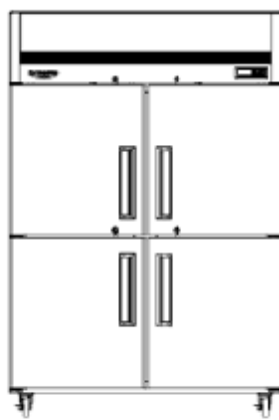




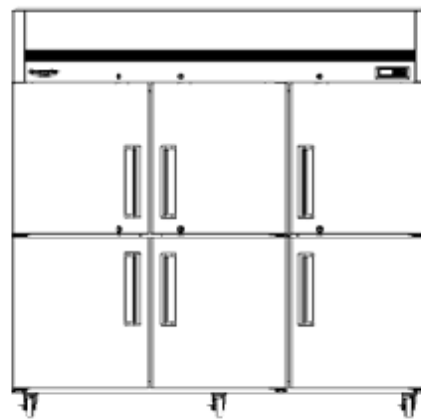
Commercial Upright Refrigerator & Freezer Service Manual



LRT-23H
LFT-23H



LRT-49H
LFT-49H



LRT-72H
LFT-72H



TABLE OF CONTENTS

1. SPECIFICATIONS	4~6
2. PARTS	7~44
3. WIRING DIAGRAM	45~47
4. MAIN COMPONENTS	48~62
5. ELECTRONIC CONTROL INSTRUCTIONS	63~85
6. PART LIST	86~89



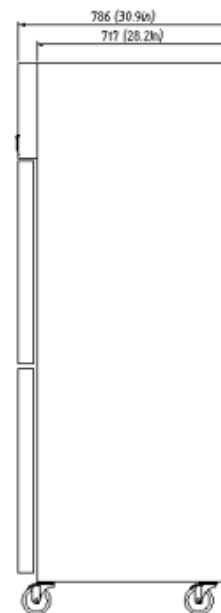
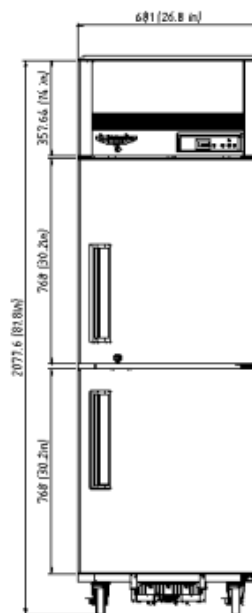
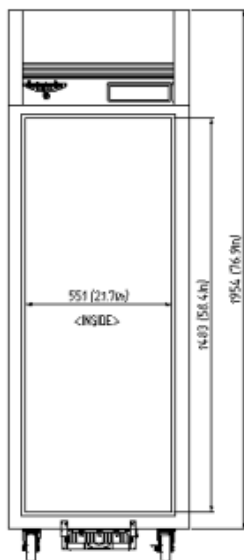
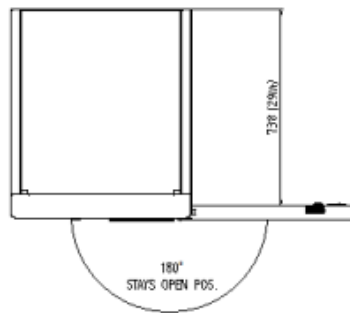
Safety cautions during service

- **When exchanging or repairing electric parts, pull the plug out before exchanging and repairing.**
- **When exchanging electric parts, use a rating part.**
 - Be sure to check marks such as MODEL name, rating voltage, rating currents, movement temperature etc.
- **During repairing, make sure wirings such as Harness, wire joint are sturdy so that it is free of danger due to disclosure of core wire.**
 - Don't let it derail when certain strength is put on.
- **When repairing, take out the dust or foreign body (Housing part, wiring part, contact point part).**
 - It prevents danger of fire such as TRACKING, SHORT.
- **Check whether water has gone into the electric parts.**
 - When there are traces of water, exchange the parts or enact the TRACKING prevention device.
- **After repairing, check the assembly status of the parts.**
 - Keep the status as it was before the repairing. .
- **After checking the usage environment of the product and if the installation is unstable, change the usage location.**
 - For installations in places with moisture, water and for heat devices, prevent placing products near igniting materials etc.
- **When earthing is needed, earth it.**
 - For cases when electric leakage is concerned due to moisture or water, be sure to earth it.
- **For products that consumes power such as electric products, make sure numerous plugs are not used in a single outlet.**

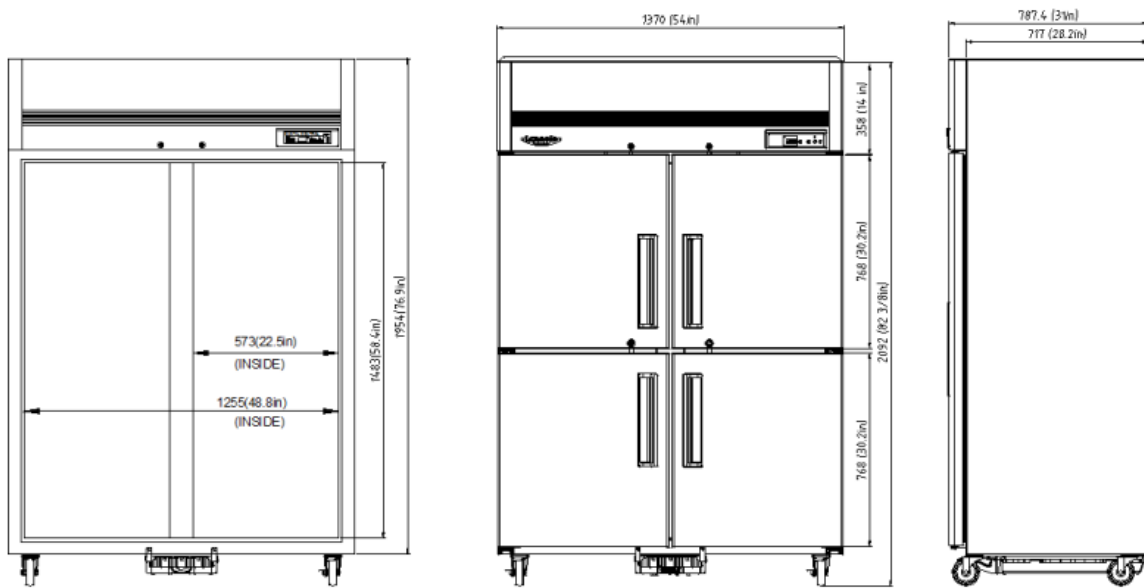
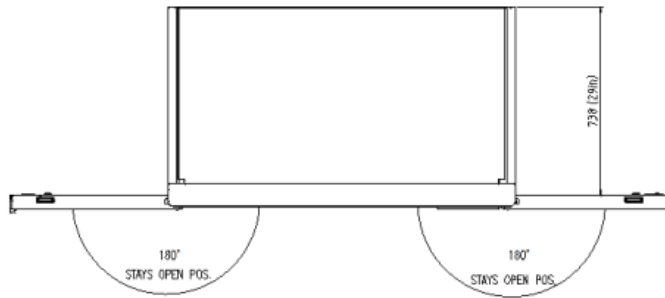
1. Specifications

A. Dimensions

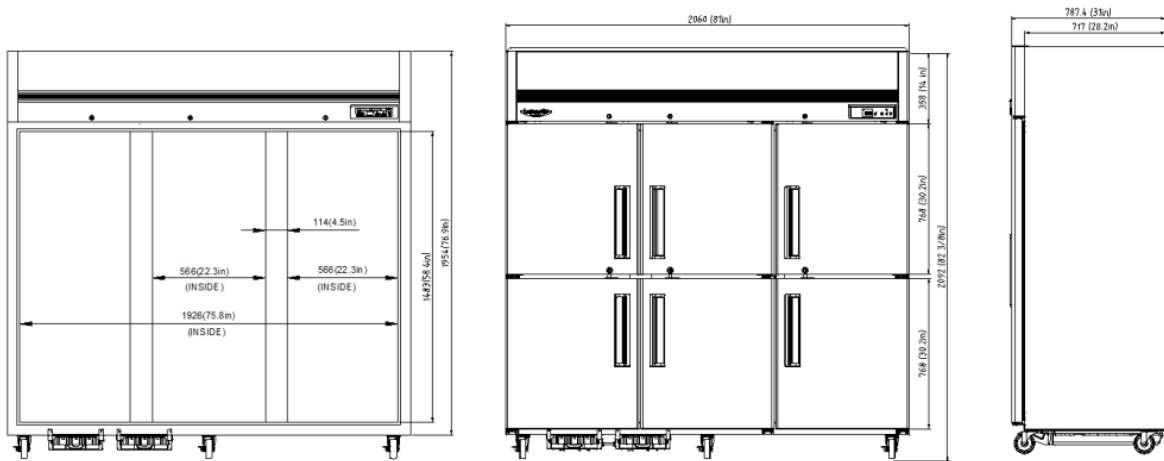
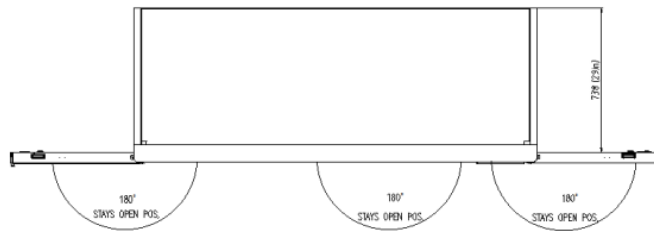
1. LRT-771H, LFT-771H



2. LRT-1471H,LFT-1471H



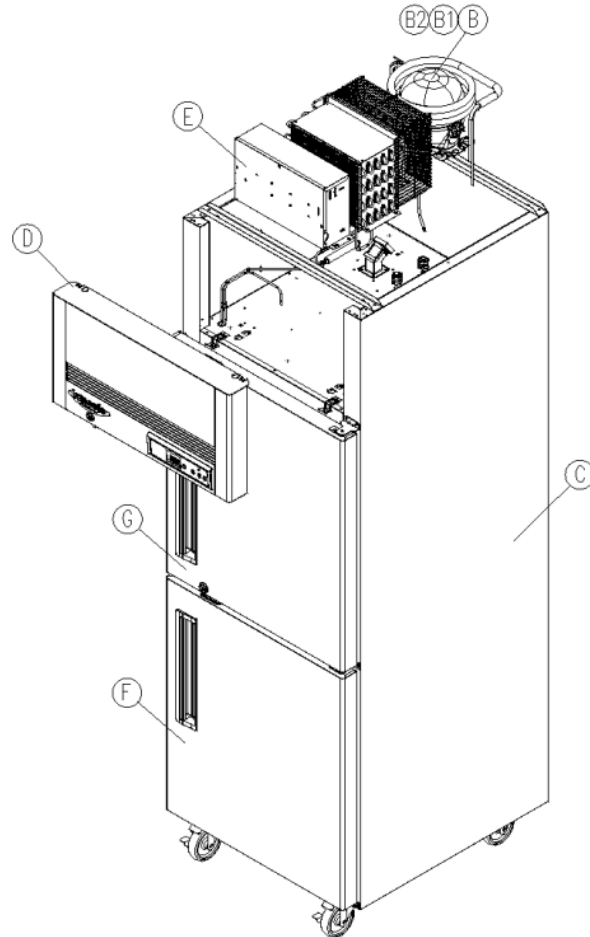
3. LRT-72H,LFT-72H



2. PART

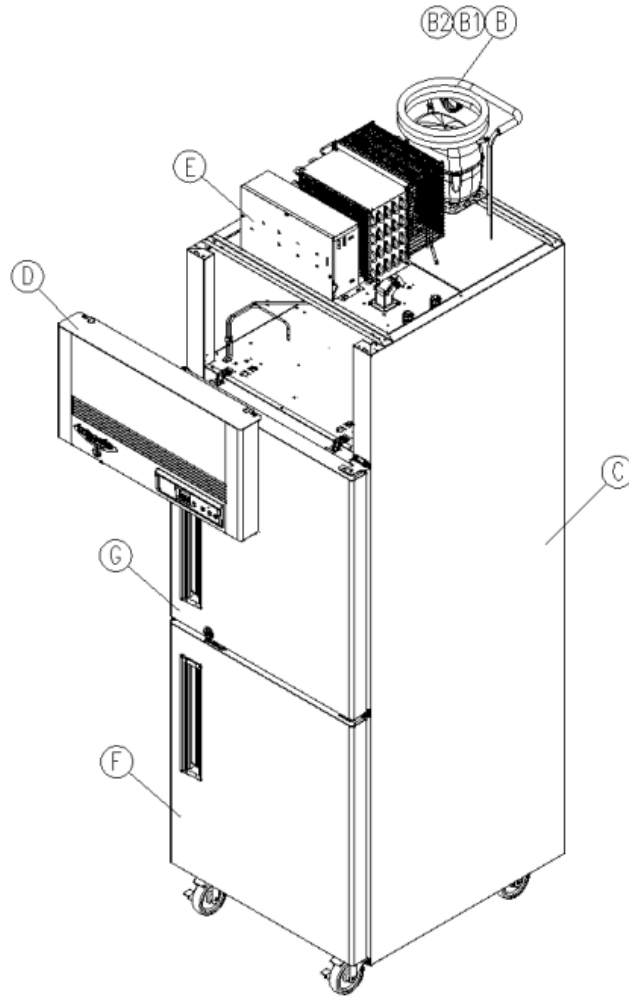
A. Main Assembly

a. LRT-771H



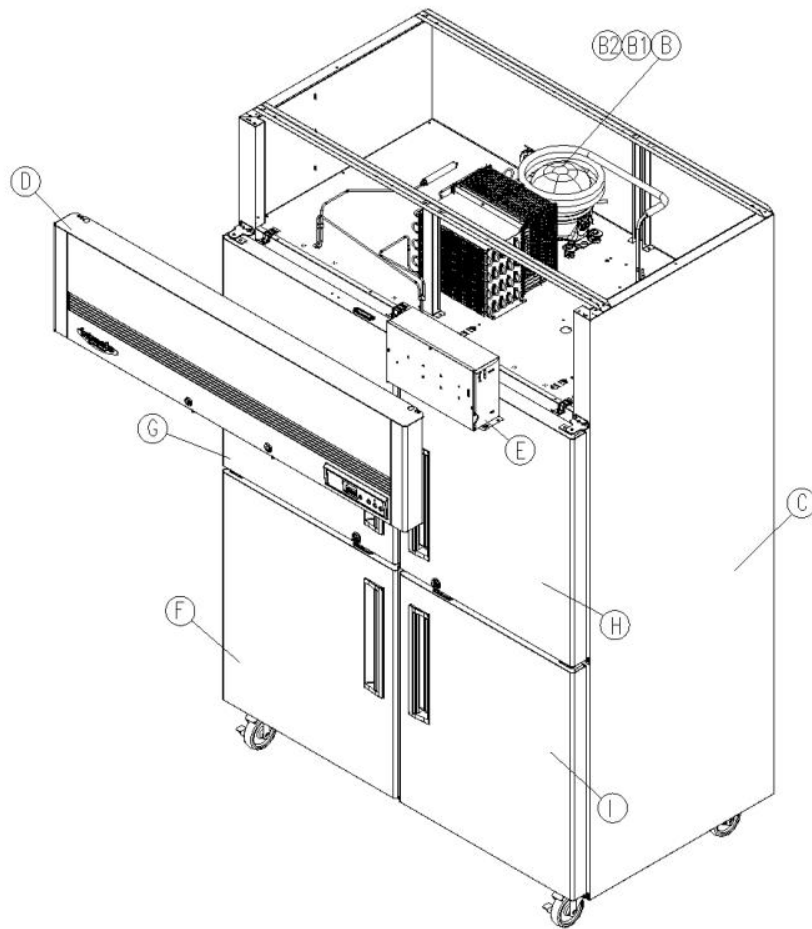
NO.	Model Code	Description	Qty	Material	Spec
B	R7439-440	Compressor	1	-	SK1A1B-L2W (220V 60HZ)
B1	Z394A-810	Screw Machine-Comp (Samsung)	4	-	MSWR ϕ 9 M6X43 ZPY
B2	R300A-030	Grommet Comp	4	EPDM	EPDM HS 48 \pm 2% BLDC COMP 용
C	R814B-520	Assy Cabi Pre	1	-	LRT-771H
D	R818A-840	Top Grill As T23H	1	STS430 #4	LRT-771H
E	R858A-710	Ass'y Control Box	1	-	T23F (220V/60HZ)
F	R817C-060	Assy Door Rh_Low	1	STS430 #4	TM HALF DOOR
G	R817C-070	Assy Door Rh_Upp	1		

b. LFT-771H



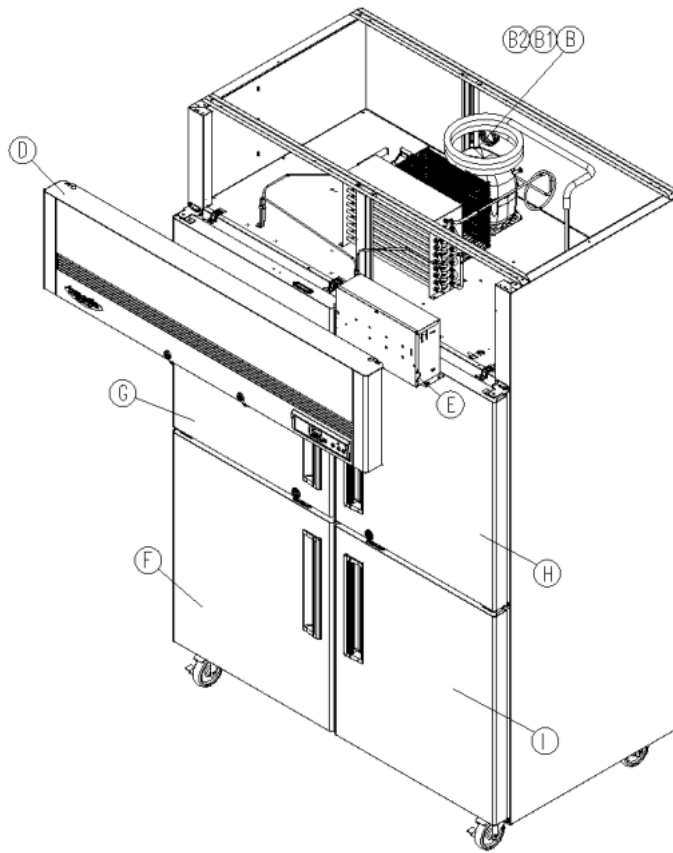
NO.	Model Code	Description	Qty	Material	Spec
B	R714A-030	Compressor	1	-	SC12CLX2 220V/50/60HZ
B1	Z394A-820	Screw Machine-Comp (Danfos)	4	-	MSWR ϕ 8 M6X31 ZPY
B2	R300A-050	Grommet Comp (Danfos)	4	-	NBR HS 40-45
C	R814B-530	Assy Cabi Pre	1	-	LFT-771H
D	R818A-840	Top Grill As T23H	1	STS430 #4	LRT-771H
E	R858A-710	Ass'y Control Box	1	-	T23F (220V/60HZ)
F	R817C-060	Assy Door Rh_Low	1	STS430 #4	TM HALF DOOR
G	R817C-070	Assy Door Rh_Upp	1		

c. LRT-1471H



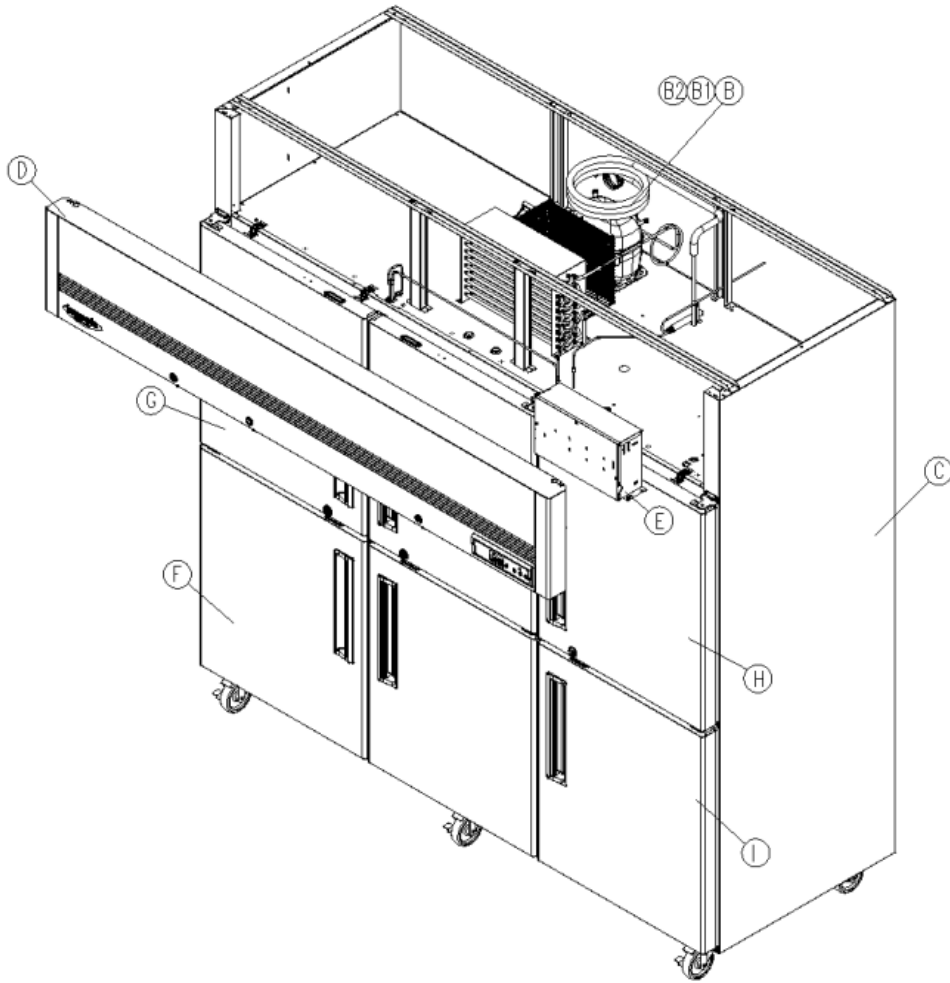
NO.	Model Code	Description	Qty	Material	Spec
B	R7439-440	Compressor	1	-	SK1A1B-L2W (220V 60HZ)
B1	Z394A-810	Screw Machine-Comp (Samsung)	4	-	MSWR ϕ 9 M6X43 ZPY
B2	R300A-030	Grommet Comp	4	EPDM	EPDM HS 48 \pm 2% BLDC COMP 용
C	R814B-540	Assy Cabi Pre	1	-	LRT-1471H
D	R818A-850	Top Grill As T49H	1	STS430 #4	LRT/LFT-1471H
E	R829B-790	Ass'y Control Box	1	-	LRT-1471H 220V/60Hz
F	R817C-090	Assy Door Lf_Low	1	STS430 #4	TM HALF DOOR
G	R817C-080	Assy Door Lf_Upp	1		
H	R817C-060	Assy Door Rh_Upp	1		
I	R817C-070	Assy Door Rh_Low	1		

d. LFT-1471H



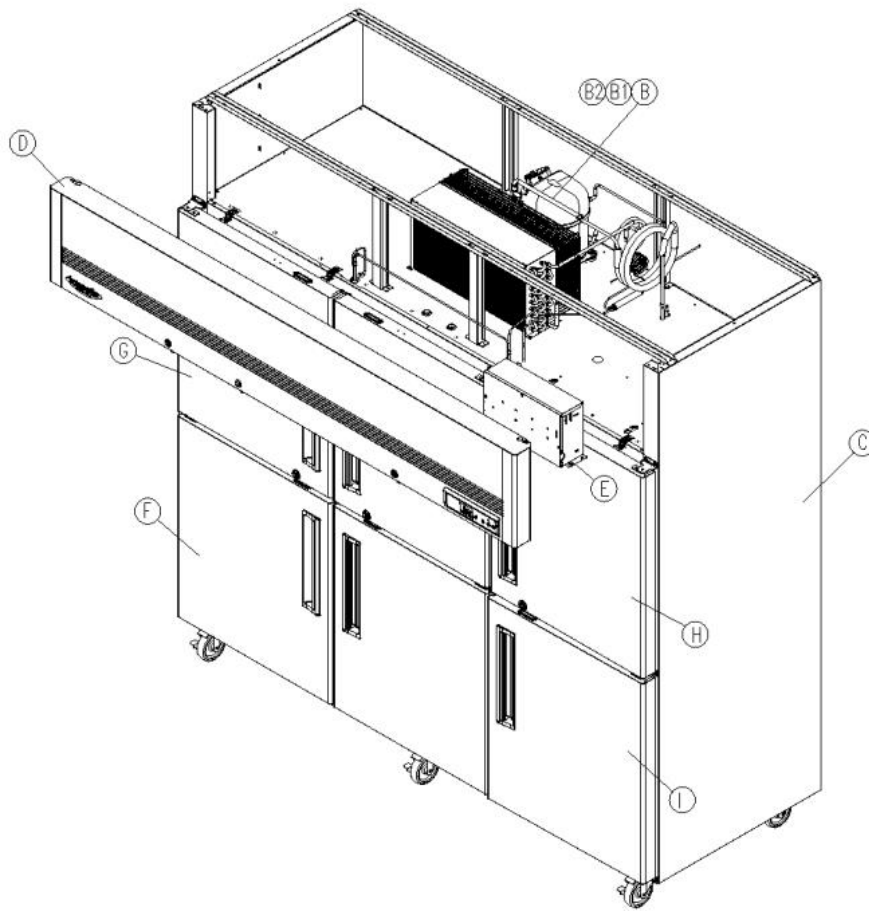
NO.	Model Code	Description	Qty	Material	Spec
B	R7439-560	Compressor	1	-	SC18CLX.2 208~230V60HZ
B1	Z394A-820	Screw Machine-Comp (Danfos)	4	-	MSWR φ 8 M6X31 ZPY
B2	R300A-050	Grommet Comp	4	-	NBR HS 40-45
C	R814B-550	Assy Cabi Pre	1	-	LFT-1471H
D	R818A-850	Top Grill As T49H	1	STS430 #4	LRT/LFT-1471H
E	R829B-800	Ass'y Control Box	1	-	LFT-1471H 220V/60Hz
F	R817C-090	Assy Door Lf_Low	1	STS430 #4	TM HALF DOOR
G	R817C-080	Assy Door Lf_Upp	1		
H	R817C-060	Assy Door Rh_Upp	1		
I	R817C-070	Assy Door Rh_Low	1		

e. LRT-72H



NO.	Model Code	Description	Qty	Material	Spec
B	R714A-150	Compressor	1	-	SC18G 220V 50/60Hz
B1	Z394A-820	Screw Machine-Comp (Danfos)	4	-	MSWR ϕ 8 M6X31 ZPY
B2	R300A-050	Grommet Comp	4	-	NBR HS 40-45
C	R814B-560	Assy Cabi Pre	1	-	LRT-72H
D	R818A-860	Top Grill As T72H	1	STS430 #4	LRT/LFT-72H
E	R829B-770	Ass'y Control Box	1	-	TH HALF DOOR 72R
F	R817C-090	Assy Door Lf_Low	1	STS430 #4	TM HALF DOOR
G	R817C-080	Assy Door Lf_Upp	1		
H	R817C-060	Assy Door Rh_Upp	2		
I	R817C-070	Assy Door Rh_Low	2		

