CONTL COVR	PP	1	

EXEPLoded VIEW AND PARTS LIST

NO	PART CODE	PART NAME	PART DESCRIPTION	Q'TY	REMARK
78	3013336100	INSULATOR F B	EPS	1	
79		ASSY F DR		1	
80	301550530	WINDOW FCP	GPPS	1	
81	7112401211	SCREW TAPPING	T1 TRS 4X12 MFZN	1	
82	3014228600	PANEL CONTROL F	ABS	1	
83	3014228600	PCB FRONT AS	T1.6	1	
84	7121300811	SCREW TAPPING	T2 PAN 3X8 MFZN	1	
85	3011450400	COVER CAP HOLE B	PP	1	
86	3011450500	COVER T HI HRNS *L	PP	1	
87	7112401211	SCREW TAPPING	T1TRS 4X12 MFZN	1	
88	3012301420	GASKET F DR AS	PVC	1	
89	3019013500	POCKET F	HIPS	2	
90	3011450300	COVER CAP HOLE A	PP	1	
91		ASSY R DR		1	
92	3012301720	GASKET R DR AS	PVC	1	
93	3011451300	COVER DARIY ROOM	GPPS	1	
94	3019013000	POCKET DAIRY	HIPS	1	
95	3011162100	CASE EGG	GPPS	1	
96	3019013100	POCKET SMALL	HIPS	3	
97	3012509600	GUIDE POCKET	HIPS	1	
98	3019013300	POCKET JUMBO	HIPS	1	
99	3019013400	POCKET BOTTLE	HIPS	1	

EXPLODED VIEW AND PARTS LIST

FR-4501N

NO	PART CODE	PART NAME	PART DESCRIPTION	Q'TY	REMARK
79	30100896A0	ASS'Y F DOOR	White PCM	1	CFC
	30100896B0		White High-glossy Laminasheet	1	CFC
	30100896C0		Beige PCM	1	CFC
	30100896D0		Beige High-glossy Laminasheet	1	CFC
	30100896E0		Light Gray High-glossy Laminasheet	1	CFC
	30100896F0		Daewoo Silver	1	CFC
	30100896G0		White Embo PCM	1	CFC
	30100896H0		Beige Embo PCM	1	CFC
	30100896J0		White PCM	1	HCFC
	30100896K0		White High-glossy Laminasheet	1	HCFC
	30100896L0		Beige PCM	1	HCFC
	30100896M0		Beige High-glossy Laminasheet	1	HCFC
	30100896N0		Light Gray High-glossy Laminasheet	1	HCFC
	30100896P0		Daewoo Silver	1	HCFC
	30100896Q0		White Embo PCM	1	HCFC
	30100896R0		Beige Embo PCM	1	HCFC
91	30100334A0	ASS'Y R DOOR	White PCM	1	CFC
	30100334B0		White High-glossy Laminasheet	1	CFC
	30100334C0		Beige PCM	1	CFC
	30100334D0		Beige High-glossy Laminasheet	1	CFC
	30100334E0		Light Gray High-glossy Laminasheet	1	CFC
	30100334H0		Daewoo Silver	1	CFC
	30100334J0		White Embo PCM	1	CFC
	30100334K0		Beige Embo PCM	1	CFC
	30100334L0		White PCM	1	HCFC
	30100334M0		White High-glossy Laminasheet	1	HCFC
	30100334N0		Beige PCM	1	HCFC
	30100334P0		Beige High-glossy Laminasheet	1	HCFC
	30100334Q0		Light Gray High-glossy Laminasheet	1	HCFC
	30100334R0		Daewoo Silver	1	HCFC
	30100334S0		White Embo PCM	1	HCFC
	30100334T0		Beige Embo PCM	1	HCFC
	30100334AK		White PCM	1	Key type CFC
	30100334BK		White High-glossy Laminasheet	1	Key type CFC
	30100334CK		Beige PCM	1	Key type CFC
	30100334DK		Beige High-glossy Laminasheet	1	Key type CFC
	30100334EK		Light Gray High-glossy Laminasheet	1	Key type CFC
	30100334HK		Daewoo Silver	1	Key type CFC
	30100334JK		White Embo PCM	1	Key type CFC
	30100334KK		Beige Embo PCM	1	Key type CFC
	30100334LK		White PCM	1	Key type HCFC
	30100334MK		White High-glossy Laminasheet	1	Key type HCFC
	30100334NK		Beige PCM	1	Key type HCFC
	30100334PK		Beige High-glossy Laminasheet	1	Key type HCFC
	30100334QK		Light Gray High-glossy Laminasheet	1	Key type HCFC
	30100334RK		Daewoo Silver	1	Key type HCFC
	30100334SK		White Embo PCM	1	Key type HCFC
	30100334TK		Beige Embo PCM	1	Key type HCFC

EXPLODED VIEW AND PARTS LIST

3) FR-4502K(In case of NO. 75,88refer to 50page)

NO	PART CODE	PART NAME	PART DESCRIPTION	Q'TY	REMARK
1	3010031200	ASSY CAB URT	FRM(P)-371	1	
2	3012911500	HINGE*T	SPCC T2	1	
3	3012905400	SPECIAL BOLT T/U	6X22 SWCH22A(WH)	3	
4	3011449800	COVER *T HI	HIPS	1	
5	3012911400	HINGE *M AS	DC-2 ZN	1	
6	3016001220	SPECIAL BOLT M	6X20 SWCH22A(WH)	2	
7	3012101300	FOOT ADJUST AS	PP	2	
8	3012911300	HINGE *U AS	SPHC-H T4	1	
9	3012905400	SPECIAL BOLT T/U	6X22 SWCH22A(WH)	3	
10	3011450200	COVER CAB BRKT	PP	1	
11	7112401211	SCREW TAPPING	T1TRS 4X12 MFZN	2	
12	3010103700	ABSORBER SUC P	NR	1	
13	3011302012	CORD POWER AS		1	250V/16A
14	7112401211	SCREW TAPPING	T1TRS 4X12 MFZN	1	
15	7001400865	SCREW MACHINE	PAN 4X8 BSNI	1	
16	3013202700	HOSE DRN B	PP	1	
17	3012405800	GRILLE	SBHG1	1	
18	7112401211	SCREW TAPPING	T1TRS 4X12 MFZN	5	
19	3016805500	DRYER AS		1	
20	3014433500	PIPE WICON	TSW OD4.76XT0.7XL14560	1	
21	3011200400	CLAMP FAN	SUS304	1	
22	3011800400	FAN		1	
23		MOTOR C		1	
24	3012004400	FIXTURE C MOTR	SUS	1	
25	3010102100	ABSORBER C MOTR	"NR,FRB-5350NT"	1	
26	3011161900	CASE VAPORI	PP	1	
27	7112401211	SCREW TAPPING	T1TRS 4X12 MFZN	2	
28		COMPRESSOR		1	
29	3018116610	SWITCH P-RELAY AS		1	
30	3012610000	CLAMP BRAND RELAY	SK-5 T0.7	1	
31	3010318400	BASE COMP	SBHG1	1	
32	3016500000	CASTER *B	PP OD36XL37	2	
33	3014902900	SHAFT CASTER *B	"SPH, T1, OD6XL51"	2	
34	3016003300	SPECIAL BOLT	T2 M6.5X20	4	
35	3012007900	FIXTURE MOTR B	PP	1	
36		MOTOR F		1	
37	3011802200	FAN	ABS(OD110)	1	
38	7112401211	SCREW TAPPING	T1TRS 4X12 MFZN	2	

