

S/M No. : FR631ND010

DAEWOO

Service Manual

Refrigerator

Model: FR-710ND



DAEWOO ELECTRONICS CO., LTD.

<http://svc.dwe.co.kr>

Feb. 2001

SAFETY AND PRECAUTIONS

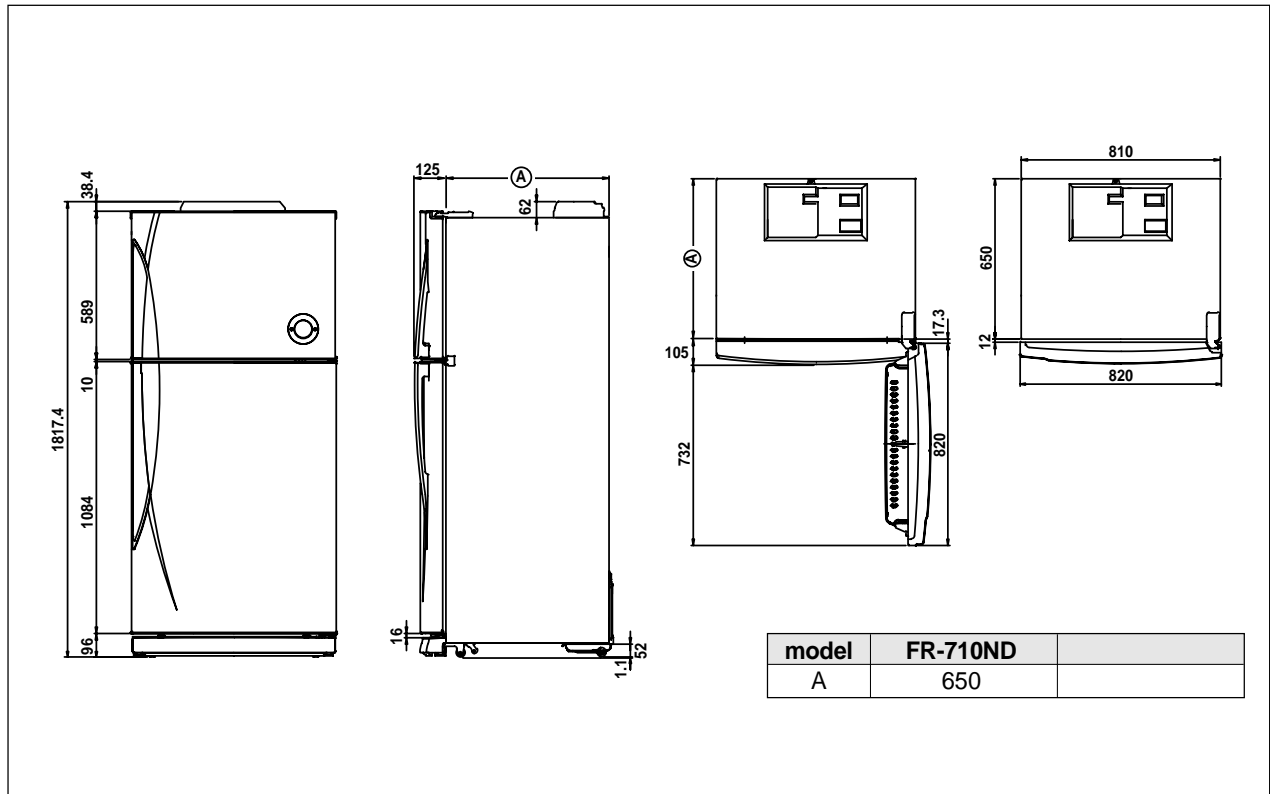
- 1) For starters, be sure to check any chances of the leakage of electricity
- 2) You could handle a part in the vicinity of electricity after unplugging
- 3) You should put on rubber gloves to prevent an electric shock on operation test
- 4) Make sure the rated current, voltage, capacity before using 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 to permeate the electric part in the machine room
- 7) with the door open during your working, you might be damaged by that door
- 8) You should give a tilt 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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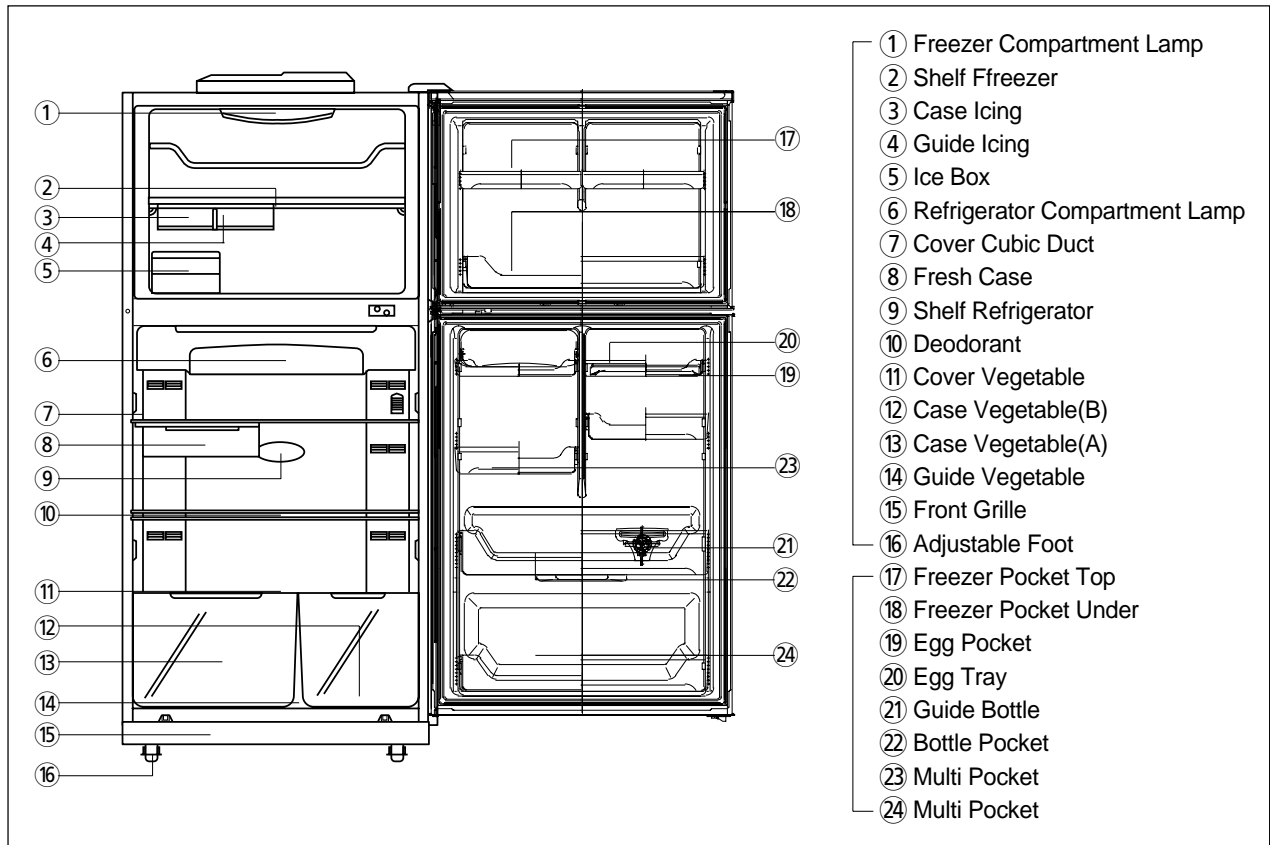
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1. EXTERNAL VIEWS