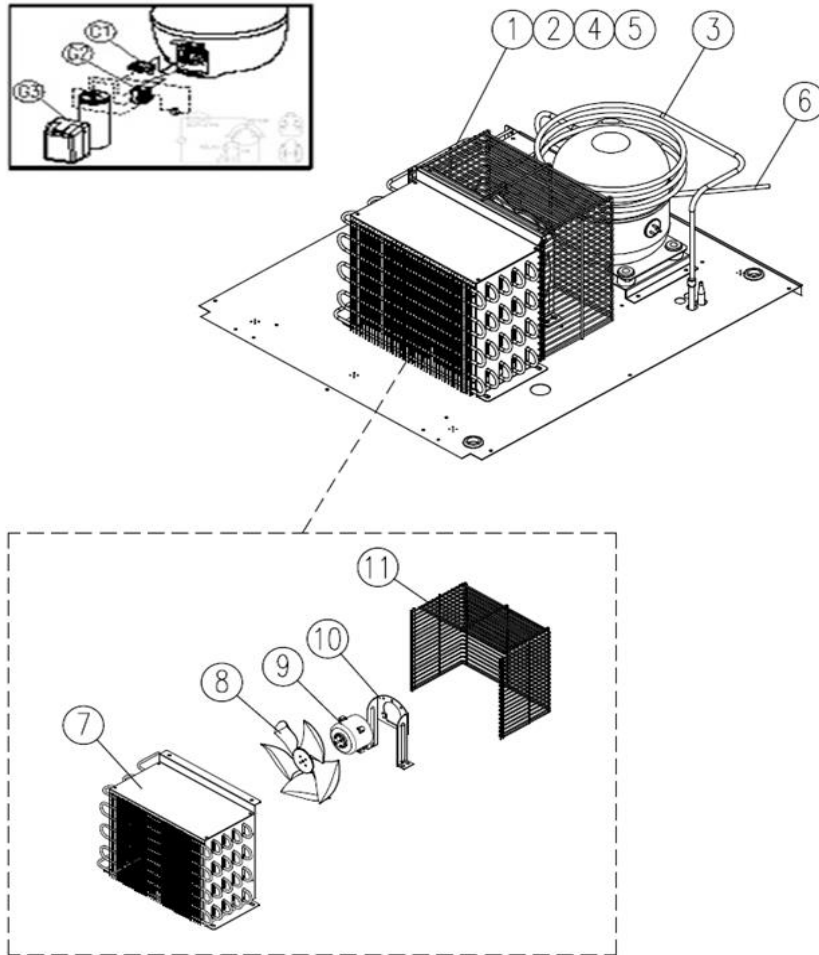
f. LFT-72H



NO.	Model Code	Description	Qty	Material	Spec
B	R714A-020	Compressor	1	-	GS26CLX 220V/60HZ
B1	Z394A-810	Screw Machine-Comp (Samsung)	4	-	MSWR ϕ 9 M6X43 ZPY
B2	R300A-030	Grommet Comp	4	EPDM	EPDM HS 48 \pm 2% BLDC COMP 용
C	R814B-570	Assy Cabi Pre	1	-	LFT-72H
D	R818A-860	Top Grill As T72H	1	STS430 #4	LRT/LFT-72H
E	R829B-780	Ass'y Control Box	1	-	LFT-72H 220V 50/60Hz
F	R817C-090	Assy Door Lf_Low	1	STS430 #4	TM HALF DOOR
G	R817C-080	Assy Door Lf_Upp	1		
H	R817C-060	Assy Door Rh_Upp	2		
I	R817C-070	Assy Door Rh_Low	2		

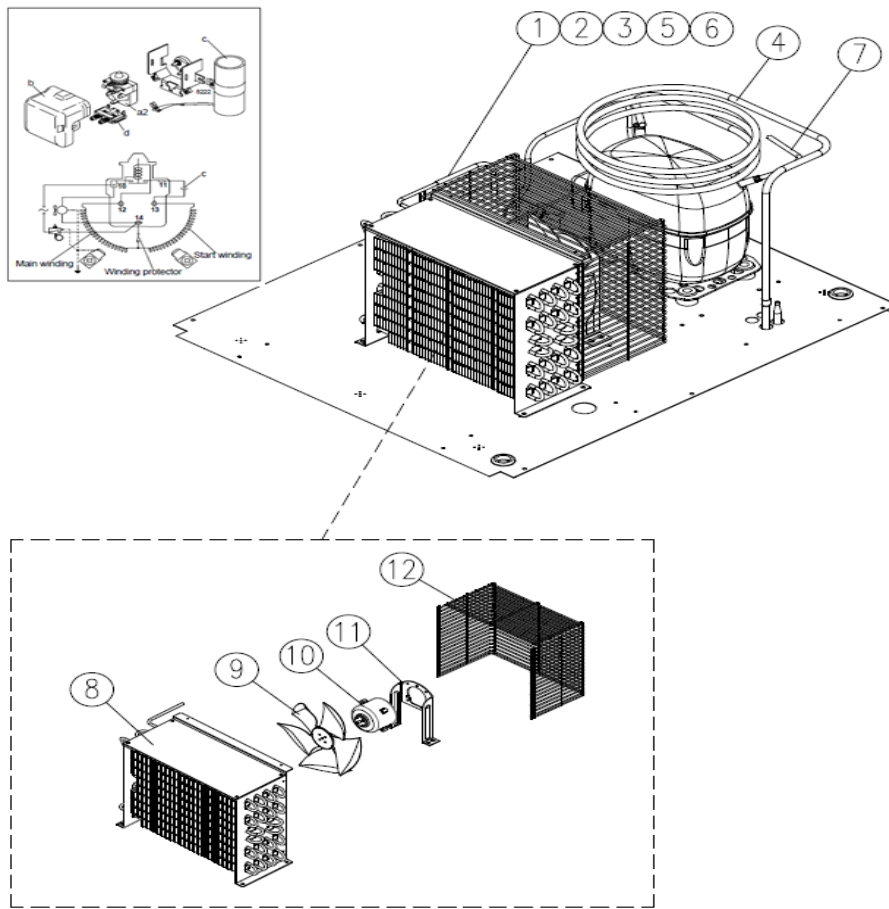
B. Assembly Uint

a. LRT-771H



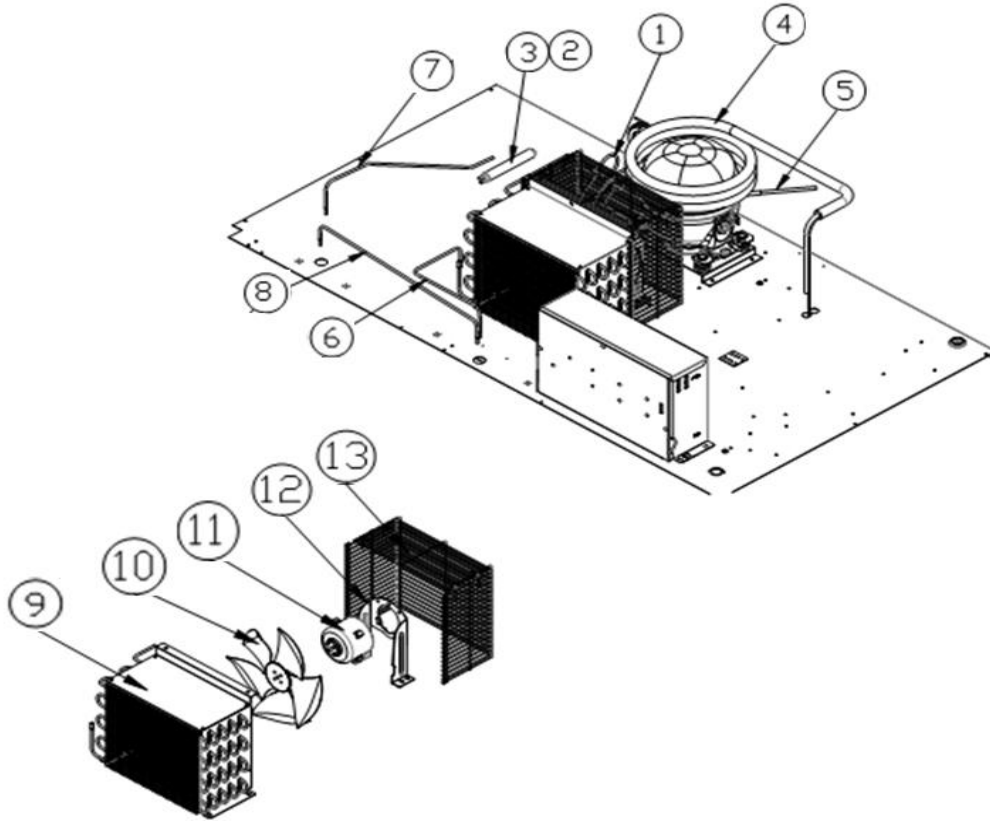
NO.	Model Code	Description	Qty	Material	Spec
1	R2113-981	Pipe Connect Dryer	1	Cu	OD4.76*T0.7*L220
2	R2183-032	Dryer	1	Cu	R-134a, 36G
3	R8603-833	PIPE SUCTION T23R	1	Cu	Φ3.0XΦ1.4X3100
4	R319A-460	Pipe Cond Outlet	1	Cu	OD4.76*T0.7*340
5	R319A-470	Pipe Dryer Inlet	1	Cu	OD4.76*T0.7*L506.5
6	R2104-610	Tube Vaccum	1	Cu	T0.6* φ 6.35*L=120
7	R858C-420	As Condenser	1	SWST	Φ4.76*13,190
8	R3723-070	Condenser Fan Motor Blade	1	AL	9" CW
9	R7423-070	Condenser Fan Motor	1	-	220V 50~60Hz. 9W. CCW.
10	R315A-050	Bracket C-Fan Motor	1	GI	T2
11	R3813-791	Fan Cover Wire	1	MSWR10	Φ2.5
G1	R7519-070	Overload Protector	1	-	4TM795TFB-53
G2	R7539-110	Posistor	1	-	220M
G3	R3813-900	Cover Relay	1	-	HOOK TYPE, S

b. LFT-771H



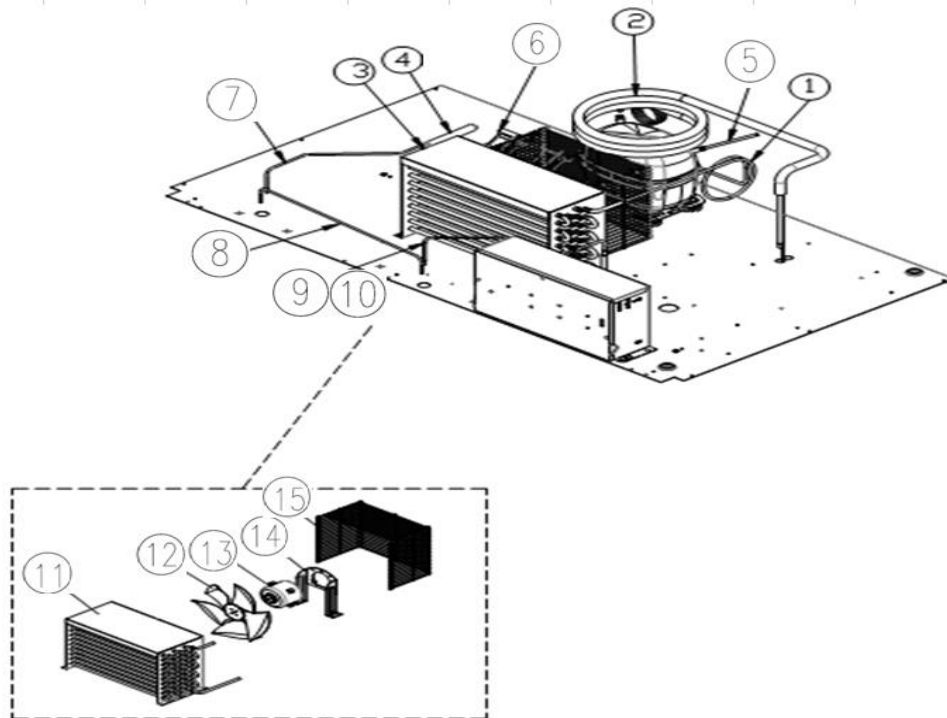
NO.	Model Code	Description	Qty	Material	Spec
1	R2113-992	Pipe Discharge	1	Cu	OD6.35*T0.7*L650
2	R2113-981	Pipe Connect Dryer	1	Cu	Φ4.76*T0.7*L220
3	R2183-032	Dryer Ass'y	1	Cu	R-134a, 36G
4	R8603-824	Ass'y Suction Pipe TM23F	1	Cu	CAPI OD3.0XID1.4X4800
5	R319A-460	Pipe Cond Outlet	1	Cu	OD4.76*T0.7*340
6	R319A-470	Pipe Dryer Inlet	1	Cu	OD4.76*T0.7*L506.5
7	R2104-610	Tube Vaccum	1	Cu	T0.6* φ 6.35*L=120
8	R858C-420	As Condenser	1	SWST	Φ4.76*13,190
9	R3723-070	Condenser Fan Motor Blade	1	AL	9" CW
10	R7423-070	Condenser Fan Motor	1	-	220V 50~60Hz. 9W. CCW.
11	R315A-050	Bracket C-Fan Motor	1	GI	T2
12	R3813-791	Fan Cover Wire	1	MSWR10	Φ2.5
a2	R730A-010	Starting Relay	1	-	SC12CLX2. 117U6020
-	R325A-670	Cover	1	-	103N2008
-	R746A-050	Starting Capacitor 240uF	1	-	117U5023
-	R750A-010	Cord Relief	1	-	103N1004

c. LRT-1471H



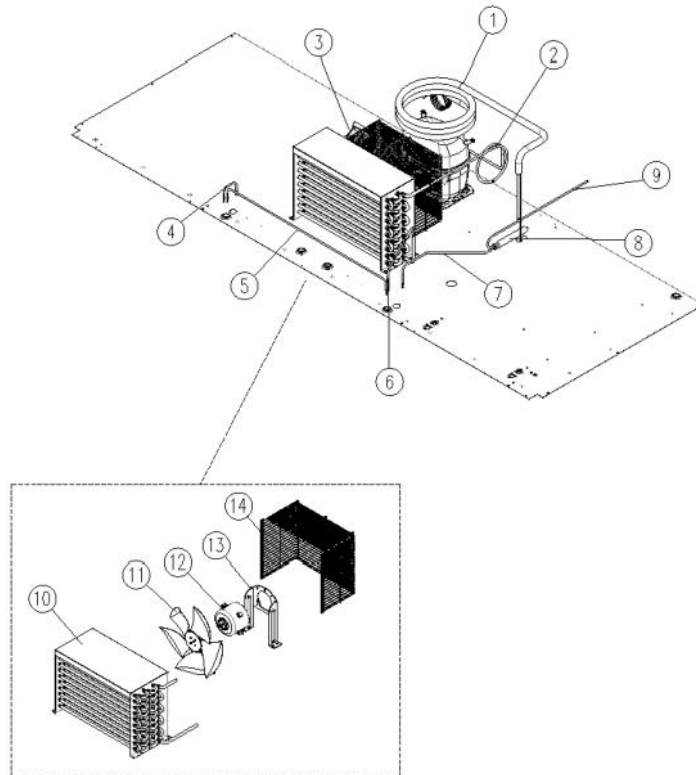
NO.	Model Code	Description	Qty	Material	Spec
1	R319A-240	Pipe Discharge	1	Cu	OD4.76*T0.7
2	R319A-580	Pipe Condenser Dryer	1	Cu	OD4.76*T0.7*482.8
3	R2183-032	Dryer	1	Cu	R-134a, 36G
4	R8603-803	Pipe Suction	1	Cu	Φ3.0XΦ1.3X3100
5	R2104-610	Tube Vaccum	1	Cu	T0.6* Φ 6.35*L=120
6	R319A-460	Pipe Cond Outlet	1	Cu	OD4.76*T0.7*L340
7	R319A-470	Pipe Dryer Inlet	1	Cu	OD4.76*T0.7*L506.5
8	R319A-490	Pipe Cross Bar Outlet	1	Cu	OD4.76*T0.7*L540
9	R858C-420	As Condenser	1	SWST+MSWR10	Φ4.76*13,190
10	R3723-070	Condenser Fan Motor Blade	1	AL	9" CW
11	R7423-070	Condenser Fan Motor	1	-	220V 50~60Hz. 9W. CCW.
12	R315A-050	Bracket C-Fan Motor	1	GI	T2
13	R3813-791	Fan Cover Wire	1	MSWR10	Φ2.5

d. LFT-1471H



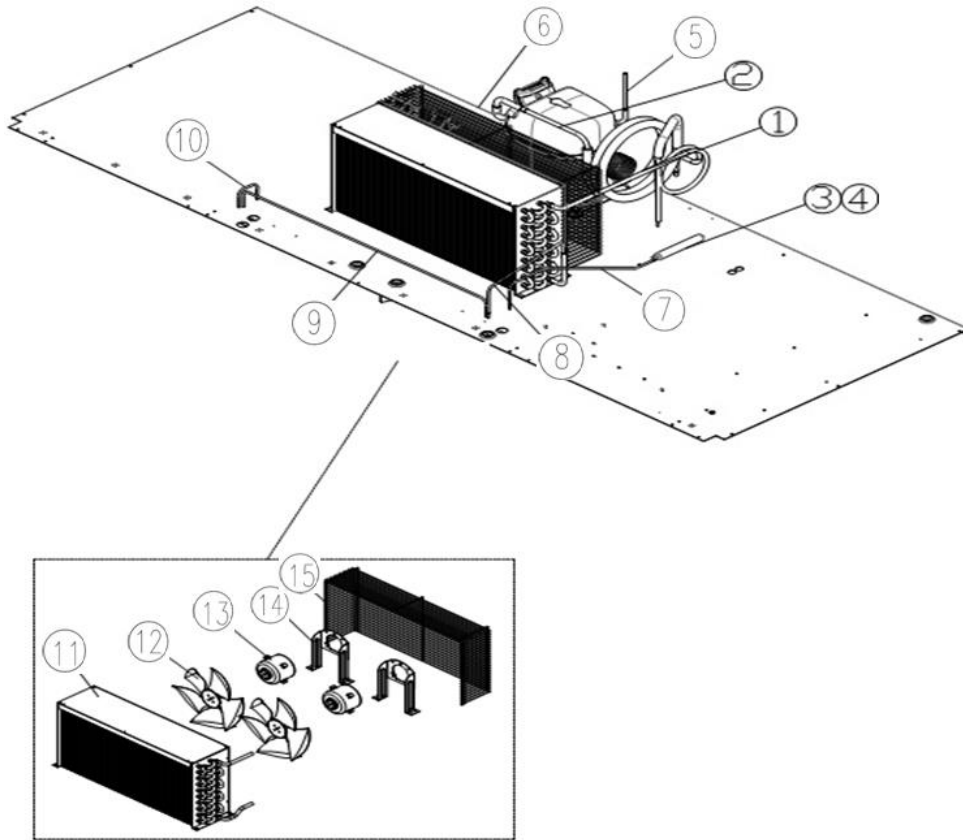
NO.	Model Code	Description	Qty	Material	Spec
1	R2113-570	Discharge Connector	1	CU	Φ6.35*T0.7*1215
2	R8603-814	Pipe Suction T49F	1	Cu	OD3.0XID1.6X5000
3	R319A-580	Pipe Condenser Dryer	2	Cu	OD4.76*T0.7*482.8
4	R2183-200	Dryer	1	Cu	Ø25.73*0.8T*169, CU-PIPE
5	R2114-321	Comp Charging Pipe	1	Cu	Φ6.35*T0.7
6	R7549-320	STARTING CAPACITOR	1	-	220V/80μF
	R7549-330	RUNING CAPACITOR		-	220V/10 μF
7	R319A-470	Pipe Dryer Inlet	1	Cu	OD4.76*T0.7*L506.5
8	R319A-490	Pipe Cross Bar Outlet	1	Cu	OD4.76*T0.7*L540
9	R319A-500	Pipe Cond Outlet	1	Cu	OD4.76*T0.7*L520
10	R319A-540	Pipe Cond	1	Cu	OD4.76*T0.7*L150
11	R865A-080	Assy Condenser	1	CU+AL	R4*S10*L19,202
12	R3723-070	Condenser Fan Motor Blade	1	AL	9" CW
13	R7423-070	Condenser Fan Motor	1	-	220V 50~60Hz. 9W. CCW.
14	R315A-050	Bracket C-Fan Motor	1	GI	T2
15	R3813-781	Fan Cover Wire	1	MSWR10	Φ2.5

e. LRT-72H



NO.	Model Code	Description	Qty	Material	Spec
1	R845A-012	Assy Suction Pipe T72R	1	CU	OD ϕ 3.0*ID1.6*4000
2	R2113-570	Discharge Connector	1	CU	ϕ 6.35*T0.7*1215
3	R867A-020	Assy Relay Box	1	-	SC18G 115V60HZ 117-7053 72R
4	R319A-530	Pipe Cross Bar Outlet TM72F	1	CU	OD4.76*T0.7*L150
5	R319A-520	Pipe Cross Bar Connect TM72F	1	CU	OD4.76*T0.7*L774.5
6	R319A-510	Pipe Cond Outlet TM72F	1	CU	OD6.35*T0.7*L363
	R319A-540	Pipe Cond	1	CU	OD4.76*T0.7*L150
7	R319A-470	Pipe Dryer Inlet TM	1	CU	OD4.76*T0.7*L506.5
8	R2183-032	Dryer	1	CU	R-134A. 36G)
9	R319A-580	Pipe Condenser Dryer	1	CU	OD4.76*T0.7*482.8
10	R865A-080	As Condenser	1	CU+AL	R4*S10*L19,202
11	R3723-070	Condenser Fan Motor Blade	1	AL	9" CW
12	R7423-070	Condenser Fan Motor	1	-	220V 50~60Hz. 9W. CCW.
13	R315A-050	Bracket C-Fan Motor	1	GI	T2
14	R3813-781	Fan Cover Wire	1	MSWR10	Φ 2.5

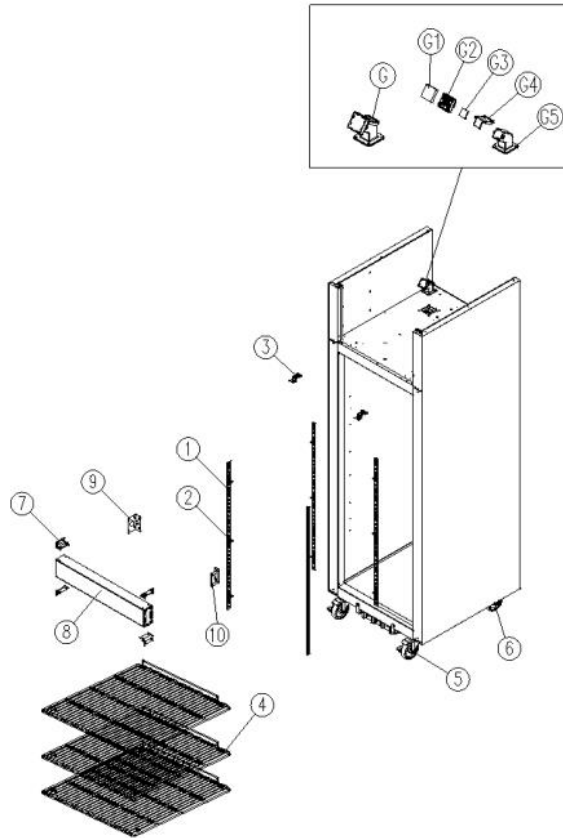
f. LFT-72H



NO.	Model Code	Description	Qty	Material	Spec
1	R2113-311	Discharge Connector	1	CU	Φ7.94*T0.7*355
2	R845A-021	Ass'y Suction Pipe T72F	1	Cu	OD 3.0*ID1.6*5000
3	R319A-580	PIPE CONDENSER DRYER	2	Cu	OD4.76*T0.7*482.8
4	R2183-200	Dryer	1	Cu	Ø25.73*0.8T*169, CU-PIPE
5	R2114-321	Compressor Charging Pipe	1	Cu	OD6.35*T0.7
6	R876A-030	Ass'y Relay Box	1	-	Code No : 117-7053
7	R319A-470	Pipe Dryer Inlet	1	Cu	OD4.76*T0.7*L506.5
8	R319A-510	Pipe Cond Outlet	1	Cu	OD6.35*T0.7*L363
	R319A-540	Pipe Cond	1	Cu	OD4.76*T0.7*L150
9	R319A-530	Pipe Cross Bar Outlet	1	Cu	OD4.76*0.7*L150
10	R319A-520	Pipe Crossbar Connect	1	Cu	OD4.76*T0.7*L774.5
11	R865A-090	As Condenser	1	Cu+AL	R3*S10*L17806 BM/TM72
12	R3723-070	Condenser Fan Motor Blade	2	AL	9" CW
13	R7423-070	Condenser Fan Motor	2	-	220V 50~60Hz. 9W. CCW.
14	R315A-050	Bracket C-Fan Motor	2	GI	T2
15	R3813-770	Fan Cover Wire	1	MSWR10	Φ2.6

