

1.0 Reference and Address			
Report Number	220516067GZU-001	Original Issued: 19-Oct-2022	Revised: 31-Jul-2023
Standard(s)	Commercial Refrigerators and Freezers [UL 471:2010 Ed.10+R:12Sep2019]		
	Refrigeration Equipment (R2018) [CSA C22.2#120:2013 Ed.4]		
Applicant	Shandong Xinhai Intelligent Technology Co., Ltd.	Manufacturer 1	Shandong Xinhai Intelligent Technology Co., Ltd.
Address	No. 37, Huaihe Road, Shibe Economic Development Zone, Wulian County, Rizhao City, Shandong Province	Address	No. 37, Huaihe Road, Shibe Economic Development Zone, Wulian County, Rizhao City, Shandong Province
Country	China	Country	China
Contact	Sun Zheng	Contact	Sun Zheng
Phone	86-150 9229 9223	Phone	86-150 9229 9223
FAX	NA	FAX	NA
Email	sunz@xinhigh.com	Email	sunz@xinhigh.com

2.0 Product Description	
Product	Commercial Refrigerator / Freezer
Brand name	NA
Description	The products covered in the report are 115 V, 60Hz, commercial refrigerators and freezers employed flammable refrigerant R290, intended to be installed indoors and provided with a permanently connected flexible power supply cord terminated in a 3-wire grounding attachment plug.
Models	ST27BR, ST27BF, ST27BRG, ST27BRGC, ST54BR, ST54BF, ST54BRG, ST54BRGC, SC350F, SC420F, SC580F, SC690F, SC630F, SC630FS, SC908F, SC908FS, SC1180F, SC1390F, SC1780F, SC2090F, SC1180FS, SC1390FS, SC1780FS, SC2090FS, ST27BFG, ST27BFGC, ST54BFG, ST54BFGC, SD580F, SD690F, SD1180F, SD1390F, SD1780F, SD2090F
Model Similarity	<p>Model ST27 series and ST54 series have similar construction except for enclosure size, door quantity, compressor, refrigerant charged quantity, evaporator size and condenser size. Model ST27BRG is similar with ST27BR and uses same compressor except that ST27BRG uses glass door and lamp switch while ST27BR uses foam door. Model ST27BRGC is similar with ST27BRG and uses same compressor except that ST27BRGC uses top lamp and thermostat, main switch and lamp switch are located on the below ventilating panel while ST27BRG doesn't use top lamp and thermostat, main switch and lamp switch are located on the top cover. Model ST27BF is similar with ST27BR except that ST27BR is refrigerator while ST27BF is freezer with defrost heater, pan heating wire and hose heating wire, and they use different compressors. The same situation are applicable for ST54BR / ST54BRG / ST54BRGC / ST54BF.</p> <p>Model SC690F is similar with ST27BRGC except for enclosure size, inner lamp location, lamp switch location, evaporator size, condenser size and refrigerant charged quantity.</p> <p>Model SC350F, SC420F and SC580F are same with SC690F except for enclosure size.</p> <p>Model SC630F, SC630FS, SC908F, SC908FS, SC1180F, SC1390F, SC1780F and SC2090F are similar with SC690F except for enclosure size, door quantity, door type, compressor, evaporator size, condenser size and refrigerant charged quantity.</p> <p>Model SC630F, SC630FS, SC908F, SC908FS, SC1180F, SC1390F are same, except for enclosure size.</p> <p>Model SC1780F, SC2090F are same, except for enclosure size.</p> <p>Model SC1180FS is same as SC1180F except for model's designation. The same situations are applicable for SC1390F / SC1390FS, SC1780F / SC1780FS, SC2090F / SC2090FS.</p> <p>Model ST27BFG is similar with ST27BRG except that ST27BRG is refrigerator while ST27BFG is freezer with defrost heater, pan heating wire and hose heating wire, and they use different compressors. The same situation are applicable for ST27BRGC, ST27BFGC, ST54BRG, ST54BFG, ST54BRGC, ST54BFGC.</p> <p>Model SD690F is similar with SC690F except that SC690F is refrigerator while SD690F is freezer with defrost heater, pan heating wire and hose heating wire, and they use different compressors. The same situation are applicable for SC580F, SD580F, SC1180F, SD1180F, SC1390F, SD1390F, SC1780F, SD1780F, SC2090F, SD2090F.</p> <p>Refer to III. 5.</p>

2.0 Product Description				
Ratings	Model Number		Ratings	
	ST27BR		115VAC, 60Hz, 3.5 A	
	ST27BF		115VAC, 60Hz, 5.0 A, Defrost power 570W	
	ST27BRG		115VAC, 60Hz, 3.5 A	
	ST27BRGC		115VAC, 60Hz, 3.5 A	
	ST54BR		115VAC, 60Hz, 4.6 A	
	ST54BF		115VAC, 60Hz, 7.1 A, Defrost power 750W	
	ST54BRG		115VAC, 60Hz, 4.6 A	
	ST54BRGC		115VAC, 60Hz, 4.6 A	
	SC350F, SC420F, SC580F, SC690F		115VAC, 60Hz, 3.5 A	
	SC630F, SC630FS, SC908F, SC908FS, SC1180F, SC1390F, SC1180FS, SC1390FS		115VAC, 60Hz, 4.6 A	
	SC1780F, SC2090F, SC1780FS, SC2090FS		115VAC, 60Hz, 9.0 A	
	ST27BFG, ST27BFGC		115VAC, 60Hz, 6.7 A, Defrost power 610W	
	ST54BFG, ST54BFGC		115VAC, 60Hz, 11.8 A, Defrost power 830W	
	SD580F, SD690F		115VAC, 60Hz, 6.7 A, Defrost power 610W	
	SD1180F, SD1390F		115VAC, 60Hz, 11.8 A, Defrost power 830W	
	SD1780F, SD2090F		115VAC, 60Hz, 17.0 A, Defrost power 1220W	
Other Ratings	Model Number	Design Pressure, High/Low psig	Refrigerant	Refrigerant Amount, oz
	ST27BR	260 psig / 140 psig	R290	3.00
	ST27BF	260 psig / 140 psig	R290	3.35
	ST27BRG	260 psig / 140 psig	R290	3.00
	ST27BRGC	260 psig / 140 psig	R290	3.00
	ST54BR	260 psig / 140 psig	R290	3.88
	ST54BF	260 psig / 140 psig	R290	4.94
	ST54BRG	260 psig / 140 psig	R290	4.06
	ST54BRGC	260 psig / 140 psig	R290	4.06
	SC350F, SC420F, SC580F, SC690F	260 psig / 140 psig	R290	3.17
	SC630F, SC630FS, SC908F, SC908FS, SC1180F, SC1390F, SC1180FS, SC1390FS	260 psig / 140 psig	R290	4.59
	SC1780F, SC2090F, SC1780FS, SC2090FS	260 psig / 140 psig	R290	5.11
	ST27BFG, ST27BFGC	260 psig / 140 psig	R290	3.53
	ST54BFG, ST54BFGC	340 psig / 140 psig	R290	5.26
	SD580F, SD690F	260 psig / 140 psig	R290	4.06
	SD1180F, SD1390F	340 psig / 140 psig	R290	5.26
	SD1780F, SD2090F	260 psig / 140 psig	R290	5.26 × 2

3.0 Product Photographs

Photo 1 - Front view - ST27BR, ST27BF

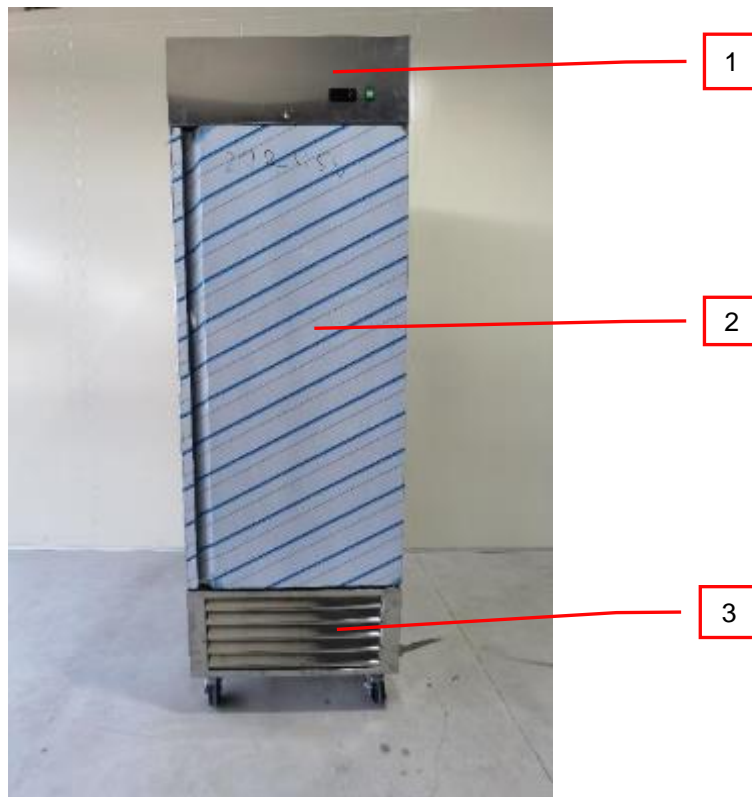


Photo 2 - Front view - ST27BRG, ST27BFG

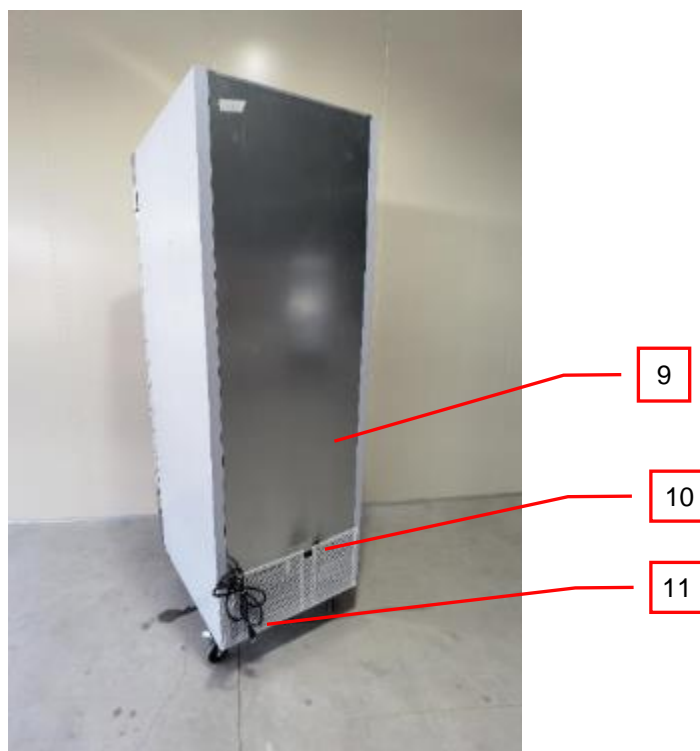


3.0 Product Photographs

Photo 3 - Front view - ST27BRGC, ST27BFGC



Photo 4 - Rear view - ST27 series



3.0 Product Photographs

Photo 5 - Front view - ST54BR, ST54BF



Photo 6 - Front view - ST54BRG, ST54BFG



3.0 Product Photographs

Photo 7 - Front view - ST54BRGC, ST54BFGC



Photo 8 - Rear view - ST54 series



3.0 Product Photographs

Photo 9 - Control panel view - ST27BR, ST27BF, ST54BR, ST54BF

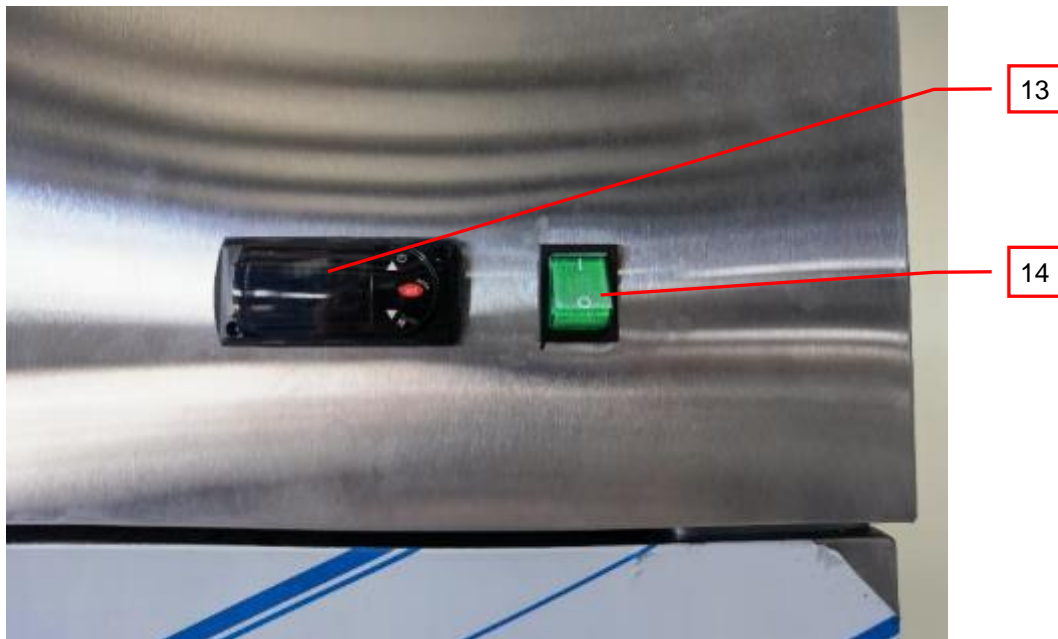


Photo 10 - Control panel view - ST27BRG, ST54BRG, ST27BFG, ST54BFG



3.0 Product Photographs

Photo 11 - Inside of control panel view - ST27BRG, ST27BFG (represent model ST27BR, ST27BF except that ST27BR, ST27BF use only one switch)