1-1. EXTERNAL SIZE



1-2. NAME OF PARTS



2. SPECIFICATIONS

2-1. OUTLINE

DIVISION		CONTENTS	
MODEL NAME		FR-710ND	
USABLE CAPACITY (L)	FREEZER	156	
	REFRIGERATOR	398	
	TOTAL	554	
EXTERNAL DIMENSION(mm)	WIDTH	818	
	DEPTH	812	
	HEIGHT	1818	
REFRIGENT	R12	125	
	R134a	110	
COOLING & CONTROL SYSTEM	COOLING SYSTEM	Fan Cooling System	
	DEFROST SYSTEM	Fin Evaporator Forced	
	DEFORST CONTROL	Automatic Start & Stop	
NET WEIGHT (kg)		95	

2-2 ELECTRIC PARTS

1) COMPRESSOR

REFRIGERANT	R12								
	100/50,60	110/60	115,120/60	127/60	220/50		220/60	230/50	240/50
SL					KL				
VOLTAGE (V/Hz)									
COMP MODEL	X	X	X	X	SL28YE-5	X	PL23YH-4	SL28YE-5	SL28YE-5
PART CODE					3954128A50		3956125G40	3954128A50	3954128A50
STARTING TYPE					RSIR		RSCR	RSIR	RSIR
MAIN COIL A9RESISTANCE									
AUX. COIL RESISTANCE									

REFRIGERANT	R134a								
	100/50,60	110/60	115,120/60	127/60	220/50		220/60	230/50	240/50
PL					KL				
VOLTAGE (V/Hz)									
COMP MODEL	X	HBL25YG-3	X	X	HPL26YH-5	X	X	HPL26YH-5	HPL26YH-5
PART CODE 3952125R30		3952125R30			3956126S50			3956126S50	3956126S50
STARTING TYPE		CSR			RSCR			RSCR	RSCR
MAIN COIL A9RESISTANCE									
AUX. COIL RESISTANCE									

2) RELAY

REFRIGERANT		R12								
VOLTAGE (V/Hz)		100/50,60	110/60	115,120/60	127/60	220/50		220/60	230/50	240/50
						SL	KL			
ASSY	TYPE NAME	X	X	X	X	276THBYY-52	X	181SHBYY-52	276THBYY-52	276THBYY-52
	PART CODE					3018119350		3018116610	3018119350	3018119350
C-RELAY	RESIS-TANCE									
	PART CODE									
PTC	RESIS-TANCE					S220		S330	S220	S220
	PART CODE									
OVER LOAD	PART CODE					276THB		181SHB	276THB	276THB

REFRIGERANT		R134a								
VOLTAGE (V/Hz)		100/50,60	110/60	115,120/60	127/60	220/50		220/60	230/50	240/50
						PL	KL			
ASSY	TYPE NAME	X	783NHBZZ-52	X	X	197NHBYY-52	X	X	197NHBYY-52	197NHBYY-52
	PART CODE		3018119390			3018119920			3018119920	3018119920
C-RELAY	RESIS-TANCE									
	PART CODE									
PTC	RESIS-TANCE		S220			S330			S330	S330
	PART CODE									
OVER LOAD	PART CODE		783NHB			197NHB			197NHB	197NHB

3) STARTING CAPACITOR

REFRIGERANT		R12								
VOLTAGE (V/Hz)		100/50,60	110/60	115,120/60	127/60	220/50		220/60	230/50	240/50
						SL	KL			
PART CODE										
RATED VOLTAGE										
RATED CAPACITANCE										

REFRIGERANT		R134a								
VOLTAGE (V/Hz)		100/50,60	110/60	115,120/60	127/60	220/50		220/60	230/50	240/50
						PL	KL			
PART CODE			3016400100							
RATED VOLTAGE			200V							
RATED CAPACITANCE			100 μ F							

4) RUNNING CAPACITOR

REFRIGERANT	R12								
VOLTAGE (V/Hz)	100/50,60	110/60	115,120/60	127/60	220/50		220/60	230/50	240/50
					SL	KL			
PART CODE							400EL15110		
RATED VOLTAGE							350V		
RATED CAPACITANCE							5 μ F		

REFRIGERANT	R134a								
VOLTAGE (V/Hz)	100/50,60	110/60	115,120/60	127/60	220/50		220/60	230/50	240/50
					PL	KL			
PART CODE		3816800400			3016401900			3016401900	3016401900
RATED VOLTAGE		300V			400V			400V	400V
RATED CAPACITANCE		7 μ F			4 μ F			4 μ F	4 μ F

5) F-FAN MOTOR

REFRIGERANT	R12, R134a								
VOLTAGE (V/Hz)	100/50,60	110/60	115,120/60	127/60	220/50		220/60	230/50	240/50
					SL	KL			
TYPE NAME	DL-2213DWFA	DL-2213DWFA	DL-2213DWFA	DL-2213DWFA	DL-2213DWFA	DL-2213DWFA	DL-2213DWFA	DL-2213DWFA	DL-2213DWFA
PART CODE	3015905300	3015905300	3015905300	3015905300	3015905300	3015905300	3015905300	3015905300	3015905300
REVOLUTION	2200RPM	2200RPM	2200RPM	2200RPM	2200RPM	2200RPM	2200RPM	2200RPM	2200RPM

6) R-FAN MOTOR

REFRIGERANT	R12, R134a								
VOLTAGE (V/Hz)	100/50,60	110/60	115,120/60	127/60	220/50		220/60	230/50	240/50
					SL	KL			
TYPE NAME	DL-2213DWRA	DL-2213DWRA	DL-2213DWRA	DL-2213DWRA	DL-2213DWRA	DL-2213DWRA	DL-2213DWRA	DL-2213DWRA	DL-2213DWRA
PART CODE	3015906900	3015906900	3015906900	3015906900	3015906900	3015906900	3015906900	3015906900	3015906900
REVOLUTION	2200RPM	2200RPM	2200RPM	2200RPM	2200RPM	2200RPM	2200RPM	2200RPM	2200RPM

7) C- FAN MOTOR

REFRIGERANT	R12, R134a								
VOLTAGE (V/Hz)	100/50,60	110/60	115,120/60	127/60	220/50		220/60	230/50	240/50
					SL	KL			
TYPE NAME		S6111EEC05		S6111NEC04	S6111CEC05		S6111GEC05	S6111CEC05	S6111CEC05
PART CODE		3015909900		3015910100	3015909800		3015910000	3015909800	3015909800
REVOLUTION		2100RPM		2100RPM	2100RPM		2100RPM	2100RPM	2100RPM

8) DEFROST HEATER

REFRIGERANT	R12, R134a								
VOLTAGE (V/Hz)	100 /50,60	110 /60	115,120/60	127/60	220/50		220 /60	230 /50	240 /50
					SL	KL			
SPEC (W)		180W	180W	180W	180W		180W	180W	180W
PART CODE		3012803210	3012803210	3012803210	3012803200		3012803200	3012803200	3012803200

9) LAMP ASSEMBLY

REFRIGERANT	R12, R134a								
VOLTAGE (V/Hz)	100 /50,60	110 /60	115,120/60	127/60	220/50		220 /60	230 /50	240 /50
					SL	KL			
SPEC (W)	15W	15W	15W	15W	15W		15W	15W	15W
PART CODE	3013600050	3013600050	3013600050	3013600010	3013600020		3013600020	3013600020	3016800020
COLOR									

