

1. SPECIFICATIONS

1. Specifications

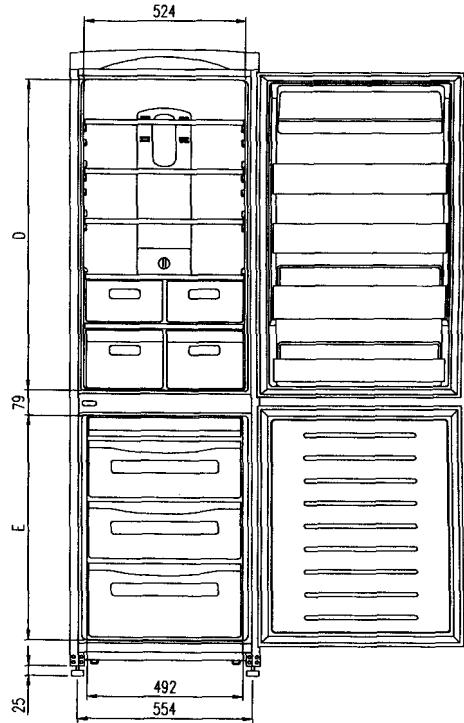
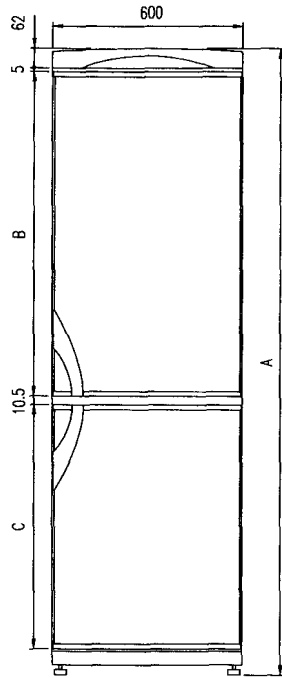
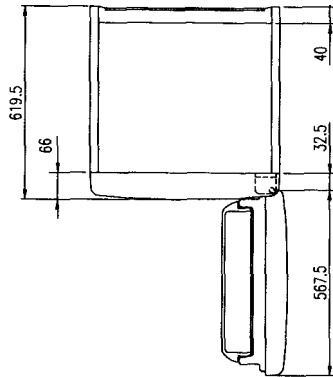
Model Name		ERF-310		ERF-340		ERF-370	
Division		M	A	M	A	M	A
Refrigerant(R134a)		150g	<-	<-	<-	160g	<-
Cooling system		Fan cooling convection					
Refrigation system		Air forced convection					
Defrost system		Fin evaporator forced					
Defrost operation		Automatic start and stop					
Cold control		Dialing	Button	Dialing	Button	Dialing	Button
Gross Capacity (l.)	Freezer	93	<-	93	<-	112	<-
	Refrigerator	218	<-	248	<-	251	<-
	Total	311	<-	341	<-	363	<-
External Dimension (mm)	Height	1780	<-	1911	<-	2000	<-
	Width	600	<-	<-	<-	<-	<-
	Depth	618	<-	<-	<-	<-	<-
Net weight (Kg)		69	<-	75	<-	79	<-
Energy class		C grade					
Power consumption (kWh/24h)		1.45	1.48	1.5	1.54	1.58	1.62
Freezing capacity (kg/24h)		5	6.5	5	6.5	6	7.5
Autonomy (F room)		12 h					
Rated input		120	125	120	125	130	135
Lamp rated input (W)		15					
Rated voltage		AC 230/50 Hz					