EXEPLoded VIEW AND PARTS LIST

NO	PART CODE	PART NAME	PART DESCRIPTION	Q'TY	REMARK
39	3013336310	INSU F LUVR	EPS	1	
40	3013402600	KNOB F CONTL	PP	1	
41	3018910400	LOUVER F	HIPS	1	
42	7112401611	SCREW TAPPING	T1TRS 4X16 MFZN	2	
43	3010924600	CAP F-LUVR	HIPS T2.3	2	
44	3017821600	SHELF F	HIPS T3.0	1	
45	3013002300	HOLDER ICE SAS	HIPS	1	
46	3012201900	FRAME ICE CASE SAS		1	
47	3010518900	BOX ICE	GPPS	1	
48	3012509800	GUIDE TWIST ICE	HIPS	1	
49	7112401208	SCREW TAPPING	T1 TRS 4X10 SUS	1	
50	3018100050	SWITCH DR	DSD-5(220V)	1	
51	3010936100	CAP DV *M HI HOLE	ABS	1	
52	3017903610	SOCKET R LAMP AS		1	
53	3013600080	LAMP AS	240V/15W	1	
54	7121300811	SCREW TAPPING	T2 PAN 3X8 MFZN	1	
55	3013402500	KNOB R CONTL	ABS	1	
56	3011449900	COVER R CONTL BOX	HIPS	1	
57	3012733700	HARNESS R-THERMO		1	
58	3018301500	THERMOSTAT	GNF-175D	1	
59	3015505200	WINDOW LAMP	PP	1	
60	3011439500	COVER CUBIC	HIPS	2	
61	3017460900	INSU R *S *L	F-PS	1	
62	3018910200	LOUVER R *S *L	PP	1	
63	3017461000	INSU R *S *R	F-PS	1	
64	3018910300	LOUVER R *S *R	PP	1	
65	3017821800	SHELF CHILD	GPPS	1	
66	3011162300	CASE CHILD	GPPS	1	
67	3017822000	SHELF R	GPPS	1	
68	3011451400	COVER VEGETB	GPPS	1	
69	3011162500	CASE VEGETB	GPPS	2	
70	3013336000	INSULATOR F A	EPS	1	
71	3012509900	GUIDE DRN	AL 0.4T	1	
72	3014433400	PIPE DRN	AL 1.0T	1	
73	3012009400	FIXTURE R CONTL COVR	PP	1	
74	3013336100	INSULATOR F B	EPS	1	
75		ASSY F DR		1	
76	3011450400	COVER CAP HOLE B	PP	1	
77	7112401211	SCREW TAPPING	T1TRS 4X12 MFZN	1	

EXPLODED VIEW AND PARTS LIST

NO	PART CODE	PART NAME	PART DESCRIPTION	Q'TY	REMARK
78	3011450500	COVER T HI HRNS *L	PP	1	
79	3012301420	GASKET F DR AS	PVC	1	
80	3019013500	POCKET F	HIPS	2	
81	7112401211	SCREW TAPPING	T1 FLT 4X12 MFZN	1	FR-4501,2,3N
82		HANDLE F	ABS	1	
83	7112401211	SCREW TAPPING	T1 FLT 4X12 MFZN	4	FR-4501,2,3N
84		HANDLE R	ABS	1	
85	7112401211	SCREW TAPPING	T1 FLT 4X12 MFZN	1	FR-4501,2,3N
86	3011450800	COVER CAP HNDL *L	ABS	1	
87	3011450300	COVER CAP HOLE A	PP	1	
88		ASSY R DR		1	
89	3012301720	GASKET R DR AS	PVC	1	
90	3010936600	CAP DR SCREW HOLE	PP	1	
91	3011451300	COVER DARIY ROOM	GPPS	1	
92	3019013000	POCKET DAIRY	HIPS	1	
93	3011162100	CASE EGG	GPPS	1	
94	3019013100	POCKET SMALL	HIPS	3	
95	3012509600	GUIDE POCKET	HIPS	1	
96	3019013300	POCKET JUMBO	HIPS	1	
97	3019013400	POCKET BOTTLE	HIPS	1	

EXPLODED VIEW AND PARTS LIST

FR-4502K

NO	PART CODE	PART NAME	PART DESCRIPTION	Q'TY	REMARK
75	30100895A0	ASS'Y F DOOR	White PCM	1	CFC
	30100895B0		White High-glossy Laminasheet	1	CFC
	30100895C0		Beige PCM	1	CFC
	30100895D0		Beige High-glossy Laminasheet	1	CFC
	30100895E0		Light Gray High-glossy Laminasheet	1	CFC
	30100895F0		Daewoo Silver	1	CFC
	30100895G0		White Embo PCM	1	CFC
	30100895H0		Beige Embo PCM	1	CFC
	30100895J0		White PCM	1	HCFC
	30100895K0		White High-glossy Laminasheet	1	HCFC
	30100895L0		Beige PCM	1	HCFC
	30100895M0		Beige High-glossy Laminasheet	1	HCFC
	30100895N0		Light Gray High-glossy Laminasheet	1	HCFC
	30100895P0		Daewoo Silver	1	HCFC
	30100895Q0		White Embo PCM	1	HCFC
30100895R0		Beige Embo PCM	1	HCFC	
88	30100335A0	ASS'Y R DOOR	White PCM	1	CFC
	30100335B0		White High-glossy Laminasheet	1	CFC
	30100335C0		Beige PCM	1	CFC
	30100335D0		Beige High-glossy Laminasheet	1	CFC
	30100335E0		Light Gray High-glossy Laminasheet	1	CFC
	30100335H0		Daewoo Silver	1	CFC
	30100335J0		White Embo PCM	1	CFC
	30100335K0		Beige Embo PCM	1	CFC
	30100335L0		White PCM	1	HCFC
	30100335M0		White High-glossy Laminasheet	1	HCFC
	30100335N0		Beige PCM	1	HCFC
	30100335P0		Beige High-glossy Laminasheet	1	HCFC
	30100335Q0		Light Gray High-glossy Laminasheet	1	HCFC
	30100335R0		Daewoo Silver	1	HCFC
	30100335S0		White Embo PCM	1	HCFC
	30100335T0		Beige Embo PCM	1	HCFC
	30100335AK		White PCM	1	Key type CFC
	30100335BK		White High-glossy Laminasheet	1	Key type CFC
	30100335CK		Beige PCM	1	Key type CFC
	30100335DK		Beige High-glossy Laminasheet	1	Key type CFC
	30100335EK		Light Gray High-glossy Laminasheet	1	Key type CFC
	30100335HK		Daewoo Silver	1	Key type CFC
	30100335JK		White Embo PCM	1	Key type CFC
	30100335KK		Beige Embo PCM	1	Key type CFC
	30100335LK		White PCM	1	Key type HCFC
	30100335MK		White High-glossy Laminasheet	1	Key type HCFC
	30100335NK		Beige PCM	1	Key type HCFC
	30100335PK		Beige High-glossy Laminasheet	1	Key type HCFC
	30100335QK		Light Gray High-glossy Laminasheet	1	Key type HCFC
	30100335RK		Daewoo Silver	1	Key type HCFC
30100335SK		White Embo PCM	1	Key type HCFC	
30100335TK		Beige Embo PCM	1	Key type HCFC	