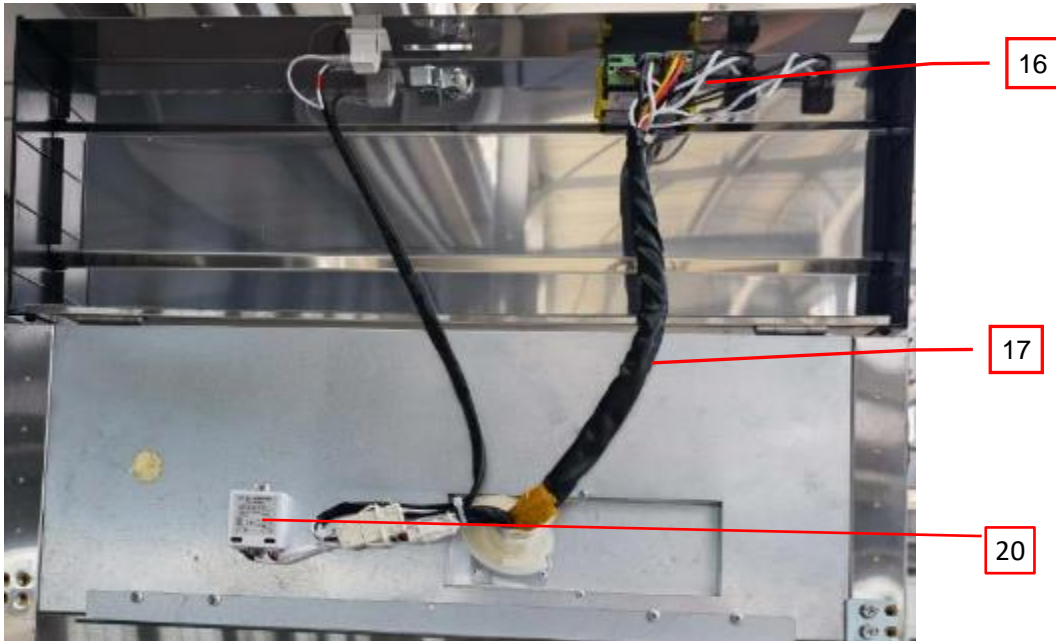
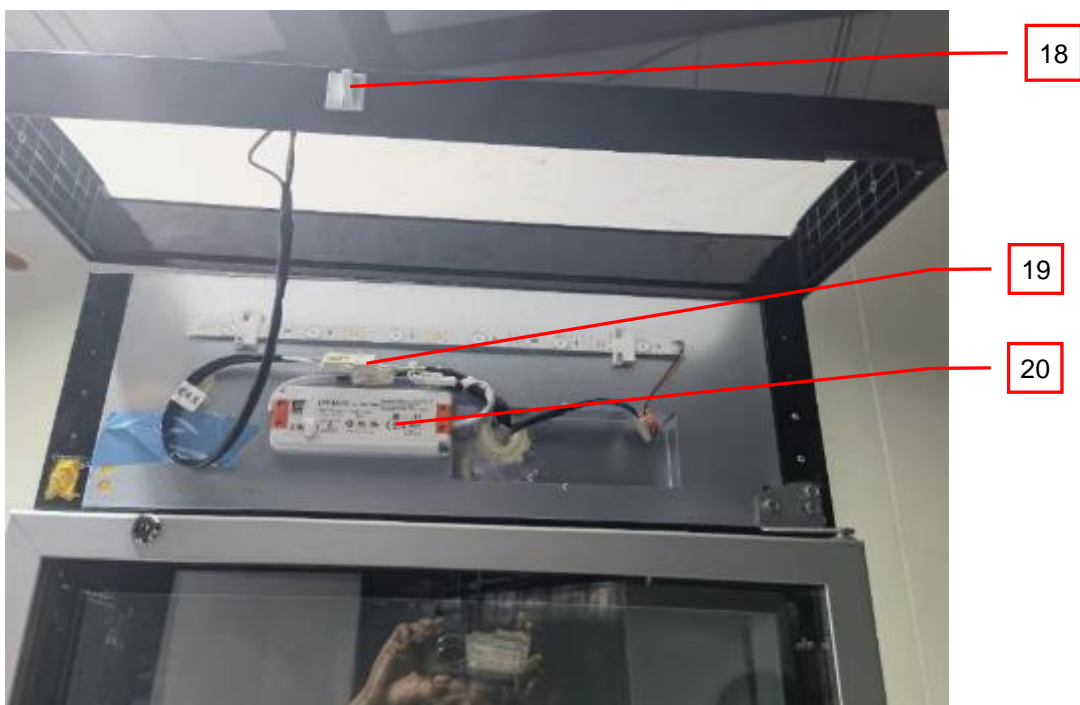


Photo 12 - Inside view of control panel - ST27BRGC, ST27BFGC



3.0 Product Photographs

Photo 13 - Inside of control panel view - ST54BRG, ST54BFG (represent model ST54BR, ST54BF except that ST54BR, ST54BF use only one switch)

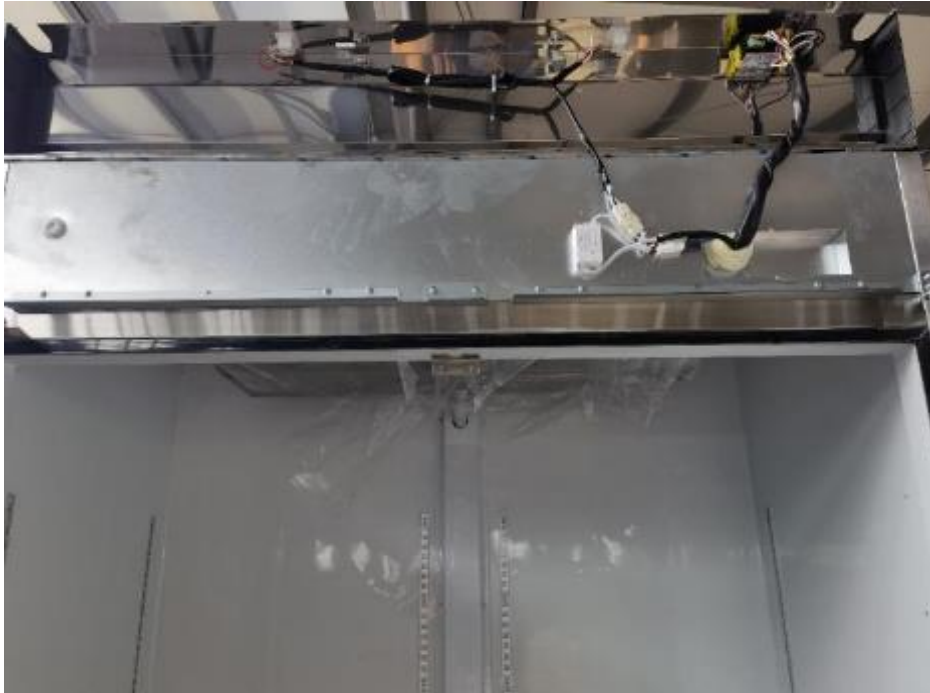


Photo 14 - Inside of top panel view - ST54BRGC, ST54BFGC



3.0 Product Photographs

Photo 15 - Internal of storage compartment view - ST27BR, ST27BF (note: model ST27BRG, ST27BRGC, ST27BFG, ST27BFGC have similar construction except for glass except for glass door and top lamp)

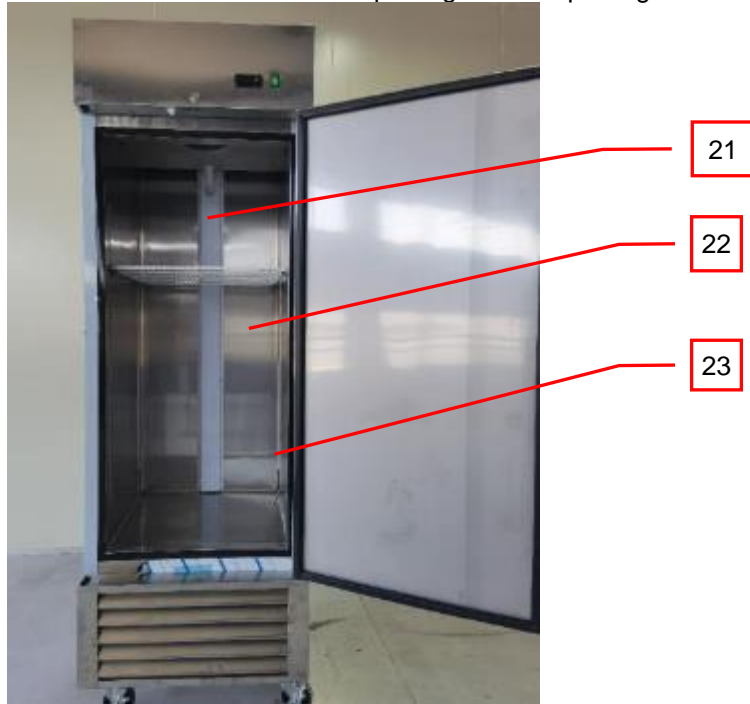
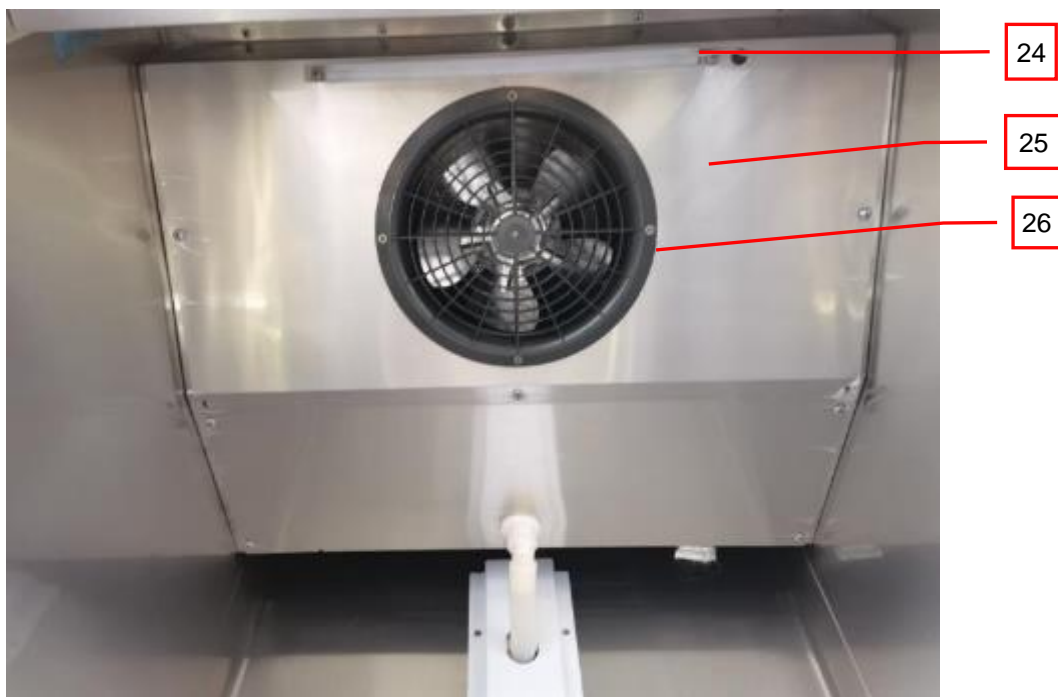


Photo 16 - Fan guard and lamp part view - ST27 series



3.0 Product Photographs

Photo 17 - Internal of storage compartment view - ST54BR, ST54BF (note: model ST54BRG, ST54BRGC, ST54BFG, ST54BFGC have similar construction except for glass door and top lamp)



Photo 18 - Fan guard and lamp part view - ST54 series



3.0 Product Photographs

Photo 19 - Internal of evaporator part view - ST27BR, ST27BRG, ST27BRGC

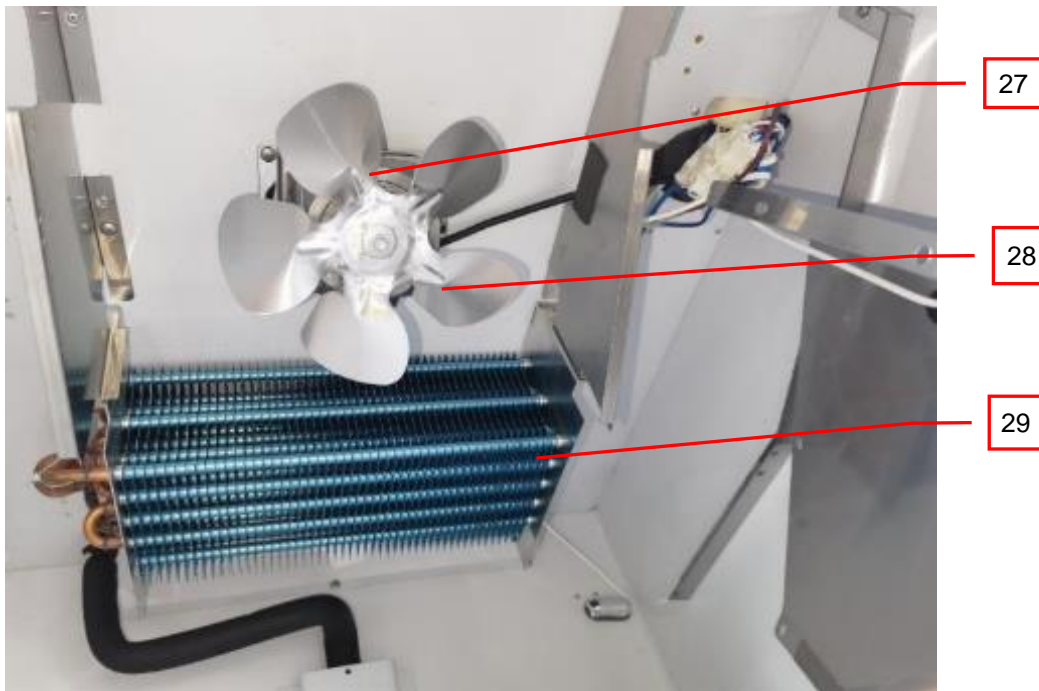
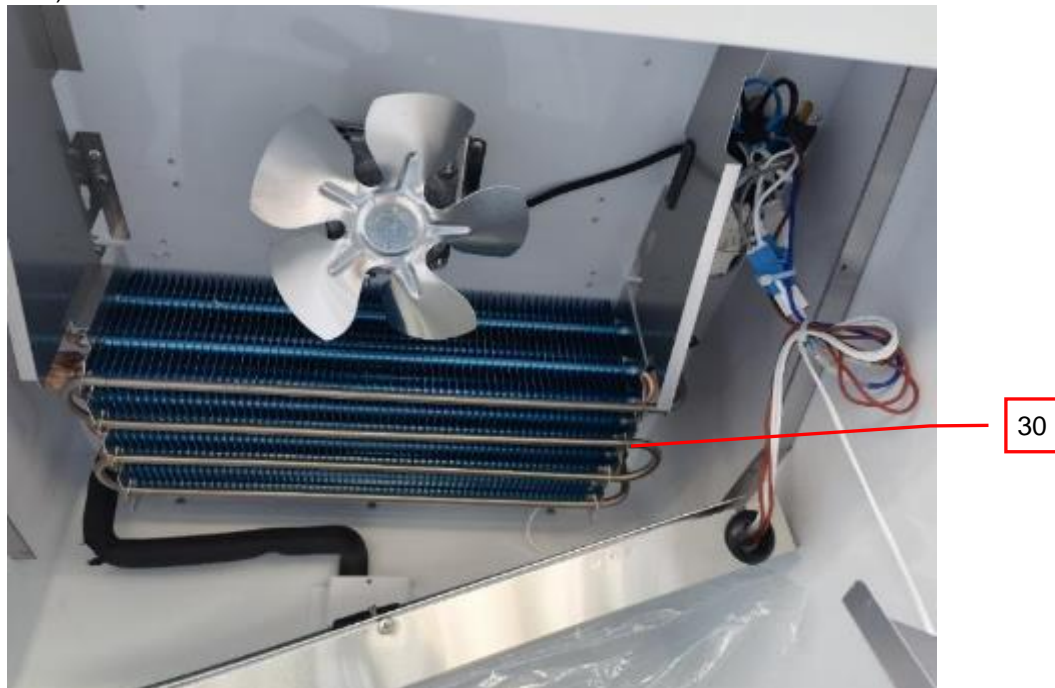


Photo 20 - Internal of evaporator part view - ST27BF (represent model ST27BFG, ST27BFGC except for evaporator size)



3.0 Product Photographs

Photo 21 - Internal of evaporator part view - ST54BR, ST54BRG, ST54BRGC



Photo 22 - Internal of evaporator part view - ST54BF (represent model ST54BFG, ST54BFGC except for evaporator size)



3.0 Product Photographs

Photo 23 - Thermal cutoff for Defrost heater view - ST27BF, ST27BFG, ST27BFGC (note: model ST54BF, ST54BFG, ST54BFGC, SD series have same construction for thermal cutout secument)