10) MAIN PCB ASSEMBLY

REFRIGERANT	R12,R134a								
VOLTAGE (V/Hz)	100 /50,60	110 /60	115,120/60	127/60	220/50		220 /60	230 /50	240 /50
					SL	KL			
TYPE NAME		Y200	Y200	Y200	Y200	Y200	Y200	Y200	Y200
PART CODE		3014385020	3014385020	3014385020	3014385020		3014385020	3014385020	3014385020

11) DRYER

REFRIGERANT	R12	R134a
SPEC (g)	10g	15g
PART CODE	3016805300	3016805610

12) THERMO FUSE

REFRIGERANT	R12,R134a								
VOLTAGE (V/Hz)	100 /50,60	110 /60	115,120/60	127/60	220/50		220 /60	230 /50	240 /50
					SL	KL			
OPERATING TEMPERATURE		77°C	77°C	77°C	77°C	77°C	77°C	77°C	77°C
PART CODE		3017200500	3017200500	3017200500	3017200500	3017200500	3017200500	3017200500	3017200500

13) DOOR S/W

REFRIGERANT	R12,R134a								
VOLTAGE (V/Hz)	100/50,60	110/60	115,120/60	127/60	220/50		220/60	230/50	240/50
					SL	KL			
TYPE NAME									
PART CODE		3018100010	3018100010	3018100010	3018100010		3018100010	3018100010	3018100010

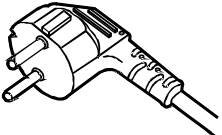
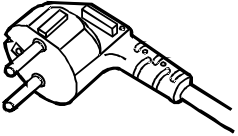
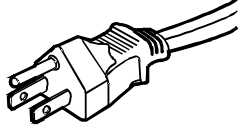
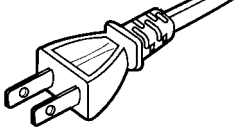
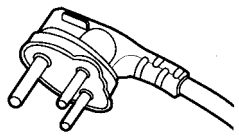
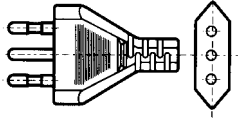
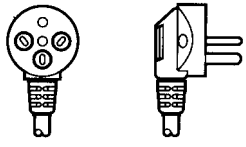
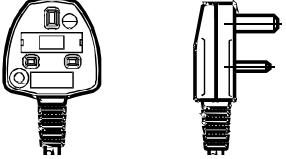

14) F-SENER

REFRIGERANT	R12,R134a								
VOLTAGE (V/Hz)	100/50,60	110/60	115,120/60	127/60	220/50		220/60	230/50	240/50
					SL	KL			
TYPE NAME									
PART CODE		3014801501	3014801501	3014801501	3014801501	3014801501	3014801501	3014801501	3014801501

15) R-SENER

REFRIGERANT	R12,R134a								
VOLTAGE (V/Hz)	100/50,60	110/60	115,120/60	127/60	220/50		220/60	230/50	240/50
					SL	KL			
TYPE NAME									
PART CODE		3014801601	3014801601	3014801601	3014801601	3014801601	3014801601	3014801601	3014801601

2-3. POWER CORD

NO	SHAPE OF POWER CORD	PART CODE	DESCRIPTION	REMARK
1		3011315000	CP-2PIN	For european country
2		401RA17200	CP-2PIN	For other country
3		4006D17101	KP-30	For America & El Salvador
4		401PD17101	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

2-4. DOOR COLOR

1) ASSEMBLY URETHAN FREEZER DOOR

① NON-KEY TYPE

Refrigerant	R12				R134a			
COLORTYP	Embo PCM	High-glossy Laminasheet	Normal PCM	High-glossy Bright PCM	Embo PCM	High-glossy Laminasheet	Normal PCM	High-glossy Bright PCM
PARTCODE	3010024400				3010024410		3010024420	

② KEY TYPE

Refrigerant	R12				R134a			
COLORTYP	Embo PCM	High-glossy Laminasheet	Normal PCM	High-glossy Bright PCM	Embo PCM	High-glossy Laminasheet	Normal PCM	High-glossy Bright PCM
PARTCODE	3010024400				3011124410		3010024420	

2) ASSEMBLY URETHAN REFRIGERATOR DOOR

① NON-KEY TYPE

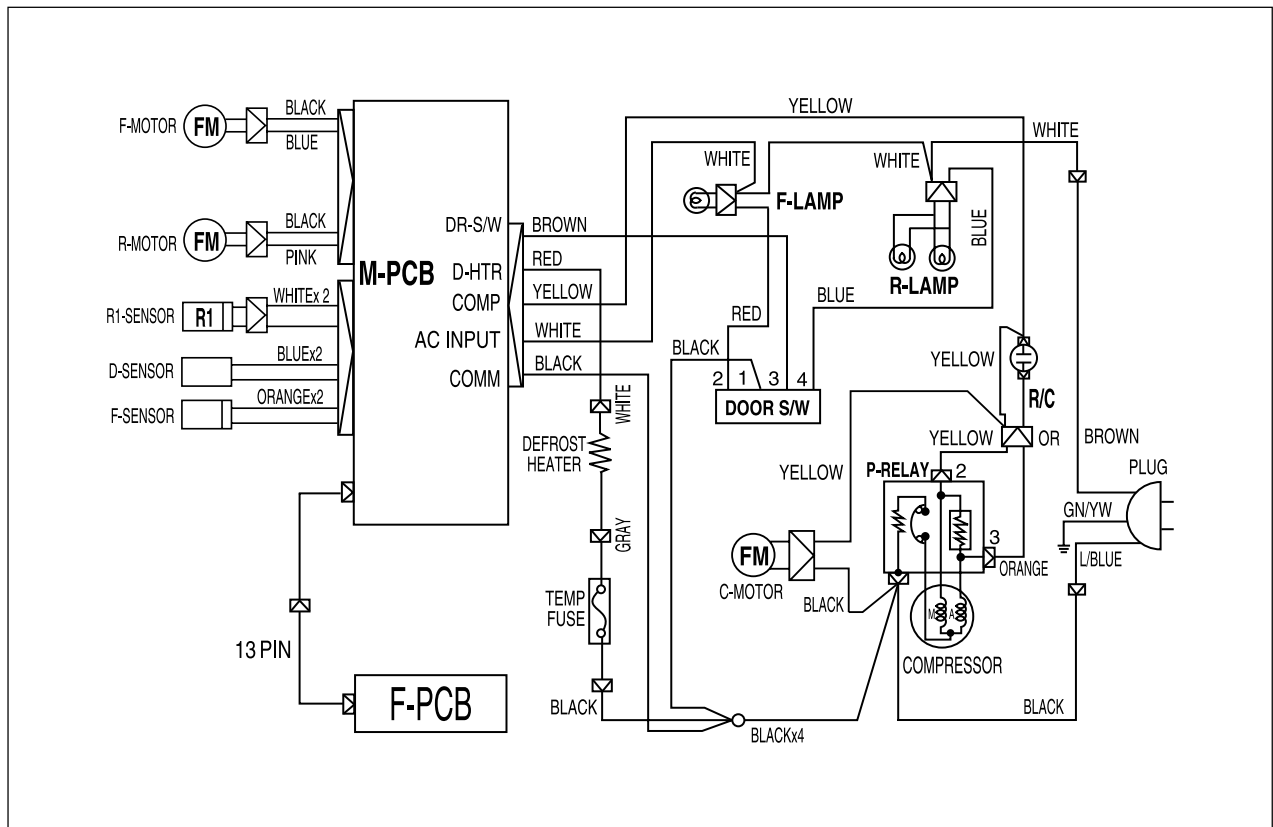
Refrigerant	R12				R134a			
COLORTYP	Embo PCM	High-glossy Laminasheet	Normal PCM	High-glossy Bright PCM	Embo PCM	High-glossy Laminasheet	Normal PCM	High-glossy Bright PCM
PARTCODE	3010026300				3010026330		3010026340	