EXEPLoded VIEW AND PARTS LIST

4) FR-4502N(In case of NO. 79,97 refer to 57page)

NO	PART CODE	PART NAME	PART DESCRIPTION	Q'TY	REMARK
1	3010031200	ASSY CAB URT	FRM(P)-371	1	
2	3012911500	HINGE*T	SPCC T2	1	
3	3012905400	SPECIAL BOLT T/U	6X22 SWCH22A(WH)	3	
4	3011449800	COVER *T HI	HIPS	1	
5	3011449500	COVER GUIDE L/WIRE	PP	1	
6	7112401211	SCREW TAPPING	T1TRS 4X12 MFZN	1	
7	3010519800	BOX MAIN POWER	PP	1	
8		PCB MAIN AS	PP	1	
9		HARNESS RUN CON		1	
10		COVER M-PCB BOX	PP	1	
11	7112401211	SCREW TAPPING	T1TRS 4X12 MFZN	2	
12	3012911400	HINGE *M AS	DC-2 ZN	1	
13	3016001220	SPECIAL BOLT M	6X20 SWCH22A(WH)	2	
14	3012101300	FOOT ADJUST AS	PP	2	
15	3012911300	HINGE *U AS	SPHC-H T4	1	
16	3012905400	SPECIAL BOLT T/U	6X22 SWCH22A(WH)	3	
17	3011450200	COVER CAB BRKT	PP	1	
18	7112401211	SCREW TAPPING	T1TRS 4X12 MFZN	2	
19	3010103700	ABSORBER SUC P	NR	1	
20	3011302012	CORD POWER AS		1	250V/16A
21	7112401211	SCREW TAPPING	T1TRS 4X12 MFZN	1	
22	7001400865	SCREW MACHINE	PAN 4X8 BSNI	1	
23	3013202700	HOSE DRN B	PP	1	
24	3012405800	GRILLE	SBHG1	1	
25	7112401211	SCREW TAPPING	T1TRS 4X12 MFZN	5	
26	3016805500	DRYER AS		1	
27	3014433500	PIPE WICON	TSW OD4.76XT0.7XL14560	1	
28	3011200400	CLAMP FAN	SUS304	1	
29	3011800400	FAN		1	
30		MOTOR C		1	
31	3012004400	FIXTURE C MOTR	SUS	1	
32	3010102100	ABSORBER C MOTR	"NR,FRB-5350NT"	1	
33	3011161900	CASE VAPORI	PP	1	
34	7112401211	SCREW TAPPING	T1TRS 4X12 MFZN	2	
35		COMPRESSOR		1	
36	3018116610	SWITCH P-RELAY AS		1	
37	3012610000	CLAMP BRAND RELAY	SK-5 T0.7	1	
38	3010318400	BASE COMP	SBHG1	1	

EXPLODED VIEW AND PARTS LIST

NO	PART CODE	PART NAME	PART DESCRIPTION	Q'TY	REMARK
39	3016500000	CASTER *B	PP OD36XL37	2	
40	3014902900	SHAFT CASTER *B	"SPH, T1, OD6XL51"	2	
41	3016003300	SPECIAL BOLT	T2 M6.5X20	4	
42	3012007900	FIXTURE MOTR B	PP	1	
43		MOTOR F		1	
44	3011802200	FAN	ABS(OD110)	1	
45	7112401211	SCREW TAPPING	T1TRS 4X12 MFZN	2	
46	3013336310	INSU F LUVR	EPS	1	
47	3013402600	KNOB F CONTL	PP	1	
48	3018910400	LOUVER F	HIPS	1	
49	7112401611	SCREW TAPPING	T1TRS 4X16 MFZN	2	
50	3010924600	CAP F-LUVR	HIPS T2.3	2	
51	3017821600	SHELF F	HIPS T3.0	1	
52	3013002300	HOLDER ICE SAS	HIPS	1	
53	3012201900	FRAME ICE CASE SAS		1	
54	3010518900	BOX ICE	GPPS	1	
55	3012509800	GUIDE TWIST ICE	HIPS	1	
56	7112401208	SCREW TAPPING	T1 TRS 4X10 SUS	1	
57	3018100050	SWITCH DR	DSD-5(220V)	1	
58	3010936100	CAP DV *M HI HOLE	ABS	1	
59	3011450100	COVER R LAMP	HIPS	1	
60	3017903610	SOCKET R LAMP AS		1	
61	3013600080	LAMP AS	240V/15W	1	
62	7121300811	SCREW TAPPING	T2 PAN 3X8 MFZN	1	
63	3015505200	WINDOW LAMP	PP	1	
64	3011439500	COVER CUBIC	HIPS	2	
65	3017460900	INSU R *S *L	F-PS	1	
66	3018910200	LOUVER R *S *L	PP	1	
67	3017461000	INSU R *S *R	F-PS	1	
68	3018910300	LOUVER R *S *R	PP	1	
69	3017821800	SHELF CHILD	GPPS	1	
70	3011162300	CASE CHILD	GPPS	1	
71	3017822000	SHELF R	GPPS	1	
72	3011451400	COVER VEGETB	GPPS	1	
73	3011162500	CASE VEGETB	GPPS	2	
74	3013336000	INSULATOR F A	EPS	1	
75	3012509900	GUIDE DRN	AL 0.4T	1	
76	3014433400	PIPE DRN	AL 1.0T	1	
77	3012009400	FIXTURE R CONTL COVR	PP	1	

EXEPLoded VIEW AND PARTS LIST

NO	PART CODE	PART NAME	PART DESCRIPTION	Q'TY	REMARK
78	3013336100	INSULATOR F B	EPS	1	
79		ASSY F DR		1	
80	301550530	WINDOW FCP	GPPS	1	
81	7112401211	SCREW TAPPING	T1TRS 4X12 MFZN	1	FR-4501,2,3N
82	3014228600	PANEL CONTROL F	ABS	1	
83	3014228600	PCB FRONT AS	T1.6	1	
84	7121300811	SCREW TAPPING	T2 PAN 3X8 MFZN	1	
85	7112401211	SCREW TAPPING	T1TRS 4X12 MFZN	1	
86	3011450400	COVER CAP HOLE B	PP	1	
87	3011450500	COVER T HI HRNS *L	PP	1	
88	3012301420	GASKET F DR AS	PVC	1	
89	3019013500	POCKET F	HIPS	2	
90	7112401211	SCREW TAPPING	T1 FLT 4X12 MFZN	1	FR-4501,2,3N
91		HANDLE F	ABS	1	
92	7112401211	SCREW TAPPING	T1 FLT 4X12 MFZN	4	FR-4501,2,3N
93		HANDLE R	ABS	1	
94	7112401211	SCREW TAPPING	T1 FLT 4X12 MFZN	1	FR-4501,2,3N
95	3011450800	COVER CAP HNDL *L	ABS	1	
96	3011450300	COVER CAP HOLE A	PP	1	
97		ASSY R DR		1	
98	3012301720	GASKET R DR AS	PVC	1	
99	3010936600	CAP DR SCREW HOLE	PP	1	
100	3011451300	COVER DARIY ROOM	GPPS	1	
101	3019013000	POCKET DAIRY	HIPS	1	
102	3011162100	CASE EGG	GPPS	1	
103	3019013100	POCKET SMALL	HIPS	3	
104	3012509600	GUIDE POCKET	HIPS	1	
105	3019013300	POCKET JUMBO	HIPS	1	
106	3019013400	POCKET BOTTLE	HIPS	1	