Note) A: Electronic control type
M: Manual control type

2. Types of the approved safety standards

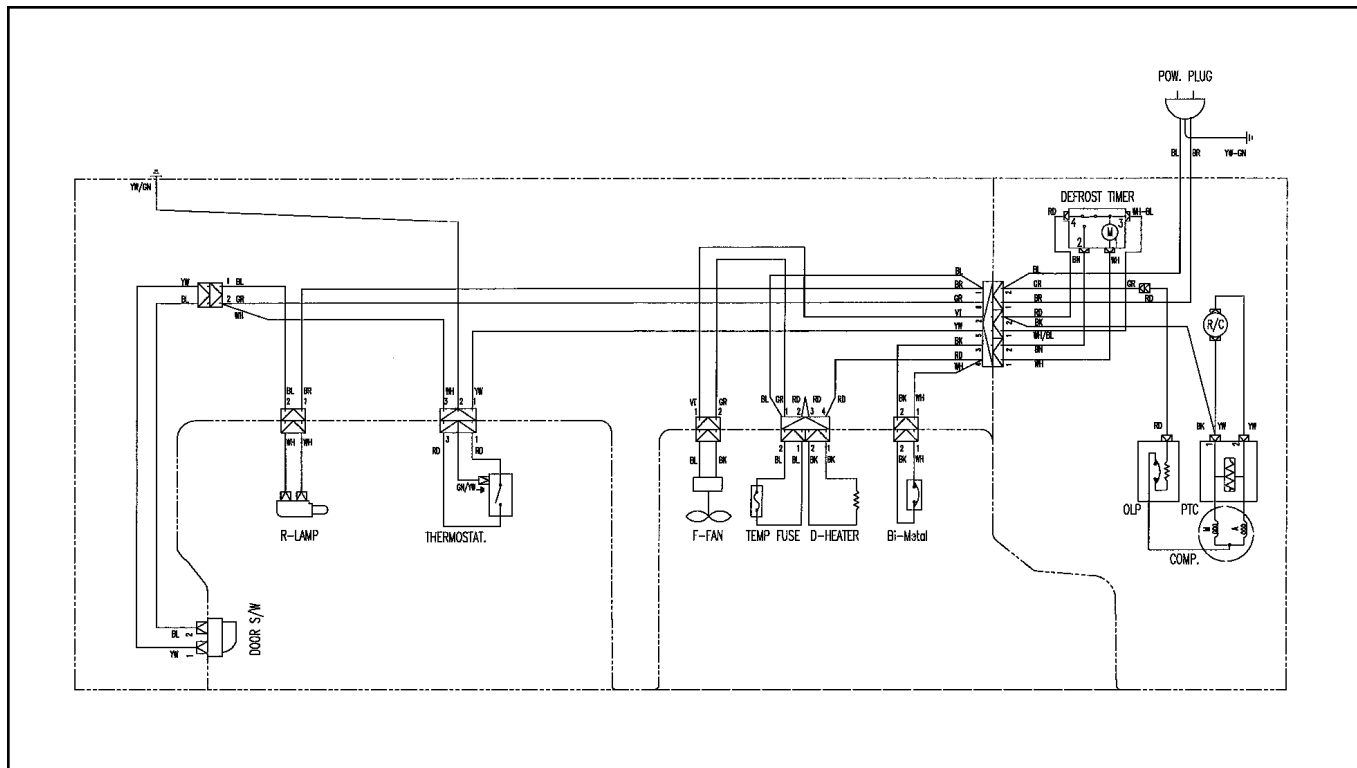


1. ERF-310M, 340M, 370M

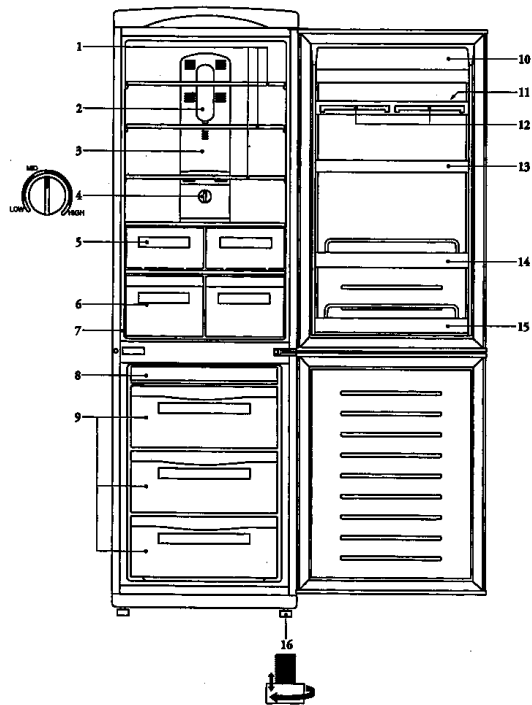


MODEL	A	B	C	D	E	REMARK
ERF-310M	1780	931	698	862.5	621.5	
ERF-340M	1911	1062	698	993.5	621.5	
ERF-370M	2000	1062	787	993.5	710.5	