② KEY TYPE

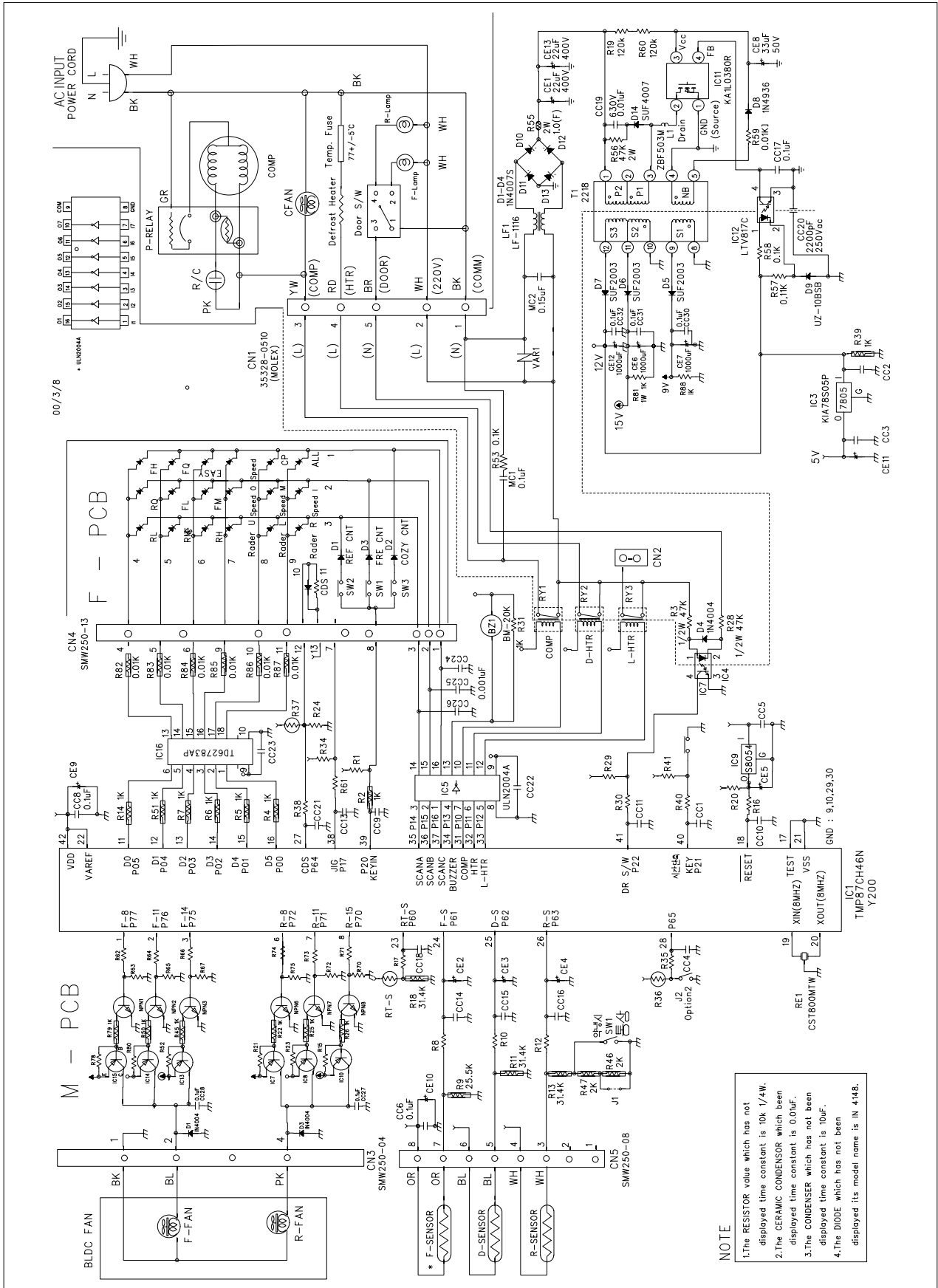
Refrigerant	R12				R134a			
COLORTYP	Embo PCM	High-glossy Laminasheet	Normal PCM	High-glossy Bright PCM	Embo PCM	High-glossy Laminasheet	Normal PCM	High-glossy Bright PCM
PARTCODE	3010026320				3010026350			

3. DIAGRAM

3-1. WIRING DIAGRAM



3-2. CIRCUIT DIAGRAM



NOTE

1. The RESISTOR value which has not displayed time constant is 10k/1/4W.
2. The CERAMIC CONDENSER which has not displayed time constant is 0.01uF.
3. The CONDENSER which has not been displayed time constant is 10uF.
4. The DIODE which has not been displayed its model name is IN 4148.

3-3. AIR FLOW DIAGRAM

Freezer

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

Freezer pocket

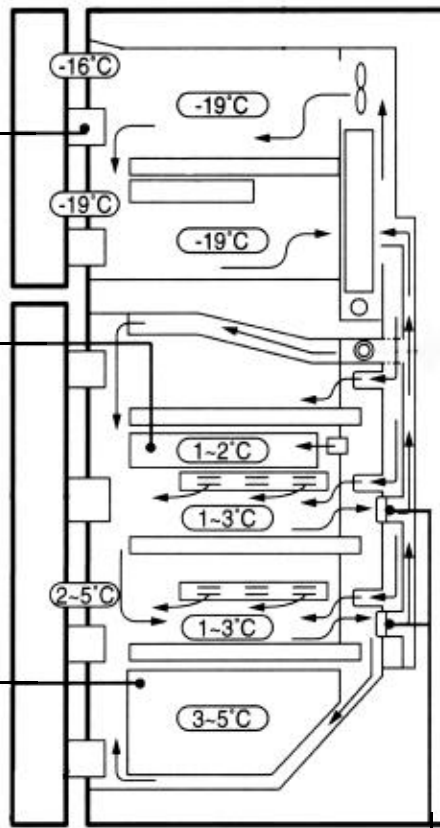
Please don't put long term storing items such as ice cream etc.
It might be melted because of opening the door frequently.

Chilled room

It is good for the storage of fishes and meats.

Crisper

It is suitable to store vegetable and fruit.
The moisture panel which is attached to the cover humidity properly.
Vegetable and fruit would be better to