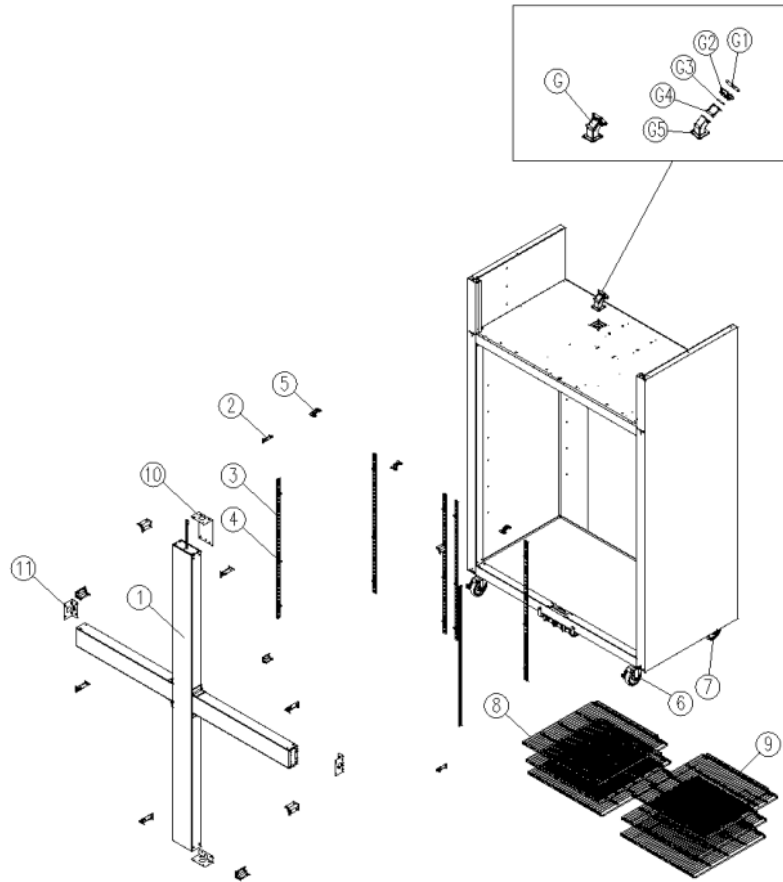
C. Body Assembly

a. LRT-771H, LFT-771H



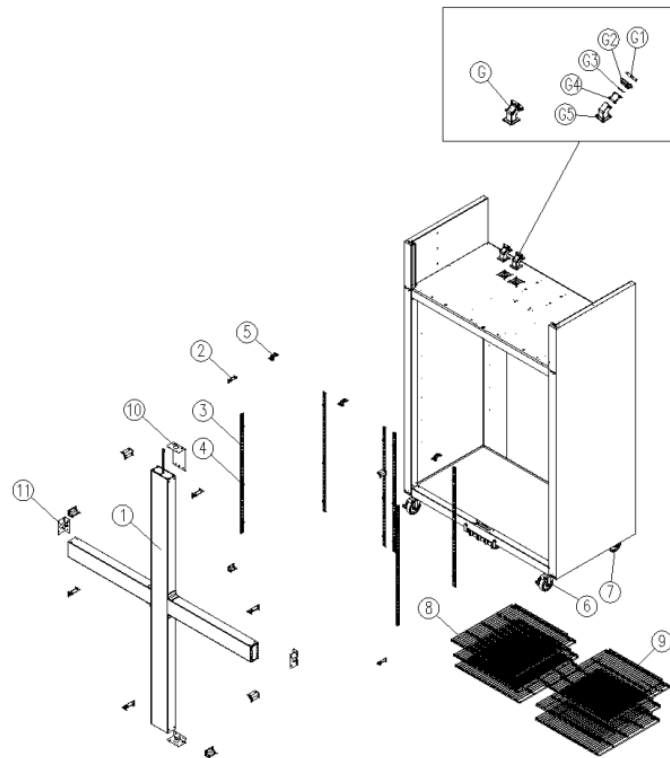
NO.	Model Code	Description	Qty	Material	Spec
1	R3373-630	Shlef Standard L	4	AL	T=12, L930
2	R8429-022	Assy Shelf Clip 14 Set	1	POM	WHITE
3	R3314-602	U-Cover Bracket A	2	EGI	1T*81.61*20
4	R371A-110	Shelf 23	3	MSWR10	W545*D580
5	R3323-230	Caster	2	-	4" MOVE
6	R3323-240	Caster	2	-	4" STOP
7	R325A-030	Cover Corner	4	ABS	28.5*28.5*53
8	R816B-270	Assy Cross Bar_23H	1	-	LRT-771H 220V 7W
	R816B-280			-	LFT-771H 220V 15W
9	R315A-361	Bracket Cross Bar	1	STS443CT-2B	T0.8*80*76.7
10	R315A-820	Bracket Cross Bar T23H	1	STS443CT-2B	T0.8*69*78.7
G	R8173-130	Check Valve As	1	-	-
G1	R3253-050	Filter Check Valve	1	FILTER FOME	#10. T10. BLK
G2	R3253-041	Cap Check Valve	1	ABS	45.5*45.5*23.5
G3	R3253-061	Packing Flap	1	PE	T4. WHITE
G4	R3253-030	Flap Check Valve	1	ABS	40.5*45*36
G5	R3253-020	Body Check Valve	1	ABS	60*60*75.05

b. LRT-1471H



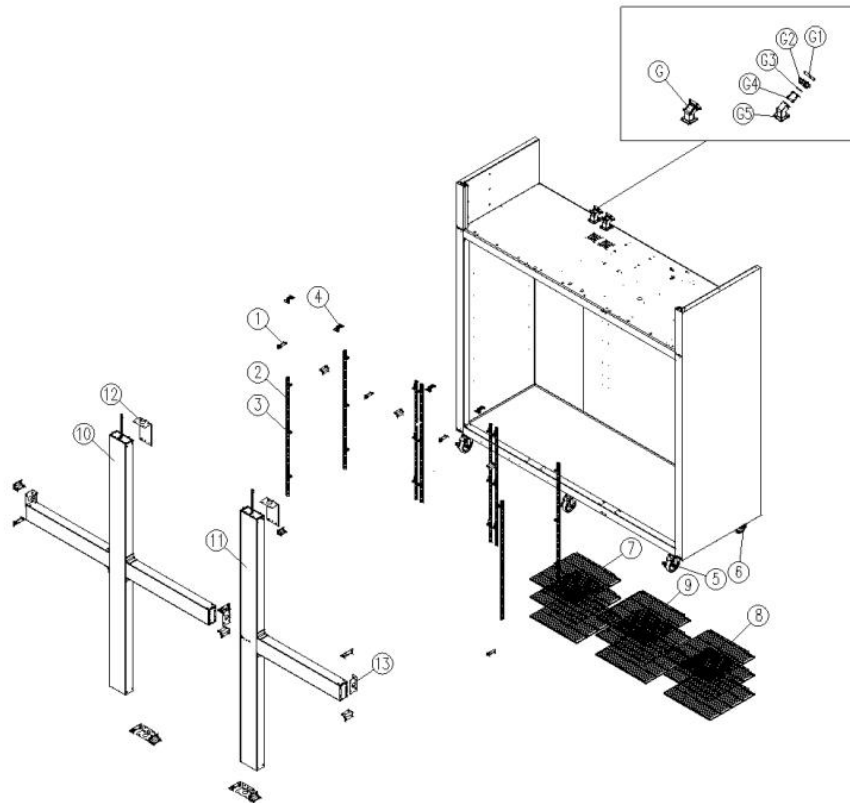
NO.	Model Code	Description	Qty	Material	Spec
1	R816B-160	Assy Cross Bar_49H	1	STS443CT	LRT/LFT-1471H HOT PIPE
2	R325A-030	Cover Corner	8	ABS	28.5*28.5*53
3	R3373-630	Shelf Standard L	8	AL	T1.2*930
4	R8429-012	Assy Shelf Clip 26 SET	1	POM	White
5	R3314-602	U-Cover Bracket A	3	GI	1T*81.61*20
6	R3323-230	Caster 4"	2	-	4" Move
7	R3323-240	Caster 4"	2	-	4" Stop
8	R3233-210	SHELF 49	3	MSWR10	NSF, W609*D580
9	R3233-210	SHELF 49	3	MSWR10	NSF, W609*D580
10	R315A-560	Bracket Cross Bar TM Upp	1	STS443CT-2B	T0.8*80*176.72
11	R315A-361	Bracket Cross Bar	3	STS443CT-2B	T0.8*80*76.7
G	R8173-130	Check Valve As	1	ABS	-
G1	R3253-050	Filter Check Valve	1	Filter Foam	#10, T10, Black
G2	R3253-041	Cap Check Valve	1	ABS	45.5*45.5*23.5
G3	R3253-061	Packing Flap	1	PE	T=4, White
G4	R3253-030	Flap Check Valve	1	ABS	40.5*45*36
G5	R3253-020	Body Check Valve	1	ABS	60*60*75.05

c. LFT-1471H



NO.	Model Code	Description	Qty	Material	Spec
1	R816B-160	Assy Cross Bar_49H	1	STS443CT	LRT/LFT-1471H HOT PIPE
2	R325A-030	Cover Corner	8	ABS	28.5*28.5*53
3	R3373-630	Shelf Standard L	8	AL	T1.2*L930
4	R8429-012	Assy Shelf Clip 26SET	1	POM	White
5	R3314-602	U-Cover Bracket A	3	GI	1T*81.61*20
6	R3323-230	Caster 4"	2	-	4" Move
7	R3323-240	Caster 4"	2	-	4" Stop
8	R3233-210	Assy SHELF 49	3	MSWR10	NSF, W609*D580
9	R3233-210	Assy SHELF 49	3	MSWR10	NSF, W609*D580
10	R315A-560	Bracket Cross Bar TM Upp	1	STS443CT-2B	T0.8*80*176.72
11	R315A-361	Bracket Cross Bar	3	STS443CT-2B	T0.8*80*76.7
G	R8173-130	Check Valve As	2	ABS	-
G1	R3253-050	Filter Check Valve	2	Filter Foam	#10, T10, Black
G2	R3253-041	Cap Check Valve	2	ABS	45.5*45.5*23.5
G3	R3253-061	Packing Flap	2	PE	T=4, White
G4	R3253-030	Flap Check Valve	2	ABS	40.5*45*36
G5	R3253-020	Body Check Valve	2	ABS	60*60*75.05

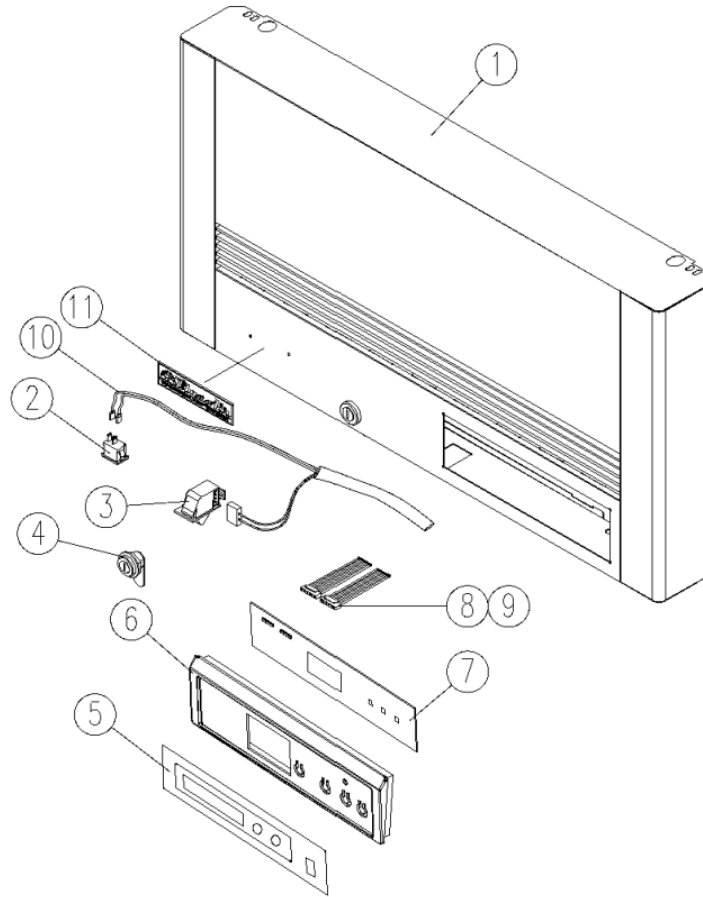
d. LFT/LRT-72H



NO	Model Code	Description	Qty	Material	Spec
1	R325A-030	Cover Corner	12	ABS	28.5*28.5*53
2	R3373-630	Shelf Standard L	12	AL	T1.2*L930
3	R835A-010	Assy Shelf Clip 36 SET	1	POM	White
4	R3314-602	U-Cover Bracket A	4	GI	1T*81.61*20
5	R3323-230	Caster 4"	3	-	4" Move
6	R3323-240	Caster 4"	3	-	4" Stop
7	R3233-210	Assy SHELF 49	3	MSWR10	NSF, W609*D580
8	R3233-210	Assy SHELF 49	3	MSWR10	NSF, W609*D580
9	R371A-010	SHELF 72	3	MSWR10	NSF, W656*D580
10	R816B-170	Assy Cross Bar_72H	1	STS443CT	LRT/LFT-72H HOT PIPE
11	R816B-180	Assy Cross Bar_72H(↓)	1	STS443CT	LRT/LFT-72H HOT PIPE
12	R315A-560	Bracket Cross Bar TM Upp	2	STS443CT-2B	T0.8*80*176.72
13	R315A-361	Bracket Cross Bar	5	STS443CT-2B	T0.8*80*76.7
G	R8173-130	Check Valve As	2	ABS	-
G1	R3253-050	Filter Check Valve	2	Filter Foam	#10, T10, Black
G2	R3253-041	Cap Check Valve	2	ABS	45.5*45.5*23.5
G3	R3253-061	Packing Flap	2	PE	T=4, White
G4	R3253-030	Flap Check Valve	2	ABS	40.5*45*36
G5	R3253-020	Body Check Valve	2	ABS	60*60*75.05

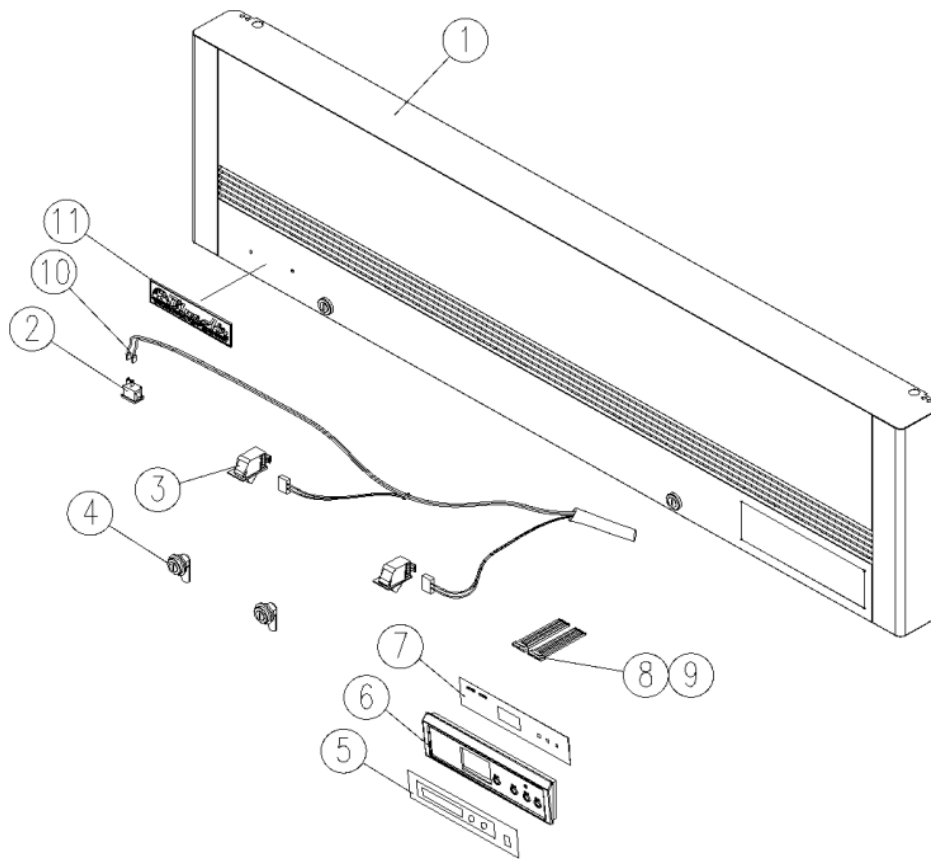
D. Top Grill Assembly

a. LRT-771H, LFT-771H



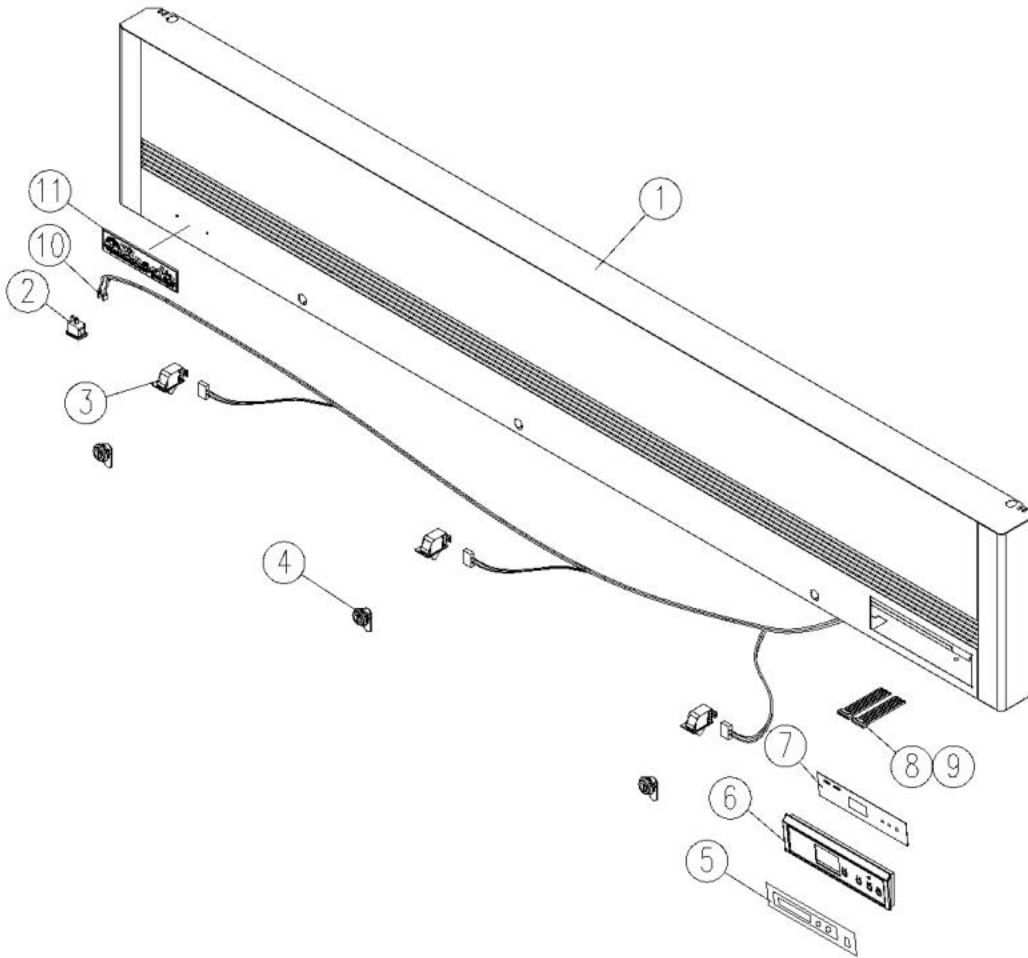
NO.	Model Code	Description	Qty	Material	Spec
1	R818A-840	Top Grill As T23	1	STS430-#4	LRT/LFT-23H
2	R7204-070	Power Switch	1	-	LIGHT COUNTRY(R19A) 10A/115V
3	R7203-010	Switch Push	1	-	SP201-7D 125VAC1.5A
4	R3734-030	Door Locking Ass'y	1	-	ZDC. ZCR
5	R511A-490	Inlay Control	1	-	88 Display-DP
6	R4142-123	Control Board	1	ABS	BLK. T2*242*72
7	R7129-550	Front PCB-88 DP1	1	FR1	88 Display, TM, °F
8	R7613-860	Harness F-PCB 8P B	1	-	AGW24, 8P, 연접 L450
9	R7613-880	Harness F-PCB 10P B	1	-	AGW24, 10P, 연접 L450
10	R7523-261	Harness Switch T23	1	-	UL AWG18
11	R5133-160	Mascot	1	AL	AL. LASSELE 영문 157.7*40

b. LRT-1471H, LFT-1471H



NO.	Model Code	Description	Qty	Material	Spec
1	R818A-850	Top Grill As T49	1	STS443CT	LRT/LFT-49H
2	R7204-070	Power Switch	1	-	LIGHT COUNTRY(R19A) 10A/115V
3	R7203-010	Switch Puch	2	-	SP201-7D 125VAC1.5A
4	R3734-030	Door Locking Ass'y	2	-	ZDC. ZCR
5	R511A-490	Inlay Control	1	-	88 Display-DP
6	R4142-123	Control Board	1	ABS	BLK. T2*242*72
7	R7129-550	Front PCB-88 DP1	1	FR1	88 Display, TM, °F
8	R7613-860	Harness F-PCB 8P B	1	-	AGW24, 8P, 연접 L450
9	R7613-880	Harness F-PCB 10P B	1	-	AGW24, 10P, 연접 L450
10	R719C-920	Harness Switch T49H	1	-	UL AWG18
11	R5133-160	Mascot	1	AL	AL. LASSELE 영문 157.7*40

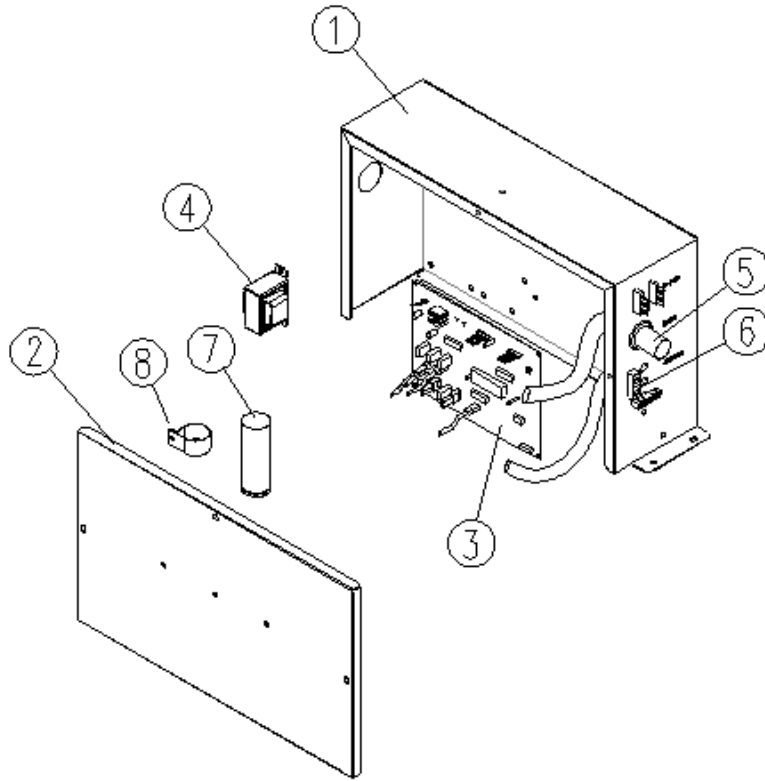
c. LRT-72H, LFT-72H



NO.	Model Code	Description	Qty	Material	Spec
1	R818A-860	Ass'y Grill Top T72	1	STS443CT	LRT/LFT-72H
2	R7204-070	Power Switch	1	-	LIGHT COUNTRY(R19A) 10A/115V
3	R7203-010	Switch Puch	3	-	SP201-7D 125VAC1.5A
4	R3734-030	Door Locking Ass'y	3	-	ZDC. ZCR
5	R511A-490	Inlay Control	1	-	88 Display-DP
6	R4142-123	Control Board	1	ABS	BLK. T2*242*72
7	R7129-550	Front PCB-88 DP1	1	FR1	88 Display, TM, °F
8	R7613-860	Harness F-PCB 8P B	1	-	AGW24, 8P, 연접 L450
9	R7613-880	Harness F-PCB 10P B	1	-	AGW24, 10P, 연접 L450
10	R719A-070	Harness Switch T72	1	-	ASSY .UL
11	R5133-160	Mascot	1	AL	AL. LASSELE 영문 157.7*40

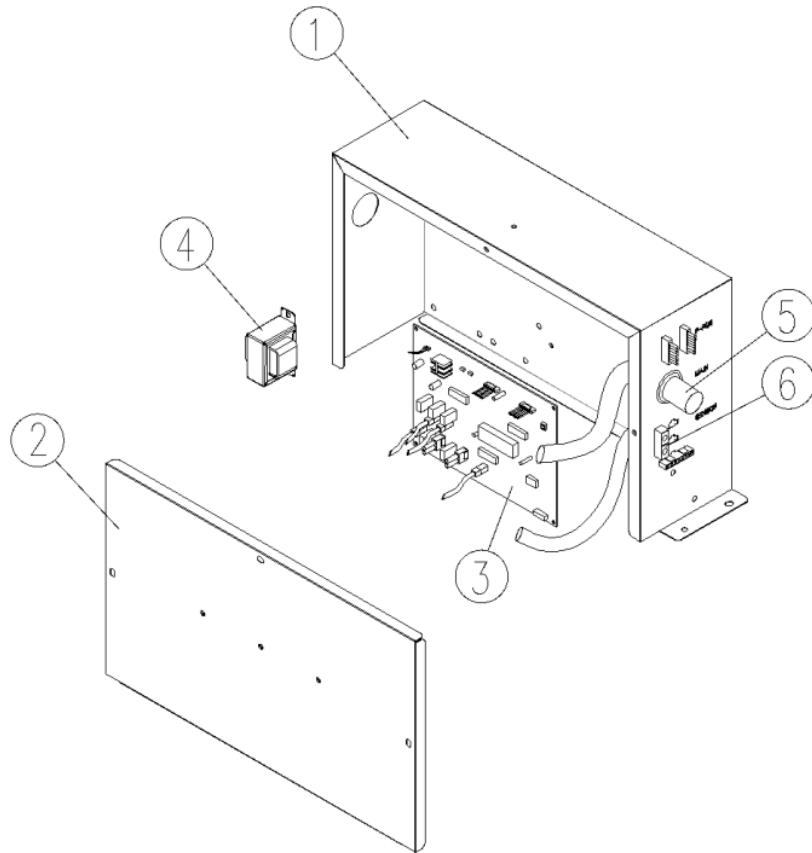
E. Main PCB Box

a. LRT-771H



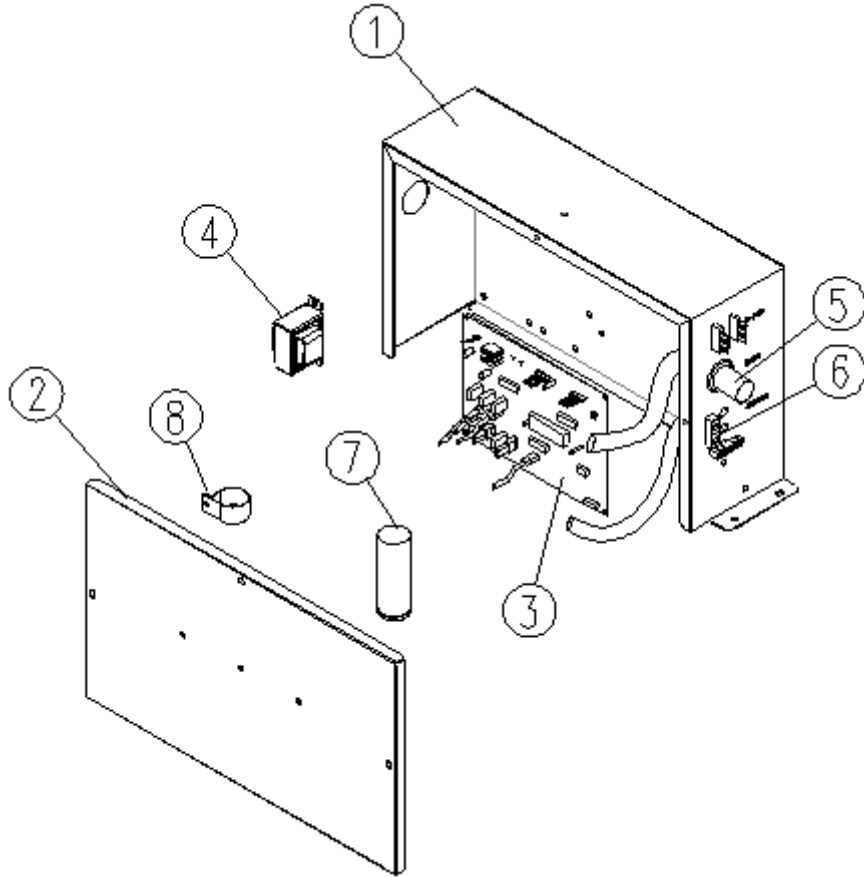
NO.	Model Code	Description	Qty	Material	Spec
1	R7119-876	Box Main PCB	1	GI	T0.5*559*331.1
2	R7119-883	Cover Main PCB BOX	1	GI	T0.5*357.07*218.97
3	R725A-424	Main PCB	1	FR1	FR1 TM 220V °C 냉동 TMF220C-06
4	R7503-070	POWER TRANS (220v)	1	-	220V 50/60HZ, DT- 1213K
5	R719B-880	Harness Main AC-A 23R	1	-	Ass'y UL, LED LAMP
	R7613-780	Harness Main AC-B 23R	1	-	Ass'y UL, LED LAMP
6	R7613-893	Harness Main DC TM-R	1	-	Ass'y UL
7	R7549-140	Running Capacitor	1	-	350V AC 8 μ F, 2P
8	R3834-130	Cable Clamp	2	Nylon-66	DA-18N