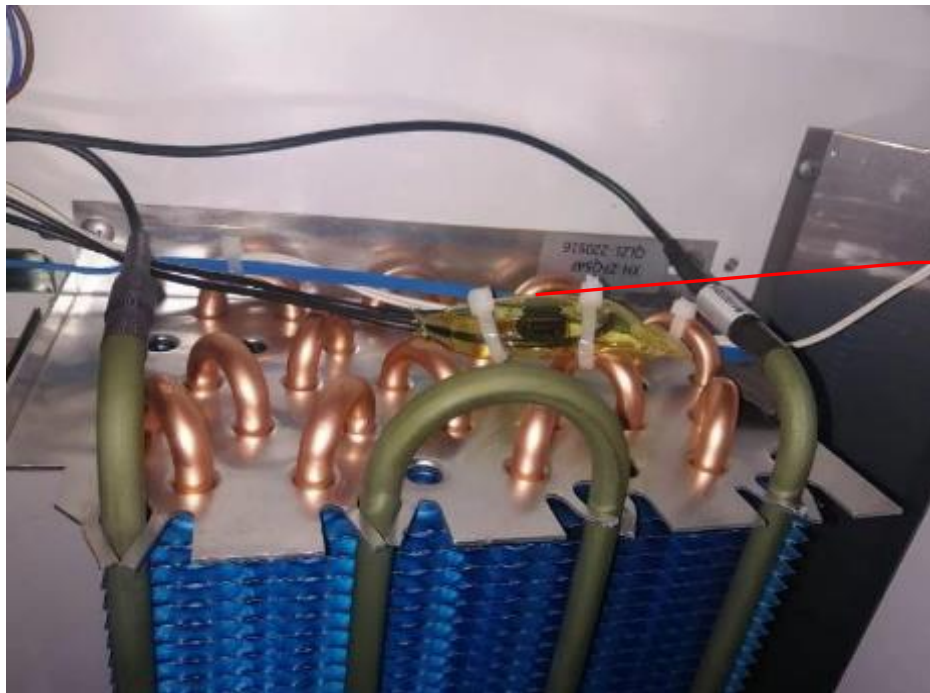
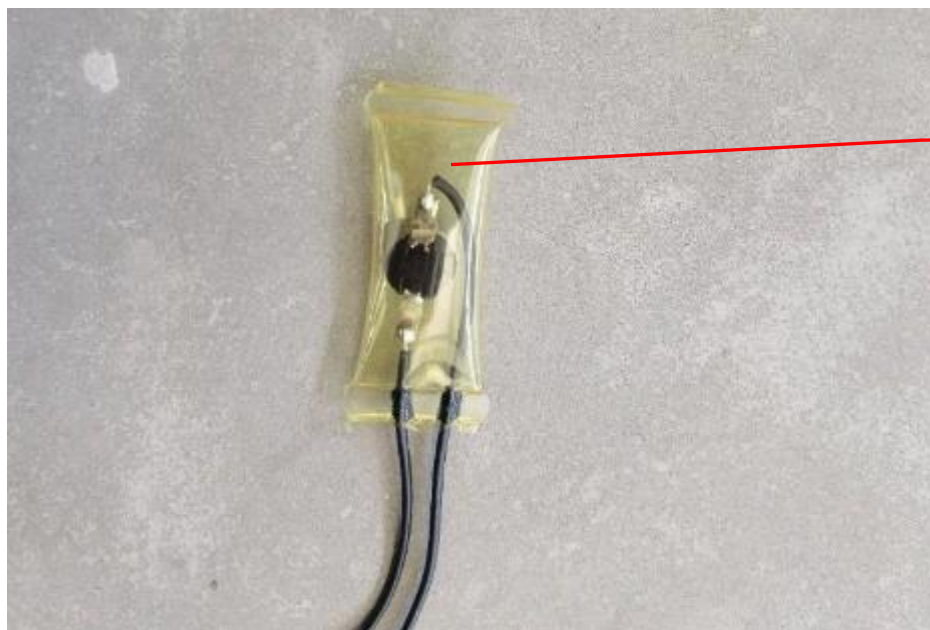


Photo 24 - Thermal cutoff bag view - ST27BF, ST54BF, ST27BFG, ST27BFGC, ST54BFG, ST54BFGC, SD series



3.0 Product Photographs

Photo 25 - Drain pan view - ST54BF, ST54BFG, ST54BFGC (note: model ST27BF, ST27BFG, ST27BFGC, SD series have similar drain pan except for length, Model ST27BR, ST27BRG, ST27BRGC, ST54BR, ST54BRG, ST54BRGC don't use hose heating wire and pan heating wire)



Photo 26 - Drain pan view - ST54BF, ST54BFG, ST54BFGC (note: model ST27BF, ST27BFG, ST27BFGC, SD series have similar drain pan except for length, Model ST27BR, ST27BRG, ST27BRGC, ST54BR, ST54BRG, ST54BRGC don't use hose heating wire and pan heating wire)

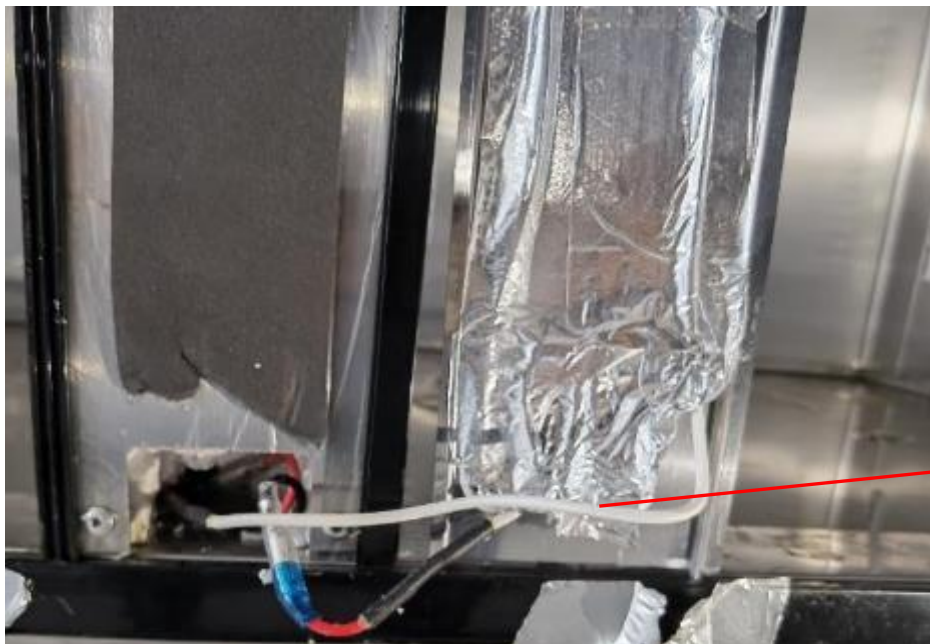


3.0 Product Photographs

Photo 27 - Mullion heating wire & cabinet heating wire view - ST54BF (represent other models except for cabinet size)



Photo 28 - Mullion heating wire & cabinet heating wire view for all models



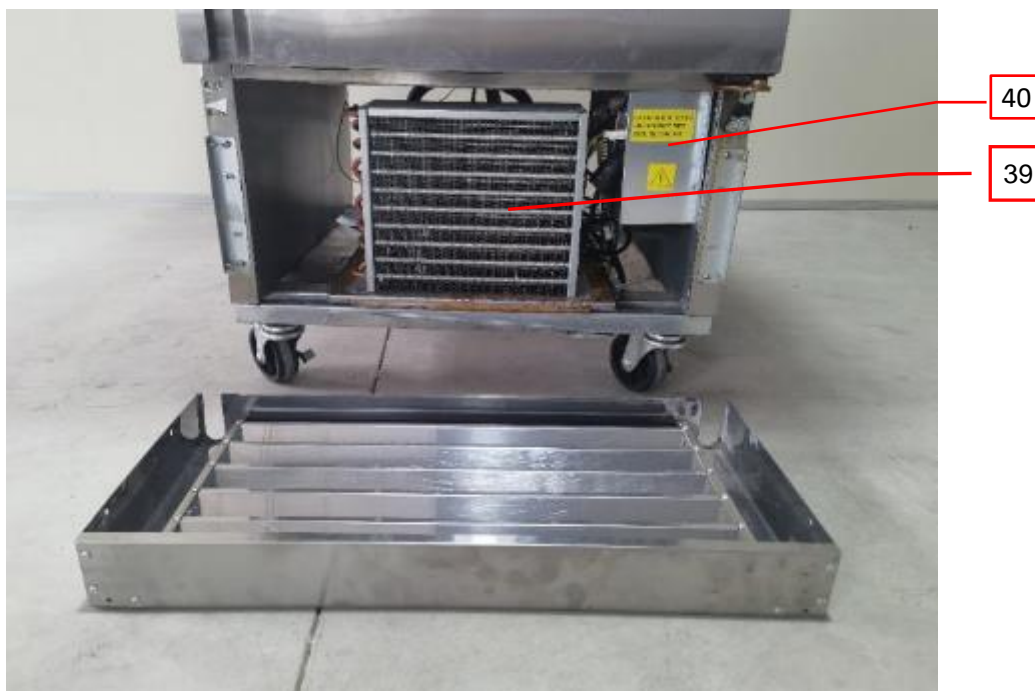
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3.0 Product Photographs