5) FR-4503N

NO	PART CODE	PART NAME	PART DESCRIPTION	Q'TY	REMARK
1	3010031200	ASSY CAB URT	FRM(P)-371	1	
2	3012911500	HINGE*T	SPCC T2	1	
3	3012905400	SPECIAL BOLT T/U	6X22 SWCH22A(WH)	3	
4	3011449800	COVER *T HI	HIPS	1	
5	3011449500	COVER GUIDE L/WIRE	PP	1	
6	7112401211	SCREW TAPPING	T1TRS 4X12 MFZN	1	
7	3010519800	BOX MAIN POWER	PP	1	
8		PCB MAIN AS	PP	1	
9		HARNESS RUN CON		1	
10		COVER M-PCB BOX	PP	1	
11	7112401211	SCREW TAPPING	T1TRS 4X12 MFZN	2	
12	3012911400	HINGE *M AS	DC-2 ZN	1	
13	3016001220	SPECIAL BOLT M	6X20 SWCH22A(WH)	2	
14	3012101300	FOOT ADJUST AS	PP	2	
15	3012911300	HINGE *U AS	SPHC-H T4	1	
16	3012905400	SPECIAL BOLT T/U	6X22 SWCH22A(WH)	3	
17	3011450200	COVER CAB BRKT	PP	1	
18	7112401211	SCREW TAPPING	T1TRS 4X12 MFZN	2	
19	3010103700	ABSORBER SUC P	NR	1	
20	3011302012	CORD POWER AS		1	250V/16A
21	7112401211	SCREW TAPPING	T1TRS 4X12 MFZN	1	
22	7001400865	SCREW MACHINE	PAN 4X8 BSNI	1	
23	3013202700	HOSE DRN B	PP	1	
24	3012405800	GRILLE	SBHG1	1	
25	7112401211	SCREW TAPPING	T1TRS 4X12 MFZN	5	
26	3016805500	DRYER AS		1	
27	3014433500	PIPE WICON	TSW OD4.76XT0.7XL14560	1	
28	3011200400	CLAMP FAN	SUS304	1	
29	3011800400	FAN		1	
30		MOTOR C		1	
31	3012004400	FIXTURE C MOTR	SUS	1	
32	3010102100	ABSORBER C MOTR	"NR,FRB-5350NT"	1	
33	3011161900	CASE VAPORI	PP	1	
34	7112401211	SCREW TAPPING	T1TRS 4X12 MFZN	2	
35		COMPRESSOR		1	
36	3018116610	SWITCH P-RELAY AS		1	
37	3012610000	CLAMP BRAND RELAY	SK-5 T0.7	1	
38	3010318400	BASE COMP	SBHG1	1	

EXEPLoded VIEW AND PARTS LIST

NO	PART CODE	PART NAME	PART DESCRIPTION	Q'TY	REMARK
39	3016500000	CASTER *B	PP OD36XL37	2	
40	3014902900	SHAFT CASTER *B	"SPH, T1, OD6XL51"	2	
41	3016003300	SPECIAL BOLT	T2 M6.5X20	4	
42	3012007900	FIXTURE MOTR B	PP	1	
43		MOTOR F		1	
44	3011802200	FAN	ABS(OD110)	1	
45	7112401211	SCREW TAPPING	T1TRS 4X12 MFZN	2	
46	3013336310	INSU F LUVR	EPS	1	
47	3013402600	KNOB F CONTL	PP	1	
48	3018910400	LOUVER F	HIPS	1	
49	7112401611	SCREW TAPPING	T1TRS 4X16 MFZN	2	
50	3010924600	CAP F-LUVR	HIPS T2.3	2	
51	3017821600	SHELF F	HIPS T3.0	1	
52	3013002300	HOLDER ICE SAS	HIPS	1	
53	3012201900	FRAME ICE CASE SAS		1	
54	3010518900	BOX ICE	GPPS	1	
55	3012509800	GUIDE TWIST ICE	HIPS	1	
56	7112401208	SCREW TAPPING	T1 TRS 4X10 SUS	1	
57	3018100050	SWITCH DR	DSD-5(220V)	1	
58	3010936100	CAP DV *M HI HOLE	ABS	1	
59	3011450100	COVER R LAMP	HIPS	1	
60	3017903610	SOCKET R LAMP AS		1	
61	3013600080	LAMP AS	240V/15W	1	
62	7121300811	SCREW TAPPING	T2 PAN 3X8 MFZN	1	
63	3015505200	WINDOW LAMP	PP	1	
64	3011439500	COVER CUBIC	HIPS	2	
65	3017460900	INSU R *S *L	F-PS	1	
66	3018910200	LOUVER R *S *L	PP	1	
67	3017461000	INSU R *S *R	F-PS	1	
68	3018910300	LOUVER R *S *R	PP	1	
69	3017821900	SHELF CHILD	HIPS	1	
70	3011162300	CASE CHILD	GPPS	1	
71	3017822100	SHELF R	HIPS	1	
72	3011451400	COVER VEGETB	GPPS	1	
73	3011162500	CASE VEGETB	GPPS	2	
74	3013336000	INSULATOR F A	EPS	1	
75	3012509900	GUIDE DRN	AL 0.4T	1	
76	3014433400	PIPE DRN	AL 1.0T	1	
77	3012009400	FIXTURE R CONTL COVR	PP	1	

EXPLODED VIEW AND PARTS LIST

NO	PART CODE	PART NAME	PART DESCRIPTION	Q'TY	REMARK
78	3013336100	INSULATOR F B	EPS	1	
79		ASSY F DR		1	
80	301550530	WINDOW FCP	GPPS	1	
81	7112401211	SCREW TAPPING	T1TRS 4X12 MFZN	1	FR-4501,2,3N
82	3014228600	PANEL CONTROL F	ABS	1	
83	3014228600	PCB FRONT AS	T1.6	1	
84	7121300811	SCREW TAPPING	T2 PAN 3X8 MFZN	1	
85	7112401211	SCREW TAPPING	T1TRS 4X12 MFZN	1	FR-4501,2,3N
86	3011450400	COVER CAP HOLE B	PP	1	
87	3011450500	COVER T HI HRNS *L	PP	1	
88	3012301420	GASKET F DR AS	PVC	1	
89	3019013500	POCKET F	HIPS	2	
90		SCREW TAPPING	T1 FLT 4X12 MFZN	1	
91		HANDLE F	ABS	1	
92		SCREW TAPPING	T1 FLT 4X12 MFZN	4	
93		HANDLE R	ABS	1	
94		SCREW TAPPING	T1 FLT 4X12 MFZN	1	
95	3011450800	COVER CAP HNDL *L	ABS	1	
96	3011450300	COVER CAP HOLE A	PP	1	
97		ASSY R DR		1	
98	3012301720	GASKET R DR AS	PVC	1	
99	3010936600	CAP DR SCREW HOLE	PP	1	
100	3011451300	COVER DAIRY ROOM	GPPS	2	
101	3019013000	POCKET DAIRY	HIPS	2	
102	3011162100	CASE EGG	GPPS	1	
103	3019013100	POCKET SMALL	HIPS	2	
104	3012509600	GUIDE POCKET	HIPS	1	
105	3019013300	POCKET JUMBO	HIPS	1	
106	3019013400	POCKET BOTTLE	HIPS	1	