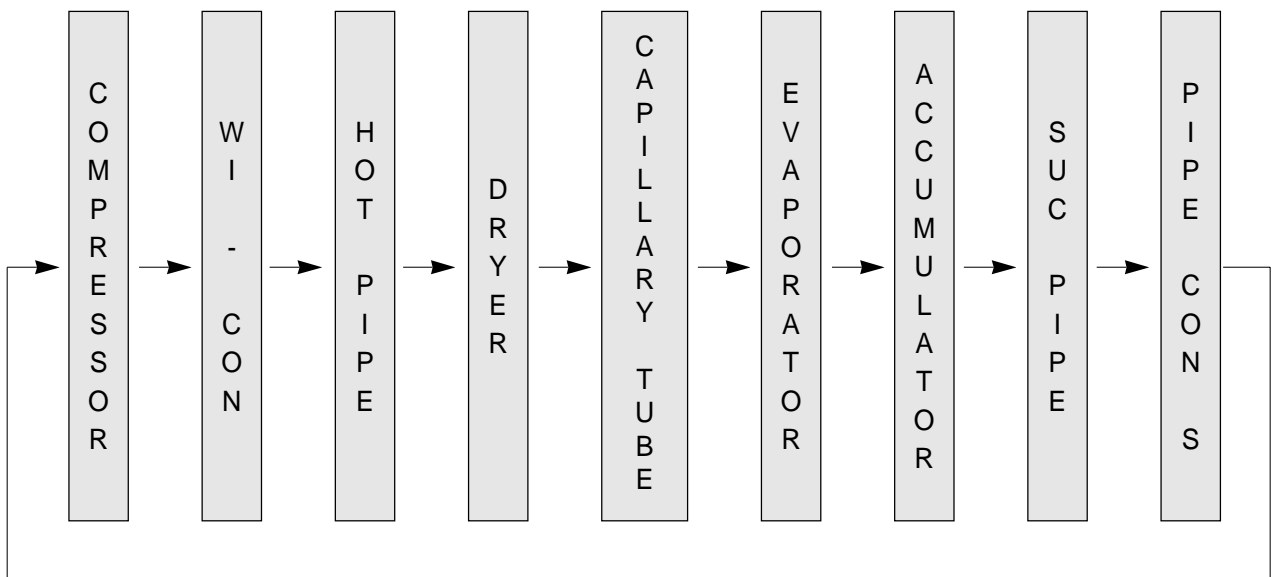
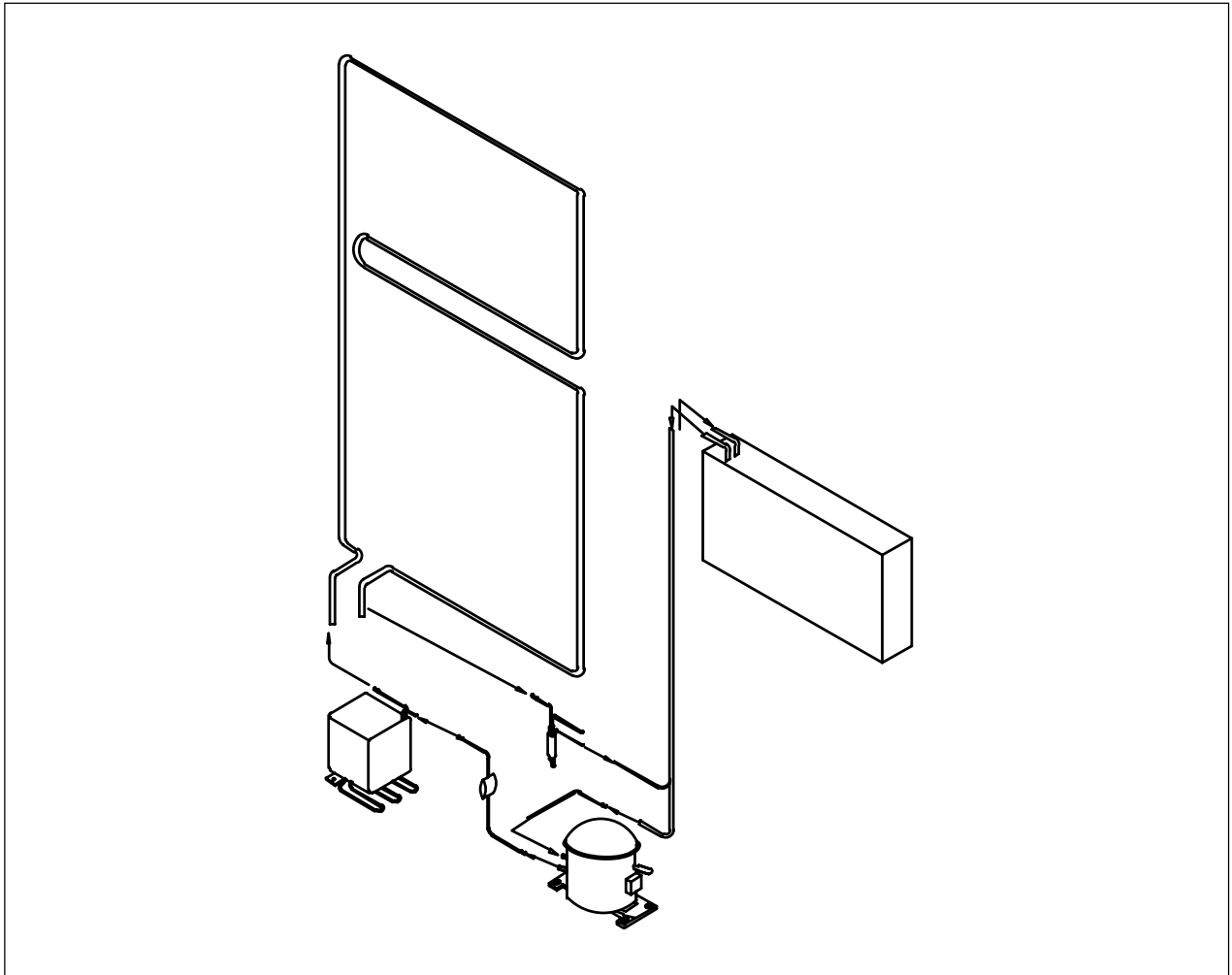
Inlet of cooling air

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

Multiple outlet of cooling air.

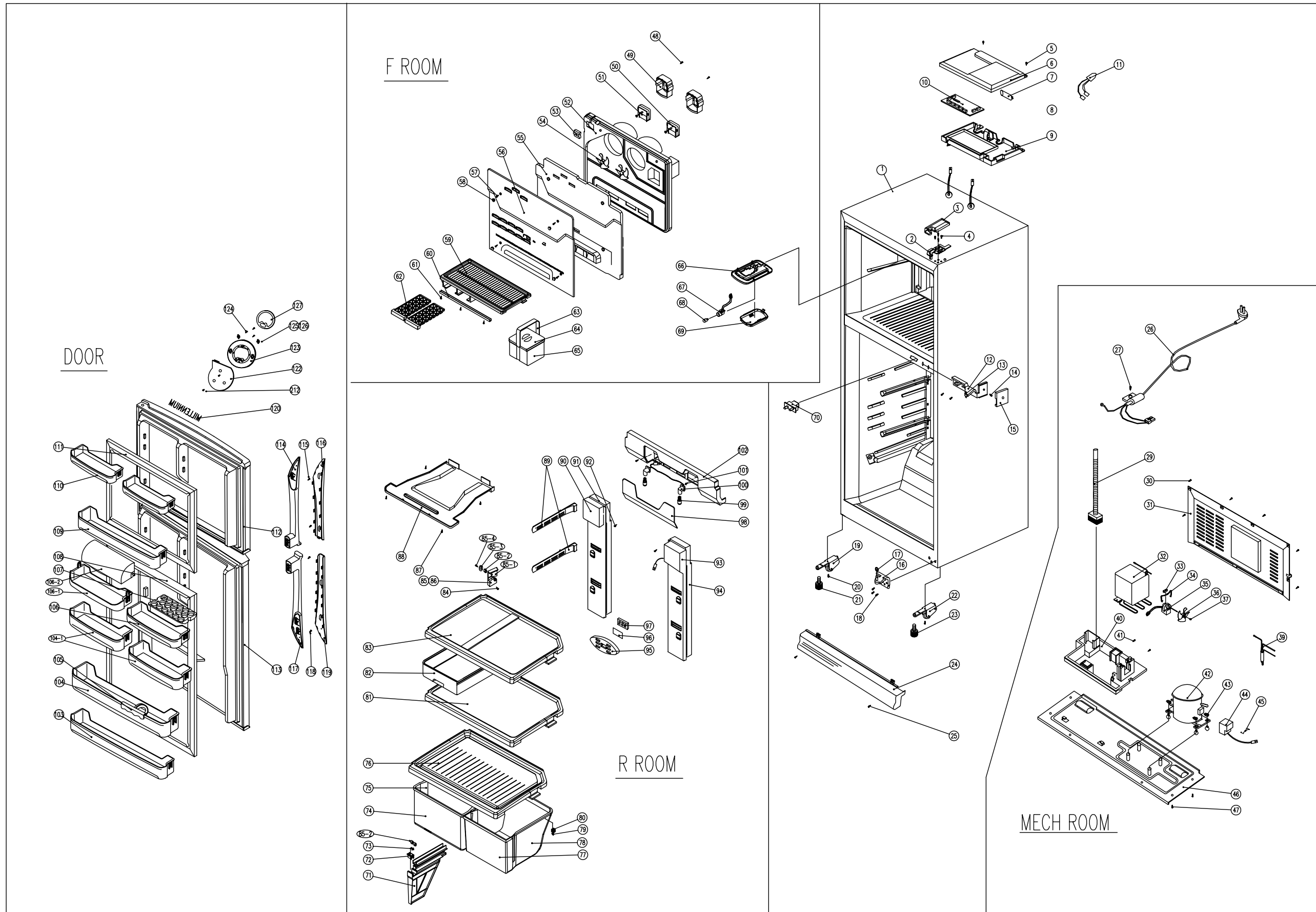
Please don't put in vegetable etc. which contain moisture. It might be frozen because of low temperature.