Photo 29 - Ventilating panel view - ST27BR, ST27BRG, ST27BF, ST27BFG



Photo 30 - Condenser part view - ST27BR, ST27BRG, ST27BF, ST27BFG

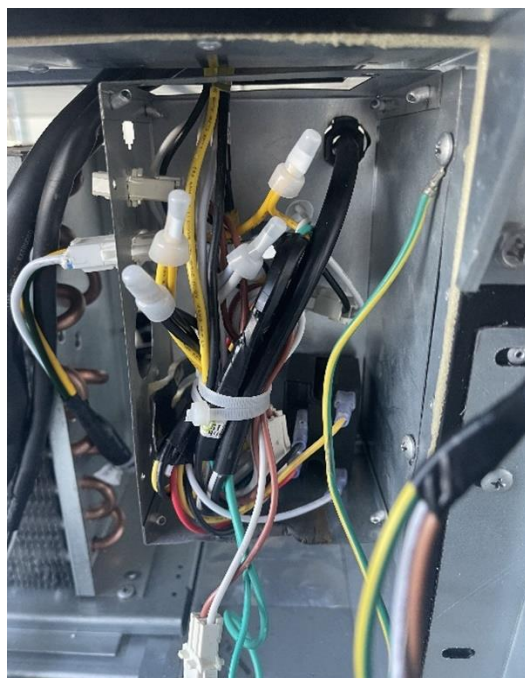


3.0 Product Photographs

Photo 31 - Inside of electrical box view - ST27BR, ST27BRG



Photo 31a - Inside of electrical box view - ST27BF, ST27BFG



3.0 Product Photographs

Photo 32 - Grounding terminal view - ST27BR, ST27BRG, ST27BF, ST27BFG, ST27BFGC

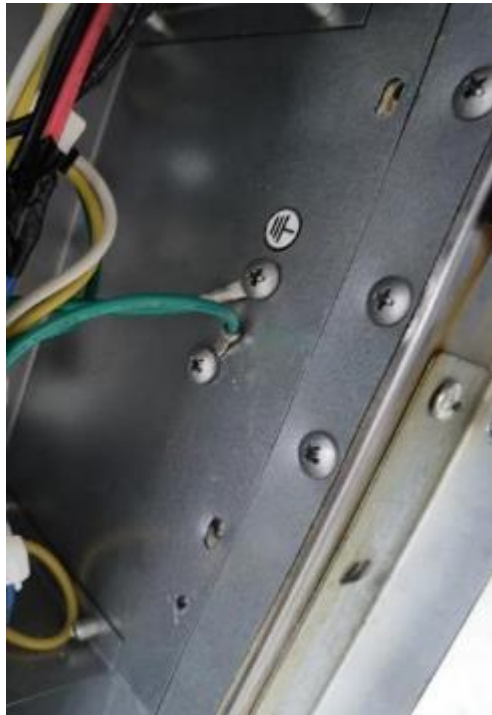


Photo 33 - Condenser part view - ST54BR, ST54BRG, ST54BF, ST54BFG

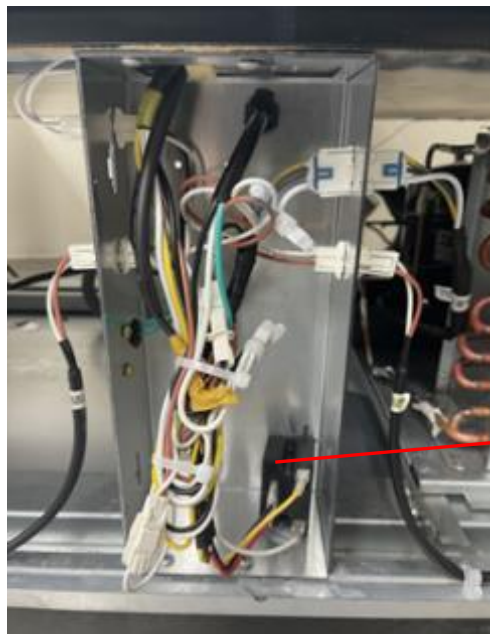


3.0 Product Photographs

Photo 34 - Inside of electrical box view - ST54BR, ST54BRG



Photo 34a - Inside of electrical box view - ST54BF, ST54BFG



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3.0 Product Photographs

Photo 35 - Grounding terminal view - ST54BR, ST54BRG, ST54BF, ST54BFG, ST54BFGC



Photo 36 - Ventilating panel & Control panel view - ST27BRGC, ST27BFGC

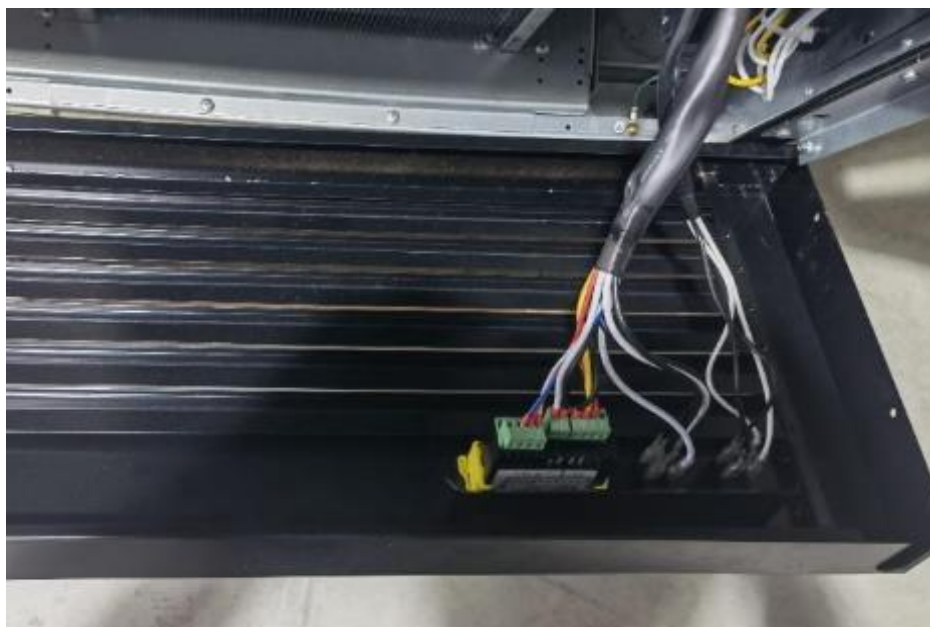


3.0 Product Photographs

Photo 37 - Ventilating panel & Control panel view - ST54BRGC, ST54BFGC



Photo 38 - Inside of control panel view - ST27BRGC, ST54BRGC, ST27BFGC, ST54BFGC

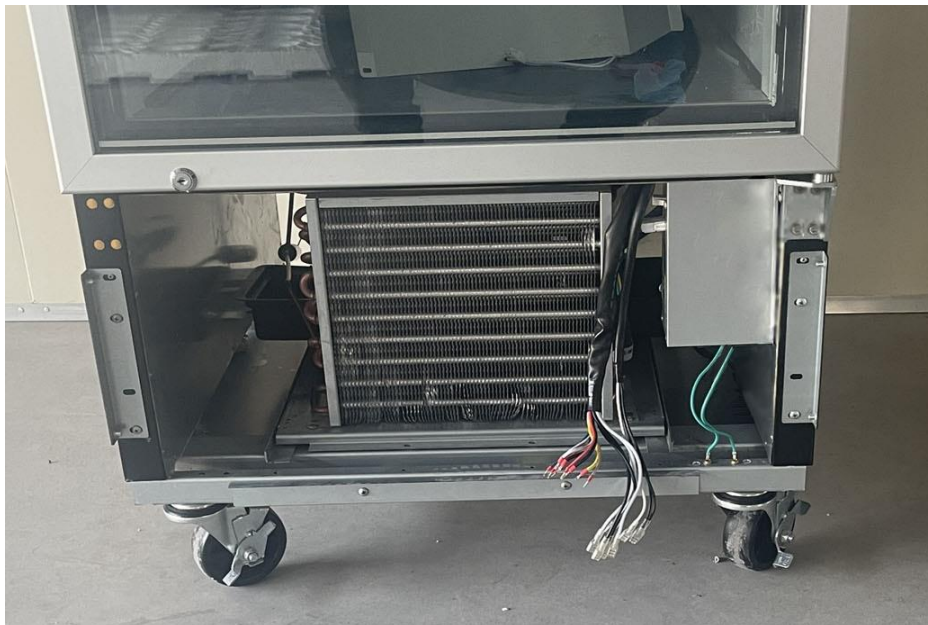


3.0 Product Photographs

Photo 39 - Condenser part view - ST27BRGC



Photo 39a - Condenser part view - ST27BFGC



3.0 Product Photographs

Photo 39b - Inside of electrical box view - ST27BFGC

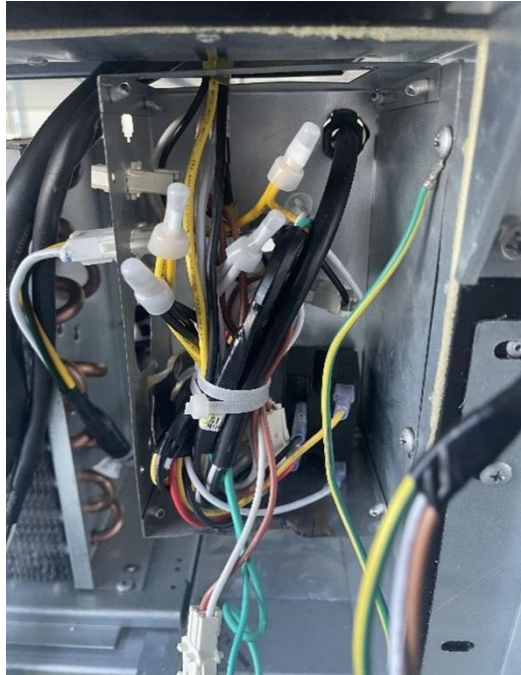


Photo 40 - Condenser part view - ST54BRGC



3.0 Product Photographs

Photo 40a - Condenser part view - ST54BFGC



Photo 40b - Inside of electrical box view - ST54BFGC

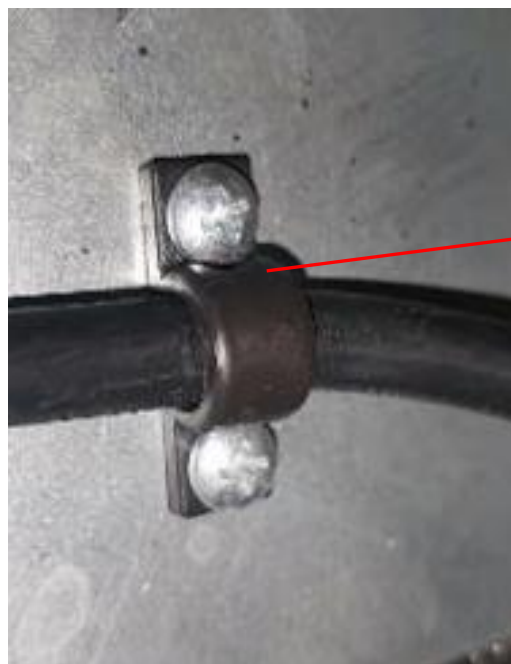


3.0 Product Photographs

Photo 41 - Inside of compressor part view - ST27 series



Photo 42 - Power cord strain-relief device view - ST27 series (other models have same construction)



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3.0 Product Photographs

Photo 43 - Inside of compressor part view - ST27BF



Photo 44 - Compressor part view - ST27BF



3.0 Product Photographs

Photo 44a - Compressor part view - ST27BFG, ST27BFGC



Photo 45 - Compressor part view - ST27BR, ST27BRG, ST27BRGC



3.0 Product Photographs

Photo 46 - Compressor part view - ST54BR, ST54BRG, ST54BRGC, ST54BF, ST54BFG, ST54BFGC

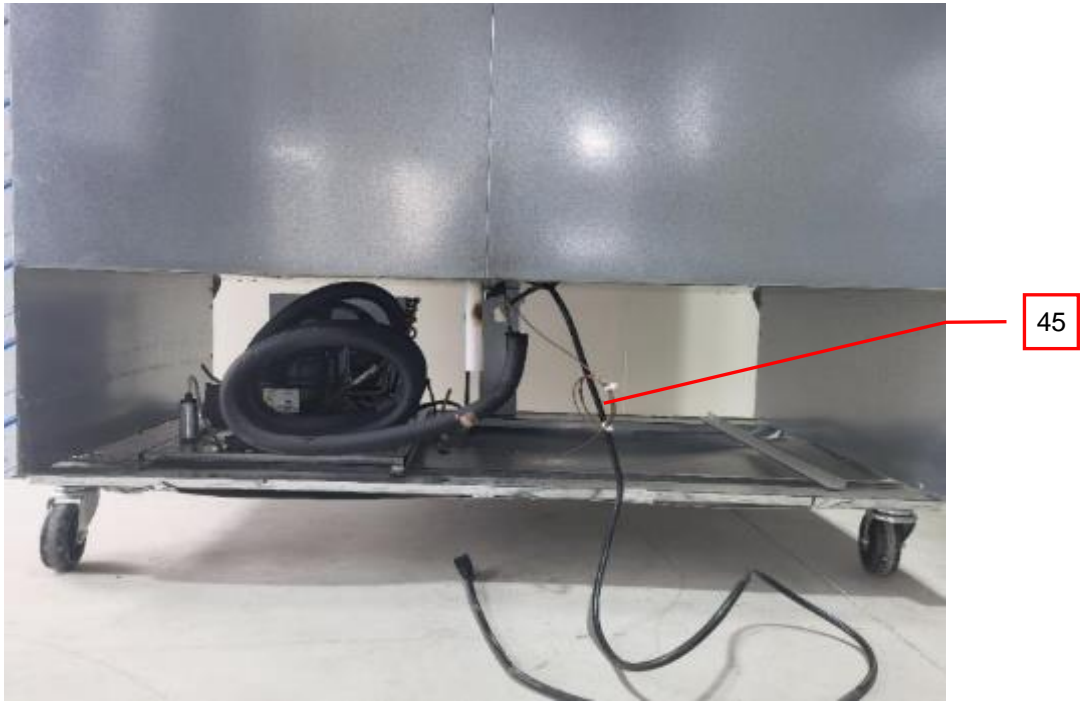


Photo 47 - Compressor part view - ST54BR, ST54BRG, ST54BRGC



3.0 Product Photographs

Photo 48 - Compressor part view - ST54BF



Photo 48a - Compressor part view - ST54BFG, ST54BFGC



3.0 Product Photographs

Photo 49 - Front view - SC690F, SD690F (model SC350F, SC420F, SC580 and SD580F has similar construction except for enclosure size)



Photo 50 - Rear view - SC690F, SD690F (model SC350F, SC420F, SC580F and SD580F has similar construction except for enclosure size)



3.0 Product Photographs

Photo 51 - Front view - SC1180F, SC1390F, SD1180F, SD1390F, also represents SC630F, SC630FS, SC908F, SC908FS except overall size.



Photo 52 - Rear view - SC1180F, SC1390F, SD1180F, SD1390F, also represents SC630F, SC630FS, SC908F, SC908FS except overall size.



3.0 Product Photographs

Photo 53 - Front view - SC1780F, SC2090F, SD1780F, SD2090F



Photo 54 - Rear view - SC1780F, SC2090F, SD1780F, SD2090F



3.0 Product Photographs

Photo 55 - Lamp switch view - SC series, SD series



Photo 56 - Inside of Top panel view - SC580F, SC690F, SD580F, SD690F (represent model SC350F and SC420F except for product width)



3.0 Product Photographs

Photo 57 - Inside of Top panel view - SC1180F, SC1390F, SD1180F, SD1390F (represents model SC630F, SC630FS, SC908F and SC908FS except for product width)



Photo 58 - Inside of Top panel view - SC1780F, SC2090F, SD1780F, SD2090F



3.0 Product Photographs

Photo 59 - Internal of storage compartment view - SC690F, SC580F, SD690F, SD580F (model SC350F and SC420F have similar construction except for product size)



Photo 60 - Internal of storage compartment view - SC1180F, SC1390F, SD1180F, SD1390F (model SC630F and SC908F have similar construction except for product size, model SC630FS and SC908FS have similar construction except for product size and door type)



3.0 Product Photographs

Photo 61 - Internal of storage compartment view - SC1780F, SC2090F



Photo 61a - Internal of storage compartment view - SD1780F, SD2090F



3.0 Product Photographs

Photo 62 - Internal of fan guard view - SC580F, SC690F, SD580F, SD690F (model SC350F and SC420F have similar construction except for product size)



Photo 63 - Evaporator fan motor part view - SC690F, SC580F (model SC350F and SC420F have similar construction except for product size)



3.0 Product Photographs

Photo 63a - Evaporator fan motor part view - SD690F, SD580F

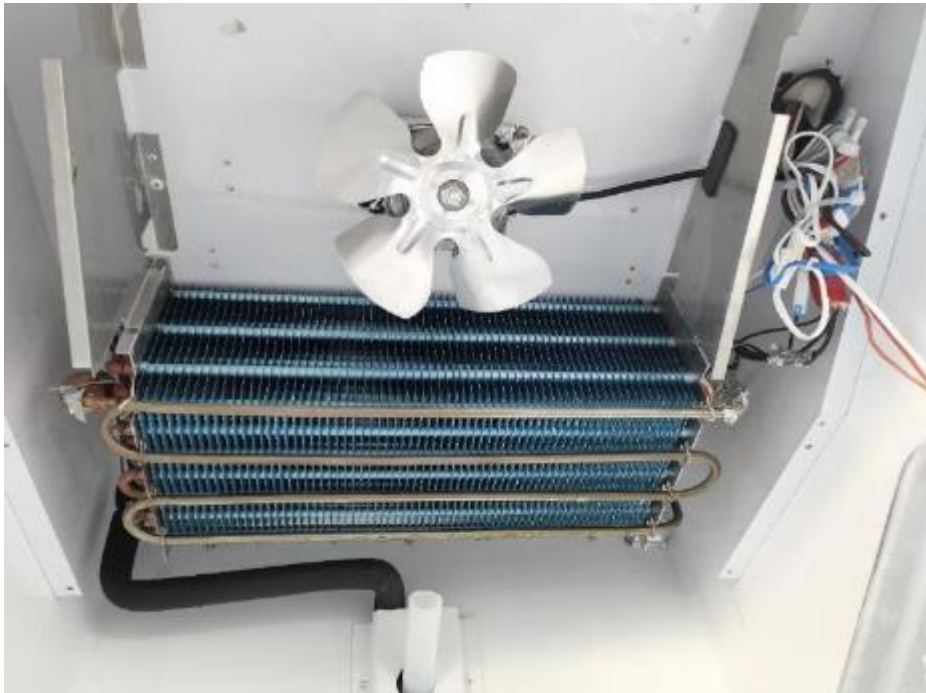


Photo 64 - Evaporator fan motor part view - SC1780F, SC2090F (model SC1180F, SC1390F, SD1180F, SD1390F, SC630F, SC630FS, SC908F and SC908FS have similar construction except for product size)

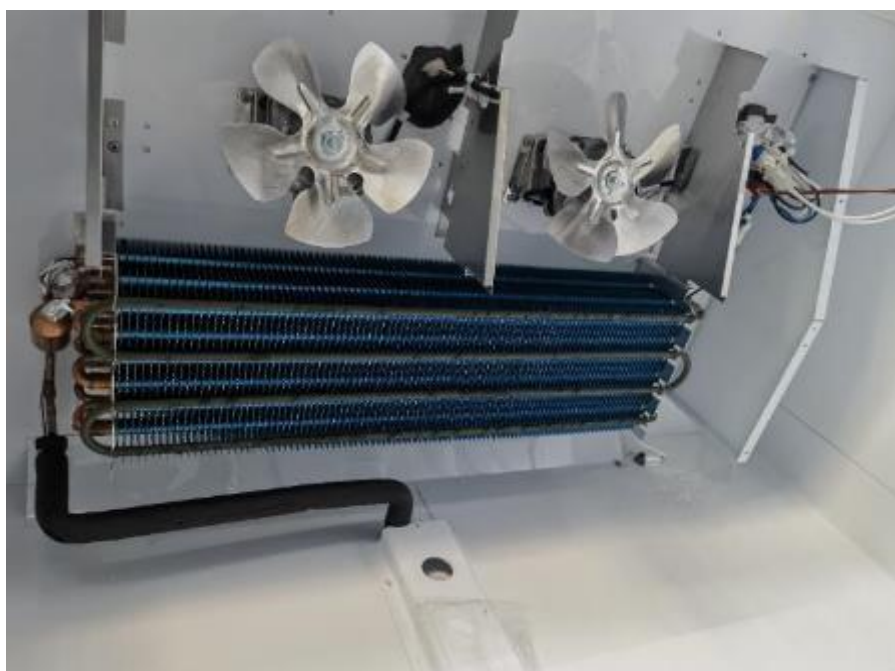


3.0 Product Photographs

Photo 65 - Evaporator fan motor part view - SC1780F, SC2090F(model SC1180F, SC1390F, SC630F, SC630FS, SC908F and SC908FS have similar construction except for product size)



Photo 65a - Evaporator fan motor part view - SD1180F, SD1390F



3.0 Product Photographs

Photo 65b - Evaporator fan motor part view - SD1780F, SD2090F



Photo 65c - Internal of evaporator fan motor part view - SD1780F, SD2090F



3.0 Product Photographs

Photo 66 - Inner right side lamp cover view - SC series, SD series



Photo 67 - Inner left side lamp cover view - SC630F, SC630FS, SC908F, SC908FS, SC1180F, SC1390F, SC1780F, SC2090F, SD1180F, SD1390F, SD1780F, SD2090F



3.0 Product Photographs

Photo 68 - Inner middle side lamp tube view - SC630F, SC630FS, SC908F, SC908FS, SC1180F, SC1390F, SC1780F, SC2090F, SD1180F, SD1390F, SD1780F, SD2090F

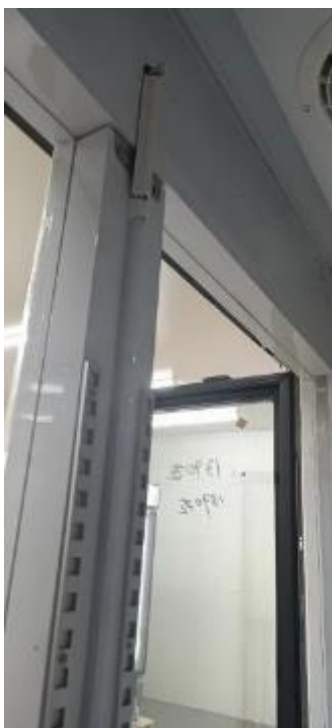


Photo 69 - Control panel view - SC series, SD series



3.0 Product Photographs

Photo 70 - Internal of control panel view - SC series, SD series



Photo 71 - Condenser part view - SC580F, SC690F, SD580F, SD690F (model SC350F and SC420F have similar construction except for product width)



3.0 Product Photographs

Photo 72 - Alternative condenser view - SC580F, SC690F (model SC350F and SC420F have similar construction except for product width)



Photo 73 - Condenser part view - SC1180F, SC1390F, SD1180F, SD1390F (model SC630F, SC630FS, SC908F and SC908FS have similar construction except for product size)



3.0 Product Photographs

Photo 74 - Alternative condenser view - SC1180F, SC1390F (model SC630F, SC630FS, SC908F and SC908FS have similar construction except for product size)



Photo 75 - Condenser part view - SC1780F, SC2090F



3.0 Product Photographs

Photo 76 - Alternative condenser part view - SC1780F, SC2090F



Photo 76a - Condenser part view - SD1780F, SD2090F



3.0 Product Photographs

Photo 77 - Compressor part view - SC580F, SC690F (model SC350F and SC420F have similar construction except for product width)