1. ERF-310M, 340M, 370M

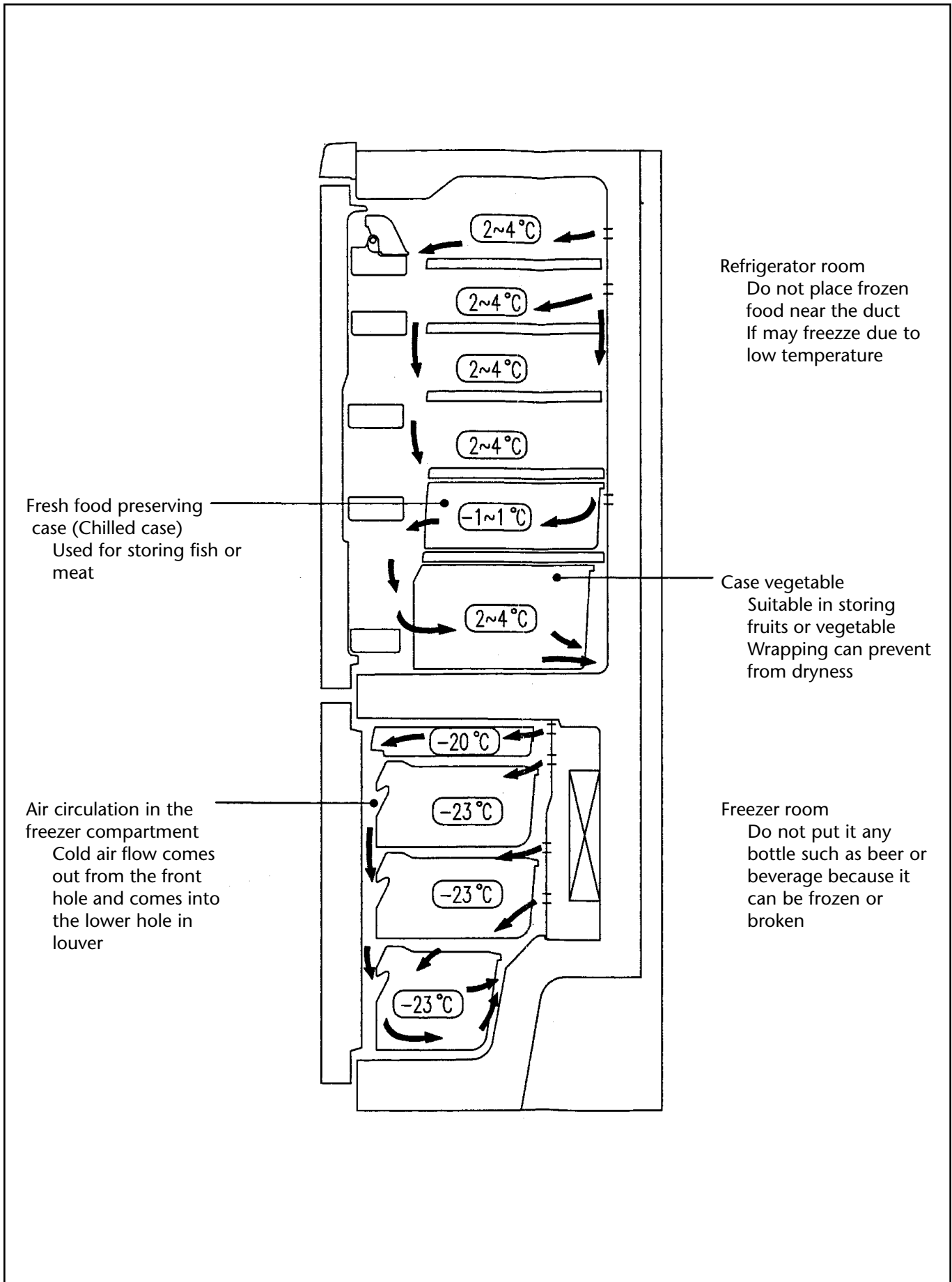


1. ERF-310M, 340M, 370M

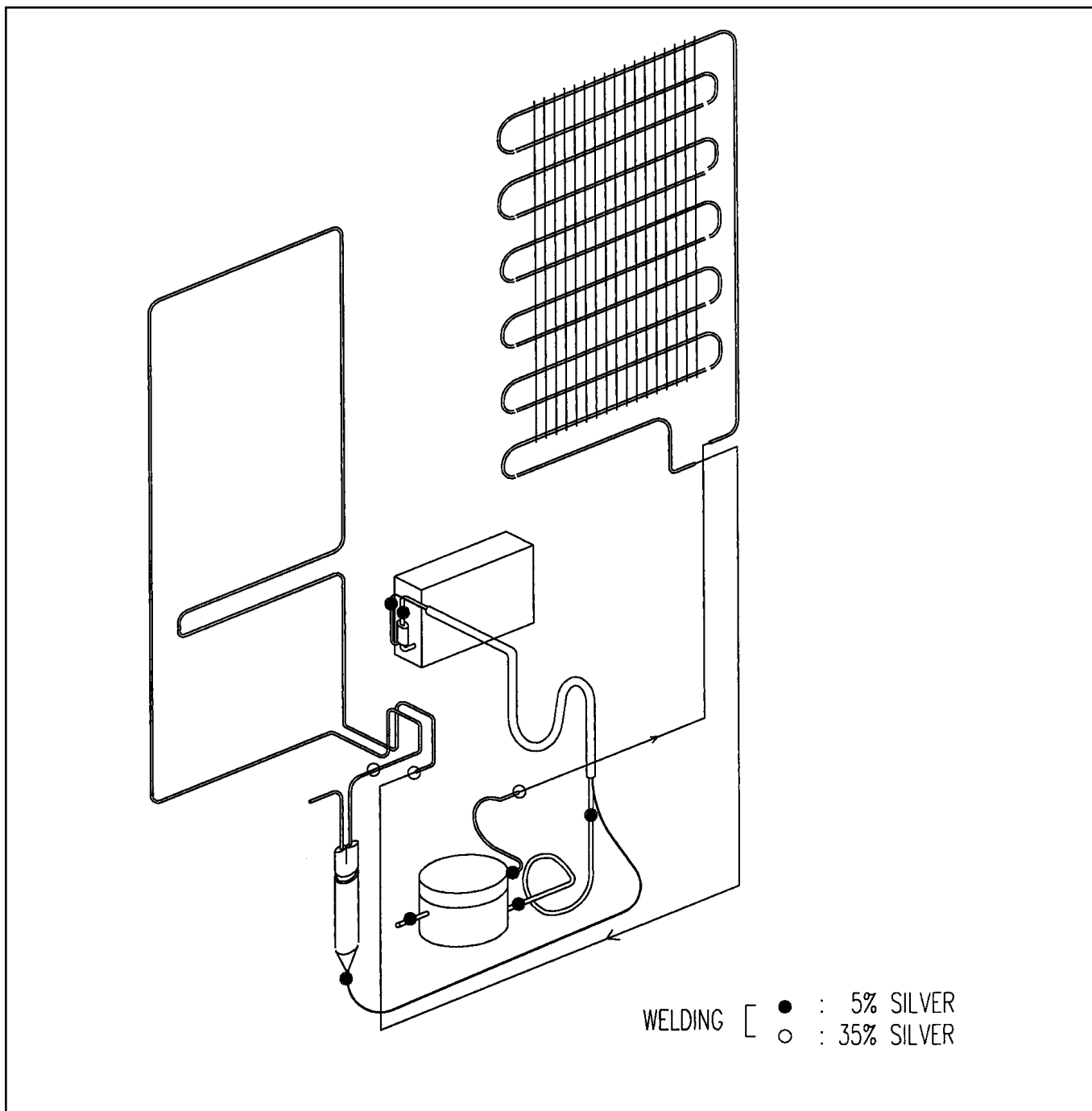


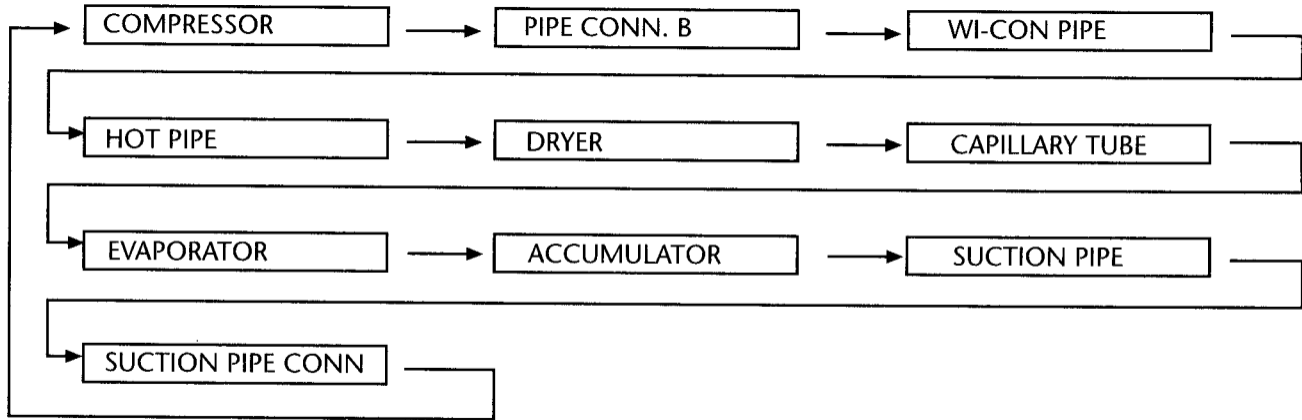
1. Removable shelf (ERF-310 series: 2 shelves and ERF-340,370 series: 3 shelves), glass or crystal clear plastic depending on model.
2. Light.
3. Multi air-flow duct.
4. Refrigerator and freezer temperature control knob.
5. Low temperature compartments.
6. Vegetable bin. Two bins or one bin; in case of one bin item (15) won't be applied depending on model.
7. Rating plate. It is attached in the refrigerator compartment on the left-hand side next to the vegetable bins.
8. Ice cube tray.
9. Compartment for storing and freezing.
10. Butter pocket.
11. Removable pocket (for egg tray)
12. Egg tray.
13. Removable pocket (not in ERF-310M)
14. Bottle pocket.
Pocket assembled with plastic bottle fixture ("A" type) or with metal bar ("B" type) depending on model.
15. R door pocket (depending on model).
16. Adjustable feet.