EXPLODED VIEW AND PARTS LIST

FR-4502N, FR-4503N

NO	PART CODE	PART NAME	PART DESCRIPTION	QTY	REMARK
79	30100897A0	ASS'Y F DOOR	White PCM	1	CFC
	30100897B0		White High-glossy Laminasheet	1	CFC
	30100897C0		Beige PCM	1	CFC
	30100897D0		Beige High-glossy Laminasheet	1	CFC
	30100897E0		Light Gray High-glossy Laminasheet	1	CFC
	30100897F0		Daewoo Silver	1	CFC
	30100897G0		White Embo PCM	1	CFC
	30100897H0		Beige Embo PCM	1	CFC
	30100897J0		White PCM	1	HCFC
	30100897K0		White High-glossy Laminasheet	1	HCFC
	30100897L0		Beige PCM	1	HCFC
	30100897M0		Beige High-glossy Laminasheet	1	HCFC
	30100897N0		Light Gray High-glossy Laminasheet	1	HCFC
	30100897P0		Daewoo Silver	1	HCFC
	30100897Q0		White Embo PCM	1	HCFC
30100897R0		Beige Embo PCM	1	HCFC	
97	30100335A0	ASS'Y R DOOR	White PCM	1	CFC
	30100335B0		White High-glossy Laminasheet	1	CFC
	30100335C0		Beige PCM	1	CFC
	30100335D0		Beige High-glossy Laminasheet	1	CFC
	30100335E0		Light Gray High-glossy Laminasheet	1	CFC
	30100335H0		Daewoo Silver	1	CFC
	30100335J0		White Embo PCM	1	CFC
	30100335K0		Beige Embo PCM	1	CFC
	30100335L0		White PCM	1	HCFC
	30100335M0		White High-glossy Laminasheet	1	HCFC
	30100335N0		Beige PCM	1	HCFC
	30100335P0		Beige High-glossy Laminasheet	1	HCFC
	30100335Q0		Light Gray High-glossy Laminasheet	1	HCFC
	30100335R0		Daewoo Silver	1	HCFC
	30100335S0		White Embo PCM	1	HCFC
	30100335T0		Beige Embo PCM	1	HCFC
	30100335AK		White PCM	1	Key type CFC
	30100335BK		White High-glossy Laminasheet	1	Key type CFC
	30100335CK		Beige PCM	1	Key type CFC
	30100335DK		Beige High-glossy Laminasheet	1	Key type CFC
	30100335EK		Light Gray High-glossy Laminasheet	1	Key type CFC
	30100335HK		Daewoo Silver	1	Key type CFC
	30100335JK		White Embo PCM	1	Key type CFC
	30100335KK		Beige Embo PCM	1	Key type CFC
	30100335LK		White PCM	1	Key type HCFC
	30100335MK		White High-glossy Laminasheet	1	Key type HCFC
	30100335NK		Beige PCM	1	Key type HCFC
	30100335PK		Beige High-glossy Laminasheet	1	Key type HCFC
	30100335QK		Light Gray High-glossy Laminasheet	1	Key type HCFC
	30100335RK		Daewoo Silver	1	Key type HCFC
	30100335SK		White Embo PCM	1	Key type HCFC
	30100335TK		Beige Embo PCM	1	Key type HCFC

EXEPLoded VIEW AND PARTS LIST

6) FR-4504K(In case of NO.71,77 refer to 61page)

NO	PART CODE	PART NAME	PART DESCRIPTION	Q'TY	REMARK
1	3010031200	ASSY CAB URT	FRM(P)-371	1	
2	3012911500	HINGE*T	SPCC T2	1	
3	3012905400	SPECIAL BOLT T/U	6X22 SWCH22A(WH)	3	
4	3011449800	COVER *T HI	HIPS	1	
5	7112401211	SCREW TAPPING	T1TRS 4X12 MFZN	1	
6	3012911400	HINGE *M AS	DC-2 ZN	1	
7	3012101300	FOOT ADJUST AS	PP	2	
8	3012911300	HINGE *U AS	SPHC-H T4	1	
9	3012905400	SPECIAL BOLT T/U	6X22 SWCH22A(WH)	3	
10	3011450200	COVER CAB BRKT	PP	1	
11	7112401211	SCREW TAPPING	T1TRS 4X12 MFZN	2	
12	3010103700	ABSORBER SUC P	NR	1	
13	3011302012	CORD POWER AS		1	250V/16A
14	7112401211	SCREW TAPPING	T1TRS 4X12 MFZN	1	
15	7001400865	SCREW MACHINE	PAN 4X8 BSNI	1	
16	3013202700	HOSE DRN B	PP	1	
17	3012405800	GRILLE	SBHG1	1	
18	7112401211	SCREW TAPPING	T1TRS 4X12 MFZN	5	
19	3016805500	DRYER AS		1	
20	3014433500	PIPE WICON	TSW OD4.76XT0.7XL14560	1	
21	3011200400	CLAMP FAN	SUS304	1	
22	3011800400	FAN		1	
23		MOTOR C		1	
24	3012004400	FIXTURE C MOTR	SUS	1	
25	3010102100	ABSORBER C MOTR	"NR,FRB-5350NT"	1	
26	3011161900	CASE VAPORI	PP	1	
27	7112401211	SCREW TAPPING	T1TRS 4X12 MFZN	2	
28		COMPRESSOR		1	
29	3018116610	SWITCH P-RELAY AS		1	
30	3012610000	CLAMP BRAND RELAY	SK-5 T0.7	1	
31	3010318400	BASE COMP	SBHG1	1	
32	3016500000	CASTER *B	PP OD36XL37	2	
33	3014902900	SHAFT CASTER *B	"SPH, T1, OD6XL51"	2	
34	3016003300	SPECIAL BOLT	T2 M6.5X20	4	
35	3012007900	FIXTURE MOTR B	PP	1	
36		MOTOR F		1	
37	3011802200	FAN	ABS(OD110)	1	
38	7112401211	SCREW TAPPING	T1TRS 4X12 MFZN	2	