3-4. REFRIGERANT CYCLE DIAGRAM



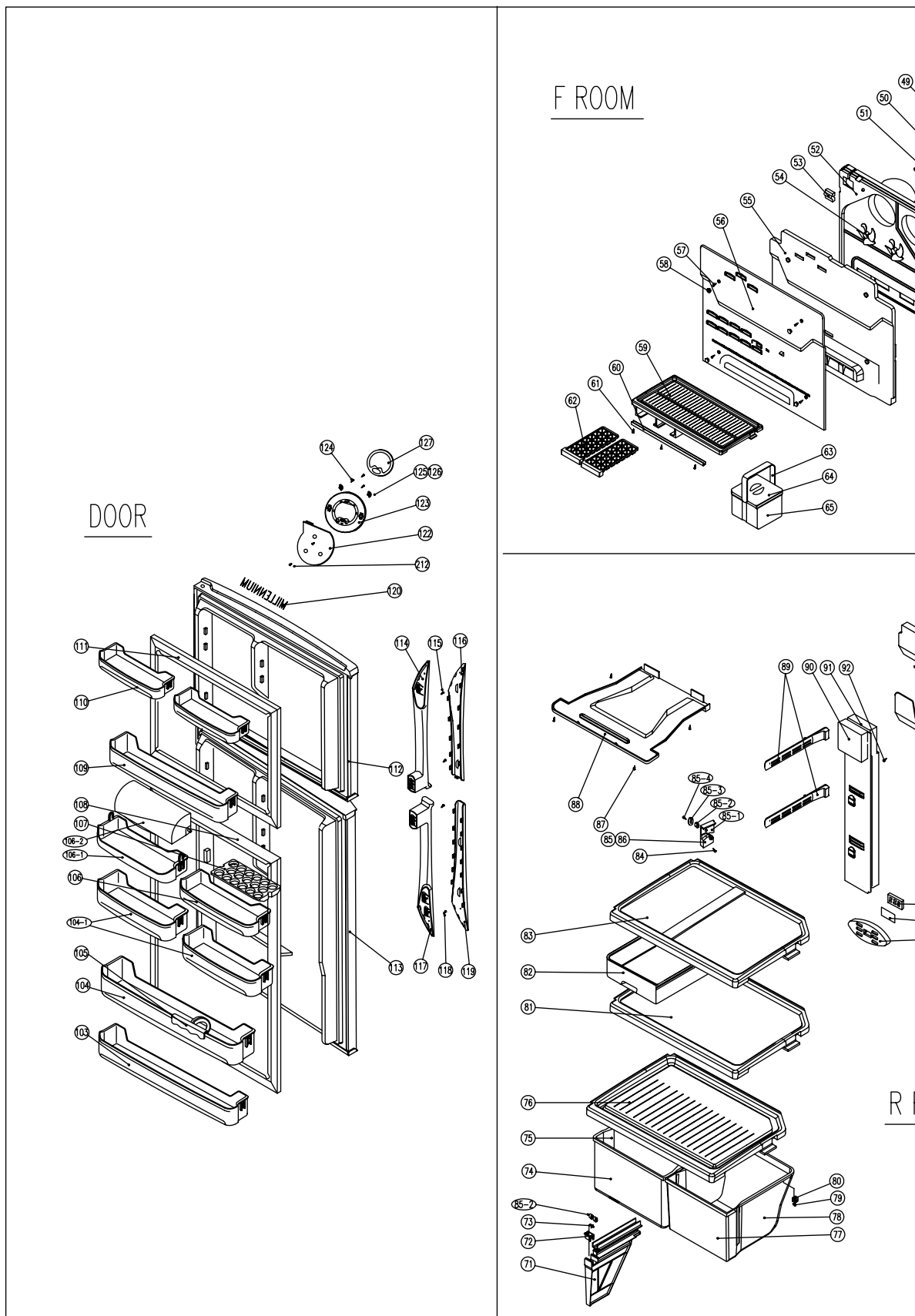
4. EXPLODED VIEW AND PARTS LIST

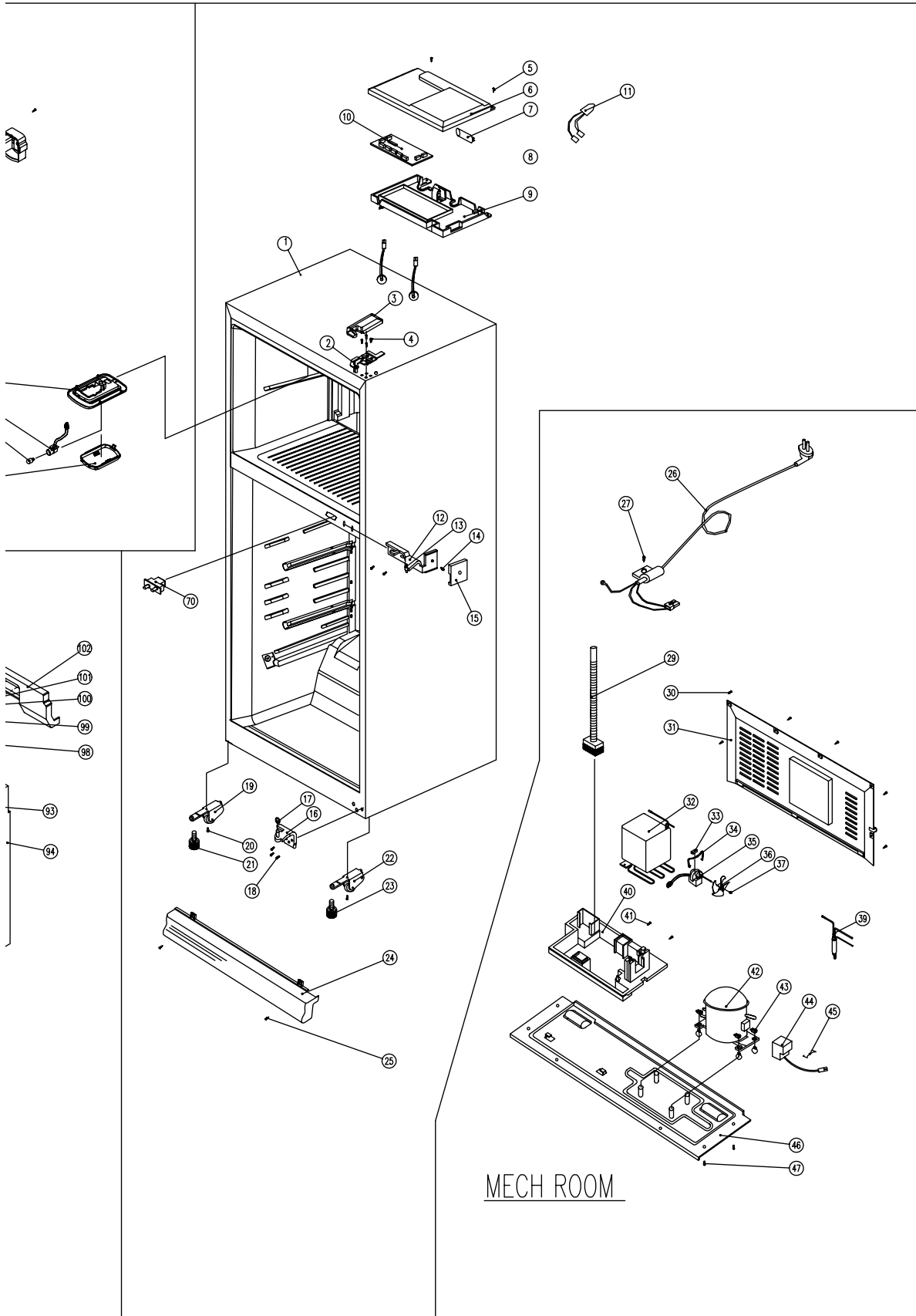
4-1. TOTAL EXPLODED VIEW



4. EXPLODED VIEW AND PARTS LIST

4-1. TOTAL EXPLODED VIEW





4-2 TOTAL PARTS LIST

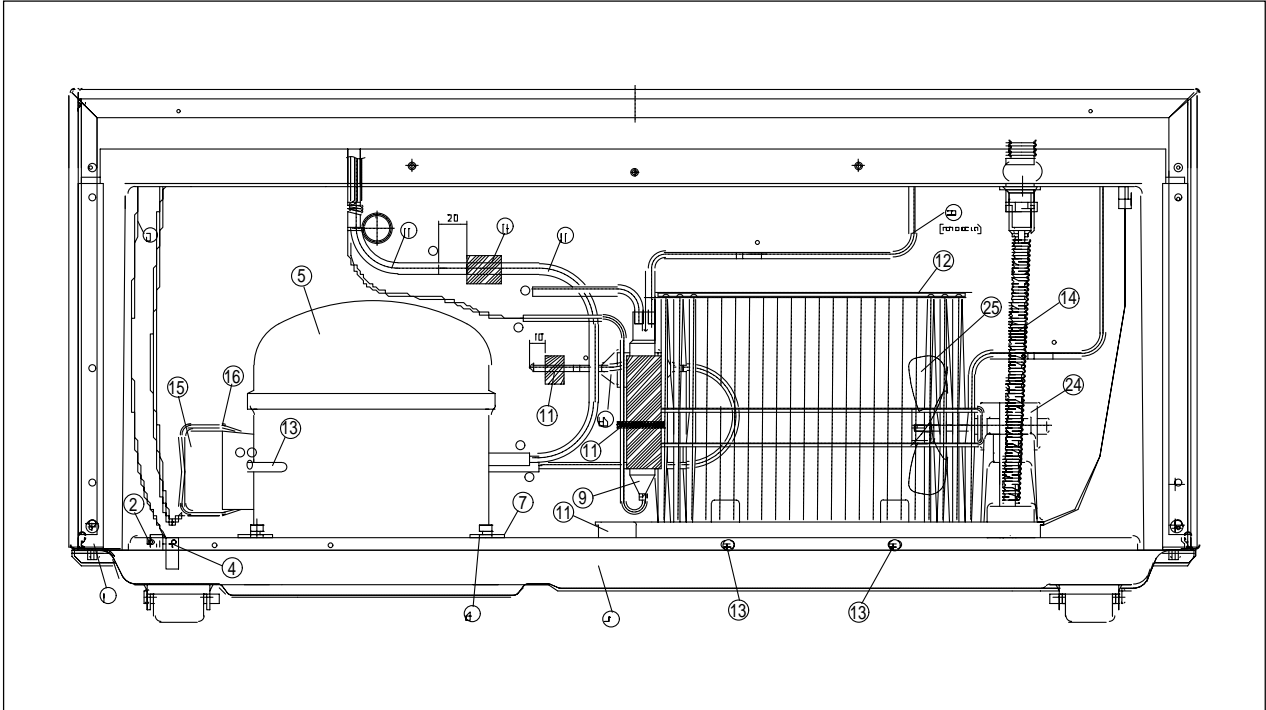
NO	PART CODE	PART NAME	PART DESCRIPTION	Q'TY	REMARK
1-1	3010019900	ASSY CAB URT	5080NB	1	5080NB
1-2	3010022800	ASSY CAB URT	5580NB	1	5580NB
2	3012905400	HINGE *T	T2.3 SCP1	1	
3	3011429000	COVER *T HI	PP	1	
4	3016001230	SPECIAL BOLT T/U	M6X22 MFZN	4	
5	7112401211	SCREW TAPPING	T1 TRS 4X12 MFZN	5	
6	3011425300	COVER M-PCB BOX	PP VO	1	
7	400EL15110	CAPACITOR RUN		1	
9	3010511700	BOX M-PCB	PP	1	
10		PCB MAIN AS	Y200	1	
11	3012712501	HARNESS RUN CONN		1	
	3012905801	HINGE *M AS		1	
12	3012905501	HINGE *M	T3.2 PO	1	
13	3014901820	SHAFT *M HI	S20C	1	