5. AIR FLOW DIA -

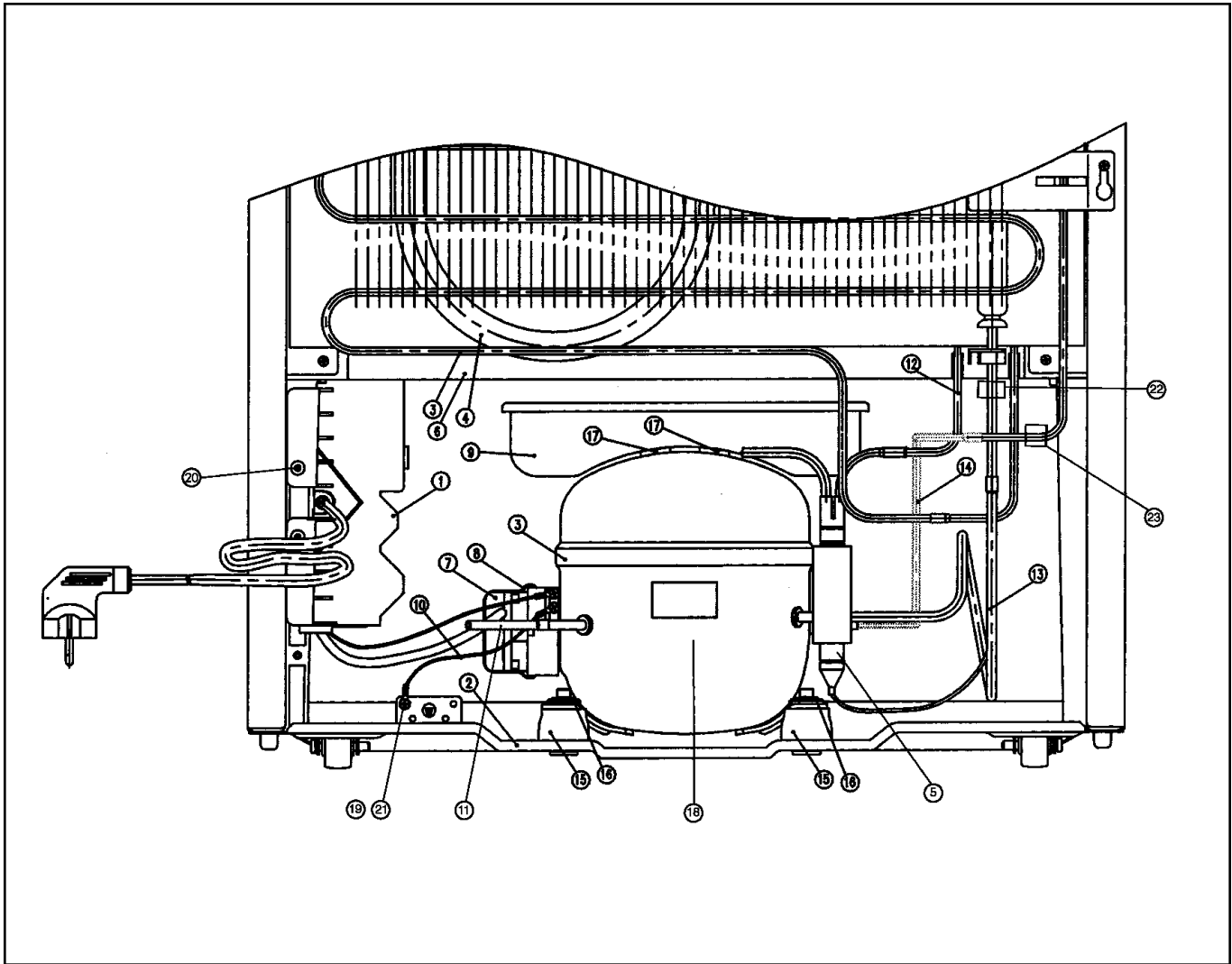


6. REFRIGERANT CYCLE DIA -





7. MACHINE ROOM VIEW AND



NO	PART NAME	NO	PART NAME	NO	PART NAME
1	ASS'Y BOX POWER	9	CASE VAPORI	17	ABSORBER VAPORI CASE
2	BASE COMP. AS	10	HARNESS EARTH	18	COMPRESSOR
3	ASS'Y WI-CON	11	PIPE CHARGE	19	SCREW MACHINE
4	SUCTION PIPE AS	12	HOT PIPE	20	SPECIAL SCREW C.
5	DRYER AS	13	PIPE SUCTION CONN	21	SPECIAL WASHER
6	BASE CAB.	14	CONN. B	22	ABSORBER PIPE B
7	COVER RELAY BOX	15	ABSORBER COMP.	23	ABSORBER PIPE C
8	BAND RELAY	16	FIXTURE COMP.		

9. COMPONENTS SPECIFICATIONS

1. COMPRESSOR

	ERF-310M	ERF-340M	ERF-370M	Remarks
Part name	HPL25YG1-5	<-	HPL27YG1-5	
Part code	39561125R51	<-	39561127R51	
Rated voltage	220-240V 50Hz	<-	<-	
Starting type	RSIR	<-	<-	
Refrigerant	R134 a			

2. RELAY ASSEMBLY

2.1 PTC

	ERF-310M	ERF-340M	ERF-370M	Remarks
Part name	PTH490D-AS330	<-	<-	
Part code	3817907000	<-	<-	

2.2 OLP

	ERF-310M	ERF-340M	ERF-370M	Remarks
Part name	4TM213NHBYY	<-	4TM265NHBYY	
Part code	3817911200	<-	3817911300	

3. RUNNING CAPACITOR

	ERF-310M	ERF-340M	ERF-370M	Remarks
Part name	MA80040040	<-	MA80050040	
Specifications	4uF 400VAC	<-	5uF 400VAC	
Part code	3016400800	<-	3016400810	

4. AS MOTOR FAN

	ERF-310M	ERF-340M	ERF-370M	Remarks
Part name	IS-23211DWBFH	<-	<-	
Specifications	2400RPM	<-	<-	
Part code	3015903700	<-	<-	

Component specifications

5. HEATER D AS

		ERF-310M	ERF-340M	ERF-370M	Remarks
Part	RICA	RS6	<-	<-	
Name	CONSONI	16	<-	<-	
Specifications		230V 230W	<-	<-	
Part code		3012803600	<-	<-	

6. LAMP

		ERF-310M	ERF-340M	ERF-370M	Remarks
Type		Pygmy	<-	<-	
Specifications		230V 15W	<-	<-	
Part code		3013600700	<-	<-	

7. SWITCH LAMP

		ERF-310M	ERF-340M	ERF-370M	Remarks
Part name		1051	<-	<-	
Specifications		250V 0.25A	<-	<-	
Part code		3018111500	<-	<-	

8. SOCKET LAMP AS

		ERF-310M	ERF-340M	ERF-370M	Remarks
Part name		1058	<-	<-	
Specifications		250V 2A	<-	<-	
Part code		3017903100	<-	<-	

9. FUSE TEMPERATURE

		ERF-310M	ERF-340M	ERF-370M	Remarks
Part name		SF76E	<-	<-	
Specifications		250V 15(10)A	<-	<-	77°C
Part code		3017200700	<-	<-	