b. LFT-771H



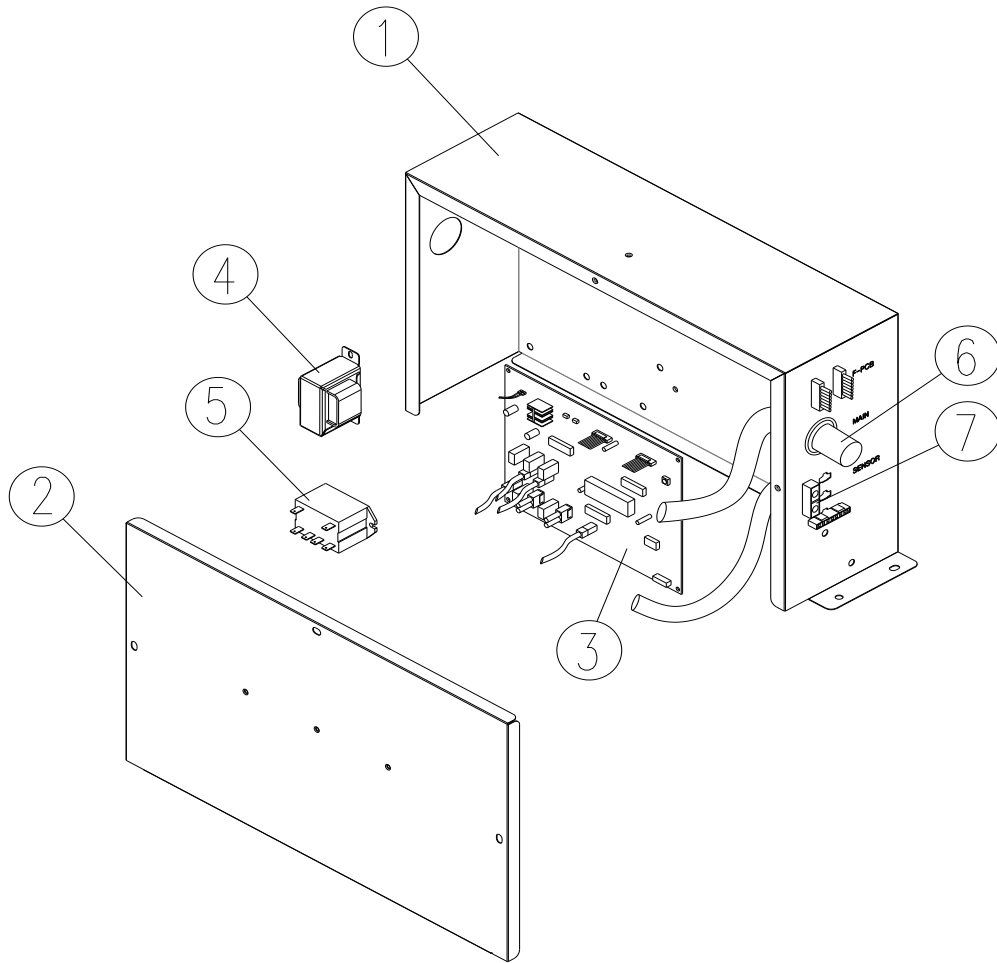
NO.	Model Code	Description	Qty	Material	Spec
1	R7119-876	Box Main PCB	1	GI	T0.5*559*331.1
2	R7119-883	Cover Main PCB Box	1	GI	T0.5*357.07*218.97
3	R725A-414	Main PCB	1	FR1	FR1 TM 220V °C 냉장 TMR220C-06
4	R7503-070	Power Trans	1	-	220V 50/60HZ, DT-1213K
5	R719A-560	Harness Main AC-A 23F	1	-	115V NEW LED LAMP
	R719B-890	Harness Main AC-A 23F	1	-	Ass'y UL, LED LAMP
6	R7613-903	Harness Main DC TM-F	1	-	Ass'y UL

c. LRT-1471H



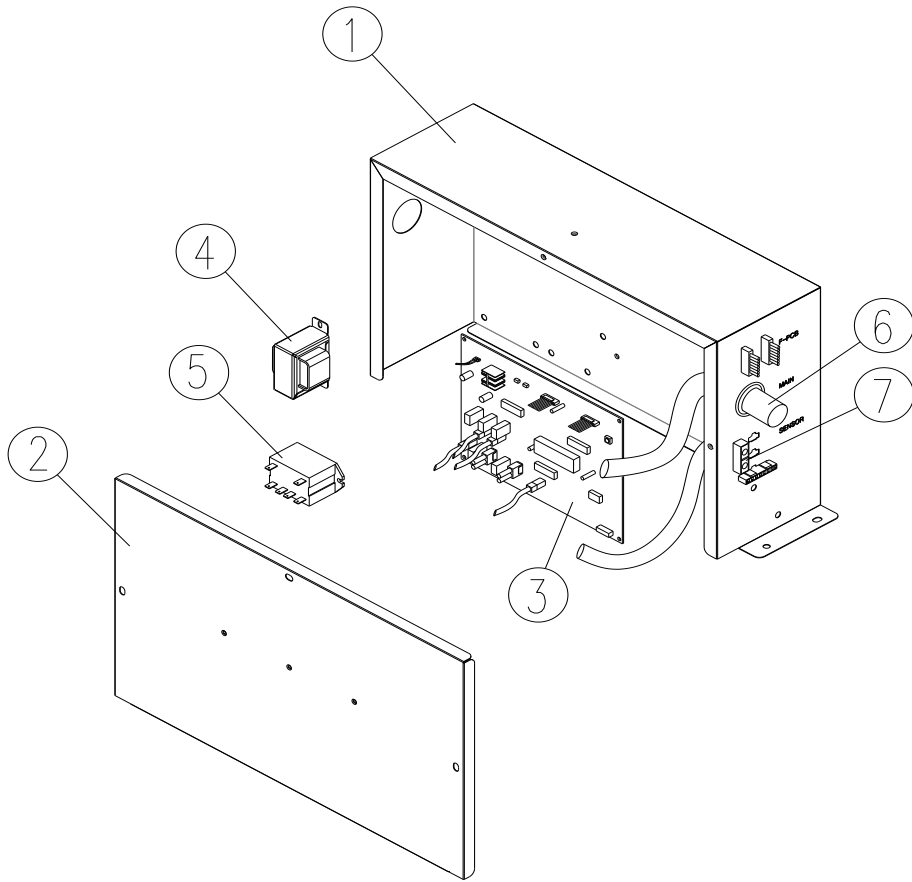
NO.	Model Code	Description	Qty	Material	Spec
1	R7119-876	Box Main PCB	1	GI	T0.5*559*331.1
2	R7119-883	Cover Main PCB Box	1	GI	T0.5*357.07*218.97
3	R725A-424	Main PCB	1	FR1	FR1 TM 220V °C 냉동 TMF220C-06
4	R7503-070	Power Trans	1	-	220V 50/60HZ, DT-1213K
5	R719B-900	Harness Main AC-A 49R	1	-	Ass'y UL, LED LAMP
	R7613-971	Harness Main AC-B 49R	1	-	Ass'y UL, LED LAMP
6	R7613-893	Harness Main DC TM-R	1	-	Ass'y UL
7	R7549-140	Running Capacitor	1	-	350V AC 8 μ F, 2P
8	R3834-130	Cable Clamp	2	Nylon-66	DA-18N

d. LFT-1471H



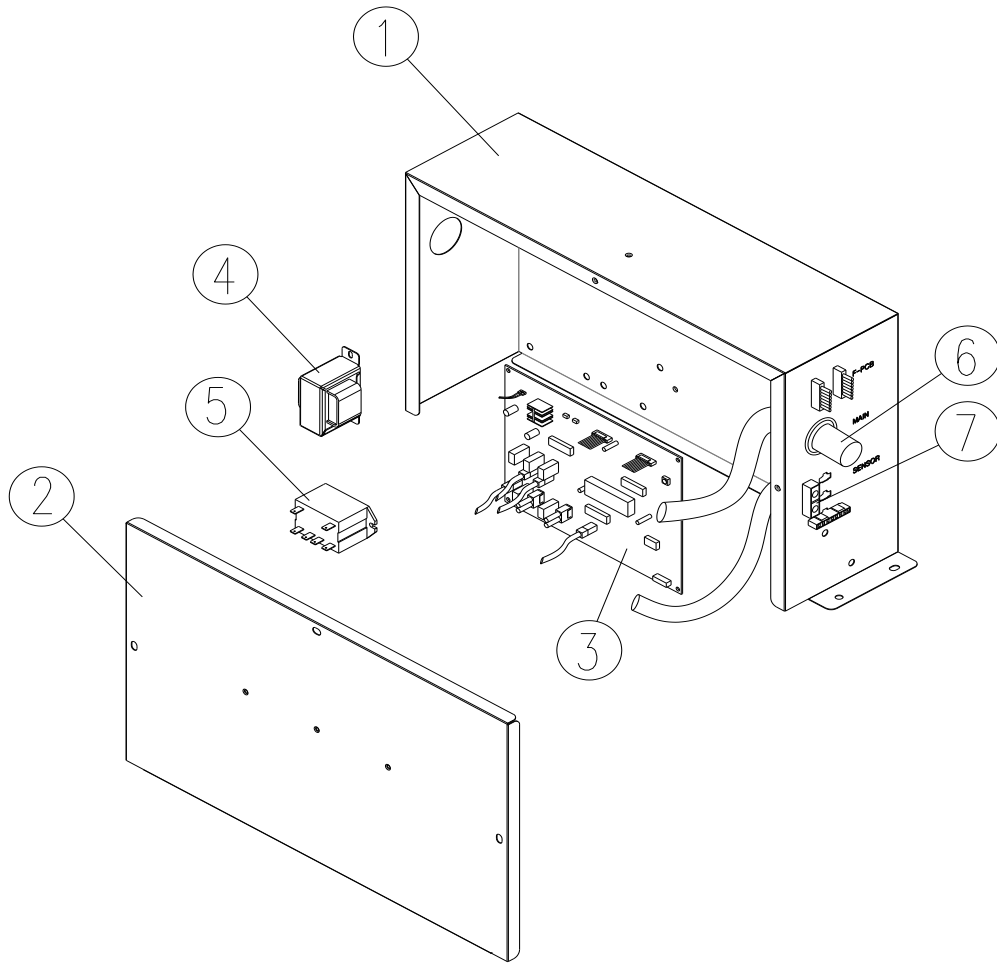
NO.	Model Code	Description	Qty	Material	Spec
1	R7119-876	Box Main PCB	1	GI	T0.5*559*331.1
2	R7119-883	M-PCB Box Cover	1	GI	T0.5*357.07*218.97
3	R725B-353	Main PCB	1	FR1	FR1 TM 115V°F FRE TMF115F-A2
4	R7503-070	Power Trans	1	-	220V 50/60HZ, DT-1213K
5	R748A-010	Power Relay	1	-	OMRON G7L-2A-TUB 220~240VAC
6	R719C-980	HARNESS MAIN AC-A T49F HALF	1	-	Ass'y UL
7	R719B-910	Harness Main AC-B 49F	1	-	Ass'y UL

e. LRT-72H



NO.	Model Code	Description	Qty	Material	Spec
1	R7119-876	Box Main PCB	1	GI	T0.5*559*331.1
2	R7119-883	M-PCB Box Cover	1	GI	T0.5*357.07*218.97
3	R725B-343	Main PCB	1	FR1	FR1 TM 115V°F REF TMR115F-A2
4	R738A-040	Power Trans	1	-	220V/50~60HZ DT-1215K
5	R748A-010	Power Relay	1	-	OMRON G7L-2A-TUB 220~240VAC
6	R719A-591	Harness Main AC-A 72R	1	-	Ass'y UL
7	R719C-720	HARNESS MAIN AC-B T72R HALF	1	-	Ass'y UL

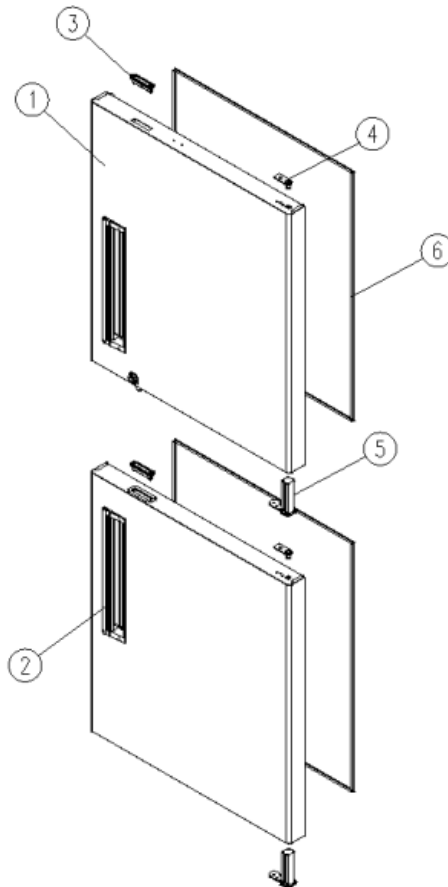
f. LFT-72H



NO.	Model Code	Description	Qty	Material	Spec
1	R7119-876	Box Main PCB	1	GI	T0.5*559*331.1
2	R7119-883	M-PCB Box Cover	1	GI	T0.5*357.07*218.97
3	R725B-353	Main PCB	1	FR1	FR1 TM 115V°F FRE TMF115F-A2
4	R738A-030	Power Trans	1	-	120V60Hz, DT-1215
5	R748A-030	Power Relay	1	-	PANASONIC HE2AN-Q-DC12V 25A
6	R719B-940	Harness Main AC-A 72R	1	-	Ass'y UL
7	R719C-730	HARNESS MAIN AC-B T72F HALF	1	-	Ass'y UL

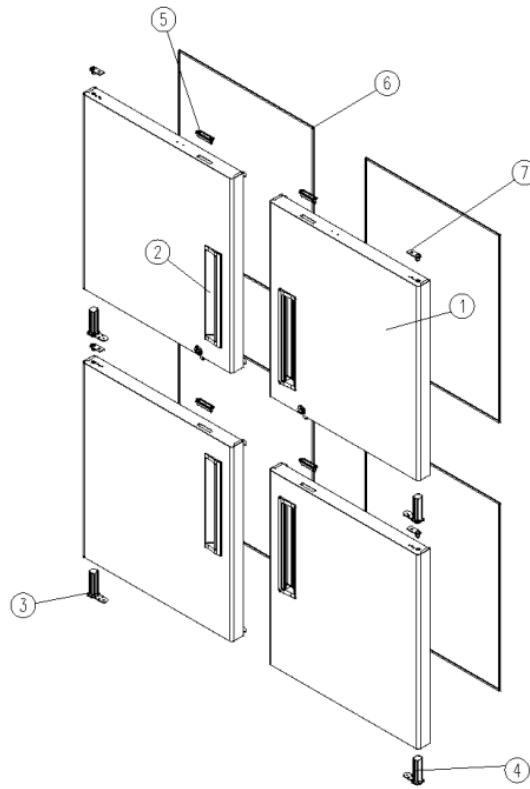
F. Door Assembly

a. LRT-771H, LFT-771H



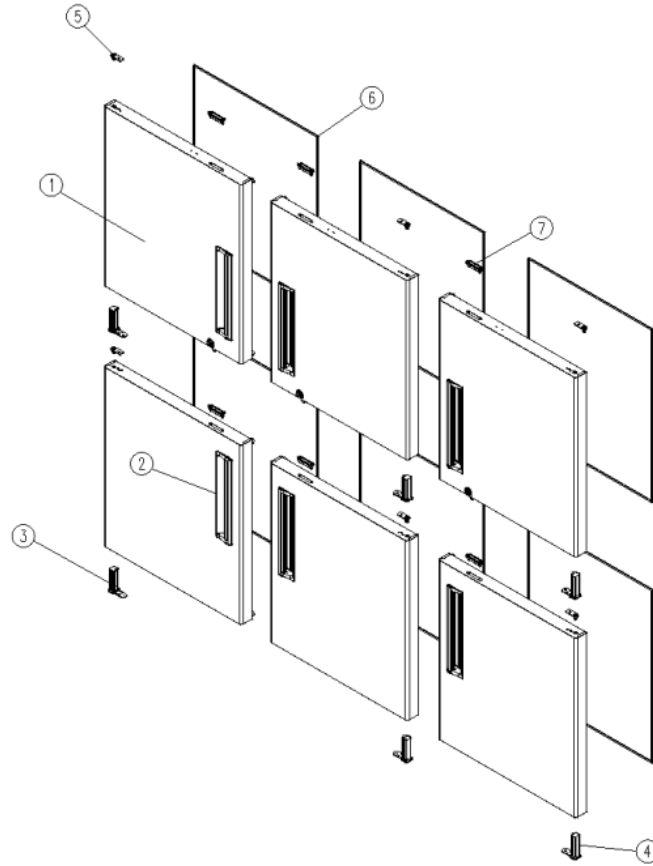
NO.	Model Code	Description	Qty	Material	Spec
1	R359F-030	Plate Door Rh_Upp	1	STS430 #4	T0.5*829.6*892.3
	R359F-040	Plate Door Rh_Low	1		
2	R4122-263	Handle Guard	2	ABS	UL94-HB
	R4122-281	Handle Cover	2		340.6*6.8
3	R3932-361	Cap Door Lock	2	ABS	69.8*21.8*20.3
4	R343A-030	Hinge Grommet	2	POM,WHT	142*153
5	R828A-200	Assy Hinge Rh	2	PA-6	27*22*82L
6	R338A-110	Gasket Door Tm_Half	2	RD-PVC(P-1000)	618*737

b. LRT-1471H, LFT-1471H



NO.	Model Code	Description	Qty	Material	Spec
1	R359F-030	Plate Door Rh_Upp	1	STS430 #4	T0.5*829.6*892.3
	R359F-040	Plate Door Rh_Low	1		
	R359F-050	Plate Door Lf_Upp	1		
	R359F-060	Plate Door Lf_Low	1		
2	R4122-263	Handle Guard	4	ABS	UL94-HB
	R4122-281	Handle Cover	4		340.6*6.8
3	R828A-190	Assy Hinge Lf	2	PA-6	27*22*82L
4	R828A-200	Assy Hinge Rh	2		
5	R3932-361	Cap Door Lock	4	ABS	69.8*21.8*20.3
6	R338A-110	Gasket Door Tm_Half	4	RD-PVC(P-1000)	618*737
7	R343A-030	Hinge Grommet	4	POM,WHT	142*153

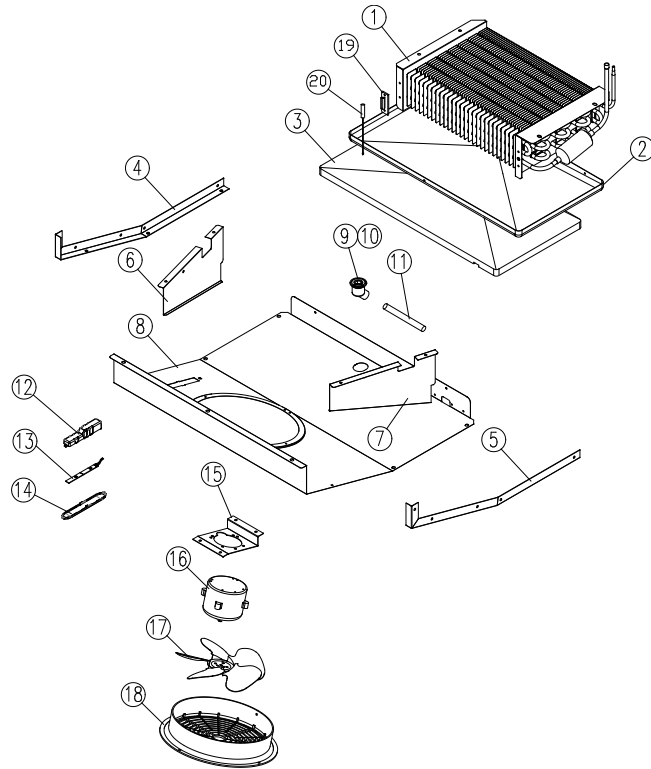
c. LRT-72H, LFT-72H



NO.	Model Code	Description	Qty	Material	Spec
1	R359F-030	Plate Door Rh_Upp	2	STS430 #4	T0.5*829.6*892.3
	R359F-040	Plate Door Rh_Low	2		
	R359F-050	Plate Door Lf_Upp	1		
	R359F-060	Plate Door Lf_Low	1		
2	R4122-263	Handle Guard	6	ABS	UL94-HB
	R4122-281	Handle Cover	6		340.6*6.8
3	R828A-190	Assy Hinge Lf	2	PA-6	27*22*82L
4	R828A-200	Assy Hinge Rh	4		
5	R3932-361	Cap Door Lock	6	ABS	69.8*21.8*20.3
6	R338A-110	Gasket Door Tm_Half	6	RD-PVC(P-1000)	618*737
7	R343A-030	Hinge Grommet	6	POM,WHT	142*153

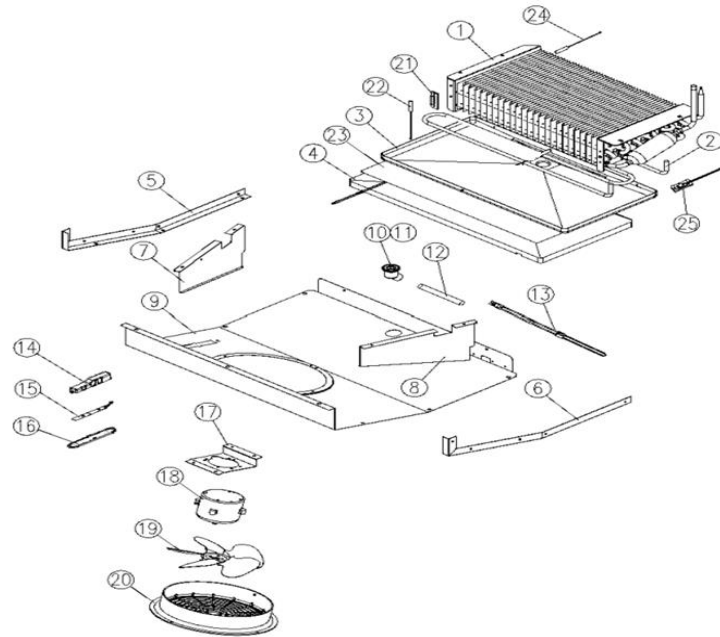
G. Evaporator Assembly

a. LRT-771H



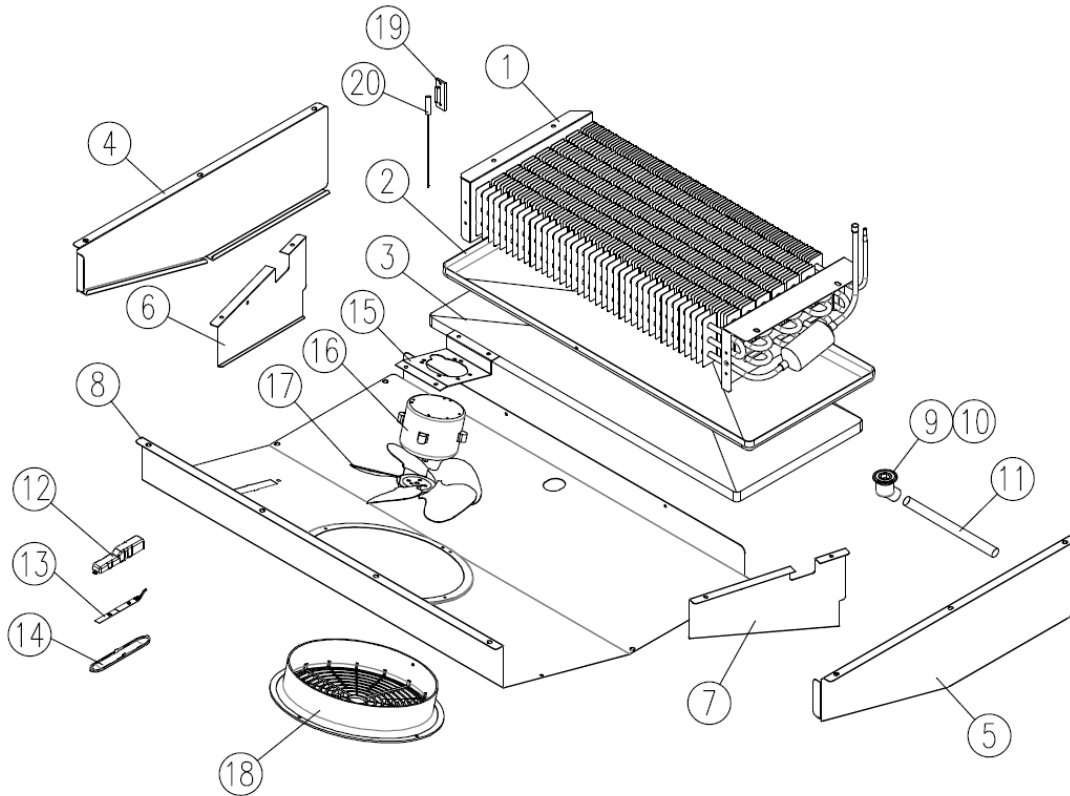
NO.	Model Code	Description	Qty	Material	Spec
1	R2263-074	Evaporator Assy	1	AL	W330*D246*H105 TM23R
2	R3743-051	Evap Drain Pan Small	1	AL+COATING	
3	R1143-202	Evap Drain Insul-S	1	Foam-PS	T=17*256*530
4	R3853-051	Evap Air Guide Left	1	AL	T=0.5*255.3*155.6
5	R3853-041	Evap Air Guide Right	1	AL	T=0.5*255.3*155.6
6	R3813-812	EVAP COVER B/K-LF	1	STS430-2B	T=1.0*565*34.8
7	R3813-802	EVAP COVER B/K RH	1	STS340-2B	T=1.0*565*34.8
8	R325A-200	Eva Cover T23	1	STS443CT	T=0.5*654.2*573
9	R3744-091	Evap Drain Elbow-Upp	1	PP	White
10	R3744-101	Evap Drain Elbow-Low	1	PP	White
11	R2124-021	Evaporator Drain Hose-A	1	Silicon	Φ16*12, L=213
12	R313A-050	BODY LAMP	1	HIPS	60HRI,112*20.7*21
13	R723A-040	ASSY LED LAMP	1	FR1	DC 12V, LED LAMP 4P
14	R325A-141	COVER LAMP	1	PC	MILKI WHITE
15	R3203-482	Motor Fix Bracket	1	STS430-2B	T=1.0*90*146
16	R7423-053	Evaporator Fan Motor	1	CCW	220V 50~60HZ.9W.CCW
17	R3729-010	Evap Fan Blade	1	AL	8" CCW
18	R3812-141	Evaporator Fan Motor Guard	1	HIPS	VH-1800EX, White
19	R3314-192	Sensor Bracket	1	PP	White
20	R7213-412	Temp Display Sensor	1	-	AT25°C, 10.75KΩ±1% -25~25