14	3016001230	SPECIAL BOLT M	T1 TRS 4X12 MFZN	3	
15	3011424700	COVER *M HI		1	
16	3012905600	HINGE *U		1	
17	3016005300	SPECIAL WASR		1	
18	3016001230	SPECIAL BOLT T/U	T1 TRS 4X22 MFZN	3	
19	3016500720	CASTER F *L AS		1	
20	3016000700	SPECIAL SCREW	M5x15	2	
21	3012102501	FOOT ADJ *L AS		1	
22	3016500820	CASTER F *R AS		1	
23	3012101501	FOOT ADJ AS		1	
24	3011448600	COVER CAB BRKT	PP	1	
25	7112401211	SCREW TAPPING	T1 TRS 4X12 MFZN	2	
26		CORD POWER AS		1	
27	7112401211	SCREW TAPPING	T1 TRS 4X12 MFZN	7	
29	3013202400	HOSE DRN AS	PP	1	
30	7112401211	SCREW TAPPING	T1 TRS 4X12 MFZN	6	
31	3012400901	GRILL		1	
32	3014423320	COIL CON AS		1	
33	3010102100	ABSORBER C MOTR		1	
34	3012004400	FIXTURE C MOTOR		1	
35		MOTOR C	AC 2100RPM	1	
36	3011800400	FAN		1	
37	3011200500	CLAMP FAN		1	
39		DRYER AS		1	
40	3011113610	CASE VAPORI	PP	1	
41	7112401211	SCREW TAPPING	T1 TRS 4X12 MFZN	2	
42		COMPRESSOR		1	