Component specifications

10. SWITCH BI-METAL

	ERF-310M	ERF-340M	ERF-370M	Remarks
Part name	261N	<-	<-	
Specifications	250V 10(3)A	<-	<-	
Part code	3018115600	<-	<-	

11. SWITCH D TIMER

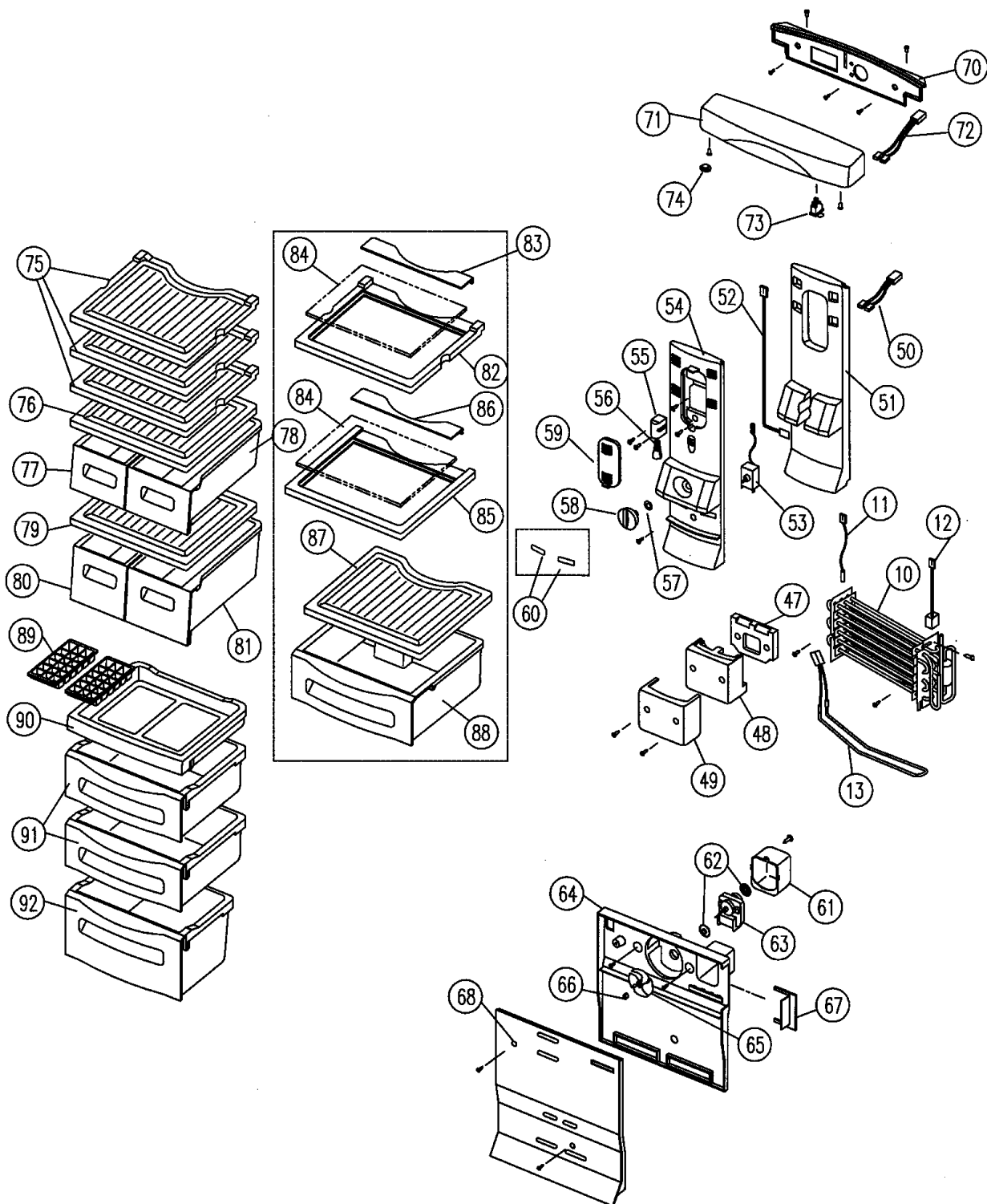
	ERF-310M	ERF-340M	ERF-370M	Remarks
Part name	TMDE807UC1	<-	<-	
Specifications	9h 37 min	<-	<-	
Part code	3018115700	<-	<-	