b. LFT-771H



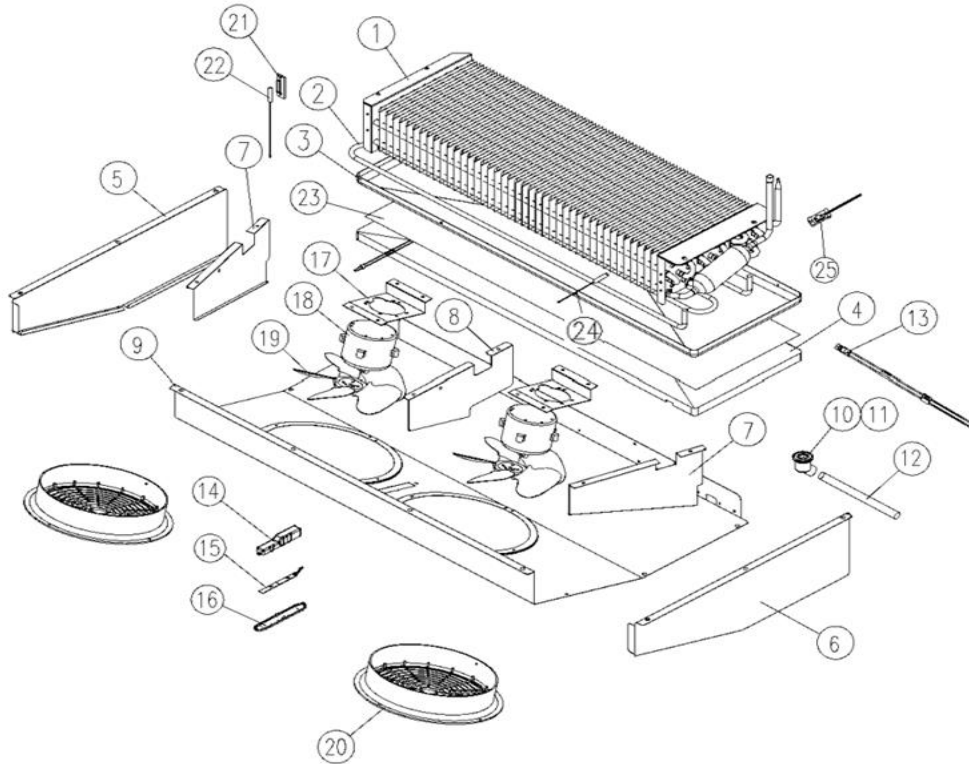
NO.	Model Code	Description	Qty	Material	Spec
1	R2263-051	Evaporator Assy	1	CU+AL	TM 23F
2	R7313-420	Defrost Heater	1	-	220V/445W . WHITE
3	R3743-051	Evap Drain Pan Small	1	AL	
4	R1143-202	Evap Drain Insul-S	1	Foam-PS	T=17*256*530
5	R3813-812	Evap Cover Bracket LF	1	STS430-2B	T=1.0*565*34.8
6	R3813-802	Evap Cover Bracket RH	1	STS304-2B	T=1.0*565*34.8
7	R3853-051	Evap Air Guide Left	1	AL	T=0.5*255.3*155.6
8	R3853-041	Evap Air Guide Right	1	AL	T=0.5*255.3*155.6
9	R325A-200	Eva Cover T23	1	STS443CT	T=0.5*654.2*573
10	R3744-091	Evap Drain Elbow-Upp	1	PP	White
11	R3744-101	Evap Drain Elbow-Low	1	PP	White
12	R2124-021	Evaporator Drain Hose-A	1	Silicon	Φ16x12, L=213
13	R7313-690	HEATER CORD DRAIN HOSE	1	-	220V 10W
14	R313A-050	Body Lamp	1	HIPS	60HRI,112*20.7*21
15	R723A-040	Assy Led Lamp	1	FR1	DC 12V, LED LAMP 4P
16	R325A-141	Cover Lamp	1	PC	MILKI WHITE
17	R3203-482	Motor Fix Bracket	1	STS430-2B	T=1.0*90*146
18	R7423-053	Evaporator Fan Motor	1	CCW	220V 50~60HZ.9W.CCW 절연지
19	R3729-010	Evap Fan Blade	1	AL	8" CCW
20	R3812-141	Evaporator Fan Motor Guard	1	HIPS	VH-1800EX, White
21	R3314-192	Sensor Bracket	1	PP	White
22	R7213-412	Temp Display Sensor	1	-	AT25°C, 10.75KΩ±1%. -25~25
23	R720A-560	Heater Drain Pan	1	-	220V/90W 538Ω
24	R7213-422	Sensor Def(Evap)	1	-	AT25°C, 10.75KΩ±1%. -25~25
25	R7253-052	Evaporator Thermal Fuse	1	-	Max, 72±5°C

c. LRT-1471H



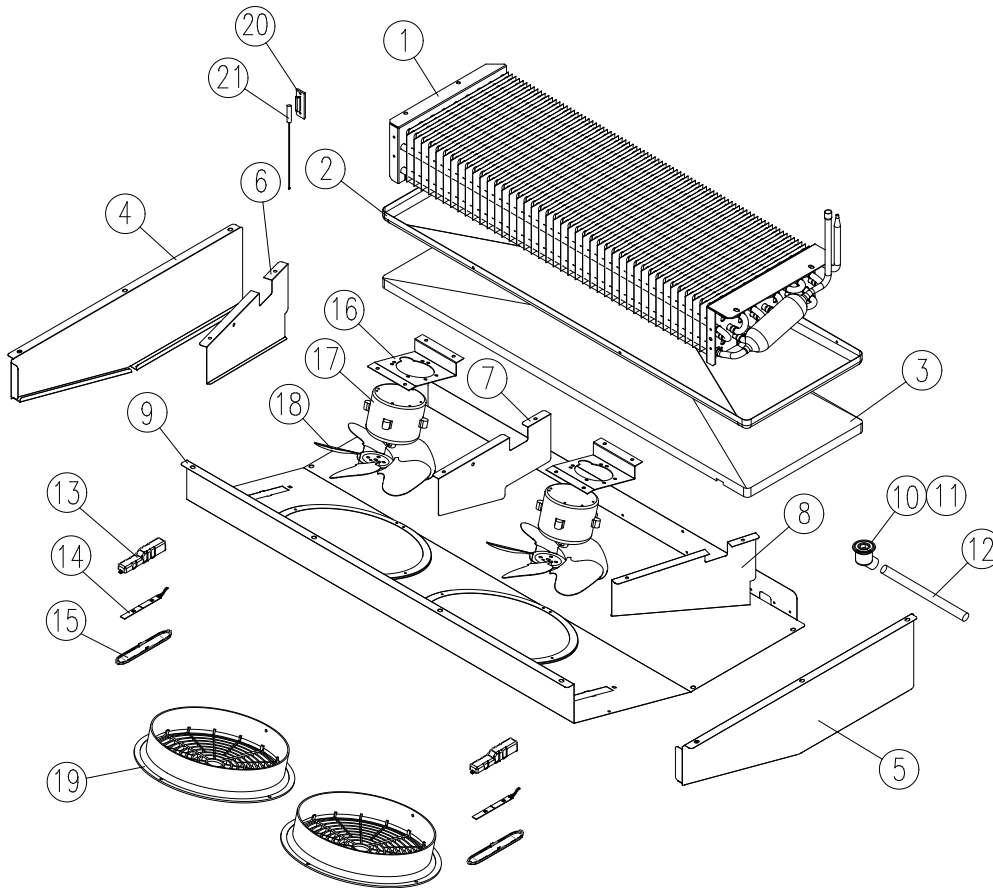
NO.	Model Code	Description	Qty	Material	Spec
1	R2263-084	Evaporator Assy	1	AL	W506*D246*H105 TM49R
2	R3743-041	Evaporator Drain Pan-Mid	1	AL+COATING	-
3	R1143-222	Evaporator Drain Insul-M	1	Foam-PS	T=17*256*622
4	R3853-800	Evap Cover Support LF	1	STS443CT	T=0.5*519.4*176.7
5	R3853-790	Evap Cover Support RH	1	STS443CT	T=0.5*519.4*176.7
6	R3853-051	Evap Air Guide Left	1	AL	T=0.5*255.3*155.6
7	R3853-051	Evap Air Guide Left	1	AL	T=0.5*255.3*155.6
8	R325A-210	Eva Cover T49	1	STS443CT	T=0.5*727*653.5
9	R3744-091	Evap Drain Elbow-Upp	1	PP	White
10	R3744-101	Evap Drain Elbow-Low	1	PP	White
11	R2124-021	Evaporator Drain Hose-A	1	Silicon	Φ16x12, L=213
12	R313A-050	Body Lamp	1	HIPS	405AF
13	R723A-040	Assy Led Lamp	1	FR1	DC 12V, LED LAMP 4P
14	R325A-141	Cover Lamp	1	PC	MILKI WHITE
15	R3203-482	Motor Fix Bracket	1	STS430-2B	T=1.0*90*146
16	R7423-053	Evaporator Fan Motor	1	CCW	220V 50~60HZ.9W.CCW 절연지
17	R3729-010	Evap Fan Blade	1	AL	8" CCW
18	R3812-141	Evaporator Fan Motor Guard	1	HIPS	VH-1800EX, White
19	R3314-192	Sensor Bracket	1	PP	White
20	R7213-412	Temp Display Sensor	1	-	AT25°C, 10.75KΩ±1%. -25~25

d. LFT-1471H



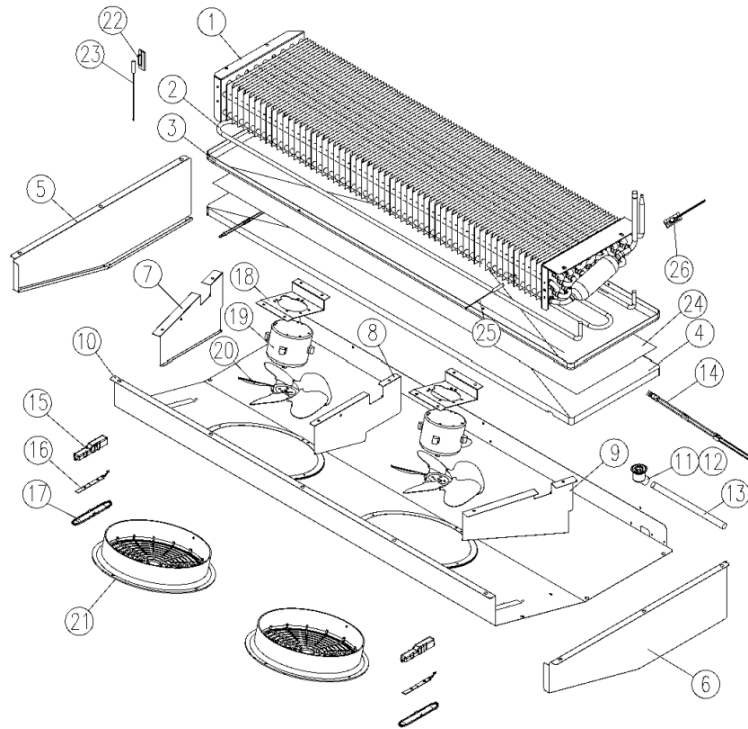
NO.	Model Code	Description	Qty	Material	Spec
1	R2263-062	Evaporator Assy	1	CU+AL	TM 49F
2	R7303-961	Defrost Heater (F49)	1	-	UL 220V 600W
3	R3743-031	Evap Drain Pan Large	1	AL+COATING	
4	R1143-212	Evap Drain Insul-L	1	Foam-PS	T=17*256*800
5	R3853-800	Evap Cover Support LF	1	STS443CT	T=0.5*519.4*176.7
6	R3853-790	Evap Cover Support RH	1	STS443CT	T=0.5*519.4*176.7
7	R3853-051	Evap Air Guide Left	2	AL	T=0.5*255.3*155.6
8	R3853-061	Evap Air Guide Mid	1	AL	T=0.5*245*127
9	R325A-220	Eva Cover T49F	1	STS443CT	T=0.5*845*653.5
10	R3744-091	Evap Drain Elbow-Upp	1	PP	White
11	R3744-101	Evap Drain Elbow-Low	1	PP	White
12	R2124-021	Evaporator Drain Hose-A	1	Silicon	Φ16*12, L=213
13	R853A-021	Ass'y Heater Drain Hose	1	-	UL 115V/10W
14	R313A-050	Body Lamp	1	HIPS	405AF
15	R723A-040	Assy Led Lamp	1	FR1	DC 12V, LED LAMP 4P
16	R325A-141	Cover Lamp	1	PC	MILKI WHITE
17	R3203-482	Motor Fix Bracket	2	STS430-2B	T=1.0*90*146
18	R7423-053	Evaporator Fan Motor	2	CCW	220V 50~60HZ.9W.CCW 절연지
19	R3729-010	Evap Fan Blade	2	AL	8" CCW
20	R3812-141	Evaporator Fan Motor Guard	2	HIPS	VH-1800EX, White
21	R3314-192	Sensor Bracket	1	PP	White
22	R7213-412	Temp Display Sensor	1	-	AT25°C, 10.75KΩ±1%. -25~25
23	R720A-570	Heater Drain Pan	1	-	220V/140W 346Ω
24	R7213-422	Sensor Def(Evap)	1	-	AT25°C, 10.75KΩ±1%. -25~25
25	R7253-052	Evaporator Thermal Fuse	1	-	Max, 72±5°C

e. LRT-72H



NO.	Model Code	Description	Qty	Material	Spec
1	R840A-012	Evaporator Assy	1	AL	W669*D240*H107 TM72R
2	R3743-031	Evap Drain Pan Large	1	AL+COATING	
3	R1143-212	Evap Drain Insul-L	1	Foam-PS	T=17*256*800
4	R3853-800	Evap Cover Support LF	1	STS443CT	T=0.5*519.4*176.7
5	R3853-790	Evap Cover Support RH	1	STS443CT	T=0.5*519.4*176.7
6	R3853-051	Evap Air Guide Left	1	AL	T=0.5*255.3*155.6
7	R3853-061	Evap Air Guide Mid	1	AL	T=0.5*245*127
8	R3853-041	Evap Air Guide Right	1	AL	T=0.5*255.3*155.6
9	R325A-231	Eva Cover T72R	1	STS443CT	T=0.5*845*655
10	R3744-091	Evap Drain Elbow-Upp	1	PP	White
11	R3744-101	Evap Drain Elbow-Low	1	PP	White
12	R2124-031	Evaporator Drain Hose-B	1	Silicon	SILICON OD22*ID18 L50MM
13	R313A-050	Body Lamp	2	HIPS	405AF
14	R723A-040	Assy Led Lamp	2	FR1	DC 12V, LED LAMP 4P
15	R325A-141	Cover Lamp	2	PC	MILKI WHITE
16	R3203-482	Motor Fix Bracket	2	STS430-2B	T=1.0*90*146
17	R7423-053	Evaporator Fan Motor	2	CCW	220V 50~60HZ.9W.CCW 절연지
18	R3729-010	Evap Fan Blade	2	AL	8" CCW
19	R3812-141	Evaporator Fan Motor Guard	2	HIPS	VH-1800EX, White
20	R3314-192	Sensor Bracket	1	PP	White
21	R7213-412	Temp Display Sensor	1	-	AT25°C, 10.75KΩ±1%. -25~25

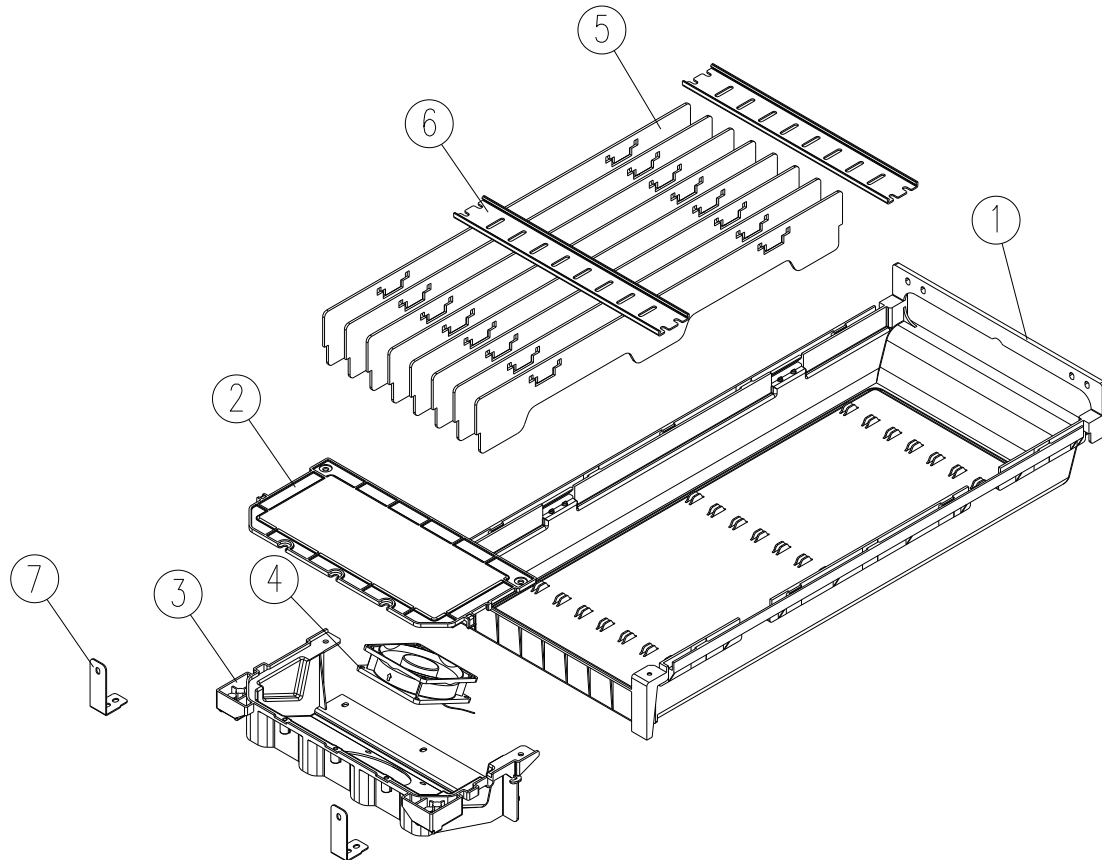
f. LFT-72H



NO.	Model Code	Description	Qty	Material	Spec
1	R2263-100	Evaporator Assy	1	Cu+AL	TM 72F
2	R720A-360	Defrost Heater	1	-	TM 72F 220V 900W 53.8Ω
3	R3743-240	Evap Drain Pan L	1	AL	T=0.8*1040*258
4	R1143-380	Evap Drain Insul-L	1	Foam-PS	T=17*256*1040
5	R3853-800	Evap Cover Support LF	1	STS443CT	T=0.5*519.4*176.7
6	R3853-790	Evap Cover Support RH	1	STS443CT	T=0.5*519.4*176.7
7	R3853-051	Evap Air Guide Left	1	AL	T=0.5*255.3*155.6
8	R3853-061	Evap Air Guide Mid	1	AL	T=0.5*245*127
9	R3853-041	Evap Air Guide Right	1	AL	T=0.5*255.3*155.6
10	R325A-240	Eva Cover T72F	1	STS443CT	T=0.5*1082*654
11	R3744-091	Evap Drain Elbow-Upp	1	PP	White
12	R3744-101	Evap Drain Elbow-Low	1	PP	White
13	R2124-021	Evaporator Drain Hose-A	1	Silicon	Φ16*12, L=213
14	R853A-040	Ass'y Heater Drain Hose	1	-	BM/TM 72F 220V 10W 4840Ω
15	R313A-050	Body Lamp	2	HIPS	405AF
16	R723A-040	Assy Led Lamp	2	FR1	DC 12V, LED LAMP 4P
17	R325A-141	Cover Lamp	2	PC	MILKI WHITE
18	R3203-482	Motor Fix Bracket	2	STS430-2B	T=1.0*90x146
19	R7423-053	Evaporator Fan Motor	2	CCW	220V 50~60HZ.9W.CCW 절연지
20	R3729-010	Evap Fan Blade	2	AL	8" CCW
21	R3812-141	Evaporator Fan Motor Guard	2	HIPS	VH-1800EX, White
22	R3314-192	Sensor Bracket	1	PP	White
23	R7213-412	Temp Display Sensor	1	-	AT25°C, 10.75KΩ±1%. -25~25
24	R720A-580	Heater Drain Pan	1	-	220V/180W 269Ω
25	R7213-422	Sensor Def(Evap)	1	-	AT25°C, 10.75KΩ±1%. -25~25
26	R7253-052	Evaporator Thermal Fuse	1	-	Max, 72±5°C

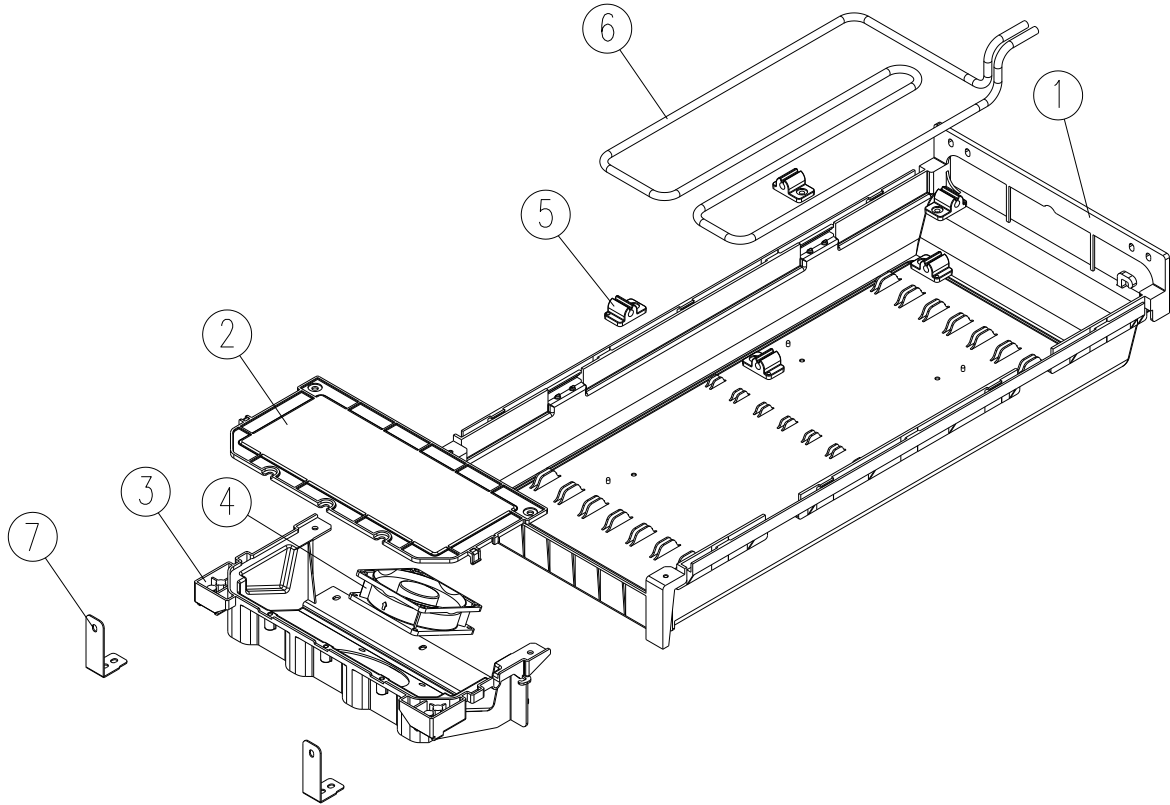
H. Vapori Assembly

a. LRT-771H, LFT-771H, LFT-1471H



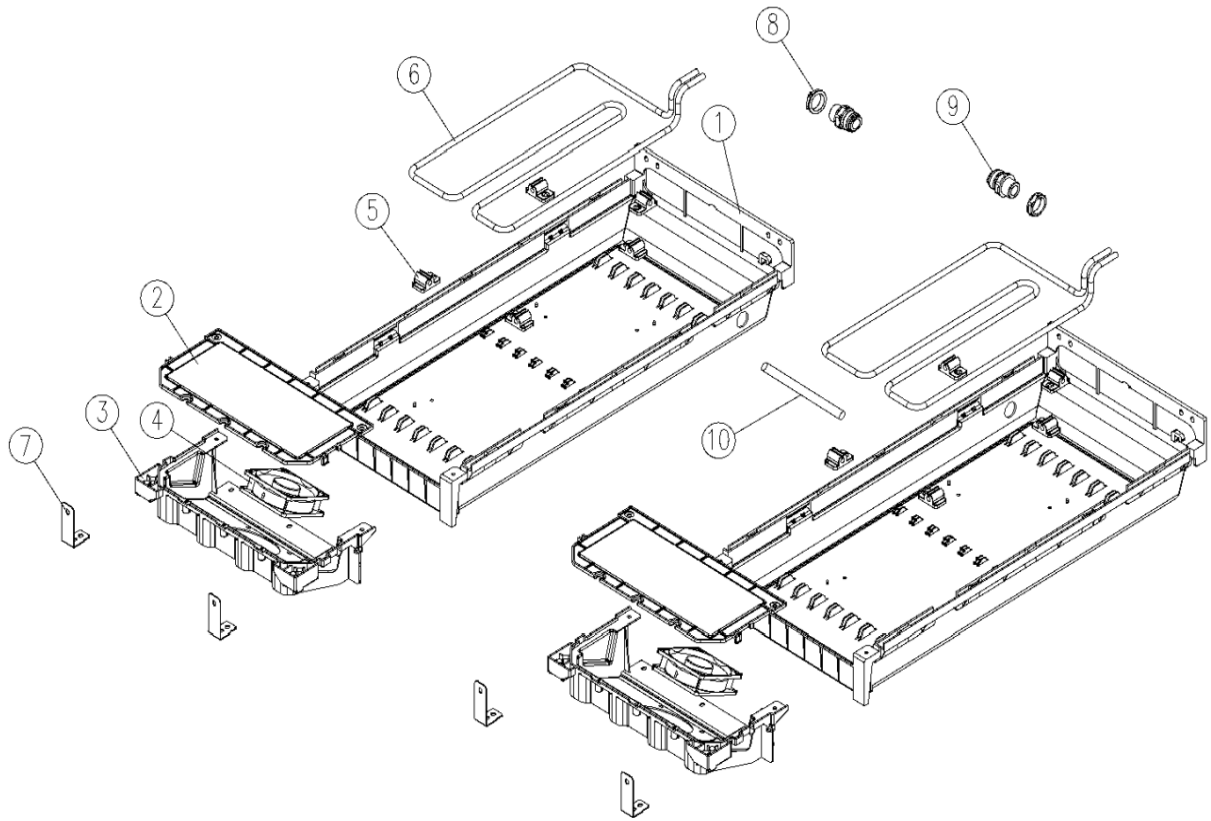
NO.	Model Code	Description	Qty	Material	Spec
0	R8522-010	Vapori AS TM	1	-	ABS+DC FAN
1	R3422-012	Case Vapori	1	ABS	602.5*275*106.5
2	R3422-050	Cover DC Motor T49	1	ABS	280.5*131*11.5
3	R3422-030	Case DC Motor T49	1	ABS	283*143.5*69.5
4	R831A-030	Ass'y DC Motor Vapori	1	-	DC12V, DA08025B12MF
5	R1154-090	Wicking Drain Water	8	-	2.5T*480*63.5
6	R3853-780	Guide Wicking	2	PP	T=1.5*269*40
7	R3313-730	Bracket Case Vapori Front	2	STS304	T=1.2*85.5*20.5

b. LRT-1471H



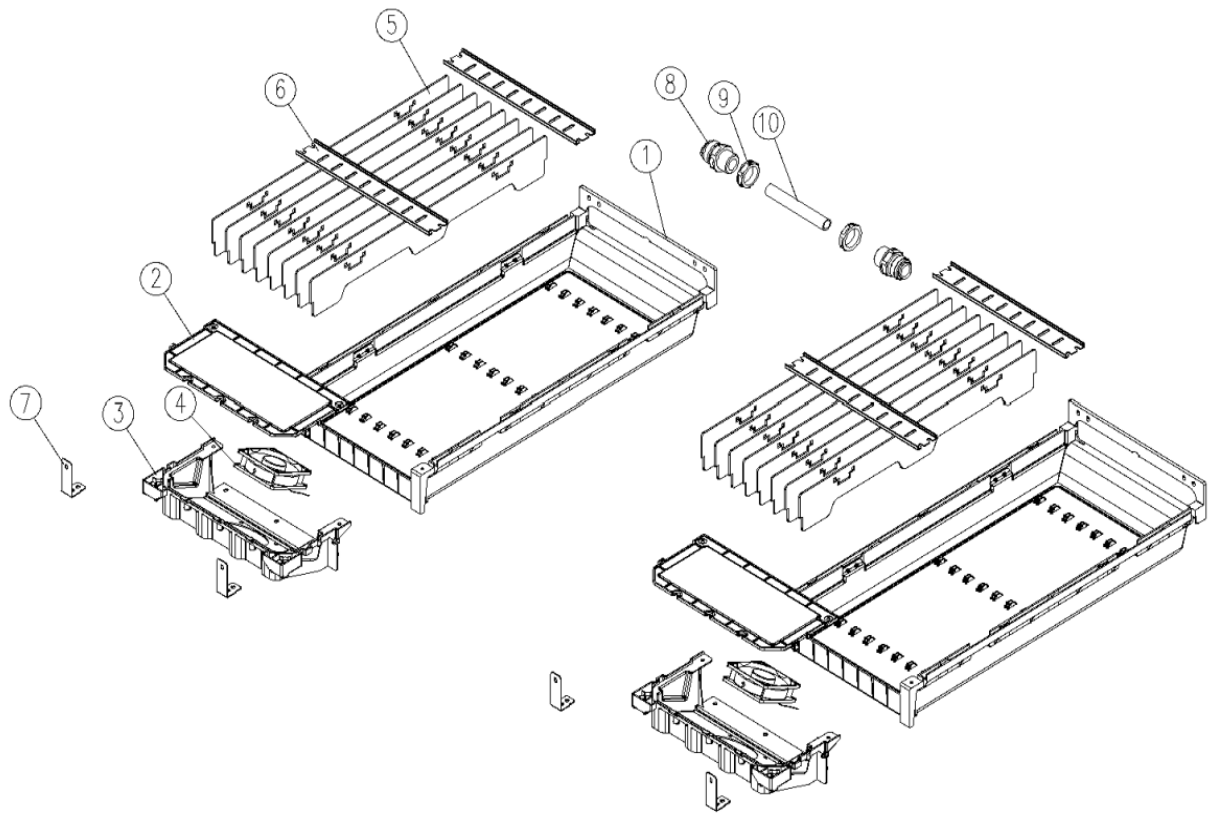
NO.	Model Code	Description	Qty	Material	Spec
0	R8522-040	Vapori AS TM	1	-	ABS+DC FAN+HEATER
1	R3422-012	Case Vapori	1	ABS	602.5*275*106.5
2	R3422-050	Cover DC Motor T49	1	ABS	280.5*131*11.5
3	R3422-030	Case DC Motor T49	1	ABS	283*143.5*69.5
4	R831A-030	Ass'y DC Motor Vapori	1	-	DC12V, DA08025B12MF
5	R3743-400	Holder Vapori Heater	5	Silicon	33*20*13.5
6	R720A-080	Heater Vaporizer	1	-	220V 50W 968Ω SHEATH HEATER
7	R3313-730	Bracket Case Vapori Front	2	STS304	T=1.2*85.5x20.5

c. LRT-72H



NO.	Model Code	Description	Qty	Material	Spec
0	R858A-420	Vapori AS TM	2	-	ABS+DC FAN+HEATER
1	R3422-012	Case Vapori	2	ABS	602.5*275*106.5
2	R3422-050	Cover DC Motor T49	2	ABS	280.5*131*11.5
3	R3422-030	Case DC Motor T49	2	ABS	283*143.5*69.5
4	R831A-030	Ass'y DC Motor Vapori	2	-	DC12V, DA08025B12MF
5	R3743-400	Holder Vapori Heater	10	Silicon	33*20*13.5
6	R720A-080	Heater Vaporizer	2	-	220V 50W 968Ω SHEATH HEATER
7	R3313-730	Bracket Case Vapori Front	4	STS304	T=1.2*85.5*20.5
8	R223A-020	Fitting Divider Vapori Nut	2	PP	Nut 20M
9	R223A-010	Fitting Divider Vapori	2	BSPP	AMCB, 1207M
10	R225A-010	Fitting Tube	1	PE	Φ12, L100mm