Photo 78 - Condenser fan motor part view - SC350F, SC420F, SC580F, SC690F



3.0 Product Photographs

Photo 79 - Compressor view - SC350F, SC420F, SC580F, SC690F



Photo 79a - Compressor part view - SD580F, SD690F



3.0 Product Photographs

Photo 79b - AC Contactor view - SD580F, SD690F (represent model SD1180F, SD1390F, also represent model SD1780F, SD2090F except that SD1780F, SD2090F employ 2 pcs used for 2 compressor systems)



Photo 79c - Compressor view - SD580F, SD690F

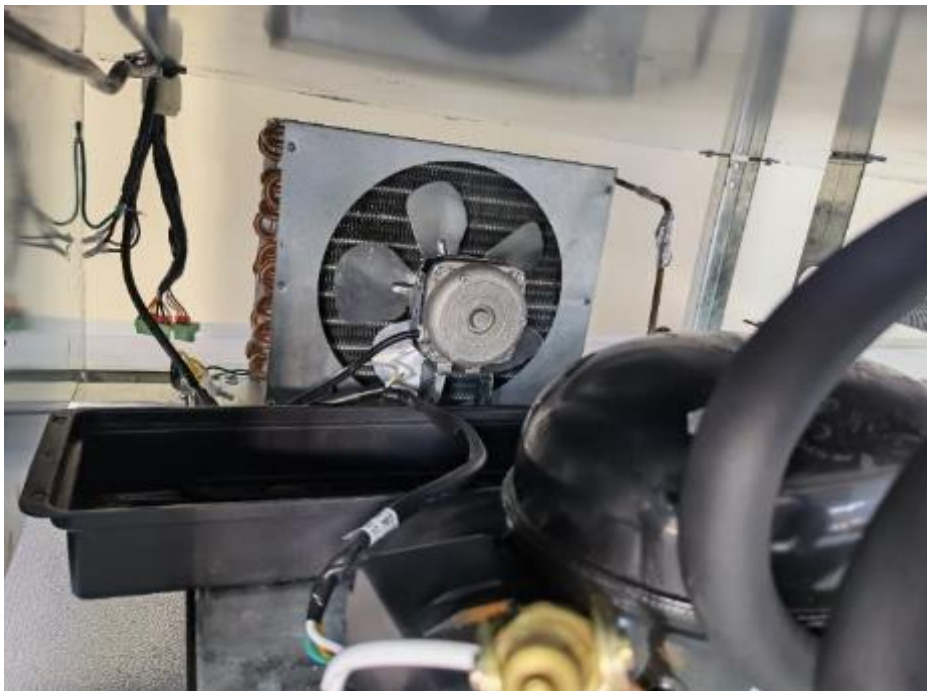


3.0 Product Photographs

Photo 80 - Compressor part view - SC1180F, SC1390F(model SC630F, SC630FS, SC908F and SC908FS have similar construction except for product size)



Photo 81 - Condenser fan motor part view - SC630F, SC630FS, SC908F, SC908FS SC1180F, SC1390F



3.0 Product Photographs

Photo 82 - Compressor view - SC630F, SC630FS, SC908F, SC908FS SC1180F, SC1390F



Photo 82a - Compressor part view - SD1180F, SD1390F



3.0 Product Photographs

Photo 82b - Compressor view - SD1180F, SD1390F



Photo 82c - Compressor view - SD1180F, SD1390F



3.0 Product Photographs

Photo 83 - Compressor part view - SC1780F, SC2090F



Photo 84 - Compressor part view - SC1780F, SC2090F



3.0 Product Photographs

Photo 85 - Compressor part view - SC1780F, SC2090F



Photo 86 - Compressor part view - SD1780F, SD2090F



3.0 Product Photographs

Photo 87 - Compressor part view - SD1780F, SD2090F



Photo 88 - Compressor view - SD1780F, SD2090F



4.0 Critical Components							
#	Photo	Item no. ¹	Name	Manufacturer/ trademark ²	Type / model ²	Technical data and securement means	Mark(s) of conformity ³
1		1	Top cover	Various	Various	For ST27BR, ST27BRG, ST27BF, ST27BFG, ST54BR, ST54BRG, ST54BF, ST54BFG: Stainless steel. Min thickness: 0.66mm	NR
1		2	Foamed door	Various	Various	For ST27BR, ST27BF, ST54BR, ST54BF: Stainless steel. Min thickness: 0.66mm	NR
1		3	Front ventilation panel	Various	Various	For ST27BR, ST27BRG, ST27BF, ST27BFG, ST54BR, ST54BRG, ST54BF, ST54BFG: Stainless steel. Min thickness: 0.66mm. Max. opening: 6.0mm	NR
				Various	Various	For ST27BRGC, ST27BFGC, ST54BRGC, ST54BFGC, SC series, SD series: Steel with coating, Min. thickness: 0.66mm when uncoated. Max. opening: 6.0mm	NR
2		4	Door glass	Shanghai Yaopi Glass Group Co., Ltd.	Tempered glass	Min thickness: 3.0 mm, 2 layers. Size(L x W,mm) & qty: 1317x600 & 1pcs for model ST27BRG, ST27BRGC, ST27BFG, ST27BFGC. 1317x600 & 2pcs for model ST54BRG, ST54BRGC, ST54BFG, ST54BFGC. 1367x352 & 1pcs for model SC350F. 1300x352 & 1pcs for model SC420F, 1367x652 & 1pcs for model SC580F, SC690F, SD580F, SD690F. 1367x320 & 2pcs for model SC630F, SC630FS. 1367x580 & 2pcs for model SC908F, SC908FS. 1367x645.5 & 2pcs for model SC1180F, SC1390F, SD1180F, SD1390F. 1367 x642 & 3pcs for model SC1780F, SC2090F, SD1780F, SD2090F.	NR
2		5	Glass door frame	Various	Various	For ST27BRG, ST27BRGC, ST27BFG, ST27BFGC, ST54BRG, ST54BRGC, ST54BFG, ST54BFGC, SC series, SD series: Al alloy. Min thickness: 0.91mm	NR
2		6	Main Enclosure	Various	Various	For ST27BR, ST27BRG, ST27BF, ST27BFG, ST54BR, ST54BRG, ST54BF, ST54BFG. For left side, right side enclosure: Stainless steel, Min. thickness: 0.66mm. For top enclosure: Steel with coating, min. thickness: 0.66mm when uncoated.	NR

4.0 Critical Components							
#	Photo	Item no. ¹	Name	Manufacturer/ trademark ²	Type / model ²	Technical data and securement means	Mark(s) of conformity ³
				Various	Various	For ST27BRGC, ST27BFGC, ST54BRGC, ST54BFGC, SC series, SD series: Steel with coating, Min. thickness: 0.66mm when uncoated. Include top side, left side, right side enclosure.	NR
3		7	Top lamp box frame	CHI MEI CORPORATION (E56070)	PA-747A	For ST27BRGC, ST27BFGC, ST54BRGC, ST54BFGC, SC series, SD series: ABS, all color, Rated HB, RTI(85,80,85), Min. 1.5mm thickness,	cURus
3		8	Top lamp cover	CHI MEI CORPORATION (E56070)	PC-110(+)	For ST27BRGC, ST27BFGC, ST54BRGC, ST54BFGC, SC series, SD series: PC, rated V-2, 125°C, 1.5mm thickness min.	cURus
4		9	Back enclosure	Various	Various	Galvanized steel sheet, Min. thickness: 0.74mm when galvanized. Including back, bottom enclosure	NR
4		10	Compressor grill	Various	Various	Hard-drawn steel with coating, Φ 3.0mm, Max. opening: 7.5mm.	NR
4		11	Power Cord Set	Various	Various	For models other than SD1780F, SD2090F: SJT, 3X14 AWG, 105°C, VW-1, 300 V, length 1.8 - 3.0 m, terminated in a NEMA 5-15P plug, 125V, 15A.	cULus or cETLus
						For model SD1780F, SD2090F: SJT, 3X14 AWG, 105°C, VW-1, 300 V, length 1.8 - 3.0 m, terminated in a NEMA 5-30P plug, 125V, 30A.	cULus or cETLus
4		12	Marking (not shown)	SUZHOU ELEGANT PRINTING CO LTD (MH254088)	MD003-025B	Rated -40 to 80°C, suitable for Galvanized steel surface and indoor use, pasted on the back of enclosure.	cURus
				Various	Various	Min. 80°C, suitable for Galvanized steel surface and indoor use, pasted on the back of enclosure. Comply with UL Category: PGDQ2, PGDQ8.	cURus

4.0 Critical Components							
#	Photo	Item no. ¹	Name	Manufacturer/ trademark ²	Type / model ²	Technical data and securement means	Mark(s) of conformity ³
9		13	Thermostat	DIXELL SRL (E211299)	XR04CX-4N1F1	For ST27BR, ST27BRG, ST27BRGC, ST54BR, ST54BRG, ST54BRGC, SC series: AC120V, 50-60Hz, FLA: 16A, LRA: 96A. Secured by snap-in devices. Relay of tested meet IEC 60079-15 = non-ignition.	cURus
					XR06CX-4N1F1	For ST27BF, ST54BF, ST27BFG, ST27BFGC, ST54BFG, ST54BFGC, SD series: AC120V, 50-60Hz, FLA: 16A, LRA: 96A. Secured by snap-in devices. Relay of tested meet IEC 60079-15 = non-ignition.	cURus
				CAREL INDUSTRIES SPA (E198839)	PZQDS1J1Q1K	For ST27BR, ST27BRG, ST27BRGC, ST54BR, ST54BRG, ST54BRGC, SC series: AC115V, 60Hz, FLA: 12A, LRA: 72A. Secured by snap-in devices. Relay of tested meet IEC 60079-15 = non-ignition.	cURus
					PZQDC1E1Q1K	For ST27BF, ST54BF, ST27BFG, ST27BFGC, ST54BFG, ST54BFGC, SD series: AC115V, 60Hz, FLA: 12A, LRA: 72A. Secured by snap-in devices. Relay of tested meet IEC 60079-15 = non-ignition.	cURus
9		14	Main switch	SHANGHAI YONGXING ELECTRONIC SWITCH CO LTD (E239917)	KCD2	For models other than SD1780F, SD2090F: AC125V, 60Hz, 16A, 10000 cycles, 85°C.	cURus
				ZHE JIANG BEI ER JIA ELECTRONIC CO LTD (E236875)	PS8C	For model SD1780F, SD2090F: AC125V, 60Hz, 20A, 6000 cycles, 85°C.	cURus
10, 55		15	Lamp switch	SHANGHAI YONGXING ELECTRONIC SWITCH CO LTD (E239917)	KCD2	For ST27BRG, ST27BRGC, ST54BRG, ST54BRGC, ST27BFG, ST27BFGC, ST54BFG, ST54BFGC: AC125V, 60Hz, 16A, 10000 cycles, 85°C.	cURus
				CHANGZHOU JINHE ELECTRONIC CO LTD (E227266)	KCD3	Only for SC series, SD series: AC125V, 60Hz, 15A, 6000 cycles, 65°C.	cURus

4.0 Critical Components							
#	Photo	Item no. ¹	Name	Manufacturer/ trademark ²	Type / model ²	Technical data and securement means	Mark(s) of conformity ³
11		16	Internal wire	Various	1015	Recognized wire. 600V, VW-1, 105°C. 14AWG for switch, thermostat, 18AWG for compressor, fan motors, LED adaptor and defrost heater. (not include the wires for Class 2 circuit)	cURus
11		17	Tubing for wire	Various	Various	Recognized tubing. Min. 300V, VW-1, 105°C.	cURus
12		18	Door switch	Zhejiang Changdecheng Electric Appliances Co Ltd (E239938)	HC-050K.4	AC250V, 2.5A, T85, 5E4. meets IEC 60079-15=non-ignition. Secured by snap-in devices. 1pcs for ST27 series, SC350F, SC420F, SC580F, SC690F, SD580F, SD690F, 2 pcs for ST54 series, SC630F, SC630FS, SC908F, SC908FS, SC1180F, SC1390F, SD1180F, SD1390F, 3 pcs for SC1780F, SC2090F, SD1780F, SD2090F.	cURus
12		19	Quick connector	Zhejiang ZUCH Technology Co Ltd. (E326081)	5557-2P 5559-2R	250V, suitable for 24 ~14 AWG copper wires.	cURus
11, 12		20	LED power supply	MEAN WELL ENTERPRISES CO LTD (E307078)	LPV-60-12	Class 2 power supply. INPUT:100-240VAC, 1.2A, 50/60Hz, OUTPUT:12VDC, 5.0A. Secured by screws. For model ST27BRG, ST27BRGC, ST54BRG, ST54BRGC, SC630F, SC630FS, SC908F, SC908FS, SC1180F, SC1390F, SC1780F, SC2090F, ST27BFG, ST27BFGC, ST54BFG, ST54BFGC, SD1180F, SD1390F, SD1780F, SD2090F	cURus
				MEAN WELL ENTERPRISES CO LTD (E334687)	APV-35-12	Class 2 power supply. INPUT:100-240VAC, 0.9A, 50/60Hz, OUTPUT:12VDC, 3.0A. Secured by screws. For model SC350F, SC420F, SC580F, SC690F, SD580F, SD690F	cURus
					YHY-12001000	Class 2 power supply. Input:100-240VAC,50/60Hz, 2.0A; Output:12VDC, 1.0A, 12W. Secured by screws. For model ST54BR / ST54BF	cURus

4.0 Critical Components							
#	Photo	Item no. ¹	Name	Manufacturer/ trademark ²	Type / model ²	Technical data and securement means	Mark(s) of conformity ³
				Shenzhen YingHuiYuan Electronics Co Ltd (E485339)	YHY-12005000	Class 2 power supply. Input:100-240VAC,50/60Hz; Output:12VDC, 5.0A, 60W. Secured by screws. For model ST27BRG, ST27BRGC, ST54BRG, ST54BRGC, SC630F / SC630FS, SC908F, SC908FS, SC1180F, SC1390F, SC1780F, SC2090F, ST27BFG, ST27BFGC, ST54BFG, ST54BFGC, SD1180F, SD1390F, SD1780F, SD2090F	cURus
				Shenzhen Zhenhuan Electronic Co Ltd (E584317)	ZF120A-1200420	Class 2 power supply. Input:100-240VAC,50/60Hz; Output:12VDC, 420mA, 5W. Secured by screws. For model ST27BR, ST27BF	cURus
15		21	Shelf	Various	Various	Shelf: Hard-drawn steel with coating, $\Phi 8$ for frame, $\Phi 3$ mm for grid. Supportor: Al alloy, thickness: 3.5mm.	NR
15		22	Inner back cover	Various	Various	Steel with coating, Min. thickness: 0.66mm when uncoated.	NR
15		23	Liner	Various	Various	Al with coating, thickness 0.7 mm.	NR
16		24	Lamp tube	CHI MEI CORPORATION (E56070)	PC-580	PMMA. White, Rated V-0, RTI(50,50,50), Min. 1.3mm thickness.	cURus
16		25	Inner fan guard panel	Various	Various	Al with coating, thickness 0.7 mm.	NR
16		26	Inner fan guard	CHI MEI CORPORATION (E56070)	PA-747A	ABS, all color, Rated HB, RTI(85,80,85), Min. 1.5mm thickness, Max. opening: 7.5mm	cURus
19		27	Inner fan motor	EBM-PAPST MOTOR (SHANGHAI) Co., LTD (E320888) (Electrical Insulation UL certificate No.: E467421)	M4Q 045-CA27-04	AC115V, 60Hz, 0.35A, Class A. impedance protected. Secured by screws. 1 pcs for ST27 series, SC350F, SC420F, SC580F, SC690F, SD580F, SD690F, 2 pcs for ST54 series, SC630F, SC630FS, SC908F, SC908FS, SC1180F, SC1390F, SC1780F, SC2090F, SD1180F, SD1390F, SD1780F, SD2090F	cURus
19		28	Inner fan blade	Various	Various	Made of aluminium alloy, $\Phi 172$ mm, minimum thickness 1.0 mm, 5 blades.	cURus