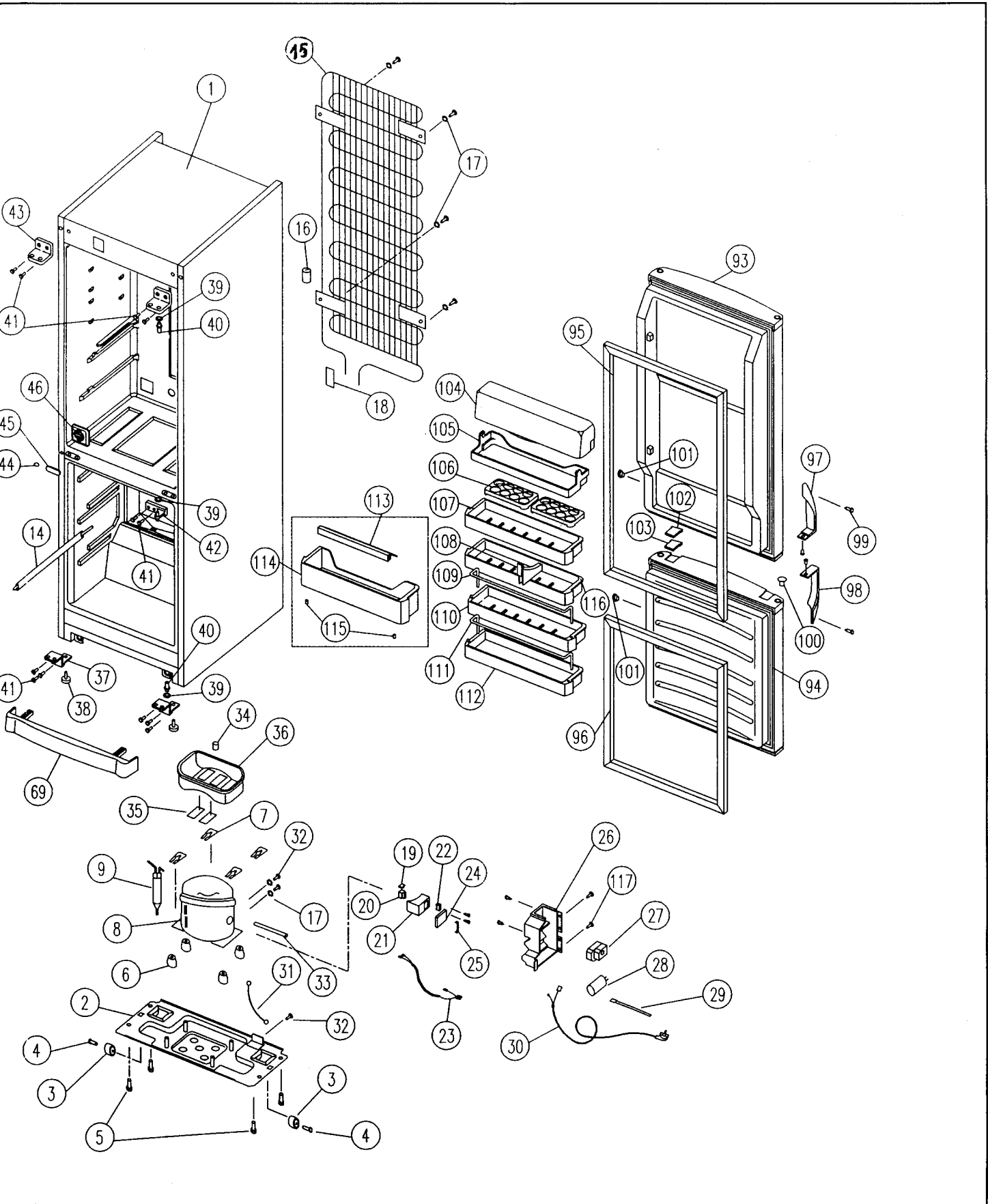
12. THERMOST AT

	ERF-310M	ERF-340M	ERF-370M	Remarks
Part name	K50-P1530	<-	<-	
Specifications	250V 6A	<-	<-	
Part code	3018300300	<-	<-	

10. EXPLODE DRAWINGS

1. ERF-310M, ERF-340M, ERF-370M





11. PART LIST

1. Parts list (M TYPE)

NO	PART NAME	PART CODE	DESCRIPTION	MODEL			REMARK
				310	340	370	
1	ASSY CAB URT	3010071030		1	-	-	
		3010071040		-	1	-	
		3010071050		-	-	1	
2	BASE COMP	3010310500	SBHG T1.2	1	1	1	
3	CASTER	3016500500	PA-6	2	2	2	
4	SHAFT CASTER	3014903100	Ø6xL40 SWRM10	2	2	2	
5	<u>SPECIAL SCREW A</u>	3016004300	M6.5xL20	4	4	4	
6	<u>ABSORBER COMP</u>	3010101700	NR	4	4	4	- D/W COMP
	FIXTURE COMP	3012005300	SK5+ZN5-C IQ.8	4	4	4	- D/W COMP
8	COMPRESSOR	395611251151	HPL25YG1-5	1	1	-	- D/W COMP
		395611271151	HPL27YG1-5	-	-	1	- D/W COMP
9	DRYER ASS	3016802200	15Gr	1	1	1	
10	EVA AS	3017003200		1	1	-	
		3017004600		-	-	1	
11	FUSE TEMPERATURE	3017200700	250V	1	1	1	
12	SWITCH BI-METAL	3018115600	250V 5A	1	1	1	
13	<u>HEATER D AS</u>	3012803600	230V 230W	1	1	1	
14	PIPE SUC AS	3014418700	DCUTI-0	1	1	1	
15	WI-CON ASSY	3010056000		1	1	-	
		3010056100		-	-	1	
16	ABSORBER PIPE C	3010102000	EPDM	2	2	2	
17	SPECIAL WASHER	3016004700	Ø4.3 STAR	8	8	8	
18	ABSORBER PIPE B	3010101900	IIR	1	1	1	
19	SWITCH P RELAY OIL	3817911200	4TM21 3NHB	1	1	-	- D/W COMP
		3817911300	4TM265NHB	-	-	1	- D/W COMP
20	SWITCH P RELAY PTC	3817907000	33 (MURADTA)	1	1	1	- D/W COMP
21	RELAY BOX	3810506400		1	1	1	- D/W COMP
22	CABLE CLAMP	3818200300		1	1	1	- D/W COMP
23	HARNESS RELAY	3012717070		1	1	1	
24	RELAY BOX COVER	3811401300		1	1	1	- D/W COMP
25	RELAY BAND	3816100400		1	1	1	- D/W COMP
26	BOX POWER	3010517201	HIPS	1	1	1	
27	SWITCH DEF TIMER	3018115700		1	1	1	
28	CAPACITOR RUNNING	3016400800	4 µF/350VAC	1	1	-	
		3016400810	5 µF/350VAC	-	-	1	
29	CABLE TIE			2	2	2	
30	<u>CORD POWER AS</u>	3011303900	CP-2 PIN	1	1	1	301_1303910: BS-1363 (U.K.)
31	HARNESS EARTH	3012717010		1	1	1	
32	SCREW MACHINE	7051401065	PAN 4x10 BSNI	3	3	3	
33	PIPE CHARGE	3014418200	DCUTI-0Ø6 xT0.6xL00	1	1	1	- D/W COMP
34	CAP DRAIN HOSE	3010919700	NBR	1	1	1	
35	ABSORBER VAPORI CASE	3010102700	IIR	2	2	2	
36	CASE VAPORI (A)	3011115100	AL T0.6	1	1	1	- D/W COMP
37	HINGE *U	3012908200	P/O+ZN T4.0	2	2	2	
38	FOOT ADJUSTING AS	3012101800	PP+SPECIAL BOLT	2	2	2	
39	SPECIAL WASHER HINGE	3016005500	S20C T1.0 13/7	2	2	2	
40	SHAFT HI	3014903200		2	2	2	
41	SPECIAL BOLT C	3016004900	M5xP0.89xL16 SWCH22A	12	12	12	
42	HINGE *M	3012908000	DIE CASTING	1	1	1	
43	HINGE *T	3012908100	P/O+ZN T3.2	2	2	2	
44	CAP SCREW	3010920200	PE-LE	1	1	1	
45	CAP SCREW HOLE	3010920300	HIPS	1	1	1	
46	COVER RETURN DUCT	3011433700	HIPS	1	1	1	
47	INSU DAMPER B	3013325400	F-PS	1	1	1	
48	<u>INSU DAMPER A</u>	3013324500	F-PS	1	1	1	
49	COVER DAMPER	3011433500	HIPS	1	1	1	
50	HARNESS LAMP SOCKET	3012719800		1	1	1	
51	INSU MULTI DUCT	3013326810	F-PS	1	-	-	
		3013326910	F-PS	-	1	1	
52	HARNESS THERMOSTAT	3012717060		1	1	1	
53	THERMOSTAT	3018300300	250V 6A	1	1	1	
54	COVER MULTI DUCT	3011434110	HIPS	1	-	-	
		3011434210	HIPS	-	1	1	
55	<u>SOCKET LAMP AS</u>	3017903100		1	1	1	
56	<u>LAMP</u>	3013600700	230V 15W	1	1	1	