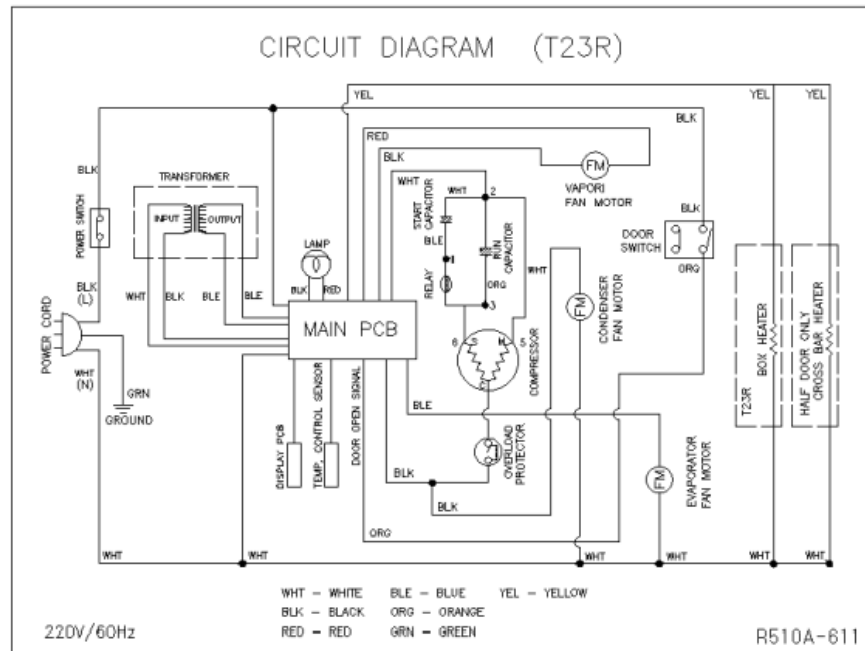
d. LFT-72H



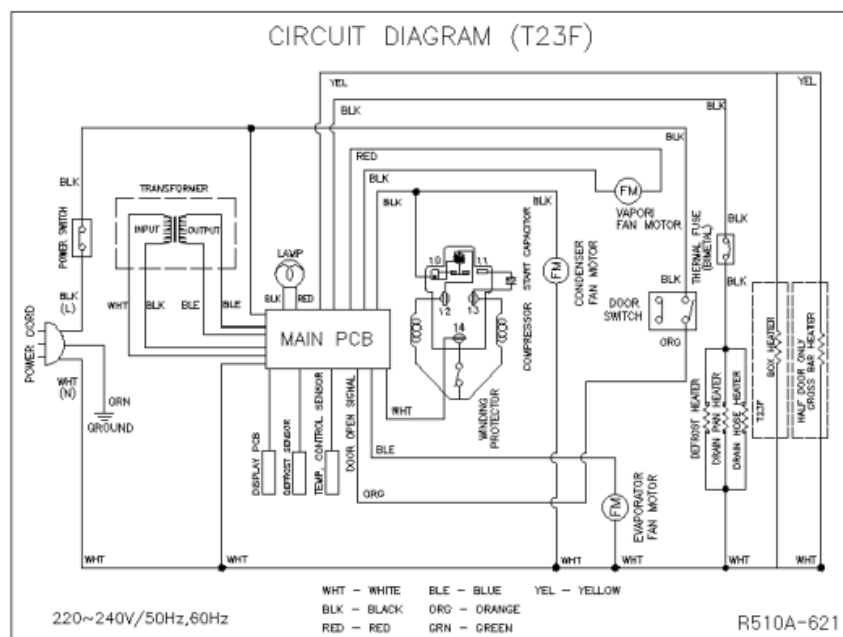
NO.	Model Code	Description	Qty	Material	Spec
0	R858A-420	Vapori AS TM	2	-	ABS+DC FAN+HEATER
1	R3422-012	Case Vapori	2	ABS	602.5*275*106.5
2	R3422-050	Cover DC Motor T49	2	ABS	280.5*131*11.5
3	R3422-030	Case DC Motor T49	2	ABS	283*143.5*69.5
4	R831A-030	Ass'y DC Motor Vapori	2	-	DC12V, DA08025B12MF
5	R3743-400	Holder Vapori Heater	10	Silicon	33*20*13.5
6	R720A-080	Heater Vaporizer	2	-	220V 50W 968Ω SHEATH HEATER
7	R3313-730	Bracket Case Vapori Front	4	STS304	T=1.2*85.5*20.5
8	R223A-020	Fitting Divider Vapori Nut	2	PP	Nut 20M
9	R223A-010	Fitting Divider Vapori	2	BSPP	AMCB, 1207M
10	R225A-010	Fitting Tube	1	PE	Φ12, L100mm

3. WIRING DIAGRAM

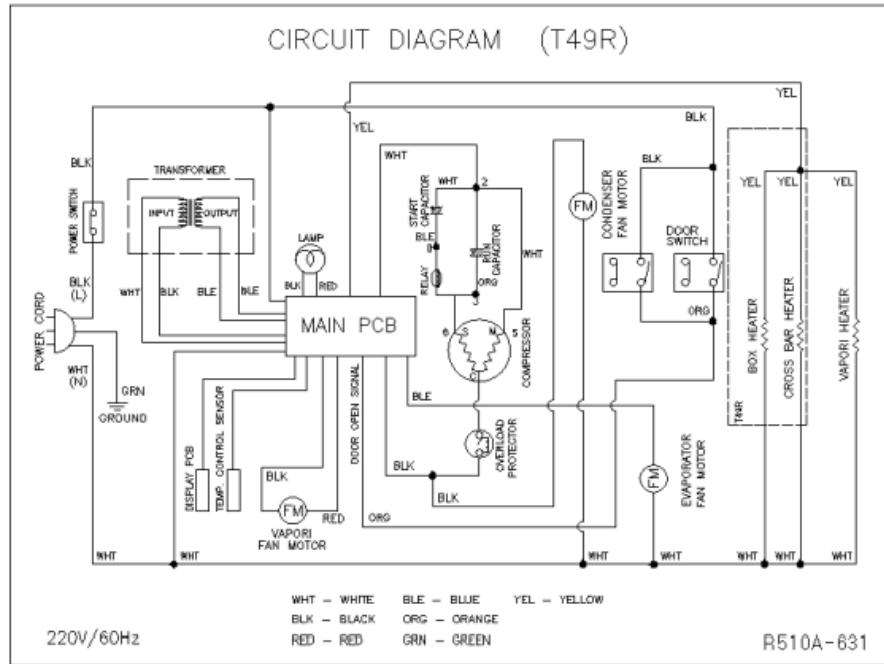
◇ T23R



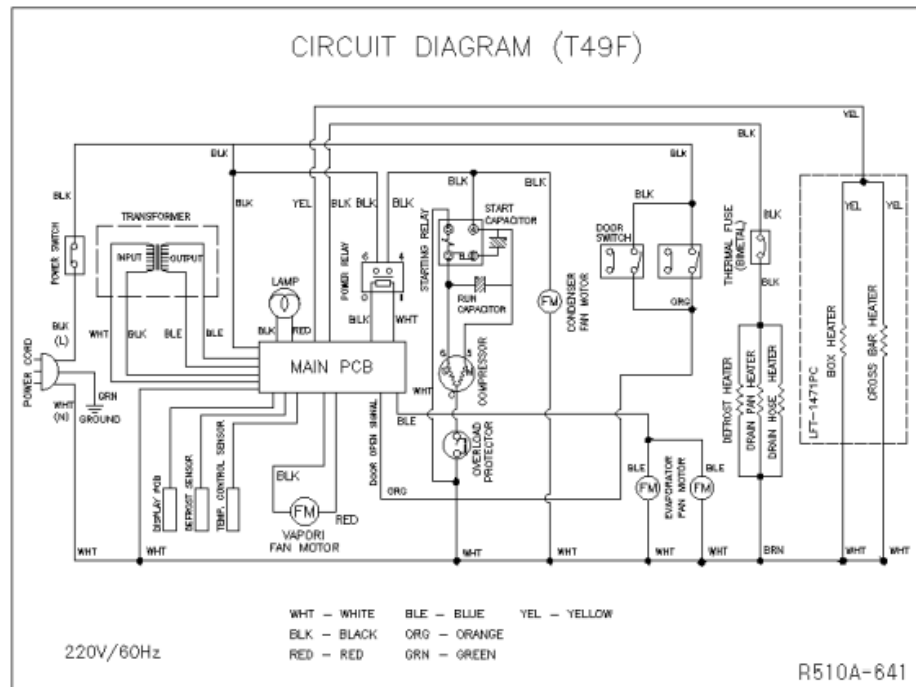
◇ T23F



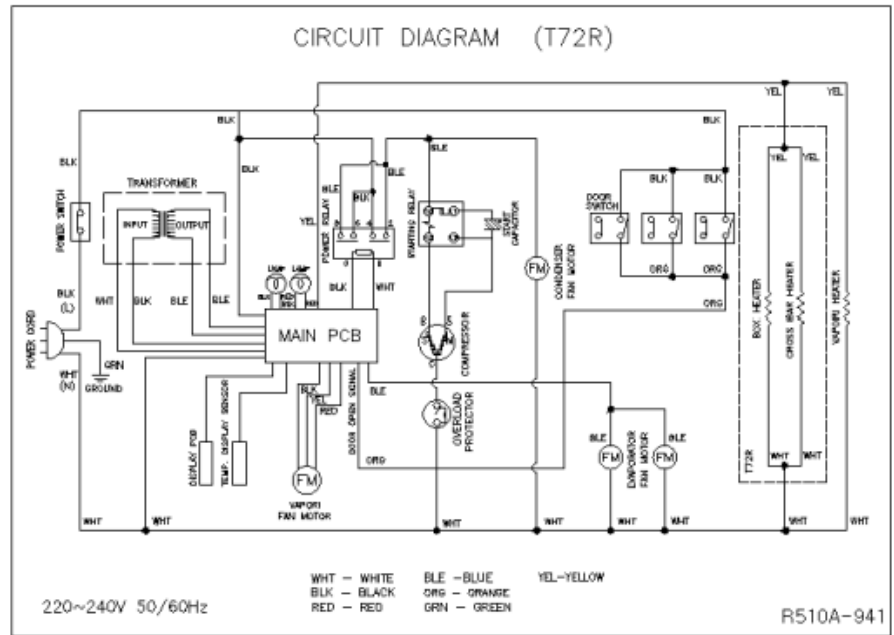
◇ T49R



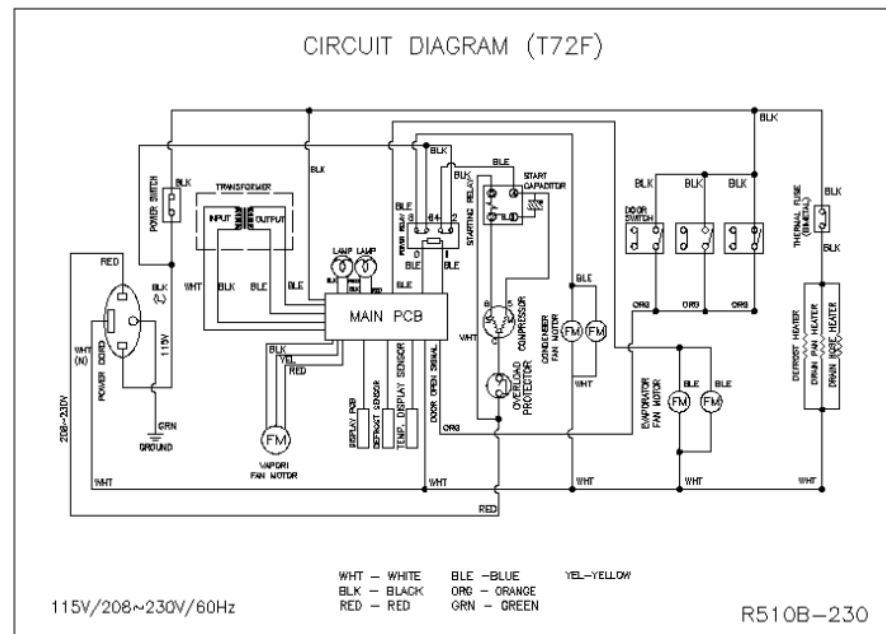
◇ T49F



◇ T72R



◇ T72F

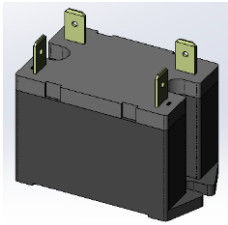
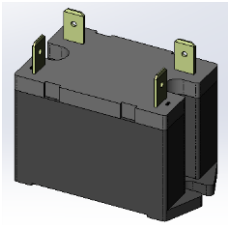


4. MAIN COMPONENTS

4-1.COMPRESSOR

MODEL	LRT-771PC LRT-1471PC	LFT-771PC	LFT-1471PC	LRT-72T	LFT-72T
Refrigerant	R-134A	R-404A	R-404A	R-134A	R-404A
Voltage	220V				
Comp. Model	SK1A1Q-L2U	SC12CLX2	SC18CLX2	SC18G	GS26CLX
Part code	(DY) R7439-170	R714A-030	R7439-530	R714A-150	R714A-020
Image					


4-2.POWER-RELAY(COMP. RELAY)

MODEL	LFT-1471H, LRT-72H	LFT-72H
Voltage	220V / 50Hz	220V / 50Hz
Relay Model	OMRON G7L-2A-TUB 220~240VAC	PANASONIC HE2AN-Q-DC12V 25A
Part code	(DY) R748A-010	R748A-030
Image		



4-3. STARTING CAPACITOR

MODEL	LFT-1471PC	
Spec	220V/125 μ F 220V/50HZ	
Part code	(DY)	R7549-300
Image	Assy Relay Box 11-7053 72F	

4-4. RUNNING CAPACITOR

MODEL	LRT-771PC, LRT-1471PC	
Spec	350V AC 8 μ F, 2P	
Part code	(DY)	R7549-140
Image		

4-5. DRYER

MODEL	LRT-771H,LFT-771H, LRT-1471H,LFT-72H	LFT-1471H ,LRT-72H
Spec	36G	24G
Part code	(DY)	R2183-032
Image		

4-6.CONDENSER COIL

MODEL		LRT-771H, LFT-771H, LRT-1471H	LFT-1471H/LRT-72H	LFT-72H
Spec		φ 4.76*13190	CU+AL R4*S10*L19202	CU+AL R3*S10*L17806
Part code	(DY)	R2202-033	R865A-080	R865A-090
Image				

4-7. CONDENSER FAN BLADE

MODEL		ALL
Spec		AL. φ 225. 9" C.W
Part code	(DY)	R3723-070
Image		

4-8. CONDENSER FAN MOTOR

MODEL		ALL
Voltage		220V 50~60HZ.9W.CCW
Motor Model		DAI-8204DYCA
Part code	(DY)	R7423-070
Image		

4-9. BRACKET C-FAN MOTOR

MODEL	ALL	
Motor Model	SBHG1-0 T2	
Part code	(DY)	R315A-050
Image		

4-10. EVAPORATOR FAN MOTOR

MODEL	ALL	
Voltage	220V 50~60HZ.9W.CCW	
Motor Model	DAI-8204DYCA-1 CCW	
Part code	(DY)	R7423-053
Image		


4-11.EVAPORATOR COIL

MODEL	LRT-771H	LRT-1471H	LFT-771H	LFT-1471H	LRT-72H	LFT-72H	
Spec	AL	AL	CU+AL	CU+AL	AL	CU+AL	
Part code	(DY)	R2263-074	R2263-084	R2263-051	R2263-062	R840A-012	R2263-100
Image							


4-12. EVAPORATOR DEFROST HEATER

MODEL	LFT-771H	LFT-1471H	LFT-72H
Voltage	UL 220V		
Spec	445W	600W	900W
Part code	(DY) R7313-420	R7303-961	R720A-360
Image			

4-13. EVAP FAN BLADE

MODEL	ALL		
Spec	8". C.C.W		
Part code	(DY) R3729-010		
Image			

4-14. EVAPORATOR FAN MOTOR GUARD

MODEL	ALL		
Spec	HIPS (VH-1800EX), WHITE		
Part code	(DY) R3812-141		
Image			

4-15. MOTOR FIX BRACKET

MODEL	ALL		
Spec	STS430-2B T1*90*146		
Part code	(DY) R3203-482		
Image			


4-16. MAIN PCB

MODEL		LRT-771PC, LRT-1471PC, LRT-72T	LFT-771PC, LFT-1471PC, LFT-72T
Spec		FR1 TM 220V °C REF TMR220C-05	FR1 TM 220V °C FRE TMF220C-05
Part code	(DY)	R725A-414	R725A-424



4-17. FRONT PCB

MODEL		ALL	
Spec		88 SEGMENT. °F	
Part code	(DY)	R725C-220	
Image		입수후 캡처	


4-18. INLAY CONTROL

MODEL		ALL	
Spec		PC-SHEET, T0.25*141.7*43.7	
Part code	(DY)	R511A-540	
Image			


4-19. POWER CORD

MODEL		LRT-771PC,LFT-771PC,LRT-1471PC,LFT-1471PC,LRT-72T	LFT-72H
Spec		250V 10A	UL-E313867/SJT 12AWG/4C
Part code	R7363-250	R7363-260	R729A-010
Image			


4-20. EVAPORATOR THERMAL FUSE (BIMETAL)

MODEL	LFT-771H	LFT-1471H	LFT-72H
Spec	MAX 72±5℃		
Part code	(DY)	R7253-052	
Image			


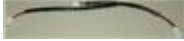
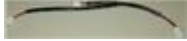
4-21. TEMP-THERMISTOR, REF/FRE

MODEL	LRT-771H, LFT-771H	LRT-1471H, LFT-1471H	LRT-72H, LFT-72H
Spec	AT25℃, 10.75KΩ±1%, -25~25		
Part code	(DY)	R7213-412	
Image			

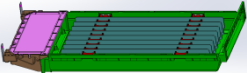
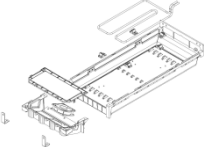
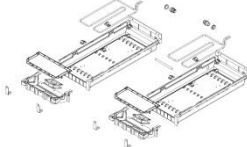
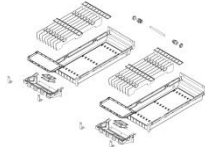
4-22. DEFROST SENSOR (D/-SENSOR, Evap-SENSOR)

MODEL	LFT-771H	LFT-1471H	LFT-72H
Spec	AT25℃, 10.75KΩ±1%, -25~25		
Part code	(DY)	R7213-422	
Image			


4-23. HARNESS SWITCH

MODEL	LRT-771H, LFT-771H	LRT-1471H, LFT-1471H	LRT-72H, LFT-72H
Spec	UL, AWG 18		
Part code	(DY)	R7523-261	R719C-920
Image			


4-24. VAPORI AS

MODEL	LRT-771PC, LFT-771PC, LFT-1471PC	LRT-1471PC	LRT-72T	LFT-72T
Spec	ABS			
Part code	(DY)	R8522-010	R858A-340	R858A-430
Image				


4-25. CASE VAPORI

MODEL	ALL	
Spec	ABS, 602.5*275*106.5	
Part code	(DY)	R3422-012
Image		


4-26. ASSY MOTOR DC VAPORI

MODEL	ALL	
Spec	DC 12V, 3000RPM, DA08025B12MF	
Part code	(DY)	R831A-030
Image		

4-27. HEATER VAPORI

MODEL	LRT-1471PC, LRT-72T	
Spec	220V 50W 968Ω SHEATH HEATER	
Part code	R720A-080	R7703-290
Image		


4-28. WICKING DRAIN WATER

MODEL	LRT-771H, LFT-771H, LFT-1471H, LFT-72H	
Spec	PP.T2.5*480*63.5	
Part code	(DY)	R1154-090
Image		



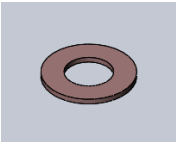
4-29. HEATER DRAIN PAN

MODEL	LFT-771H	LFT-1471H	LFT-72H	
Spec	220V/90W	220V/140W	220V/180W	
Part code	(DY)	R720A-560	R720A-570	R720A-580
Image				


4-30. SENSOR BRACKET

MODEL	ALL	
Spec	PP. WHT	
Part code	(DY)	R3314-192
Image		


4-31. CASTER

MODEL	LRT-771H, LFT-771H	LRT-1471H, LFT-1471H	LRT-72H, LFT-72H
Spec	SPCC 4"		
Part code	(DY)	R3323-240, R3323-230 , R397A-020 (WASHER CASTER)	
Q'ty	2/2	2/2	3/3
Image			

4-32. SWITCH PUSH

MODEL	LRT-771H, LFT-771H	LRT-1471H, LFT-1471H	LRT-72H, LFT-72H
Spec	SP201-7D 125VAC1.5A		
Part code	(DY)	R7203-010	
Q'ty	1	2	3
Image			

4-33. DOOR LOCKING ASSY

MODEL	LRT-771H, LFT-771H	LRT-1471H, LFT-1471H	LRT-72H, LFT-72H
Spec	ZDC, ZCR		
Part code	(DY)	R3734-030	
Q'ty	1	2	3
Image			

4-34. POWER SWITCH

MODEL	ALL		
Spec	LIGHT COUNTRY(R19A) 10A/115V		
Part code	(DY)	R7204-070	
Image			

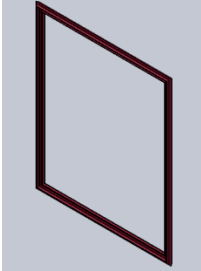
4-35. ASSY SHELF CLIP

MODEL		LRT-771H, LFT-771H	LRT-1471H, LFT-1471H	LRT-72H, LFT-72H
Spec		14 SET	26 SET	36 SET
Part code	(DY)	R8429-022	R8429-012	R835A-010
Image				

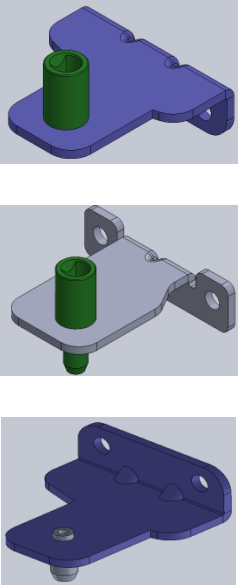
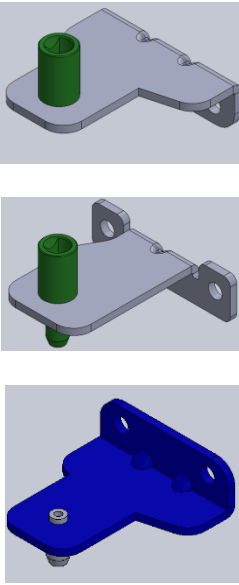
4-36. SHELF STANDARD. L

MODEL		LRT-771H, LFT-771H	LRT-1471H, LFT-1471H	LRT-72H, LFT-72H
Spec		AL, T1.2*L930		
Part code	(DY)	R3373-630		
Q'ty		4	8	12
Image				

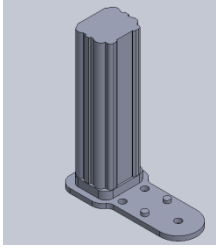
4-37. DOOR GASKET

MODEL	LRT-771H, LFT-771H	LRT-1471H, LFT-1471H	LRT-72H, LFT-72H
Spec	RD-PVC.BLK, 610*737		
Part code	(DY)	R338A-110	
Q'ty	2	4	6
Image			

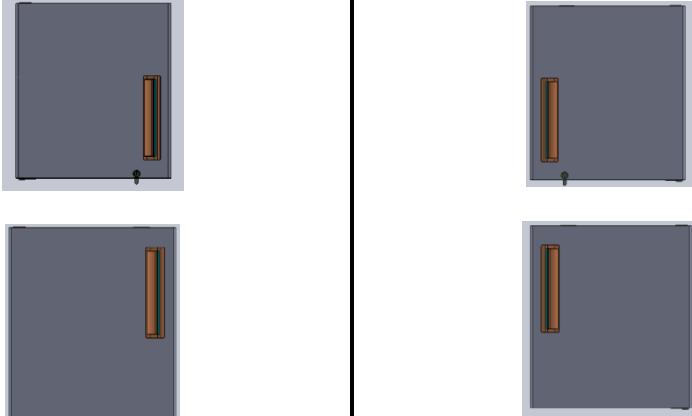
4-38. ASSY HINGE

MODEL	LRT-771H, LFT-771H LRT-1471H, LFT-72H LFT-1471H, LFT-72H	LRT-1471H, LFT-1471H LRT-72H, LFT-72H		
Spec	STS304 T3.0			
Part code	(DY)			
	R828A-260	ASSY HINGE BK LOW RH	R828A-250	ASSY HINGE BK LOW LF
	R828A-240	ASSY HINGE BK MID RH	R828A-230	ASSY HINGE BK MID LF
	R828A-130	ASSY HINGE UPPER RH	R828A-140	ASSY HINGE UPPER LF
Image				