EXPLODED VIEW AND PARTS LIST

NO	PART CODE	PART NAME	PART DESCRIPTION	Q'TY	REMARK
39	3013336310	INSU F LUVR	EPS	1	
40	3013402600	KNOB F CONTL	PP	1	
41	3018910400	LOUVER F	HIPS	1	
42	7112401611	SCREW TAPPING	T1TRS 4X16 MFZN	2	
43	3010924600	CAP F-LUVR	HIPS T2.3	2	
44	3017821500	SHELF F	SWRM-B	1	
45	3012509700	GUIDE ICE CASE	HIPS	1	
46	3011162200	CASE ICE	PP	1	
47	3010518900	BOX ICE	GPSS	1	
48	3018100050	SWITCH DR	DSD-5(220V)	1	
49	3010936100	CAP DV *M HI HOLE	ABS	1	
50	3017903610	SOCKET R LAMP AS		1	
51	3013600080	LAMP AS	240V/15W	1	
52	7121300811	SCREW TAPPING	T2 PAN 3X8 MFZN	1	
53	3013402500	KNOB R CONTL	ABS	1	
54	3011449900	COVER R CONTL BOX	HIPS	1	
55	3012733700	HARNESS R-THERMO		1	
56	3018301500	THERMOSTAT	GNF-175D	1	
57	3015505200	WINDOW LAMP	PP	1	
58	3011439500	COVER CUBIC	HIPS	2	
59	3017460900	INSU R *S *L	F-PS	1	
60	3018910200	LOUVER R *S *L	PP	1	
61	3017461000	INSU R *S *R	F-PS	1	
62	3018910300	LOUVER R *S *R	PP	1	
63	3017821700	SHELF R	SWRM-B	2	
64	3011451400	COVER VEGETB	GPSS	1	
65	3011162400	CASE VEGETB	GPSS	1	
66	3013336000	INSULATOR F A	EPS	1	
67	3012509900	GUIDE DRN	AL 0.4T	1	
68	3014433400	PIPE DRN	AL 1.0T	1	
69	3012009400	FIXTURE R CONTL COVR	PP	1	
70	3013336100	INSULATOR F B	EPS	1	
71		ASSY F DR		1	
72	3011450400	COVER CAP HOLE B	PP	1	
73	3011450500	COVER T HI HRNS *L	PP	1	
74	7112401211	SCREW TAPPING	T1TRS 4X12 MFZN	1	
75	3012301420	GASKET F DR AS	PVC	1	
76	3019013500	POCKET F	HIPS	2	
77		ASSY R DR		1	

EXEPLoded VIEW AND PARTS LIST

NO	PART CODE	PART NAME	PART DESCRIPTION	Q'TY	REMARK
78	3011450300	COVER CAP HOLE A	PP	1	
79	3012301720	GASKET R DR AS	PVC	1	
80	3011451200	COVER DARIY ROOM	GPPS	1	
81	3019012900	POCKET DAIRY	HIPS	1	
82	3011162100	CASE EGG	GPPS	1	
83	3019013200	POCKET MULTI	HIPS	1	
84	3012509600	GUIDE POCKET	HIPS	1	
85	3019013300	POCKET JUMBO	HIPS	1	
86	3019013400	POCKET BOTTLE	HIPS	1	

EXPLODED VIEW AND PARTS LIST

FR-4504K

NO	PART CODE	PART NAME	PART DESCRIPTION	Q'TY	REMARK
71	30100898A0	ASSY F DOOR	White PCM	1	CFC
	30100898B0		White High-glossy Laminasheet	1	CFC
	30100898C0		Beige PCM	1	CFC
	30100898D0		Beige High-glossy Laminasheet	1	CFC
	30100898E0		Light Gray High-glossy Laminasheet	1	CFC
	30100898F0		Daewoo Silver	1	CFC
	30100898G0		White Embo PCM	1	CFC
	30100898H0		Beige Embo PCM	1	CFC
	30100898J0		White PCM	1	HCFC
	30100898K0		White High-glossy Laminasheet	1	HCFC
	30100898L0		Beige PCM	1	HCFC
	30100898M0		Beige High-glossy Laminasheet	1	HCFC
	30100898N0		Light Gray High-glossy Laminasheet	1	HCFC
	30100898P0		Daewoo Silver	1	HCFC
	30100898Q0		White Embo PCM	1	HCFC
30100898R0		Beige Embo PCM	1	HCFC	
77	30100336A0	ASSY R DOOR	White PCM	1	CFC
	30100336B0		White High-glossy Laminasheet	1	CFC
	30100336C0		Beige PCM	1	CFC
	30100336D0		Beige High-glossy Laminasheet	1	CFC
	30100336E0		Light Gray High-glossy Laminasheet	1	CFC
	30100336H0		Daewoo Silver	1	CFC
	30100336J0		White Embo PCM	1	CFC
	30100336K0		Beige Embo PCM	1	CFC
	30100336L0		White PCM	1	HCFC
	30100336M0		White High-glossy Laminasheet	1	HCFC
	30100336N0		Beige PCM	1	HCFC
	30100336P0		Beige High-glossy Laminasheet	1	HCFC
	30100336Q0		Light Gray High-glossy Laminasheet	1	HCFC
	30100336R0		Daewoo Silver	1	HCFC
	30100336S0		White Embo PCM	1	HCFC
	30100336T0		Beige Embo PCM	1	HCFC
	30100336AK		White PCM	1	Key type CFC
	30100336BK		White High-glossy Laminasheet	1	Key type CFC
	30100336CK		Beige PCM	1	Key type CFC
	30100336DK		Beige High-glossy Laminasheet	1	Key type CFC
	30100336EK		Light Gray High-glossy Laminasheet	1	Key type CFC
	30100336HK		Daewoo Silver	1	Key type CFC
	30100336JK		White Embo PCM	1	Key type CFC
	30100336KK		Beige Embo PCM	1	Key type CFC
	30100336LK		White PCM	1	Key type HCFC
	30100336MK		White High-glossy Laminasheet	1	Key type HCFC
	30100336NK		Beige PCM	1	Key type HCFC
	30100336PK		Beige High-glossy Laminasheet	1	Key type HCFC
	30100336QK		Light Gray High-glossy Laminasheet	1	Key type HCFC
	30100336RK		Daewoo Silver	1	Key type HCFC
30100336SK		White Embo PCM	1	Key type HCFC	
30100336TK		Beige Embo PCM	1	Key type HCFC	

7) FR-4505K(In case of NO.71, 77 refer to 65page)

NO	PART CODE	PART NAME	PART DESCRIPTION	Q'TY	REMARK
1	3010031200	ASSY CAB URT	FRM(P)-371	1	
2	3012911500	HINGE*T	SPCC T2	1	
3	3012905400	SPECIAL BOLT T/U	6X22 SWCH22A(WH)	3	
4	3011449800	COVER *T HI	HIPS	1	
5	3012911400	HINGE *M AS	DC-2 ZN	1	
6	3016001220	SPECIAL BOLT M	6X20 SWCH22A(WH)	2	
7	3012101300	FOOT ADJUST AS	PP	2	
8	3012911300	HINGE *U AS	SPHC-H T4	1	
9	3012905400	SPECIAL BOLT T/U	6X22 SWCH22A(WH)	3	
10	3011450200	COVER CAB BRKT	PP	1	
11	7112401211	SCREW TAPPING	T1TRS 4X12 MFZN	2	
12	3010103700	ABSORBER SUC P	NR	1	
13	3011302012	CORD POWER AS		1	250V/16A
14	7112401211	SCREW TAPPING	T1TRS 4X12 MFZN	1	
15	7001400865	SCREW MACHINE	PAN 4X8 BSNI	1	
16	3013202700	HOSE DRN B	PP	1	
17	3012405800	GRILLE	SBHG1	1	
18	7112401211	SCREW TAPPING	T1TRS 4X12 MFZN	5	
19	3016805500	DRYER AS		1	
20	3014433500	PIPE WICON	TSW OD4.76XT0.7XL14560	1	
21	3011200400	CLAMP FAN	SUS304	1	
22	3011800400	FAN		1	
23		MOTOR C		1	
24	3012004400	FIXTURE C MOTR	SUS	1	
25	3010102100	ABSORBER C MOTR	"NR,FRB-5350NT"	1	
26	3011161900	CASE VAPORI	PP	1	
27	7112401211	SCREW TAPPING	T1TRS 4X12 MFZN	2	
28		COMPRESSOR		1	
29	3018116610	SWITCH P-RELAY AS		1	
30	3012610000	CLAMP BRAND RELAY	SK-5 T0.7	1	
31	3010318400	BASE COMP	SBHG1	1	
32	3016500000	CASTER *B	PP OD36XL37	2	
33	3014902900	SHAFT CASTER *B	"SPH, T1, OD6XL51"	2	
34	3016003300	SPECIAL BOLT	T2 M6.5X20	4	
35	3012007900	FIXTURE MOTR B	PP	1	
36		MOTOR F		1	
37	3011802200	FAN	ABS(OD110)	1	
38	7112401211	SCREW TAPPING	T1TRS 4X12 MFZN	2	