Part List

NO	PART NAME	PART CODE	DESCRIPTION	MODEL			REMARK
				310	340	370	
57	SPECIAL NUT	3016005400	HEX M10	1	1	1	
58	KNOB R	3013401410	HIPS	1	1	1	
59	WINDOW LAMP	3015503300	GP	1	1	1	
60	CAP M-DUCT COVER	3010924700	PP	2	2	2	- WITHOUT C-CASE
61	BRACKET FAN MOTOR	3010615600	PP	1	1	1	
62	BUSHING FAN MOTOR	3010901800	NR	2	2	2	
63	<u>MOTOR FAN A S</u>	3015903700	IS-23211 DWBFH	1	1	1	
64	LOUVER F B	3018905500	HIPS	1	1	-	
		3018905600	HIPS	-	-	1	
65	FAN	3011801400	ABS	1	1	1	
66	<u>FIXTURE FAN RING</u>	3012005400	SUS304 T0.5	1	1	1	
67	FLAP F	3017100310	HIPS	1	1	1	
68	LOUVER F A	3018905300	HIPS	1	1	-	
		3018905400	HIPS	-	-	1	
69	COVER CAB BRACKET	3011433300	HIPS_	1	1	1	
70	BASE CONTROL PANEL	3010312900	HIPS	1	1	1	
71	<u>PANEL CONTROL</u>	3014204810	ABS	1	1	1	
72	<u>HARNES LAMP SW</u>	3012717020		1	1	1	
73	<u>SWITCH LAMP</u>	3018111500	250V 0.25A	1	1	1	
74	CAP CONTROL PANEL A	3010902800	SILICON RUBBER	1	1	1	
75	SHELF R	3017813700	GPPS	2	3	3	
76	COVER CHILD CASE	3011433200	GPPS	1	1	1	
77	CASE CHILD *L	3011114700	GPPS	1	1	1	-OPTION
78	CASE CHILD *R	3011115800	GPPS	1	1	1	-OPTION
79	COVER VEGTB CASE (B)	3011434410	GPPS	1	1	1	
80	CASE VEGTB*L	3011115010	GPPS	1	1	1	
81	CASE VEGTB*R	3011115020	GPPS	1	1	1	
82	FRAME R SHELF A	3012200900	ABS	2	3	3	-OPTION
83	<u>FRAME R SHELF B</u>	3012201400	ABS	2	3	3	-OPTION
84	SHELF GLASS	3017813800	T4.0	3	4	4	-OPTION
85	FRAME <u>C-CASE COVER A</u>	3012201500	ABS	1	1	1	-OPTION
86	FRAME C-CASE COVER B	3012201600	ABS	1	1	1	-OPTION
87	COVER VEGTB CASE (A)	3011434400	GPPS	1	1	1	-OPTION
88	CASE VEGTB	3011115000	GPPS	1	1	1	-OPTION
89	CASE ICING	3011114900	PP	2	2	2	
90	CASE F D	3011115910	HIPS	1	1	1	
91	<u>CASE F B</u>	3011115300	GPPS	2	2	-	
	CASE F C	3011115400	GPPS	-	-	2	
92	<u>CASE FA</u>	3011115200	GPPS	1	1	1	
93	ASSY R DOOR URT	3010075200		1	-	-	
		3010075210		-	1	1	
94	ASSY F DOOR URT	3010075300		1	1	-	
		3010075310		-	-	1	
95	GASKET R DOOR AS	3012306600	PVC+MAGNET	1	-	-	
		3012306800	PVC+MAGNET	-	1	1	
96	GASKET F DOOR AS	3012306500	PVC+MAGNET	1	1	-	
		3012306700	PVC+MAGNET	-	-	1	
97	HANDLE *T	3012610200	PBT	1	1	1	
98	HANDLE (*U)	3012610100	PBT	1	1	1	
99	SPECIAL SCREW D	3016004810	T2 FLT 4x16 PAINTING	4	4	4	
100	CAP DOOR BUSHING	3010918300	PP	1	1	1	
101	CAP HANDLE	3010910000	HIPS	2	2	2	
102	COVER DOOR CAP *L	3011437000	ABS	1	1	1	
103	COVER DOOR CAP *R	3011437010	ABS	1	1	1	
104	COVER BUTTER CASE	3011433100	GPPS	1	1	1	
105	CASE BUTTER	3011114600	GPPS	1	1	1	
106	CASE EGG	3011114800	GPPS	2	2	2	
107	POCKER EGG	3019008700	HIPS	1	1	1	
108	SUPOT B-POCKET (B)	3015300400	HIPS	1	1	1	
109	GUIDE BOTTLE SUPOT (B)	3012508000	Ø5	1	1	1	
110	<u>POCKET BOTTLE (B)</u>	3019009500	HIPS	1	1	1	
111	GUIDE BOTTLE SUPOT C	3012508010	Ø5	1	1	1	
112	POCKET R DOOR	3019008710	HIPS	1	1	1	
	113 SUPOT B-POCKET (A)	3015303900	PE-LD	1	1	1	-OPTION
114	POCKET BOTTLE A	3019008600	HIPS	1	1	1	-OPTION
115	CAP POCKET	3010909900	SILICON RUBBER	2	2	2	-OPTION
116	POCKET BUTTE B	3019008720	HIPS	-	1	1	
117	<u>SPECIAL SCREW C</u>	3016004800		2	2	2	

Part List

Part list of colour components (ERF-310M,ERF-340M,ERF-370M)