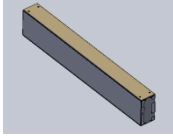
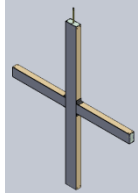
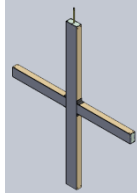
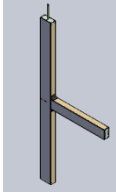
4-39. ASSY HINGE

MODEL		LRT-1471H, LFT-1471H LRT-72H, LFT-72H	LRT-771H, LFT-771H
Spec		LF	RH
Part code	(DY)	R828A-190	R828A-200
Image			

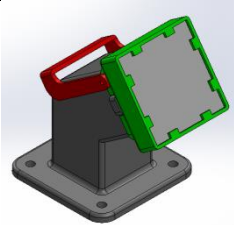
4-40. DOOR ASSY

MODEL		LRT-1471H, LFT-1471H LRT-72H, LFT-72H	LRT-771H, LFT-771H LRT-1471H, LFT-1471H LRT-72H, LFT-72H
Spec		LF UPP LF LOW	RH UPP RH LOW
Part code	(DY)	R817C-080 R317C-090	R817A-050
Image			

4-41. ASSY CROSS BAR

MODEL	LRT-771H, LFT-771H		LRT-1471H, LFT-1471H,	LRT-72H, LFT-72H		
Spec	220V, 7W	220V, 15W	SWST OD4.76*T0.7	SWST OD4.76*T0.7		
Part code	(D Y)		R816B-120	R816B-170	R816B-180	
+						
Image						

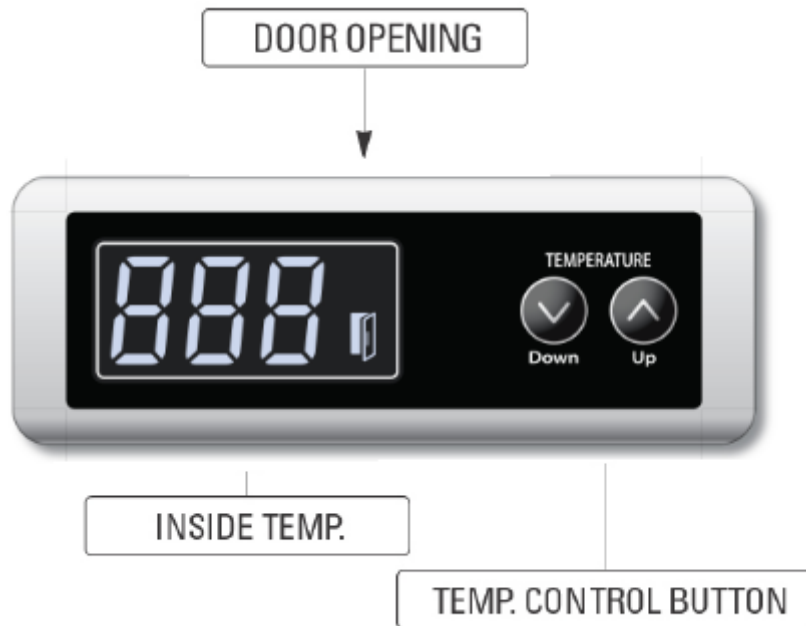
4-42. CHECK VALVE AS

MODEL	LRT-771H, LFT-771H, LRT-1471H		LFT-1471H, LRT-72H, LFT-72H
Spec	ABS + FILTER		
Part code	(DY)	R8173-130	
Q'ty	1		2
Image			

5. ELECTRONIC CONTROL INSTRUCTIONS

5-1. FREEZER CONTROL

5-1-1. HOW TO USE THE DISPLAY PCB PANEL



1. UP / DOWN BUTTON (Temperature control button)

- By pushing the up/down button, you can set the cabinet temperature.

2. DOOR OPENING INDICATOR

- If door is opened, door opening indicator will be turned on.
- If the door is left open for 3 minutes, the alarm will sound continuously.
- The alarm will stop immediately upon closing the door.

5. ELECTRONIC CONTROL INSTRUCTIONS

5-1-2. FUNCTION TABLE & MANUAL DEFROST

NO	Function	Content	Display
1	Power On	1. OFF for 2 sec 2. Display current Temp. and BUZZ 1 time. 3. Eva sensor Temp. over 41°F(5°C) : Operate under 41°F(5°C) : Operate after 5 min	. First 2 sec Ver. °F : F8, °C : FC After 2 sec Present °C/°F
2	Front Key	1. Push △/▼ to change Temp. (Each time you push, 1 buzz sound.) 2. The set-up is memorized in the EEPROM and remains even after Power Off.	. Hit △/▼ 1 time - Display final set 2 times - Change set-up value
3	COMP	1. Operate by Temperature Value 2. Operates on Comp ON/OFF Set Value 3. If Temp. Value hits the OFF Temp. the Comp. does not operate for 5 min	
4	FAN	1. Operate with Comp. 2. If the door opens, the fan stops.	
5	BOX HEATER	1. Temp Sensor over 78°F(26°C): Box Heater Relay On. 2. Temp Sensor under 78°F(26°C). Box Heater Operates by each mode - 1. 1MODE : 10 min on/ 10 min off - 2. 2MODE : 15 min on/ 10 min off - 3. 3MODE : 20 min on/ 10 min off(Default) - 4. 4MODE : 25 min on/ 15 min off 3. Push ▼ 5 sec to display Mode. Hit ▼ to change Mode 4. First Cycle operates by 1 Mode	72R
6	Lamp	1. Door Open - LED Lamp Off Door Close - LED Lamp On 2. Maximum 2 Lamps can be Controlled.	

7	Defrost	<ol style="list-style-type: none"> 1. If the defrost period passes defrost starts from pre-cool. 2. - 1. 5H : 5 Hr - 2. 6H : 6Hr - 3. 8H : 8 Hr(DEFAULT) - 4. AH : 10Hr 3. Push \triangle for 5 sec to display defrost period 4. Hit \triangle to get the Value desire 	
8	PRE-COOL	<ol style="list-style-type: none"> 1. Operate for 30 min, before defrost heater on 2. If Temp. goes under $-12^{\circ}\text{F}(-24.6^{\circ}\text{C})$ in 30 min defrost heater goes on mode 	. Displays Temp.
9	HEATER ON	<ol style="list-style-type: none"> 1. Operate after Pre-Cool 2. If the defrost sensor reaches 12°C defrost completes and heater goes Off 3. Heater on goes maximum 40 min 4. If fails, defrost Error Code will be saved. <p>If Temp. is over $23^{\circ}\text{F}(-5^{\circ}\text{C})$ after precool, or the sensor malfunctioned, heater will go atleast 20 min and at $28^{\circ}\text{F}(-2^{\circ}\text{C})$ it will go Off</p>	. dF
10	Resting Period	<ol style="list-style-type: none"> 1. After heater is Off there is a 5 min resting period. 	. dF
11	Forced Defrost	<ol style="list-style-type: none"> 1. Push \triangle&\blacktriangledown for 3 Sec at the same time. 2. Push \triangle&\blacktriangledown for 3 Sec at the same time during Defrost for cancel 	
12	Self Check	<ol style="list-style-type: none"> 1. Push \blacktriangledown & hit \triangle 3 times 2. Error Display D1 : D-Sensor Error F3 : Defrost Error C1 : Cycle Error 3. Return if nothing has done for 15 sec 	
13	Door Open and Alarm	<ol style="list-style-type: none"> 1. Door Open LED will blink until closer every 0.5 sec. 2. When Door is open over 3 min, Buzzer will chirp every 0.5 sec until closer. 	

14	D-Sensor Check	<p>1. Sensor Temp. Check & Set-up</p> <p>1) Push \triangle & hit \blacktriangledown 3 times.</p> <p>2) 1. dS : Displays D-Sensor \rightarrow hit \blacktriangledown</p> <p>2. D-Sensor Temp \rightarrow hit \blacktriangledown</p> <p>3. rS : Displays R-S \rightarrow hit \blacktriangledown</p> <p>4. R-Sensor Temp \rightarrow hit \blacktriangledown</p> <p>5. Return(return to last status. Displays current Temp or dF(Defrost)</p> <p>- After access return after the last procedure</p> <p>- Return after 20 min auto(D-Sensor display)</p>	<p>. dS</p> <p>. 888(D-Sensor)</p> <p>. rS</p> <p>. 888(R-Sensor)</p>
15	Condenser Alarm	<p>1. Alarms for an hour if set-up period is passed..</p> <p>2. 1) Push \triangle & hit \blacktriangledown 3 times</p> <p>2) dS : Displays D-Sensor \rightarrow hit \triangle</p> <p>- 0 : Disabled.</p> <p>- 3 : 3 months</p> <p>- 6 : 6 months(Default)</p> <p>- 9 : 9 months</p> <p>3) Hit \triangle to get the Value desire.</p> <p>4) . Alarms every 1 sec for an hour.</p> <p>5) Return</p> <p>- Power On after Off</p> <p>- Push \triangle & \blacktriangledown at the same time for 3 sec</p>	<p>."CL"</p>

5. ELECTRONIC CONTROL INSTRUCTIONS

5-1-3. ERROR CODE TABLE

Display	Condition	Temp. Display	Function
CO	R-Sensor OPEN	CO	- Comp ON : 18 MINUTES - Comp OFF: 6 MINUTES 28.4°F
CS	R-Sensor SHORT	CS	
D1	D-Sensor OPEN/SHORT	Room Temp Displayed	- If R-Sensor is above 28.4°F 20 min. after the Defrost started, terminate the Defrost.
F3	Poor Defrost (If D-Sensor lower than 53.6°F in 40 min. later)		- Terminate the Defrost 40 min. after its start.
C1	Poor Cycle (If D-Sensor is above 32°F in 30 min later.		- Normal Operation
	RT-Sensor OPEN/SHORT		- BOX HEATER 100% On (72R)

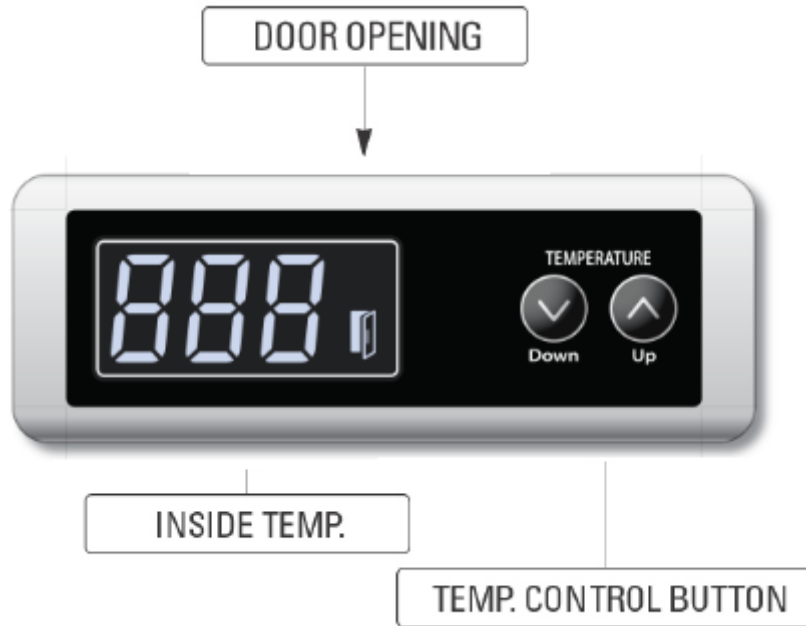
5-1-4. SENSOR DESCRIPTION

Sort	Name & Function	WAFER Color
D-sensor	. Defrost Sensor . HEATER ON/OFF CONTROL during Defrost.	WHITE
R-sensor	. Room Sensor . DISPLAY & COMP ON/OFF CONTROL	YELLOW
RT-sensor	. Room Temp Sensor . BOX HEATER Control for energy efficiency	BLUE

5. ELECTRONIC CONTROL INSTRUCTIONS

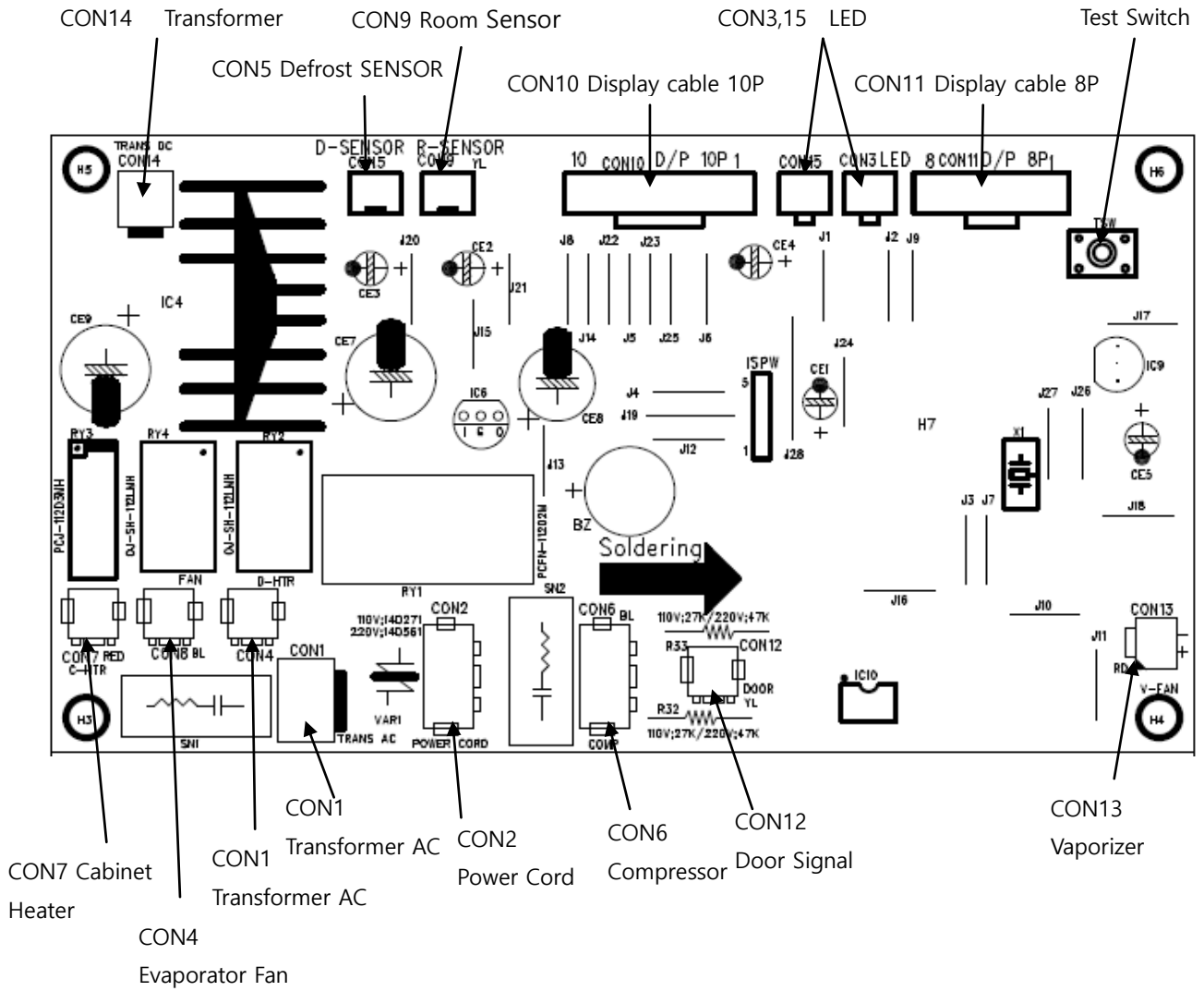
5-2. REFRIGERATOR CONTROL

5-2-1. HOW TO USE THE DISPLAY PCB PANEL



		Default	Temp. Range	Level
°C	REF.	2	-2~4	6
	FEZ.	-18	-23~-15	9
°F	REF.	35	28~39	12
	FEZ.	0	-9~5	15

• Control Board Layout



5. ELECTRONIC CONTROL INSTRUCTIONS

5-2-2. FUNCTION TABLE

NO	Function	Content
1	Power On	<ul style="list-style-type: none"> - OFF for 2 sec - First 2 sec Ver. °F : F8, °C : FC - After 2 sec Present °C/°F - Blinks Model name 5 times. - LED blinks 3 times. - Present °C/°F.
		<p>2. Defrost Check</p> <p><F Model > : LFT-23S, LFT-49D</p> <ul style="list-style-type: none"> - Defrost Sensor Operation <ol style="list-style-type: none"> 1) COMP On above 38°F(3.5°C) 2) Defrost On, under 38°F(3.5°C) ※ After 5min COMP delay pre-cool operate before defrost. <p><R Model > : LRT-23S, LRT-49D</p> <ul style="list-style-type: none"> - Room Sensor Operation. <ol style="list-style-type: none"> 1) COMP On above 41°F(5.0°C) 2) Defrost On, under 41°F(5.0°C)
2	Normal Operation	<ul style="list-style-type: none"> - COMP 5min delay (COMP OFF for 5 min) - COMP ON/OFF by Room Sensor Temp.
3	FRE. Defrost Period	<ul style="list-style-type: none"> - Defrost Period can be set to 5/6/7/8/9/10Hr - Default 8hr
4	REF Defrost Period	<ul style="list-style-type: none"> - Defrost every 5 Hr.
5	Defrost System -FRE. Defrost System 1. PRE-COOL	<ul style="list-style-type: none"> - To Lower Room Temp. before HEATER ON - When Defrost Period, PRE-COOL on before HEATER ON - HEATER ON if Temp. is under 17°F(-8°C) in 45min - Maximum PRE-COOL time is 45min
	2. HEATER ON	<ul style="list-style-type: none"> - If the defrost sensor reaches 51°F/11°C defrost completes and heater goes Off - Heater on goes maximum 50 min. - When Defrost SENSOR ERROR, HEATER is on for 20min. HEATER OFF when Temp. is 28°F(-2°C) - When Defrost Sensor / Room Sensor error HEATER is on for 20min - If HEATER ON goes maximum 50min and does not reach the Defrost Return Temp. ERROR CODE will be saved. ※ This ERROR Occurs Pre-COOL disable

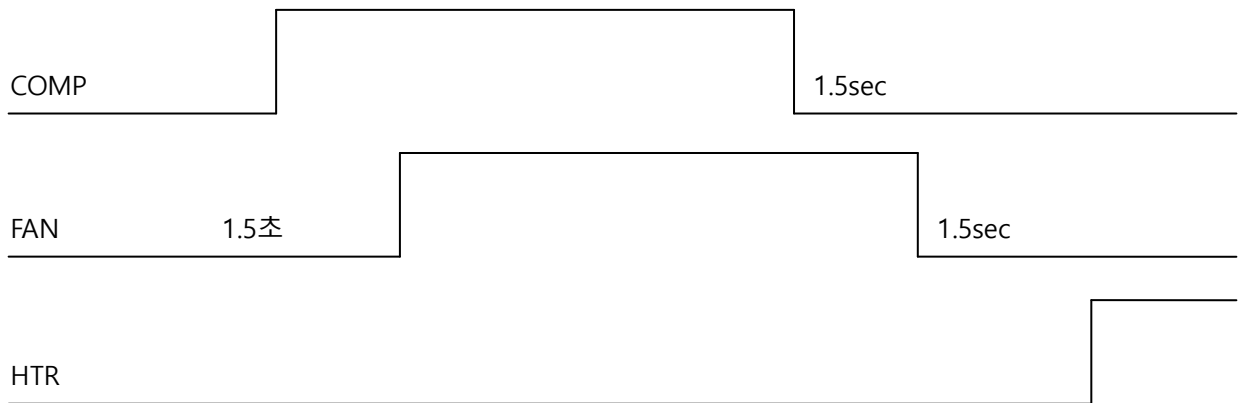
5	3. Resting Period	<ul style="list-style-type: none"> - After heater is Off there is a 5 min resting period. - HEATER, FAN, COMP ALL OFF.
	4. FAN Off	<ul style="list-style-type: none"> - After Resting Period FAN is off for Maximum 5min. - Only COMP Operates for the EVA - If Temp. is under 14°F(-10°C) before 5 min, FAN will go off and activate normal operation.
6	REF. Defrost System	<ul style="list-style-type: none"> - Operate FAN for Defrost. - If Air Sensor ERROR, Defrost for 30 min and return. - After 30min Defrost, Air Sensor displays return Temp. - When Temp. reaches the return temp. normal operation. ※When Set-up Temp. is under 30°F(-1°C), Return Temp. is 37°F(+3°C) When Set-up Temp. is above 32°F(0°C) Return Temp. is 41°F(5°C).
7	HTR Control (BOX HTR)	<ul style="list-style-type: none"> - When COMP ON POINT Temp. is higher than RT Temp. HTR goes OFF. - When RT Temp. is above 78°F(26°C) HTR is On. - When RT Temp. is between 78°F(26°C)~Comp On Temp. HTR is 10min ON 10min OFF - When RT Temp is below Comp On Temp. HTR goes OFF.
8	REF. Frost Prevent System	<ul style="list-style-type: none"> - COMP OFF → EVA FAN OFF. - To prevent REF. EVA Frost, If Room Temp. is under 32°F(0°C) FAN activates.
9	Door Open and Alarm	<ol style="list-style-type: none"> 1. Door Open LED will blink until closer every 0.5 sec. 2. When Door is open over 3 min, Buzzer will chirp every 0.5 sec until closer.
10	FAN	<ol style="list-style-type: none"> 1. Operate with Comp. 2. If the door opens, the fan stops.
11	Lamp	<ol style="list-style-type: none"> 1. Door Open - LED Lamp Off Door Close - LED Lamp On <ul style="list-style-type: none"> - Door Error : LED Lamp Off
12	Vapor Pan ERROR Display	<ul style="list-style-type: none"> - Vapor fan ERROR : beeping sounds with SEGMENT blinks Temp.(3sec) -uFn(0.5sec) repeat. - Beeping sounds goes for 5min. - Vapor Pan ERROR can be disabled or enabled by OPTION.
13	Condenser Alarm	<ul style="list-style-type: none"> - Alarms for an hour if set-up period is passed.. - Alarms goes on with SEGMENT "CL". - Alarms every 1 sec for an hour. - Return : Power On after Off, Push △ & ▼ at the same time for 3 sec

a) COMP Operation

- 1) COMP 5 min OFF (COMP disabled for 5 min)
- 2) Operate by Temperature Value.
- 3) If Temp. Value hits the OFF Temp. the Comp. does not operate for 5 min.

b) AC Load Control

- 1) Each Part does not operate together, each operate by a 1.5 sec term.



Push Δ/∇ KEY.for 3 sec to enter control mode

888SEGMENT

S	E	L
---	---	---

NO	MODE	SW 4(Δ)	Display	Content
1	Forced Defrost	1 times	ds	Display after 2 sec (888 SEGMENT & LED OFF.)
2	Mode Control	2 times	0F	
3	Each part TEST	3 times	St	
4	Error Check	4 times	no	
5	Ver. Change	5 times	23F	
6	$^{\circ}$ C/ $^{\circ}$ F Change	6 times	F	
7	Cabinet Heater	7 times	Ht	
8	LED check & E ² PROM clear	8 times	LED blinks	

a) Forced Defrost

- 1) Display : 888SEGMENT - "ds"
- 2) Content : ① Press SW3(▽) during 1) to Force Defrost.
② 888 SEGMENT - "dF"

b) Mode Control

- 1) Display : 888 SEGMENT.

0	F
---	---

 After 1 sec

0	0
---	---

- 2) Content : Press SW(△) to change mode – OFF Temp.→ DIF Change →
Adjust Temp.gap → Defrost Time Change.

- ① 0F 1 sec 00 : 23°F(-5.0)~41°F(+5.0) – 32°F(0.5°C) change
(32°F(0.5°C)→32(5) Display)
- ② 0d 1 sec 20 : 32(0.25) → 32(0.5) → 33(0.75) → 33(1.0) → 34(1.5) →
35(2.0) → 37(3.0) → 39(4.0) → 41(5.0)
- ③ CA 1 sec 00 : 23°F(-5.0)~41°F(+5.0) – 33°F(1°C) change
(Room Temp. gap adjustment)
- ④ dt 1 sec 6 : FRE. Defrost Time (0, 5 ~ 10 Hr) – 1Hr Change
(0 : Disable)
REF. Defrost Time (0, 5~10 Hr) – 1Hr Change

- SW(▽) button for adjustment.
- Auto-save for change in the set-up.
- 15sec auto return.

c) Each part TEST

- 1) Display : 888SEGMENT – “St”
- 2) Content : Press SW4(△) 0~3 Mode Change.
- 3) Each part TEST Cancel : 15sec auto return.

단계	Function	Time	DISPLAY	비고			
0	All OFF	10sec auto return	<table border="1" style="display: inline-table;"> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px; text-align: center;">S</td> <td style="width: 20px; height: 20px; text-align: center;">t</td> </tr> </table>		S	t	
	S	t					
1	COMP ON FAN ON	∞	<table border="1" style="display: inline-table;"> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px; text-align: center;">C</td> <td style="width: 20px; height: 20px; text-align: center;">P</td> </tr> </table>		C	P	
	C	P					
2	COMP OFF FAN OFF Defrost HTR ON	∞	<table border="1" style="display: inline-table;"> <tr> <td style="width: 20px; height: 20px; text-align: center;">d</td> <td style="width: 20px; height: 20px; text-align: center;">H</td> <td style="width: 20px; height: 20px; text-align: center;">t</td> </tr> </table>	d	H	t	R Model does not have function
d	H	t					
3	COMP OFF FAN OFF Defrost HTR OFF Cord HTR ON	∞	<table border="1" style="display: inline-table;"> <tr> <td style="width: 20px; height: 20px; text-align: center;">C</td> <td style="width: 20px; height: 20px; text-align: center;">H</td> <td style="width: 20px; height: 20px; text-align: center;">t</td> </tr> </table>	C	H	t	
C	H	t					

d) Error Check

- 1) Display
 - No Error

	n	O
--	---	---

- Error

S	1	-
---	---	---

 : S1-SENSOR SHORTAGE

- Press SW(△) to check the errors
- Specific errors are below.

e) Ver. Change

- 1) Press SW(▽) – "rEF" -> "FrE"
 - 2) 15sec auto save.
- ※ Re-enter the power plug to confirm change.
(Ver. Change initializes set-up.)

f) °C/°F Change

- 1) Press SW(▽) - F → C
- 2) 15sec auto save.

g) Cord H/T Change

① Press SW(▽)

- "00" → "02" → "04" → ~ "30" → "40" → "100" → "00"

Display	On	Off	Display	On	Off
"00"	Cord H/T Off		"15"	15min	10min
"02"	2min	10min	"20"	20min	10min
"04"	4min	10min	"25"	25min	10min
"06"	6min	10min	"30"	30min	10min
"08"	8min	10min	"40"	40min	10min
"10"	10min	10min	"100"	Cord H/T on ∞	

- Default "10"

② 5sec auto save.

h) LED check & E² PROM clear

- 1) LED blinks 5 times & returns.
- 2) E²PROM Clear & reset.
(set-up °C/°F is remembered.)

i) Vapor Pan ERROR

- ① Hold ▼ & hit △ 5 times to display Vapor Pan enable or disable mode.
- ② Press ▼



③ 15sec auto save

j) Temp. Check Mode.