4.0 Critical Components							
#	Photo	Item no. ¹	Name	Manufacturer/ trademark ²	Type / model ²	Technical data and securement means	Mark(s) of conformity ³
19		29	Evaporator coil	Various	Various	Buddy tube evaporator bonded to configured Al fins, outside diameter of copper tubing is Φ 7.94mm, thickness 0.5mm. Refer to illustration 8.1- 8.9 of section 7.0 for details.	NR
20		30	Defrost heater	BACKER EHP INC (SA5102)	AGN	Rated 120V, 400W(for ST27BF, ST27BFG, ST27BFGC, SD580F, SD690F), 535W(for ST54BF, ST54BFG, ST54BFGC, SD1180F, SD1390F), 400W / 2pcs(for SD1780F, SD2090F). secured by clamps.	cURus
23		31	Temperature limiter for defrost heater	PACIFIC CONTROLS CO LTD (E84277)	PST-3A	Rated 120V, off: $80\pm 5^{\circ}\text{C}$, on: $10\pm 10^{\circ}\text{C}$. Sealed in thermostat bag.	cURus
24		32	Temperature limiter bag	SHENZHEN SUNBOW INSULATION MATERIALS MFG CO LTD (E360625)	SB-PVC-300	Rated 300V, 105°C , VW-1, min. thickness: 1.0mm.	cURus
25		33	Hose heating wire	BACKER EHP INC (E20903)	3269	For ST27BF, ST54BF: Rated 150°C dry location, 100°C wet location, 300 Volts, 700mm, 10W. Located in the drain hose.	cURus
25		34	Drain pan	Various	Various	Stainless steel. Min. thickness: 1.0mm	NR
26		35	Foil for pan heating wire	Various	Various	For ST27BF, ST54BF, ST27BFG, ST27BFGC, ST54BFG, ST54BFGC, SD series: Al foil, Min. thickness: 0.2mm. Located beneath drain pan and supported by foam material.	NR
26		36	Pan heating wire	BACKER EHP INC (E20903)	1473	For ST27BF, ST54BF, ST27BFG, ST27BFGC, ST54BFG, ST54BFGC, SD series: Rated 115V, 60Hz, 61W / 3460mm length (for ST27BF, ST27BFG, ST27BFGC, SD580F, SD690F, SD1780F, SD2090F), 90W / 5060mm length (for ST54BF, ST54BFG, ST54BFGC, SD1180F, SD1390F), 18AWG, 105°C , 300V. Located between the metal foil and bottom of the drain pan.	cURus
					1139		cURus

4.0 Critical Components							
#	Photo	Item no. ¹	Name	Manufacturer/ trademark ²	Type / model ²	Technical data and securement means	Mark(s) of conformity ³
26		37	Foam plate	WUXI XINGDA NEW FOAM PLASTICS MATERIALS CO LTD (E212192)	ZFR	For ST27BF, ST54BF, ST27BFG, ST27BFGC, ST54BFG, ST54BFGC, SD series: Rated HF-1, 18mm thickness. Located between the metal foil and pan cover.	cURus
28		38	Mullion heating wire & cabinet heating wire	BACKER EHP INC (E20903)	1473	600V, 105°C, VW-1, 3.5W/m, 18AWG.	cURus
					1139		cURus
30		39	Condenser coil	Various	Various	For all models. Buddy tube condenser bonded to configured Al fins, outside diameter of copper tubing is Φ 7.94mm, thickness 0.5mm. Refer to illustration 7.1 - 7.4, 7.8 of section 7.0 for details.	NR
						Alternative only for SC series: Buddy tube condenser bonded to configured Al fins, outside diameter of steel tubing is Φ 6.4mm, thickness 1.0mm. Refer to illustration 7.5 - 7.7 of section 7.0 for details.	NR
30		40	Electrical cover	Various	Various	Galvanized steel sheet, Min. thickness: 0.74mm when galvanized. Secured by screws.	NR
42		41	Cord Clamp	CHI MEI CORPORATION (E56070)	6331	PP, all color, 65°C, Rated HB, measured min. 1.5mm thick, length 33mm, width 15mm, fixed by two screws.	cURus
43		42	Compressor starting capacitor	NINGGUO YUHUA ELECTRICAL PRODUCTS CO LTD (E317866)	CBB65-B	Rated min. 160V, 150 μ F(for NUG90NR, NPY14LR) , 250 μ F(for NLY12NR).	cURus
				Fuxin Jiekeda Electronic Co Ltd (E212600)	CD60	Rated min. 160V, 150 μ F(for NUG90NR, NPY14LR) , 250 μ F(for NLY12NR). 65°C.	cURus
				Huangshan Zhenzhou Electronic Technology Co Ltd (E473480)	CD60	Rated min. 160V, 150 μ F(for NUG90NR, NPY14LR) , 250 μ F(for NLY12NR). 65°C.	cURus
				SHANGHAI HAOYE ELECTRIC CO LTD (E218344)	MSC-1	Rated min. 160V, 150 μ F(for NUG90NR, NPY14LR) , 250 μ F(for NLY12NR).	cURus
				NUEVA GENERACION MANUFACTURA S S A D E C V (E348072)	60 series	Rated min. 250V, 374 μ F(for NEU2178U) , 85°C.	cURus

4.0 Critical Components							
#	Photo	Item no. ¹	Name	Manufacturer/ trademark ²	Type / model ²	Technical data and securement means	Mark(s) of conformity ³
43		43	Compressor	Changhong Huayi Compressor Co Ltd (SA11818)	NUT55NR 1	For ST27BR, ST27BRG, ST27BRGC, SC350, SC420, SC580F, SC690F: Rated 115V, 60Hz, R290, RLA 2.0A, LRA: 16.2A. Secured by screws, thermally protected, the processing tube shall be colored red extend at least 2.5 cm from the compressor. start component: QPS2-A4R7MD3 is PTC type = non-ignition. Thermal protector: DRB-B110-105 meet IEC 60079-15 = non-ignition.	cURus
					NUG90NR 1	For ST27BF: Rated 115V, 60Hz, R290, RLA 3.4A, LRA: 29A. Secured by screws, thermally protected, the processing tube shall be colored red extend at least 2.5 cm from the compressor. start relay: QL2-16.7 meet IEC 60079-15 = non-ignition. Thermal protector: DRB-B210-125 meet IEC 60079-15 = non-ignition.	cURus
					NUT70NR 1	For ST54BR, ST54BRG, ST54BRGC, SC630F, SC630FS, SC908F, SC908FS, SC1180F, SC1390F: Rated 115V, 60Hz, R290, RLA 2.5A, LRA: 19.9A. Secured by screws, thermally protected, the processing tube shall be colored red extend at least 2.5 cm from the compressor. start component: QPS2-A4R7MD3 is PTC type = non-ignition. Thermal protector: DRB-B154-105 meet IEC 60079-15 = non-ignition.	cURus
					NPY14LR	For ST54BF, SD1780F, SD2090F: Rated 115V, 60Hz, R290, RLA 5.2A, LRA: 42A. Secured by screws, thermally protected, the processing tube shall be colored red extend at least 2.5 cm from the compressor. start relay: QLZ-18.7A meet IEC 60079-15 = non-ignition. Thermal protector: DRB-B200-105 meet IEC 60079-15 = non-ignition.	cURus

4.0 Critical Components							
#	Photo	Item no. ¹	Name	Manufacturer/ trademark ²	Type / model ²	Technical data and securement means	Mark(s) of conformity ³
				HUAYI COMPRESSOR BARCELONA S L (SA5846)	NLY12NR	For SC1780F, SC2090F, ST27BFG, ST27BFGC, SD580F, SD690F: Rated 115V, 60Hz, R290, RLA 5.36A, LRA: 42A. Secured by screws, thermally protected, the processing tube shall be colored red extend at least 2.5 cm from the compressor. start relay: QLZ-20.3A meet IEC 60079-15 = non-ignition. Thermal protector: T0258 meet IEC 60079- 15 = non-ignition.	cURus
				EMBRACO SLOVAKIA S R O (SA4369)	NEU2178U	For ST54BFG, ST54BFGC, SD1180F, SD1390F: Rated 115V, 60Hz, R290, RLA 7.8A, LRA: 51A. Secured by screws, thermally protected, the processing tube shall be colored red extend at least 2.5 cm from the compressor. start relay: RVAH7AA3C meet IEC 60079-15 = non-ignition. Thermal protector: internal line break type = non-ignition.	cURus
43	44	Compressor running capacitor	NINGGUO YUHUA ELECTRICAL PRODUCTS CO LTD (E317866)	CBB65	Rated min. 250V, 10μF(for NUT55NR, NUG90NR), 12μF(for NUT70NR), 20μF(for NPY14LR) .	cURus	
			ANHUI TONG FENG ELECTRONICS CO LTD (E187356)	CBB65	Rated min. 250V, 10μF(for NUT55NR, NUG90NR), 12μF(for NUT70NR), 20μF(for NPY14LR) , 85°C.	cURus	
			Anhui Feida Electrical Technology Co Ltd (E241095)	CBB65A-1	Rated min. 250V, 10μF(for NUT55NR, NUG90NR), 12μF(for NUT70NR), 20μF(for NPY14LR) , 85°C.	cURus	
			SHANGHAI HAOYE ELECTRIC CO LTD (E218344)	CBB65D	Rated min. 250V, 10μF(for NUT55NR, NUG90NR), 12μF(for NUT70NR), 20μF(for NPY14LR) , 85°C.	cURus	
			DUCATI ENERGIA S P A (E102953)	416.25.8580	Rated min. 370V, 40μF(for NEU2178U), 70°C.	cURus	

4.0 Critical Components							
#	Photo	Item no. ¹	Name	Manufacturer/ trademark ²	Type / model ²	Technical data and securement means	Mark(s) of conformity ³
46		45	Capillary tube	Various	Various	Copper tube. O.D.: 1.0mm, thickness: 0.6mm, length: 4000mm for ST27BR, ST27BRG, ST27BRGC, ST54BR, ST54BRG, ST54BRGC, 4100mm for ST27BF, ST27BFG, ST27BFGC, SD580F, SD690F, 3900mm for ST54BF, ST54BFG, ST54BFGC, SD1180F, SD1390F, 4000mm for SC series, 4100mm × 2 for SD1780F, SD2090F.	NR
47		46	Con. Fan motor	EBM-PAPST MOTOR (SHANGHAI) Co., LTD (E320888) (Electrical Insulation UL certificate No.: E467421)	M4Q045-CA27-04	AC115V, 60Hz, 0.45A, Class A. impedance protected. Secured by screws.	cURus
47		47	Con. Fan blade	Various	Various	Made of aluminium alloy, Φ 200 mm, minimum thickness 1.0 mm, 5 blades.	NR
66		48	Inner lamp cover	Chi Mei Corporation (E56070)	PC-110(+)	Only for SC series, SD series: PC, rated V-2, 125°C, 1.5mm thickness min. Secured by snap-in devices.	cURus
66		49	LED (Not shown)	Various	Various	Rated 12VDC, rectangular, 0.5W, soldered on base board.	NR
34a		50	Motor controller	XIAMEN HONGFA ELECTROACOUSTIC CO LTD (E134517)	HF116F-2	Only for ST27BF, ST27BFG, ST27BFGC, ST54BF, ST54BFG, ST54BFGC, SD series: 240VAC, 3HP, Coil: 120VAC. Also meet IEC 60079-15. Secured to the bottom enclosure by screws.	cURus

NOTES:

- 1) Not all item numbers are indicated (called out) in the photos, as their location is obvious.
- 2) "Various" means any type, from any manufacturer that complies with the "Technical data and securement means" and meets the "Mark(s) of conformity" can be used.
- 3) Indicates specific marks to be verified, which assures the agreed level of surveillance for the component. "NR" - indicates Unlisted and only visual examination is necessary. "See 5.0" indicates Unlisted components or assemblies to be evaluated periodically refer to section 5.0 for details.

5.0 Critical Unlisted CEC Components

No Unlisted CEC components are used in this report.

6.0 Critical Features

Recognized Component - A component part, which has been previously evaluated by an accredited certification body with restrictions and must be evaluated as part of the basic product considering the restrictions as specified by the Conditions of Acceptability.

Listed Component - A component part, which has been previously Listed or Certified by an accredited Certification Organization with no restrictions and is used in the intended application within its ratings.

Unlisted Component - A part that has not been previously evaluated to the appropriate designated component standard. It may also be a Listed or Recognized component that is being used outside of its evaluated Listing or component recognition.

Critical Features/Components - An essential part, material, subassembly, system, software, or accessory of a product that has a direct bearing on the product's conformance to applicable requirements of the product standard.

Construction Details - For specific construction details, reference should be made to the photographs and descriptions. All dimensions are approximate unless specified as exact or within a tolerance. In addition to the specific construction details described in this Report, the following general requirements also apply.

1. Spacing -

For refrigerated and/or air-handling compartments: in primary circuits, 3.2 mm minimum spacing are maintained through air and 6.4 mm minimum spacing are maintained over surfaces of insulating material between current-carrying parts of opposite polarity and uninsulated live part and a dead metal part. For non-refrigerated and non-air handling compartments: in primary circuits, 1.6 mm minimum spacing are maintained through air and over surface, and 6.4 mm minimum spacing are maintained to enclosure.

2. Mechanical Assembly - Components such as switches, fuseholders, connectors, wiring terminals and display lamps are mounted and prevented from shifting or rotating by the use of lockwashers, starwashers, or other mounting format that prevents turning of the component.

3. Corrosion Protection - All ferrous metal parts are protected against corrosion by painting, plating or the equivalent.

4. Accessibility of Live Parts - All uninsulated live parts in primary circuitry are housed within a <metal or non-metallic> enclosure constructed with no openings other than those specifically described in Sections 4 and 5.

5. Grounding - All exposed dead-metal parts and all dead-metal parts within the enclosure that are exposed are connected to the grounding lead of the power supply cord.

6. Polarized Connection - This product is provided with a polarized power supply connection. All single pole switches and fuses are connected only to the ungrounded supply circuit conductor.

7. Internal Wiring - Internal wiring is routed away from sharp or moving parts. Internal wiring leads terminating in soldered connections are made mechanically secure prior to soldering. Recognized Component separable (quick disconnect) connectors of the positive detent type, closed loop connectors, or other types specifically described in the text of this report are also acceptable as internal wiring terminals. At points where internal wiring passes through metal walls or partitions, the wiring insulation is protected against abrasion or damage by plastic bushings or grommets.

8. Schematics - Refer to Illustration No.6.1 to 6.8 for schematics requiring verification during Field Representative Inspection Audits.

9. Markings - The product is marked on a labeling system as described in item no. 12 of Section 4.0 as follows:

- brand name or applicant's name
 - model number
 - date of manufacture
 - electrical rating (volts, frequency, amperes)
 - type and mass of refrigerant
 - high and low side design pressures
- Refer to illustration 1 for detail.

10. Cautionary Markings - Refer to illustration No. 2,3 for detail.

11. Installation, Operating and Safety Instructions - Instructions for installation and use of this product are provided by the manufacturer. Refer to Illustration No. 4, 4a for cautionary statements.

7.0 Illustrations

Illustration 1 - Markings

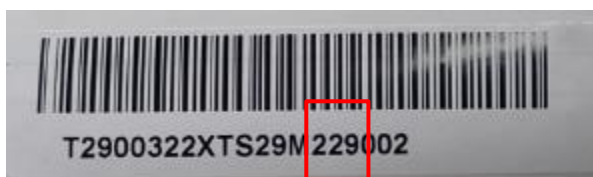
Commercial Freezer
MODEL: ST54BF
Shandong Xinhai Intelligent Technology Co., Ltd.

SPECIFICATIONS	
DESIGN PRESSURE	
HIGH SIDE	260 PSIG
LOW SIDE	140 PSIG
AMOUNT	R290 4.94 oz
RATED VOLTAGE	115V AC
RATED FRENQUENCY	60Hz
RATED CURRENT	7.1 A
DEFROST POWER	750 W
NET WEIGHT	-

FREE STANDING INSTALATION ONLY

Note: The above marking is representative for the applicant, other model listed in section 2.0 are same as the above except for model number and different ratings which are listed in section 2.0.