EXEPLoded VIEW AND PARTS LIST

NO	PART CODE	PART NAME	PART DESCRIPTION	Q'TY	REMARK
39	3013336310	INSU F LUVR	EPS	1	
40	3013402600	KNOB F CONTL	PP	1	
41	3018910400	LOUVER F	HIPS	1	
42	7112401611	SCREW TAPPING	T1TRS 4X16 MFZN	2	
43	3010924600	CAP F-LUVR	HIPS T2.3	2	
44	3017821600	SHELF F	HIPS T3.0	1	
45	3012509700	GUIDE ICE CASE	HIPS	1	
46	3011162200	CASE ICE	PP	1	
47	3010518900	BOX ICE	GPPS	1	
48	3018100050	SWITCH DR	DSD-5(220V)	1	
49	3010936100	CAP DV *M HI HOLE	ABS	1	
50	3011449900	COVER R CONTL BOX	HIPS	1	
51	3013402500	KNOB R CONTL	ABS	1	
52	3017903610	SOCKET R LAMP AS		1	
53	3013600080	LAMP AS	240V/15W	1	
54	7121300811	SCREW TAPPING	T2 PAN 3X8 MFZN	1	
55	3012733700	HARNESS R-THERMO		1	
56	3018301500	THERMOSTAT	GNF-175D	1	
57	3015505200	WINDOW LAMP	PP	1	
58	3011439500	COVER CUBIC	HIPS	2	
59	3017460900	INSU R *S *L	F-PS	1	
60	3018910200	LOUVER R *S *L	PP	1	
61	3017461000	INSU R *S *R	F-PS	1	
62	3018910300	LOUVER R *S *R	PP	1	
63	3017821700	SHELF R	SWRM-B	2	
64	3011451400	COVER VEGETB	GPPS	1	
65	3011162400	CASE VEGETB	GPPS	1	
66	3013336000	INSULATOR F A	EPS	1	
67	3012509900	GUIDE DRN	AL 0.4T	1	
68	3014433400	PIPE DRN	AL 1.0T	1	
69	3012009400	FIXTURE R CONTL COVR	PP	1	
70	3013336100	INSULATOR F B	EPS	1	
71		ASSY F DR		1	
72	3011450400	COVER CAP HOLE B	PP	1	
73	3011450500	COVER T HI HRNS *L	PP	1	
74	7112401211	SCREW TAPPING	T1TRS 4X12 MFZN		
75	3012301420	GASKET F DR AS	PVC	1	
76	3011450300	COVER CAP HOLE A	PP	1	
77		ASSY R DR		1	

EXPLODED VIEW AND PARTS LIST

NO	PART CODE	PART NAME	PART DESCRIPTION	Q'TY	REMARK
78	3012301720	GASKET R DR AS	PVC	1	
79	3011451300	COVER DAIRY ROOM	GPPS	1	
80	3019013000	POCKET DAIRY	HIPS	1	
81	3011162100	CASE EGG	GPPS	1	
82	3019013200	POCKET MULTI	HIPS	1	
83	3012509600	GUIDE POCKET	HIPS	1	
84	3019013300	POCKET JUMBO	HIPS	1	
85	3019013400	POCKET BOTTLE	HIPS	1	