1) Content

Hold △ & hit ▼ 3 times to enter Mode.

- ① SEGMENT : display value
- ② Operation : Normal Operation

2) Adjustment

① Press ▼

- Display DS → D-SENSOR Temp. → RS → R-SENSOR Temp. → Return
(REF. : D-Sensor OPEN : tO
D-Sensor SHORT : tS)

3) Return

- ① Press ▼ until Return.
- ② 20min return after "DS".

k) Condenser Alarm

1) Content

Hold \triangle & hit \blacktriangledown 3 times to enter Mode.

Press \triangle To Check period..

- ① SEGMENT : display value
- ② Operation : Normal Operation

2) Adjustment

- ① Press \triangle to adjust period.
 - 0 \rightarrow 3 \rightarrow 6 \rightarrow 9 \rightarrow 0 cycle.
 - 0 : Disable
 - 3 : 3 months
 - 6 : 6 months
 - 9 : 9 months

3) Return

- ① 15sec Return.

a) S1 – Sensor Error

- 1) S1 – Sensor SHORTAGE or Temp. is over 143°F(62°C)
SEGMENT – “ESH” & Blinks.
- 2) S1 – Sensor OPEN or Temp. is under –58°F(–50°C)
SEGMENT – “ESL” & Blinks.
- 3) ERROR Mode Operation.
 - REF. S1 – Sensor ERROR : 10min On/20min Off
 - FRE. S1 – Sensor ERROR : 10min On/6min Off
- 4) If ERROR is removed – Normal Operation.

※ Types of Sensors

No.	Sensor	Description
1	S1 - Sensor	Detected cabinet temperature.
2	D1 - Sensor	Detected Evaporator Coil temperature to defrost system.
3	Rt - Sensor	Detected ambient temperature.

2. Check Error

* Errors will be displayed, if there is no error Display "nO".

NO	Code	Error code	Error explanation	Status of Unit
		DISPLAY		
1	S1-SENSOR (Room Sensor)	S 1	Disconnected Sensor or Room temp is under-58°F	Operate Error mode
		S 1 -	Shortage of Sensor or Room temp is under 149°F	
2	Rt-SENSOR (Ambient sensor)	r t	Disconnected Sensor	Normal Operation
		r t -	Shortage of Sensor	
3	D1-SENSOR (Defrost - Sensor)	D 1	Disconnected Sensor or Room temp is under-58°F	Normal Operation
		D 1 -	Shortage of Sensor or Room temp is under 149°F	
4	Fail to defrost	d F 1	If perform the defrost over 50 min	Normal Operation
5	Fail of Cooling Cycle	C F 1	After pass 30 min from start working , Defrost sensor reached 32°F	Normal Operation
6	Hi temp Frz	E H F	if cabinet temp is keeping 59°F for 8 hr	Normal Operation

7	Hi temp Ref	E H r	if cabinet temp is keeping 45°F for 8 hr	Normal Operation
8	E ² PROM Error	E E P	E ² PROM cannot Read & Write	Normal Operation
9	Open Door	E D r	if Door S/W is open for 1 Hr	Operate Error mode
10	Vapor Pan Error	u F n	Vapor Fan is not connected of error	Normal Operation

When a combined temperature/amperage value is above the limit specified by the compressor manufacturer, a protector will operate independently, turning off the compressor. The compressor will restart when this protector has reset.

Note :

1. Compressor protector resets automatically.
2. If condenser fan is operating and the compressor is off, it is most likely that the protector has operated.

V. Service Diagnosis

A. Diagnosis Chart

Problem	Possible Cause		Remedy
1. Compress will not start - no current draw.	1. Power Switch	1. "OFF" position.	1. Move to "ON" position.
		2. Loose connection.	2. Tighten.
		3. Failure.	3. Call electrician.
	2. Cord and Plug	1. Defective.	1. Replace.
	3. Ground Fault Circuit interrupter	1. Tripped.	1. Check and reset.
		2. Defective.	2. Replace.
	4. Voltage	1. Too low.	1. Call electrician.
		2. Too hige.	2. Call electrician.
	5. Wiring to Control Board	1. Loose connection.	1. Tighten.
		2. Faulty.	2. Check continuity and replace.
	6. Transformer	1. Open coil winding.	1. Check continuity and replace.
	7. Control Board	1. Defective.	1. Replace control board.
8. Compressor Overload	1. Defective.	1. Replace.	
9. Compressor	1. Open windings.	1. Check continuity and replace.	
10. Relay(Compressor)	1. Bad contacts.	1. Replace.	
	2. Open coil winding.	2. Check and replace.	
2. Compressor will not run - draws current and trips on overload.	1. Voltage	1. Too low.	1. Call electrician.
	2. Start Relay	1. Bad contacts.	1. Replace.
		2. Open coil winding.	2. Replace.
	3. Compressor	1. Locked rotor.	1. Replace.
4. Start Capacitor	1. Defective.	1. Check and replace.	
3. Compressor runs intermittently and trips on overload.	1. Voltage	1. Too low.	1. Call electrician.
		2. Too hige.	2. Call electrician.
	2. Refrigerant Line or Component	1. Plugged or restricted.	1. Clean and replace filter
	3. Condenser Fan Motor	1. Failed.	1. Replace.
	4. Refrigerant	1. Overcharged.	1. Evacuate and recharge
		2. Non-condensibile in system	2. Evacuate and recharge
5. Location of Unit	1. Restricted air flow to condenser.	1. Move unit or increase ventilation.	

4. Cabinet inside temperature too high; compressor will not start	1. Compressor Relay	1. Defective. (115V to relay coil.)	1. Check and replace.
	2. Circuit Board	1. Defective. (Compressor relay coil not energized at 115V.)	1. Replace.

Problem	Possible Cause		Remedy
5. Cabinet temperature too high.	1. Setpoint	1. Incorrect.	1. Correct setpoint. Factory defaults : Freezer -0.4°F(-18°C) Refrigerator 35°F(2°C)
	2. Door	1. Not sealing, or open for long intervals.	1. Check for sealing, check for door open at time of warm cabinet temperature.
	3. Defrost	1. Not enough defrosts occurring per day. Operation in humid conditions.	1. Freezer ; See "C. 1. 5 Defrost System." 2. Refrigerator : "C. 1. 6 Defrost System." 3. Check D-Sensor position.
	4. Refrigerant	1. Leak.	1. Repair leak and recharge
	5. Fan Motor	1. Defective.	1. Check and replace.
	6. Condenser	1. Dirty.	1. Clean.
	7. S1-Sensor	1. Defective.	1. Check and replace.
	8. Control Board	1. Defective.	1. Replace.
6. Cabinet temperature display indicator does not illuminate properly.	1. Board Connection	1. Bad connection between control board and display board.	1. Check connection.
	2. Display Board	1. Defective.	1. Replace.
	3. Control Board	1. Defective.	1. Replace.
7. Cabinet inside temperature too low.	1. Sensor	1. Defective.	1. Check and Replace.
	2. Compressor Relay	1. Defective; contacts welded.	1. Replace.
	3. Circuit Board	1. Defective.	1. Replace.
8. Evaporator does	1. D-Sensor	1. Defective.	1. Check and replace.

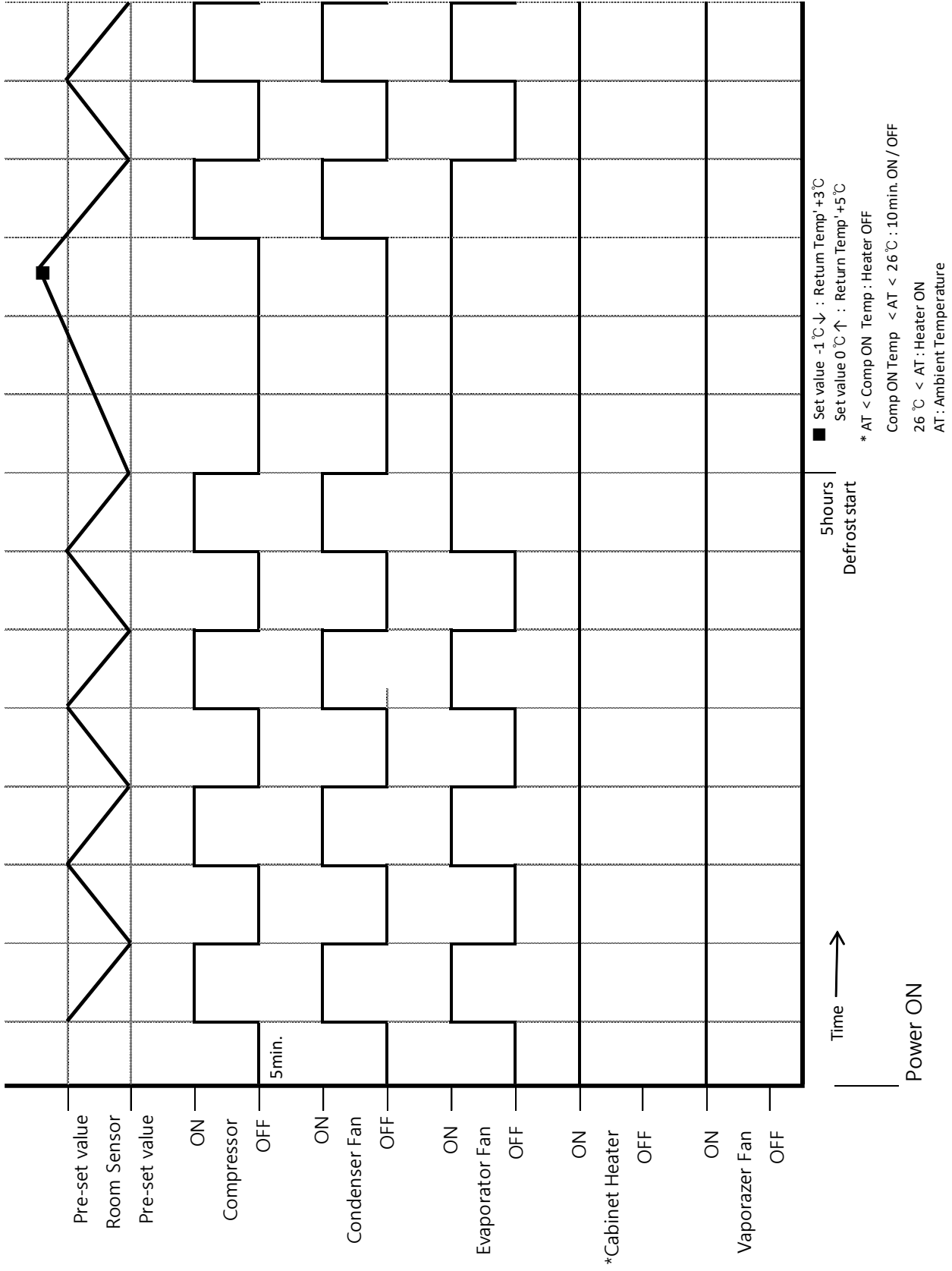
not defrost completely	2. Defrost	1. Not enough defrosts occurring per day. Operation in humid conditions.	1. Freezer ; See "C. 1. 5 Defrost System." 2. Refrigerator : "C. 1. 6 Defrost System." 3. Check D-Sensor position.
	3. Defrost Heaters	1. Defective.	1. Freezer : Replace heaters.
	4. Safety Defrost Thermostat	1. Defective, turning off heaters prematurely, or fused open.	1. Freezer : Replace safety deforst thermostat.

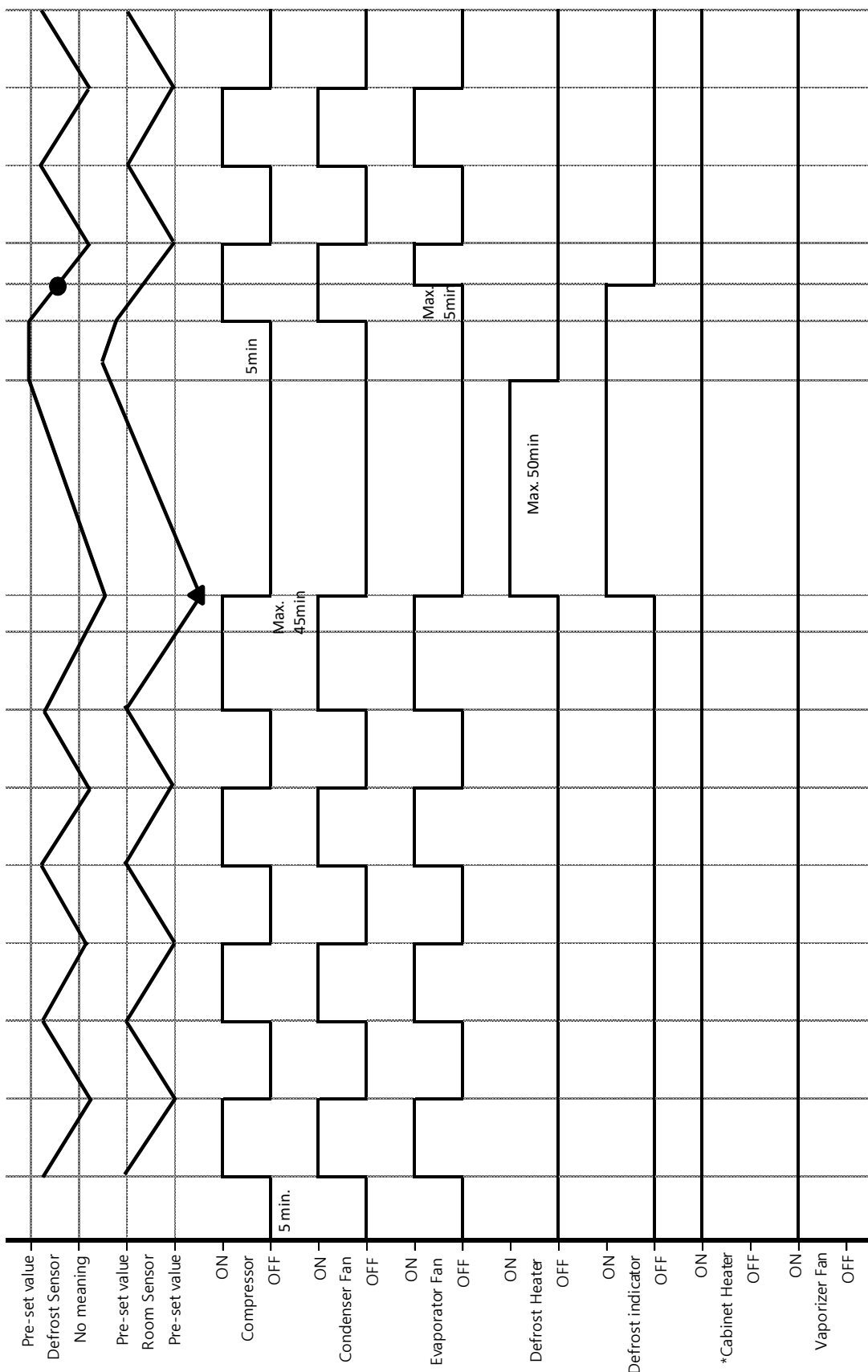
Problem	Possible Cause		Remedy
9. Defrost cycle lasts too long.	1. Defrost Sensor	1. Defective.	1. Replace.
	2. Control Board	1. Defective.	1. Replace.
	3. Defrost	1. Not enough defrosts occurring per day. Operation in humid conditions.	1. Freezer ; See "C. 1. 5 Defrost System." 2. Refrigerator : "C. 1. 6 Defrost System." 3. Check D-Sensor position.
	3. Defrost Heaters	1. Defective.	1. Freezer : Replace heaters.
	4. Safety Defrost Thermostat	1. Defective, turning off heaters prematurely, or fused open.	1. Freezer : Replace safety deforst thermostat.
11. Abnormal noise	1. Fasteners	1. Loose fasteners allow vibration of part.	1. Tighten fasteners.
	2. Compressor	1. Problem with mount.	1. Properly mount compressor. Replace any missing grommets.
		2. Floodback to compressor.	2. Check for signs of floodback to compre-

			ssor. Evacuate and recharge if necessary.
		3. Defective.	3. Replace.
	3. Fan	1. Fan blade loose.	1. Adjust and tighten.
		2. Defective motor.	2. Replace.
	4. Relay	1. Chattering.	1. Replace.

Thermistors (semiconductors) are used for the cabinet control sensor and defrost termination sensor. The resistance varies depending on temperature. No adjustment is required.

If necessary, check for resistance between thermistor leads and visually check the thermistor mounting.





- ▲ Set value minus 8 °C
- Defrost sensor Temp' -10 °C
- * Default setting 8hours, adjustable

5. ELECTRONIC CONTROL INSTRUCTIONS

5-2-3. ERROR CODE

Display	Content	Segment	Function
tO	R-Sensor OPEN	tO	- Comp ON : 6 MINUTES - Comp OFF: 11 MINUTES
ts	R-Sensor SHORT	ts	
	RT-Sensor OPEN/SHORT	Room Temp.	- BOX HEATER 100% On

6. PART-LIST

Code	Part name	Description	Solid					
			R23T	F23T	R49T	F49T	R72T	F72T
COMPRESSOR								
R7439-440	COMPRESSOR	SK1A1B-L2W	1		1			
R714A-030	COMPRESSOR	SC12CLX2		1				
R7439-560	COMPRESSOR	SC18CLX2				1		
R714A-150	COMPRESSOR	SC18G					1	
R714A-020	COMPRESSOR	GS26CLX						1
R719B-880	HARNESS MAIN AC-A T23R	115V NEW LED LAMP TYPE	1					
R719B-890	HARNESS MAIN AC-A T23F	115V NEW LED LAMP		1				
R719B-900	HARNESS MAIN AC-A T49R	115V NEW LED LAMP TYPE			1			
R719A-581	HARNESS MAIN AC-A T49F	115V LED TYPE HE1AN-Q-DC12V				1		
R719A-591	HARNESS MAIN AC-A T72R	115V LED HE1AN-Q-DC12V					1	
R719B-940	HARNESS MAIN AC-A T72F	115V NEW LED LAMP TYPE						1
R7363-250	POWER CORD	250V 10A	1	1	1	1	1	
R729A-010	POWER CORD	UL-E313867/SJT 12AWG/4C						1
CONDENSER								
R858C-420	CONDENSER COIL	SWST ϕ 4.76*13190	1	1	1			
R865A-080	CONDENSER COIL	CU, R4*S10*L19202				1	1	
R865A-090	CONDENSER COIL	CU, R3*S10*L17806						1
DRYER ASSY								
R2183-032	DRYER	R-134A, 36G	1		1			
R2183-200	DRYER ASSY	R-404A, 24G		1		1	1	1
CONDENSER FAN MOTOR								
R7423-063	CONDENSER FAN MOTOR	220V 50~60HZ.9W.CCW	1	1	1	1	1	2
R315A-050	BRACKET C-FAN MOTOR	GI, T2.0*185.6*194.8	1	1	1	1	1	2
R3723-070	CONDENSER FAN MOTOR BLADE	115V FAN MOTOR AL 9' C.W	1	1	1	1	1	2
VAPORI AS								
R8522-040	VAPORI AS T49R	ABS, DC12V, 115V/50W			1			
R8522-010	VAPORI AS TM	ABS, DC12V	1	1		1		
R858A-420	VAPORI AS T72R	ABS, DC12V, 115V/50W					1	
R858A-430	VAPORI AS T72F	ABS, DC12V						1

R858C-900	VAPORI AS T72R	ABS, DC12V, 115V/50W					1	
R858C-910	VAPORI AS T72F	ABS, DC12V						1
EVAPORATOR								
R2263-074	ASSY EVAPORATOR	AL, W330*D246*H105 TM23R	1					
R2263-051	ASSY EVAPORATOR	CU+AL, T23F		1				
R2263-084	ASSY EVAPORATOR	AL, W506*D246*H105 TM49R			1			
R2263-062	ASSY EVAPORATOR	CU+AL, T49F				1		
R840A-012	ASSY EVAPORATOR	AL, W669*D240*H107 TM72R					1	
R2263-100	ASSY EVAPORATOR	CU+AL, T72F						1
R720A-560	HEATER DRAIN PAN	220V/90W 538Ω		1				
R720A-570	HEATER DRAIN PAN	220V/140W 346Ω				1		
R720A-580	HEATER DRAIN PAN	220V/180W 269Ω						1
R3314-192	B/K SENSOR	P.P WHT	1	1	1	1	1	1
R7253-052	EVAPORATOR THERMAL FUSE	MAX 72±5℃		1		1		1
R7423-053	EVAPORATOR FAN MOTOR	220V 50~60HZ.9W.CCW 절연지	1	1	1	2	2	2
R3729-010	EVAP FAN BLADE	AL, 8 INCH. CCW	1	1	1	2	2	2
R3203-482	MOTOR FIX BRACKET	STS430-2B, T1.0*90*146	1	1	1	2	2	2
R3812-141	EVAPORATOR FAN MOTOR GUARD	HIPS (VH-1800EX). WHITE	1	1	1	2	2	2
R7213-412	SENSOR ROOM	AT25℃, 10.75KΩ±1%, -25~25	1	1	1	1	1	1
R7213-422	D-SENSOR(EVAP-SENSOR)	AT25℃, 10.75KΩ±1%, -25~25		1		1		1
R325A-141	COVER LAMP	PC, MILKI WHITE	1	1	1	1	2	2
R313A-050	BODY LAMP	HIPS (405AF)	1	1	1	1	2	2
R723A-040	LAMP LED ASSY	FR1 DC 12V LED LAMP 4P	1	1	1	1	2	2
R813A-230	ASSY EVA COVER	TM 23R LED LAMP	1					
R813A-250	ASSY EVA COVER	TM 23F LED LAMP		1				
R813A-260	ASSY EVA COVER	TM 49R LED LAMP			1			
R813A-280	ASSY EVA COVER	TM 49F LED LAMP 115V				1		
R813A-290	ASSY EVA COVER	TM 72R LED LAMP					1	
R813A-310	ASSY EVA COVER	TM 72F LED LAMP 115V						1
GRILLE TOP								
R818A-840	ASSY GRILL TOP_23H		1	1				
R818A-850	ASSY GRILLE TOP_49H				1	1		
R818A-860	ASSY GRILLE TOP_72H						1	1

R5133-160	MASCOT	AL, LASSEL 영문 157.7*40	1	1	1	1	1	1
R725A-424	MAIN PCB	FR1 TM 220V ℃ 냉동 TMF220C-06		1		1		1
R725A-414	MAIN PCB	FR1 FR1 TM 220V ℃ 냉장 TMR220C-06	1		1		1	
R4142-123	CONTROL BOARD	ABS/BLACK BM/TM T2*242*72	1	1	1	1	1	1
R725C-220	FRONT PCB	88 DISPLAY-DP1 기타 BUYER TM 공용	1	1	1	1	1	1
R511A-490	INLAY CONTROL	88 DISPLAY-DP1 *F- TM	1	1	1	1	1	1
C3379-240	SPACER SUPPORTS	S/S-9N(T)	4	4	4	4	4	4
R7204-070	POWER SWITCH	LIGHT COUNTRY(R19A) 10A/115V	1	1	1	1	1	1
R748A-010	POWER RELAY	PANASONIC HE1AN Q-DC12V 30A				1	1	
R748A-030	POWER RELAY	PANASONIC HE2AN Q-DC12V 25A						1
R7203-010	SWITCH PUSH	SP201-7D 125VAC1.5A	1	1	2	2	3	3
SHELF								
R836A-080	SHELF 23	MSWR10, W545*D580	1	1				
R8439-240	SHELF 49	MSWR10, W609*D580			2	2	2	2
R834A-100	SHELF 72	MSWR10, W656*D580					1	1
R8429-022	ASSY SHELF CLIP	14 SET	1	1				
R8429-012	ASSY SHELF CLIP	26 SET			1	1		
R835A-010	ASSY SHELF CLIP	36 SET					1	1
R3373-630	SHELF STANDARD L	AL, T1.2*L930	4	4	8	8	12	12
DOOR								
R817C-060	ASSY DOOR RH_UPP	-	1	1	1	1	2	2
R817C-070	ASSY DOOR RH_LOW	-	1	1	1	1	2	2
R817C-080	ASSY DOOR LF_UPP	-	-	-	1	1	1	1
R817C-090	ASSY DOOR LF_LOW	-	-	-	1	1	1	1
R338A-110	GASKET DOOR TM_HALF	RD-PVC (P-1000) 610*737	1	1	2	2	3	3
R828A-190	ASSY HINGE LF	PA-6 27*22*82L	-	-	2	2	2	2
R828A-200	ASSY HINGE RH		2	2	2	2	4	4
CROSS BAR								
R816B-150	ASSY CROSS BAR T23R_HALF	115V/7W	1					
R816B-260	ASSY CROSS BAR T23F_HALF	115V/15W		1				
R816B-160	ASSY CROSS BAR _49H	LRT/LFT-1471H			1	1		
R816B-170	ASSY CROSS BAR _72H (+)	LRT/LFT-72H					1	1
R816B-180	ASSY CROSS BAR _72H()	LRT/LFT-72H					1	1

CASTOR BOX ASSY								
R3323-230	CASTOR MOVE	SPCC 4"	2	2	2	2	3	3
R3323-240	CASTOR STOP	SPCC 4"	2	2	2	2	3	3
R3074-030	SPANNER	3T, GI+ZN COATING	1	1	1	1	1	1
R397A-020	WASHER CASTER	GI T2*ID24*OD60	4	4	4	4	6	6

※COMP SPEC PART-LIST

No.	Part Code	Spec	Item	Supplier's Compressor Application Model Names	
				Daeyeong E&B	Fresh Town
1	R714A-030	SC12CLX.2 (115v/60Hz)	Compressor Set (Total Price)	STM23F	SPT-93 USCF-48/60/72
	R730A-010		SC12CLX.2 OLP		
	R750A-010		Cord relief		
	R746A-050		Starting Capacitor		
	R325A-670		Cover		
2	R7439-530	SC18CLX.2 (115v/60Hz)	Compressor Set (Total Price)	S49F, STM49F	
	R867A-080		Starting device		
3	R714A-150	SC18G (115v/60Hz)	Compressor Set (Total Price)	S72R,STM72R,S49R G	
	R867A-020		CSIR		
	R739A-060		410mf capacitor		
	R730A-090		SC18CLX.2 OLP		
	R344A-040		Protector holder		
	R325A-700		Cover		
4	R714A-020	GS26CLX (220v/60Hz)	Compressor Set (Total Price)	S72F,STM72F	
	R867A-030		cable		
5	R7439-170	SK1A1CL2W/DY3	Compressor Set (Total Price)	S23R,S23F, S23RG,S49R STM23R, STM49R	SPT-44,SPT-67,SUSS-48-12/18 SRCB-84/86/96/98(ME) USCF-27, USC-48/60/72 SUSS-/60-16/24/72-18/30 SBB-60-2B/2S, SBB-70-2B/2S SBB-90-3B/3S SBB-60-2BG/SG, SBB-70-2BG/SG SBB-90-3BG/3SG SBD-60-2B/2S, SBD-70-2B/S SBD-90-3B/3S
	R730A-110		PTC REALY(220MB3)		
	R727A-050		OVERLOAD PROTECTOR(795 RHB)		
	R3813-900		COVER REALY		
	R300A-020		GROMMET		
	R7549-260		RUNNING CAPACITOR 350V15UF		
	R7549-270		STRRTING CAPACITOR 160V 145UF		
6	F0140A050	SD162C-L1U	Samsung Compressor Set (Total Price)		SRCB-52/70/74(ME) SUSS-27-8/27-12,USC-27 SBB-24-1B/1S, SBB-24-1BG/SG SBD-24-1B/S
	FA100K270		Electric Kit Assy		
	FA100K271		PTC Relay		
	FA100K272		Overload Protector (OLP)		
	FA100K273		Running Capacitor-A Type		