Manufacturing date code:



→ YYM: Indicate the manufacturing date: 2022-09

Date Code: The letters used to indicate the figures above 9

Code:	1	2	3	4	5	6	7	8	9	A	B	C
Actual figure:	1	2	3	4	5	6	7	8	9	10	11	12

7.0 Illustrations

Illustration 2 - Cautionary Markings

Below marking pasted near the machine compartment:



Below marking pasted near the exterior of the refrigerator:



Note 1: The markings are in letters of English no less than 6.4 mm high, and in letters of France no less than 3.2mm high.

Note 2: The perpendicular height of the triangle containing "CAUTION-Risk of fire" shall be at least 15 mm.

Note 3: The refrigerating tubing intended to be serviced is painted red, Pantone® Matching System (PMS) No. 185.

7.0 Illustrations

Illustration 3 - Shipping Carton Markings



Note 1: The markings are in letters of English no less than 6.4 mm high, and in letters of France no less than 3.2mm high.

Note 2: The perpendicular height of the triangle containing "CAUTION-Risk of fire" shall be at least 15 mm.

7.0 Illustrations

Illustration 4 - Instruction

Safety Tips

1. The appliance is intended for commercial use or similar use (etc. to be used by a layman in shops).
2. DO NOT use the appliance outside.
3. DO NOT attempt to service the item yourself.
4. DO NOT use damaged appliances. If you are in any doubt, consult service agent.
5. DO NOT use electrical appliances inside the appliance (e.g. heaters, ice-cream makers etc.), unless they are of the type recommended by the manufacturer.
6. Keep ventilation openings, in the appliance enclosure or in the built-in structure, clear of obstruction.
7. DO NOT use mechanical devices or other means to accelerate the defrosting process, other than those recommended by the manufacturer.
8. DO NOT damage the refrigerant circuit.
9. DO NOT stand or support yourself on the base, drawers or the door.
10. DO NOT allow oil or fat to come into contact with the plastic components or door seal. Clean immediately if contact occurs.
11. DO NOT place combustible, explosive or volatile articles, corrosive acids or alkalis or liquids in the appliance.
12. DO NOT use this appliance to store medical supplies.
13. DO NOT use jet/pressure washers to clean the appliance.
14. DO NOT allow children to play with the packaging, and destroy plastic bags safely.
15. Bottles that contain a high percentage of alcohol must be sealed and placed vertically in the refrigerator.
16. Always carry, store and handle the appliance in a vertical orientation and move by holding the base of the appliance.
17. Always switch off and disconnect the power supply to the unit before cleaning.
18. If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.
19. This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
20. Children should be supervised to ensure that they do not play with the appliance.
21. For indoor used only. Not suitable for installation in an area where a water jet could be used. Must not be cleaned by a water jet.
22. To guarantee safe operation, ensure that the appliance is set up and connected as described in the instruction manual.
23. Any repairs and work on the appliance should only be carried out by the customer service department.
24. The key to the fridge/freezer should be kept out of the reach of children and users.

7.0 Illustrations

Illustration 4a - Instruction

Important Safety Instruction



- DANGER – Risk Of Fire Or Explosion. Flammable Refrigerant Used. To Be Repaired Only By Trained Service Personnel. Do Not Puncture Refrigerant Tubing.
- CAUTION – Risk Of Fire Or Explosion. Flammable Refrigerant Used. Consult Repair Manual/Owner’s Guide Before Attempting To Install or Service This Product. All Safety Precautions Must be Followed.
- CAUTION – Risk Of Fire Or Explosion. Dispose Of Properly In Accordance With Federal Or Local Regulations. Flammable Refrigerant Used.
- Caution – Risk of Fire or Explosion due to Flammable Refrigerant Used. Follow Handling Instructions Carefully in Compliance with Local Government Regulations.
- DANGER – Risk Of Fire or Explosion. Flammable Refrigerant Used. Do Not Use Mechanical Devices To Defrost Refrigerator. Do Not Puncture Refrigerant Tubing.
- CAUTION – Flammable refrigerant used! When handing, moving and use of the refrigerator, make sure to avoid either damaging the refrigerant tubing, or increasing the risk of a leak.
- Component parts shall be replaced with like components and that servicing shall be done by factory authorized service personnel, so as to minimize the risk of possible ignition due to incorrect parts or improper service.
- The appliance is not for the display of potentially hazardous foods.

For model ST27BRG, ST27BRGC, ST27BFG, ST27BFGC, ST54BRG, ST54BRGC, ST54BFG, ST54BFGC:

- The equipment is intended for use in an area where the environmental conditions are controlled and maintained so that the ambient temperature typically does not exceed 86°F(30°C).

7.0 Illustrations

Illustration 5 - Table of product similarities

Model	Product Type	Door material & Qty	Door type	Enclosure size (WxDxH, mm)	Compressor	Eva. Fan motor & Qty	Con. Fan motor & Qty
ST27BR	Refrigerator	Foamed Door & 1 pcs	Hinged door	686x815x2111	NUT55NR	M4Q045-BD03-04 & 1 pcs	M4Q045-CA27-04 & 1 pcs
ST27BRG	Display Cooler	Glass door & 1 pcs	Hinged door	686x835x2111			
ST27BRGC	Display Cooler	Glass door & 1 pcs	Hinged door	686x835x2111			
SC350F	Display Cooler	Glass door & 1 pcs	Hinged door	590x645x1905			
SC420F	Display Cooler	Glass door & 1 pcs	Hinged door	640x665x1845			
SC690F	Display Cooler	Glass door & 1 pcs	Hinged door	685x852x2107			
SC580F	Display Cooler	Glass door & 1 pcs	Hinged door	685x740x2107			
ST27BF	Freezer	Foamed Door & 1 pcs	Hinged door	686x815x2111	NUG90NR	M4Q045-BD03-04 & 1 pcs	M4Q045-CA27-04 & 1 pcs
ST54BR	Refrigerator	Foamed Door & 2 pcs	Hinged door	1375x815x2111	NUT70NR	M4Q045-BD03-04 & 2 pcs	M4Q045-CA27-04 & 1 pcs
ST54BRG	Display Cooler	Glass door & 2 pcs	Hinged door	1375x835x2111			
ST54BRGC	Display Cooler	Glass door & 2 pcs	Hinged door	1375x835x2111			
SC630F	Display Cooler	Glass door & 2 pcs	Hinged door	925x695x2010			
SC630FS	Display Cooler	Glass door & 2 pcs	Sliding door	925x695x2010			
SC908F	Display Cooler	Glass door & 2 pcs	Hinged door	1295x695x2010			
SC908FS	Display Cooler	Glass door & 2 pcs	Sliding door	1295x695x2010			
SC1390F	Display Cooler	Glass door & 2 pcs	Hinged door	1370x852x2107			
SC1390FS	Display Cooler	Glass door & 2 pcs	Hinged door	1370x852x2107			
SC1180F	Display Cooler	Glass door & 2 pcs	Hinged door	1370x740x2107			
SC1180FS	Display Cooler	Glass door & 2 pcs	Hinged door	1370x740x2107			
ST54BF	Freezer	Foamed Door & 2 pcs	Hinged door	1375x815x2111	NPY14LR	M4Q045-BD03-04 & 2 pcs	M4Q045-CA27-04 & 1 pcs
SC2090F	Display Cooler	Glass door & 3 pcs	Hinged door	2050x852x2107	NLY12NR	M4Q045-BD03-04 & 2 pcs	M4Q045-CA27-04 & 1 pcs
SC2090FS	Display Cooler	Glass door & 3 pcs	Hinged door	2050x852x2107			
SC1780F	Display Cooler	Glass door & 3 pcs	Hinged door	2050x740x2107			
SC1780FS	Display Cooler	Glass door & 3 pcs	Hinged door	2050x740x2107			

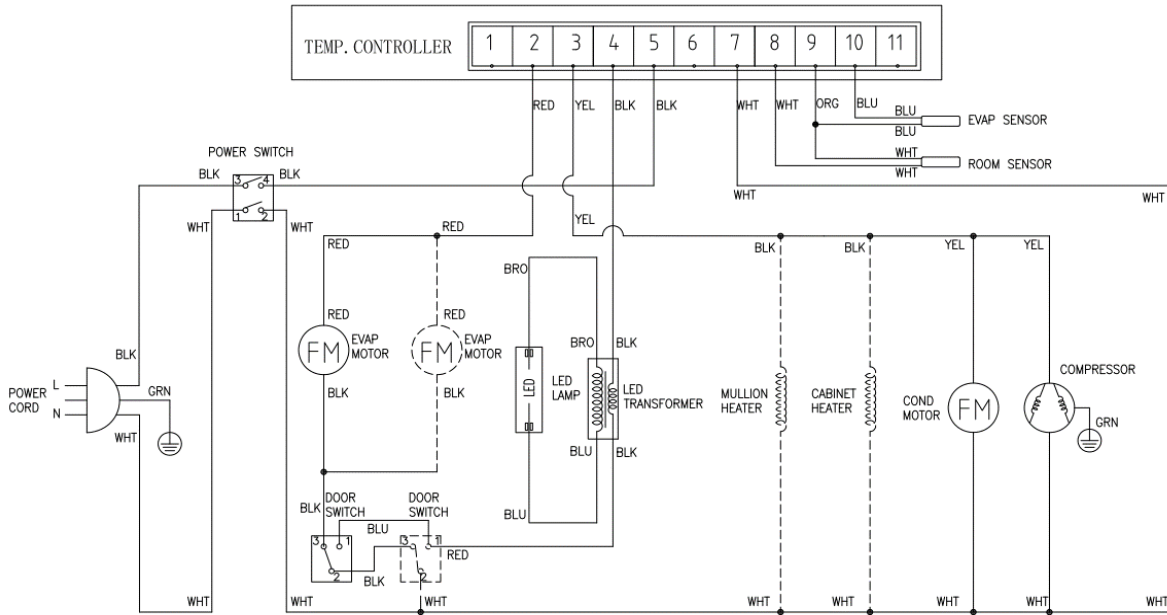
7.0 Illustrations

Illustration 5.1 - Table of product similarities(Con'd)

Model	Product Type	Door material & Qty	Door type	Enclosure size (WxDxH, mm)	Compressor	Eva. Fan motor & Qty	Con. Fan motor & Qty
ST27BFG	Display freezer	Glass Door & 1 pcs	Hinged door	686x835x2111	NLY12NR	M4Q045-BD03-04 & 1 pcs	M4Q045-CA27-04 & 1 pcs
ST27BFGC	Display freezer	Glass Door & 1 pcs	Hinged door	686x835x2111			
ST54BFG	Display freezer	Glass door & 2 pcs	Hinged door	1375x835x2111	NEU2178U	M4Q045-BD03-04 & 2 pcs	M4Q045-CA27-04 & 1 pcs
ST54BFGC	Display freezer	Glass door & 2 pcs	Hinged door	1375x835x2111			
SD690F	Display freezer	Glass door & 1 pcs	Hinged door	685x852x2107	NLY12NR	M4Q045-BD03-04 & 1 pcs	M4Q045-CA27-04 & 1 pcs
SD580F	Display freezer	Glass door & 1 pcs	Hinged door	685x740x2107			
SD1390F	Display freezer	Glass door & 2 pcs	Hinged door	1370x852x2107	NEU2178U	M4Q045-BD03-04 & 2 pcs	M4Q045-CA27-04 & 1 pcs
SD1180F	Display freezer	Glass door & 2 pcs	Hinged door	1370x740x2107			
SD2090F	Display freezer	Glass door & 3 pcs	Hinged door	2050x852x2107	NPY14LR	M4Q045-BD03-04 & 2 pcs	M4Q045-CA27-04 & 2 pcs
SD1780F	Display freezer	Glass door & 3 pcs	Hinged door	2050x740x2107			

7.0 Illustrations

Illustration 6.1 - Circuit diagram (for ST27BR, ST54BR)

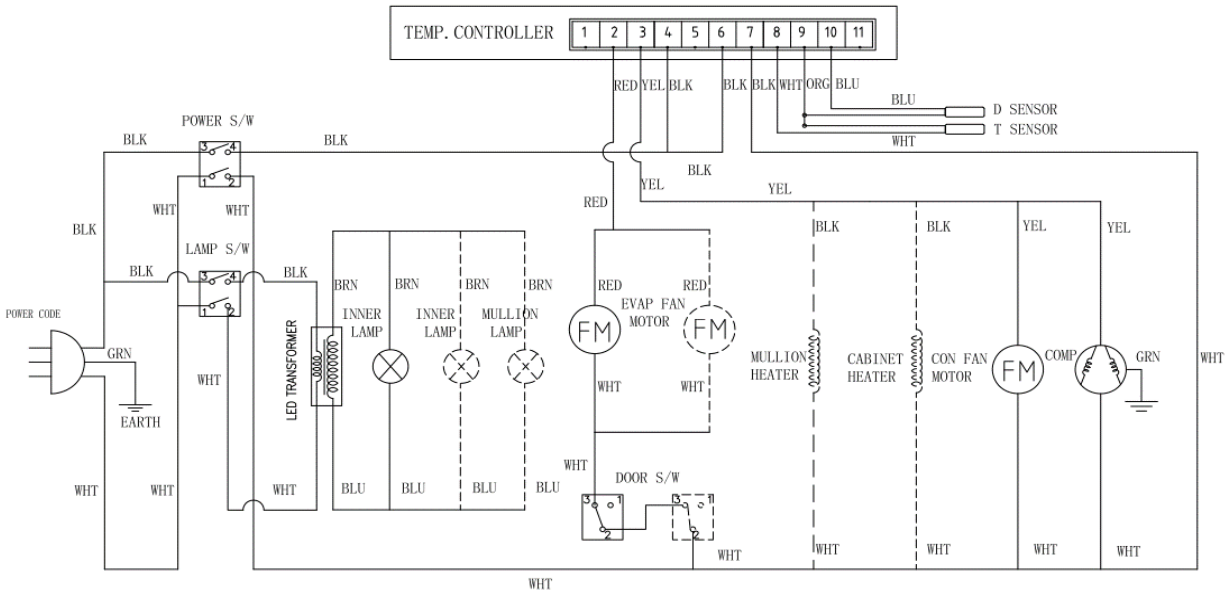


-----: Dotted lines represent optional specifications

Note:

- 1) for ST27BR: 1 pcs eva. fan motor, 1 pcs door switch
- 2) for ST54BR: 2 pcs eva. fan motor, 2 pcs door switch

Illustration 6.2 - Circuit diagram (for ST27BRG, ST54BRG)



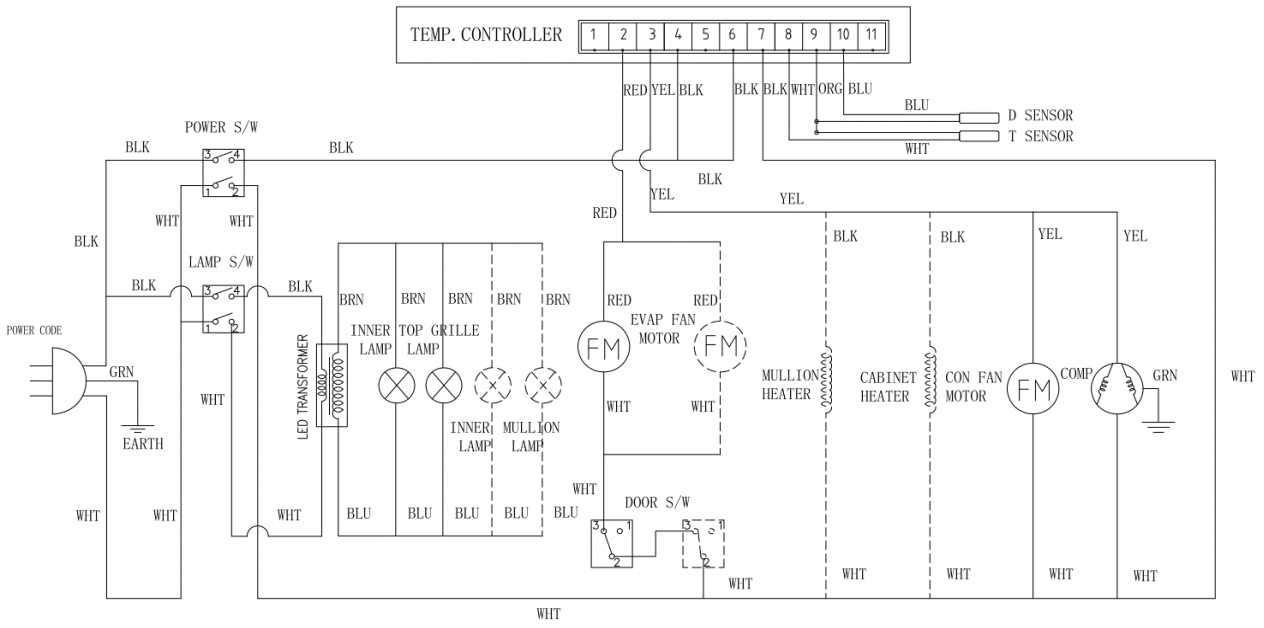
-----: Dotted lines represent optional specifications