WHITE

NO	PART NAME	PART CODE	MODEL			DESCRIPTION	REMARK
			310	340	370		
2	CONTROL PANEL M	3014204950	1	1	1	ABS	mechanical
3	BASE CONTROL PANEL	3010312900	1	1	1	HIPS	
4	REFRIGERATOR DOOR (310)	3010075201	1			URT FORMING (CO-LAMINAR)	
5	REFRIGERATOR DOOR (340-370)	3010075213		1	1	URT FORMING (CO-LAMINAR)	
6	FREEZER DOOR (310-340)	3010075303	1	1		URT FORMING (CO-LAMINAR)	
7	FREEZER DOOR (370)	3010075313			1	URT FORMING (CO-LAMINAR)	
8	HANDLE *F	3012610100	1	1	1	PBT	
9	HANDLE *R	3012610200	1	1	1	PBT	
10	COVER DOOR CAP *L	3011437000	2	2	2	ABS	
11	COVER DOOR CAP *R	3011437010	2	2	2	ABS	
12	CAP HANDLE	3010910010	4	4	4	HIPS	
13	CAP SCREW	3010920200	1	1	1	HIPS	
14	CAP DOOR BUSHING	3010918300	1	1	1	PP	
15	CAP CONTROL PANEL	3010902810	1	1	1	SILICON RUBBER	
16	COVER CAB BRACKET	3011433320	1	1	1	HIPS	

SILVER

NO	PART NAME	PART CODE	MODEL			DESCRIPTION	REMARK
			310	340	370		
2	CONTROL PANEL M	3014204970	1	1	1	ABS	mechanical
3	BASE CONTROL PANEL	3010312910	1	1	1	HIPS	
4	REFRIGERATOR DOOR (310)	3010074601	1			URT FORMING (CO-LAMINAR)	
5	REFRIGERATOR DOOR (340-370)	3010075211		1	1	URT FORMING (CO-LAMINAR)	
6	FREEZER DOOR (310-340)	3010075301	1	1		URT FORMING (CO-LAMINAR)	
7	FREEZER DOOR (370)	3010075311			1	URT FORMING (CO-LAMINAR)	
8	HANDLE *F	3012610120	1	1	1	PBT	
9	HANDLE *R	3012610220	1	1	1	PBT	
10	COVER DOOR CAP *L	3011437040	2	2	2	ABS	
11	COVER DOOR CAP *R	3011437050	2	2	2	ABS	
12	CAP HANDLE	3010910010	4	4	4	HIPS	
13	CAP SCREW	3010920210	1	1	1	HIPS	
14	CAP DOOR BUSHING	3010918310	1	1	1	PP	
15	CAP CONTROL PANEL	3010902810	1	1	1	SILICON RUBBER	
16	COVER CAB BRACKET	3011433320	1	1	1	HIPS	

INOX (DARK GRAY)

NO	PART NAME	PART CODE	APPLY MODEL			DESCRIPTION	REMARK
			310	340	370		
2	CONTROL PANEL M	3014204990	1	1	1	ABS	mechanical
3	BASE CONTROL PANEL	3010312910	1	1	1	HIPS	
4	REFRIGERATOR DOOR (310)	3010074602	1			URT FORMING (INOX)	
5	REFRIGERATOR DOOR (340-370)	3010075212		1	1	URT FORMING (INOX)	
6	FREEZER DOOR (310-340)	3010075302	1	1		URT FORMING (INOX)	
7	FREEZER DOOR (370)	3010075312			1	URT FORMING (INOX)	
8	HANDLE *F	3012610110	1	1	1	PBT	
9	HANDLE *R	3012610210	1	1	1	PBT	
10	COVER DOOR CAP *L	3011437020	2	2	2	ABS	
11	COVER DOOR CAP *R	3011437030	2	2	2	ABS	
12	CAP HANDLE	3010910010	4	4	4	HIPS	
13	CAP SCREW	3010920210	1	1	1	HIPS	
14	CAP DOOR BUSHING	3010918310	1	1	1	PP	
15	CAP CONTROL PANEL	3010902810	1	1	1	SILICON RUBBER	
16	COVER CAB BRACKET	3011433310	1	1	1	HIPS	

14. TROUBLE SHOOTING

1. TROUBLE SHOOTING PROCEDURE OF THE BREAKDOWN

SYMPTOM	CHECK POINT	CAUSE	ACTION
LAMP OFF COMP OFF	Power receptable	Power failure	
	power plug	Connection is not good	Adjust
	connectors	Housing connector bad assy, with URT, terminals bent	Adjust
FAN ON COMP OFF	Comp	Short circuit on coil	Replace comp
	PTC relay	Bad connection, bad assembled	Adjust
	running capacitor (R/C)	Bad connection, bad assembled	Adjust
LAMP OFF COMP ON	Component	Lamp broken or bad assy	replace it
	Door switch	Door switch broken or bad assy	Adjust
FAN OFF COMP ON	Component	Fan motor broken, fan obstruction replace it	
	connectors	Housing connector bad assy, with URT, terminals bent	Adjust
DEFROST PROBLEMS	Heater	Component broken	replace it
	fuse	broken (find broke down reason)	replace it
	d-sensor/bi-metal	incorrect open/close temperature	replace it
	connectors	Housing connectors bad assy, with URT, terminals bent	adjust
	M-pcb	htr relay broken	replace it
	Timer	timer broken or bad connection	Adjust
UNDERCOOLING	Temperature control	The control button setting is not proper	set temp
	closing/opening door	Closing/opening door is too frequent, or door is open	close door
	Food storage conditions	Excesive storage	Arrange
		Hot food has been stored	Prevent this
	Food location	Food close outlet air ducts	Reorganizate food
	Location setting	Ref is located under direct sun light or heat.	Move it
		Surrounding is blocked (no gap between walls)	Move it
	Electric problems	Compressor, sensor, thermostat problems	General inspection
	Air circulation	Air ducts obstruction	Clean and repair
	Fan	Fan broken or obstructed	Replace it
	Refrigerant	Low charge	Recharge
		Gas leak	Repair/recharge
Lamp	Lamp always on because door switch problems	Adjust	
OVER COOLING	Temperature control	The control button setting is not proper	set temp
	Food location	The wet food is placed in front of the outlet of the duct	Reorganizate food
	R-sensor, thermostat	Componet broken or disadjusted	replace
	Chilled case	(Chilled case has 0°C under specification)	

CONFIRMATION PROCEDURE ON REFRIGERANT INSUFFICIENT

SYMPTOM	DECISION	REPAIRS
Complete leaking	Remove louver a and b. No frost will be produced at the inlet of evaporator after passing approximately 4 minute operation of the comp	- Check for a leakage after vacuuming
Refrigerant insufficient	1) Frost condition: frost condition in the inlet pipe is extremely different from the outlet pipe.	- Inject proper amount of refrigerant
	2) Measurement of the temperature: When the inside temperature is stable, a 5°C temperature difference occurs between the inlet pipe and the outlet pipe.	