NO	PART CODE	PART NAME	PART DESCRIPTION	Q'TY	REMARK
43	3016002500	SPECIAL WASR	SK-5	1	
44		SWITCH P-RELAY AS		1	
45	3012610000	RELAY BAND	SK-5	1	
46	3010309101	BASE COMP AS		1	
47	3016003300	SPECIAL BOLT	MFZN	4	
48	7112401211	SCREW TAPPING	T1 TRS 4X12 MFZN	2	
	3018908000	LOUVER F B AS		1	
49	3012007800	FIXTURE MOTR A	PP	2	
50	3015906900	MOTOR R	DC MOTOR	1	
51	3015905300	MOTOR F	DC MOTOR	1	
52	3018908000	LOUVER F B	99«,	1	
53	3014524800	PLATE SENS		1	
54	3011800400	FAN	ABS	2	
54	3018904201	LOUVER F B	PP	1	
	3018909300	LOUVER F A AS		1	
55	3013335100	INSU F LUVR A		1	
56	3018909300	LOUVER F A	HIPS	1	
57	7112401211	SCREW TAPPING	T1 TRS 4X12 MFZN	4	
58	3010924600	CAP F LUVR		1	
59-1	3017820920	SHELF F AS	HIPS(FR-710ND)	1	
60	3010621500	BRACKET F SHELF		1	
61	7112401211	SCREW TAPPING	T1 TRS 4X12 MFZN	3	
62	3011110200	CASE ICING	PP	2	
	3010519500	BOX ICE AS		1	
63	3012603400	HANDLE ICE BOX	ABS	1	
64	3011415500	COVER ICE BOX	GPPS	1	
65	3010519600	BOX ICE	HIPS	1	
66	3012003800	FIXTURE F LAMP		1	
67	3017900840	SOCKET F LAMP AS		1	
68		LAMP AS		1	
69	3015502600	WINDOW F	PP	1	
70	3018100040	SWITCH DR		1	
	3012508700	GUIDE V/CASE *M AS		1	
71	3012505600	GUIDE V/CASE *M		1	
72	3015304100	SUPPORTER ROLL B		1	
73	3014904300	SHAFT ROLLER			
74	3011110400	CASE VEGETB *L A		1	
75-2	3011110800	CASE VEGETB *L B	HIPS(FR-710ND)	1	

NO	PART CODE	PART NAME	PART DESCRIPTION	Q'TY	REMARK
76-2	3011428601	COVER V/CASE	SAN(FR-710ND)	1	
77	3011110500	CASE VEGETB *R A		1	
78-2	3011113400	CASE VEGETB *R B	HIPS(FR-710ND)	1	
79	3014700200	ROLLER V/CASE	*R / *L = 2 / 2	4	
80	3015303300	SUPPORTER ROLL	*R / *L = 2 / 2	4	
81-2	3017813110	SHELF R *U AS	GLASS(FR-710ND)	1	
82-2	3011111510	CASE CHILD	SAN(FR-710ND)	1	
83-2	3017812610	SHELF R *T AS	GLASS(FR-710ND)	1	
84	7112401211	SCREW TAPPING	T1 TRS 4X12 MFZN	2	
85	3012507020	GUIDE *L AS		1	
85-1	3012505000	GUIDE V/CASE *L		1	
85-2	3014700300	ROLLER A		4	
85-3	3016003700	SPECIAL WASR		1	
85-4	7112401211	SCREW TAPPING	T1 TRS 4X12 MFZN	1	
86	3012507100	GUIDE *R AS	PA-6	1	
87	7112401611	SCREW TAPPING	TRS 4X16 MFZN	4	
88	3014228300	PANEL R *T	FR-710ND	1	
89	3011428900	COVER CUBIC DUCT	ABS	4	
	3018904500	LOUVER R *S *L AS			
90	3018904300	LOUVER R *S *L	PP	1	
91	3013324301	INSULATOR R *S *L	F-PS	1	
92	7112401611	SCREW TAPPING	TRS 4X16 MFZN	2	
	3018908410	LOUVER R *S *R AS		1	
93	3018904400	LOUVER R *S *R	PP	1	
94	3013324401	INSULATOR R *S *R	F-PS	1	
95	3010916800	CAP RETUN DUCT	ABS	2	
96	3011900600	FILTER DEO CUBIC		6	
97	3018701400	DEODRANT ANTI CUBIC		6	
98	3015502800	WINDOW R	GPPS	1	
99		LAMP AS		2	
100	3017901010	SOCKET R LAMP AS	250 [V] / 1 [A]	1	
101	7112401611	SCREW TAPPING	TRS 4X16 MFZN	2	
102	3011416800	COVER RETUN DUCT	PP	1	
103	3019012600	POCKET SM	HIPS	1	
104	3019012700	POCKET JUMBO	HIPS	1	
104-1	3019012800	POCKET MULTI	HIPS	2	
105	3012509000	GUIDE JUMBO POCKET AS	ABS	1	

NO	PART CODE	PART NAME	PART DESCRIPTION	Q'TY	REMARK
106	3019012500	POCKET EGG	HIPS	1	
106-1	3019012400	POCKET FRESH	HIPS	1	
106-2	3011448400	COVER FRESH POCKET	GPPS	1	
107	3011161500	CASE EGG	GPPS	1	
108	3012307620	GASKET R DR AS	PVC-S	1	
109	3019012300	POCKET F *U	HIPS	1	
110	3019012200	POCKET F *T	HIPS	2	
111	3012307520	GASKET F DR AS	PVC-S	1	
112		ASSY F DR		1	
113		ASSY R DR		1	
114	3012610900	HANDLE F	ABS	1	
115	7002501611	SCREW MACHINE	TRS 5X16 MFZN	2	
116	3011609100	DECO F DR HNDL	ABS	1	
117	3012611000	HANDLE R	ABS	1	
118	7002501611	SCREW MATCHING	TRS 5X16 MFZN	2	
119	3011609200	DECO R DR HNDL	ABS	1	
120		EMBLEM		1	
121	7173301011	SCREW TAPPING	TT2 BIN 3X12MFZN	2	
122	3014395120	PCB *F AS	Y200	1	
123	3014228510	PANEL *F CONTL	ABS	1	
124	7125301211	SCREW TAPPING	T2S FLT 3X10 MFZN	3	
125	3016301100	BUTTON FCP *L		1	
126	3016301200	BUTTON FCP *R		1	
127	3015505110	WINDOW FCP AS		1	

4-3. MACHINE ROOM EXPLODED VIEW AND PARTS LIST



NO	PART NAME	NO	PART NAME	NO	PART NAME
1	BASE CAB *B	10	CABLE TIE	18	PIPE SUC CONN
2	SCREW MACHINE	11	CASE VAPORI AS	19	ABSORBER PIPE
3	CORD POWER AS	12	PIPE WI-CON AS	20	PIPE MUFFLER AS
4	SCREW TAPPING	13	SCREW TAPPING	21	ABSORBER PIPE A
5	COMPRESSOR	14	DRAIN HOSE B AS	22	PIPE HOT
6	ABSORBER COMP AS	15	SWITCH P-RELAY AS	23	PIPE SERVICE
7	WASHER SPECIAL	16	BAND RELAY	24	MOTOR C
8	BASE COMP AS	17	PIPE SUC AS	25	FAN C AS
9	DRYER AS				