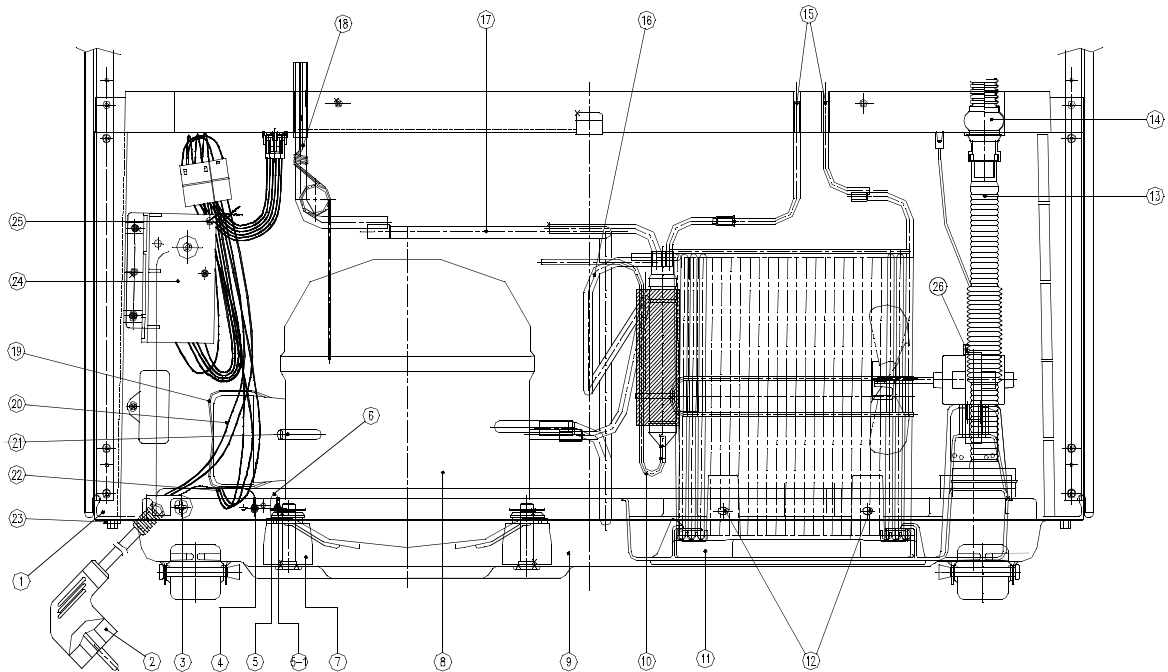
EXPLODED VIEW AND PARTS LIST

FR-4505K

NO	PART CODE	PART NAME	PART DESCRIPTION	Q'TY	REMARK
71	30100899A0	ASSY F DOOR	White PCM	1	CFC
	30100899B0		White High-glossy Laminasheet	1	CFC
	30100899C0		Beige PCM	1	CFC
	30100899D0		Beige High-glossy Laminasheet	1	CFC
	30100899E0		Light Gray High-glossy Laminasheet	1	CFC
	30100899F0		Daewoo Silver	1	CFC
	30100899G0		White Embo PCM	1	CFC
	30100899H0		Beige Embo PCM	1	CFC
	30100899J0		White PCM	1	HCFC
	30100899K0		White High-glossy Laminasheet	1	HCFC
	30100899L0		Beige PCM	1	HCFC
	30100899M0		Beige High-glossy Laminasheet	1	HCFC
	30100899N0		Light Gray High-glossy Laminasheet	1	HCFC
	30100899P0		Daewoo Silver	1	HCFC
	30100899Q0		White Embo PCM	1	HCFC
30100899R0		Beige Embo PCM	1	HCFC	
77	30100336A0	ASSY R DOOR	White PCM	1	CFC
	30100336B0		White High-glossy Laminasheet	1	CFC
	30100336C0		Beige PCM	1	CFC
	30100336D0		Beige High-glossy Laminasheet	1	CFC
	30100336E0		Light Gray High-glossy Laminasheet	1	CFC
	30100336H0		Daewoo Silver	1	CFC
	30100336J0		White Embo PCM	1	CFC
	30100336K0		Beige Embo PCM	1	CFC
	30100336L0		White PCM	1	HCFC
	30100336M0		White High-glossy Laminasheet	1	HCFC
	30100336N0		Beige PCM	1	HCFC
	30100336P0		Beige High-glossy Laminasheet	1	HCFC
	30100336Q0		Light Gray High-glossy Laminasheet	1	HCFC
	30100336R0		Daewoo Silver	1	HCFC
	30100336S0		White Embo PCM	1	HCFC
	30100336T0		Beige Embo PCM	1	HCFC
	30100336AK		White PCM	1	Key type CFC
	30100336BK		White High-glossy Laminasheet	1	Key type CFC
	30100336CK		Beige PCM	1	Key type CFC
	30100336DK		Beige High-glossy Laminasheet	1	Key type CFC
	30100336EK		Light Gray High-glossy Laminasheet	1	Key type CFC
	30100336HK		Daewoo Silver	1	Key type CFC
	30100336JK		White Embo PCM	1	Key type CFC
	30100336KK		Beige Embo PCM	1	Key type CFC
	30100336LK		White PCM	1	Key type HCFC
	30100336MK		White High-glossy Laminasheet	1	Key type HCFC
	30100336NK		Beige PCM	1	Key type HCFC
	30100336PK		Beige High-glossy Laminasheet	1	Key type HCFC
	30100336QK		Light Gray High-glossy Laminasheet	1	Key type HCFC
	30100336RK		Daewoo Silver	1	Key type HCFC
	30100336SK		White Embo PCM	1	Key type HCFC
	30100336TK		Beige Embo PCM	1	Key type HCFC

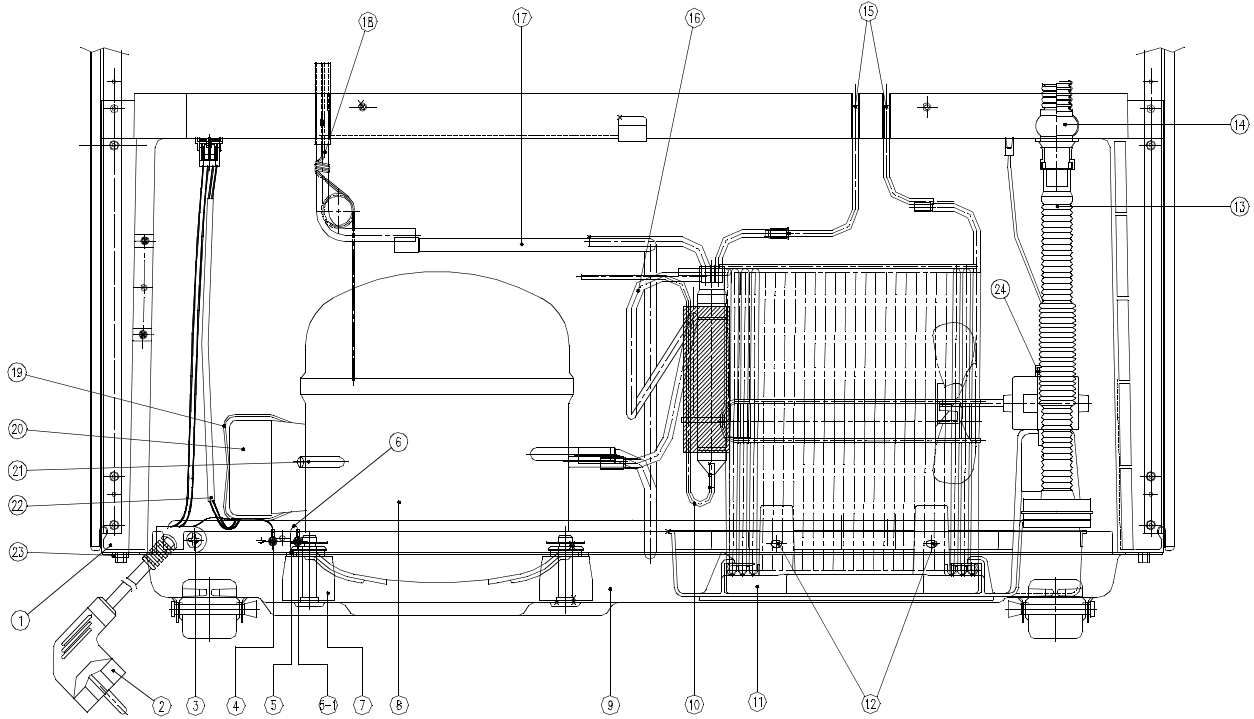
3. MACHINE ROOM EXPLODED VIEW AND PARTS LIST

1) FR-4501K, FR-4502K, FR-4504K, FR-4505



NO	PART NAME	NO	PART NAME	NO	PART NAME
1	BASE CAB	10	DRYER AS	20	COVER RELAY
2	CORD POWER	11	CASE VAPORI AS	21	PIPE SERVICE
3	SCREW TAPPING	12	SCREW TAPPING	22	SWITH P-RELAY AS
4	SCREW MACHINE	13	HOSE DRN A	23	SCREW SPECIAL
5	WASHER TOOTH	14	HOSE DRN B	24	BOX POWER AS
5-1	SCREW MACHINE	15	PIPE HOT	25	WIRE BIND BAND
6	HARNESS EARTH	16	PIPE CONN A	26	ABSORBER C MOTOR
7	ABSORBER COMP	17	PIPE SUC CONN		
8	COMPRESSOR	18	PIPE SUCTION AS		
9	BASE COMP	19	BAND RELAY		

2) FR-4501N, FR-4502N, FR-4503N



NO	PART NAME	NO	PART NAME	NO	PART NAME
1	BASE CAB	10	DRYER AS	20	COVER RELAY
2	CORD POWER	11	CASE VAPORI AS	21	PIPE SERVICE
3	SCREW TAPPING	12	SCREW TAPPING	22	SWITH P-RELAY AS
4	SCREW MACHINE	13	HOSE DRN A	23	ABSORBER C MOTOR
5	WASHER TOOTH	14	HOSE DRN B		
5-1	SCREW MACHINE	15	PIPE HOT		
6	HARNES EARTH	16	PIPE CONN A		
7	ABSORBER COMP	17	PIPE SUC CONN		
8	COMPRESSOR	18	PIPE SUCTION AS		
9	BASE COMP	19	BAND RELAY		