Note:

- 1) for ST27BRG: 1 pcs eva. fan motor, 1 pcs door switch
- 2) for ST54BRG: 2 pcs eva. fan motor, 2 pcs door switch

7.0 Illustrations

Illustration 6.3 - Circuit diagram (for ST27BRGC, ST54BRGC)

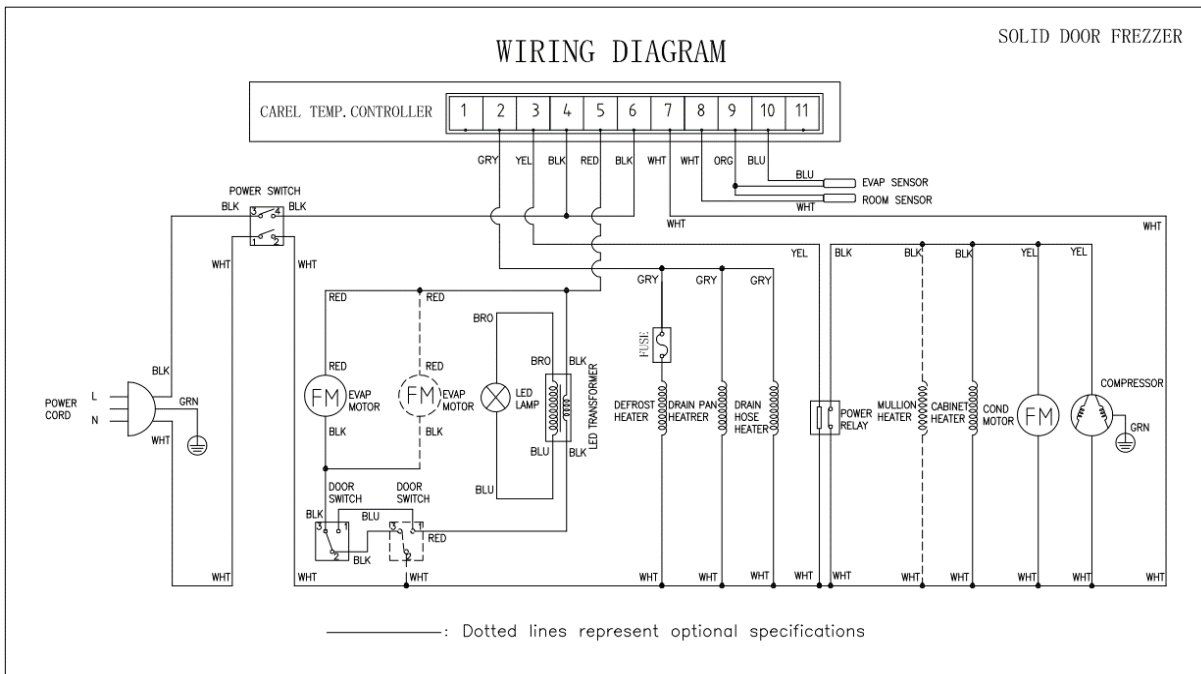


-----: Dotted lines represent optional specifications

Note:

- 1) for ST27BRGC: 1 pcs eva. fan motor, 1 pcs door switch
- 2) for ST54BRGC: 2 pcs eva. fan motor, 2 pcs door switch

Illustration 6.4 - Circuit diagram (for ST27BF, ST54BF)



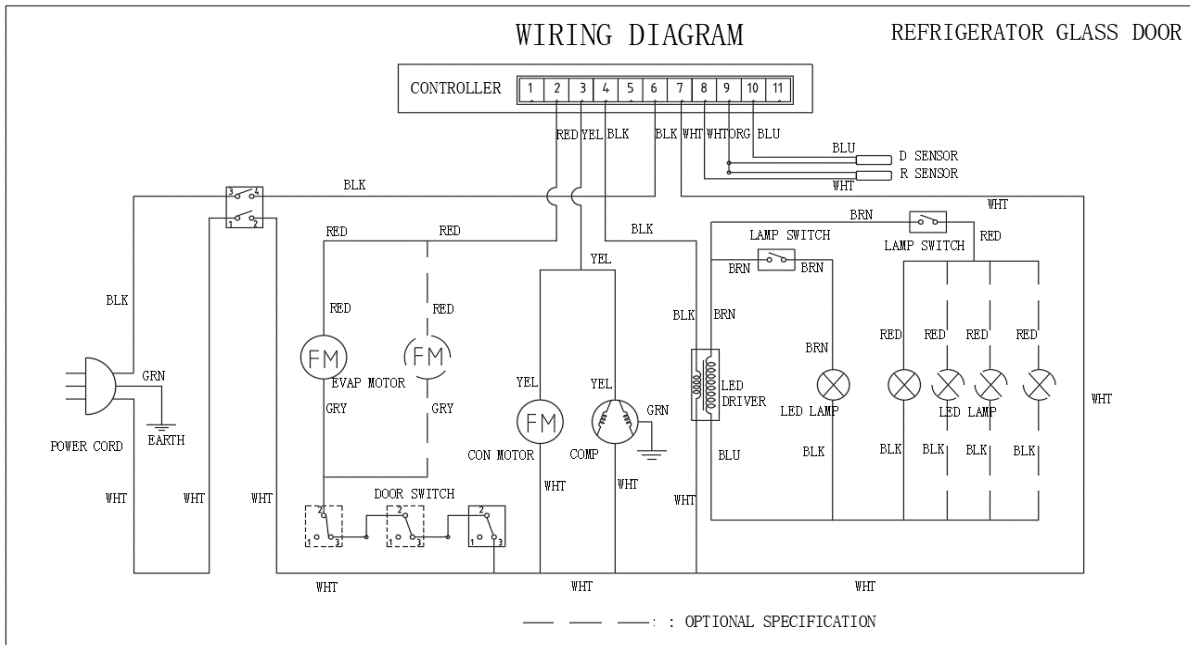
-----: Dotted lines represent optional specifications

Note:

- 1) for ST27BF: 1 pcs eva. fan motor, 1 pcs door switch
- 2) for ST54BF: 2 pcs eva. fan motor, 2 pcs door switch

7.0 Illustrations

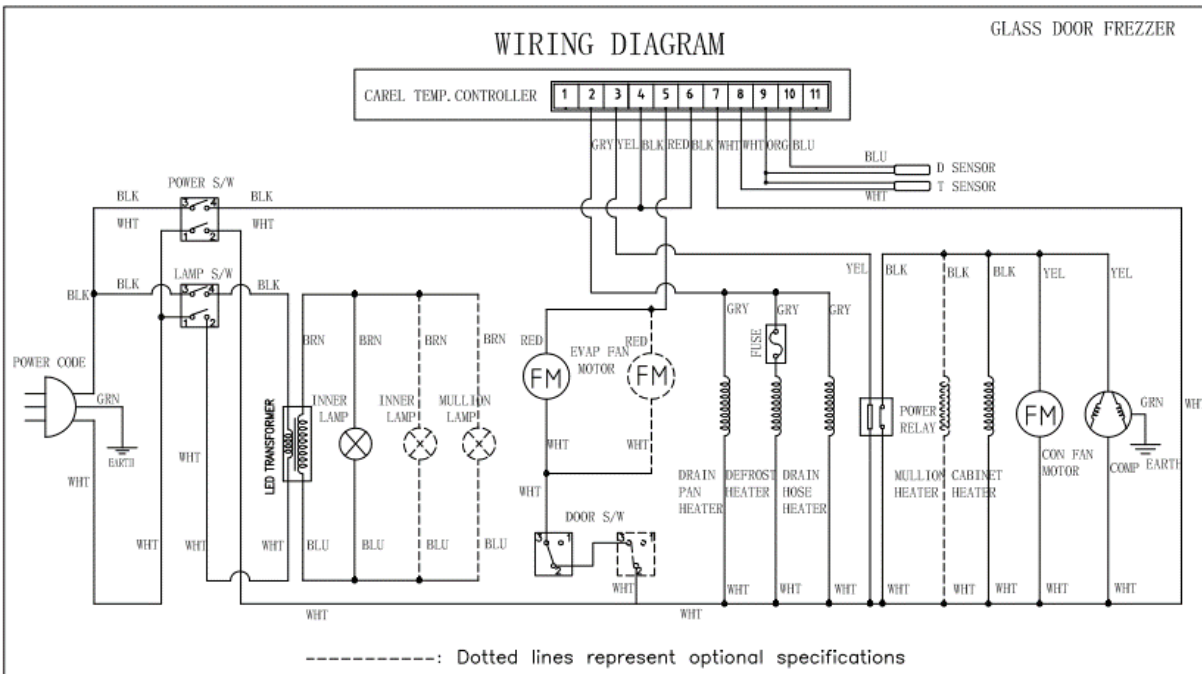
Illustration 6.5 - Circuit diagram (for SC series)



Note:

- 1) for SC350F, SC420F, SC580F, SC690F: 1 pcs eva. fan motor, 1 pcs door switch
- 2) for SC630F, SC630FS, SC908F, SC908FS, SC1180F, SC1390F: 2 pcs eva. fan motor, 2 pcs door switch
- 3) for SC1780F, SC2090F: 2 pcs eva. fan motor, 3 pcs door switch

Illustration 6.6 - Circuit diagram (for ST27BFG, ST54BFG)

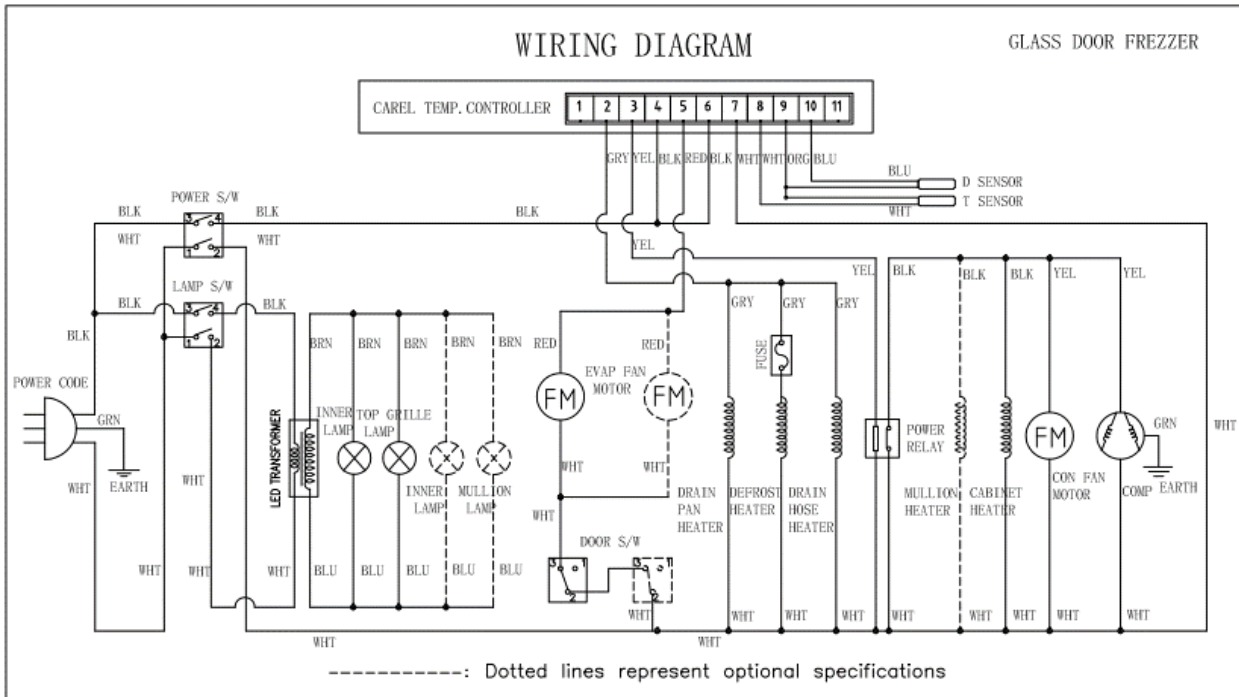


Note:

- 1) for ST27BFG: 1 pcs eva. fan motor, 1 pcs door switch
- 2) for ST54BFG: 2 pcs eva. fan motor, 2 pcs door switch

7.0 Illustrations

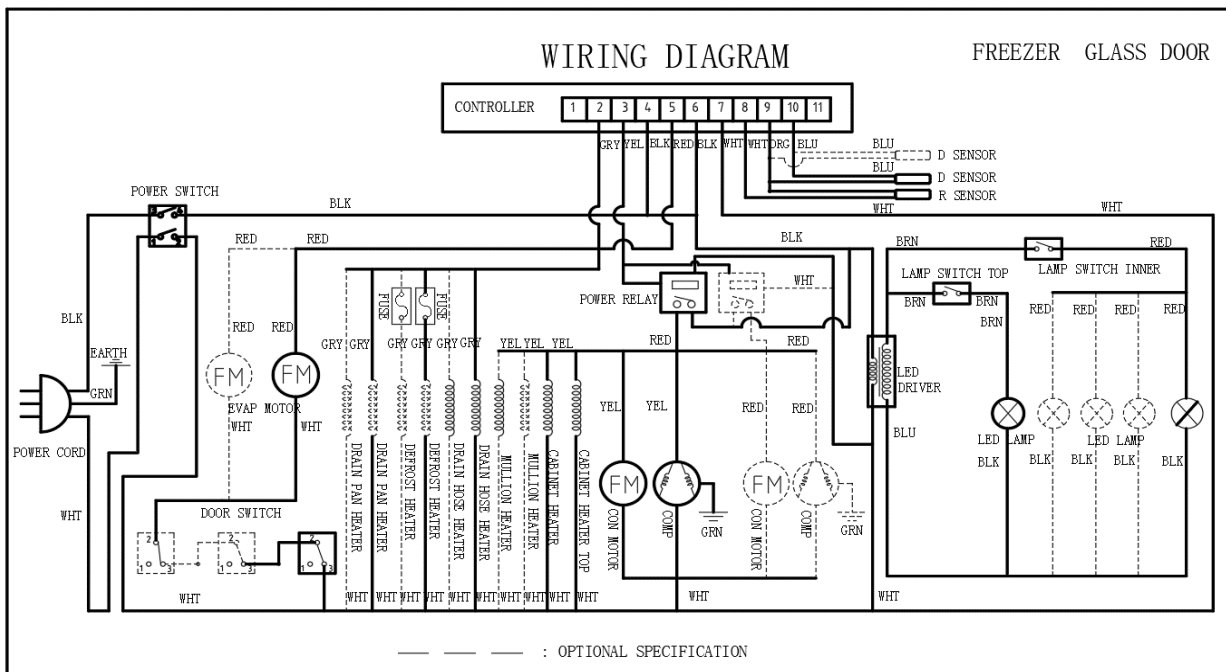
Illustration 6.7 - Circuit diagram (for ST27BFGC, ST54BFGC)



Note:

- 1) for ST27BFGC: 1 pcs eva. fan motor, 1 pcs door switch
- 2) for ST54BFGC: 2 pcs eva. fan motor, 2 pcs door switch

Illustration 6.8 - Circuit diagram (for SD series)

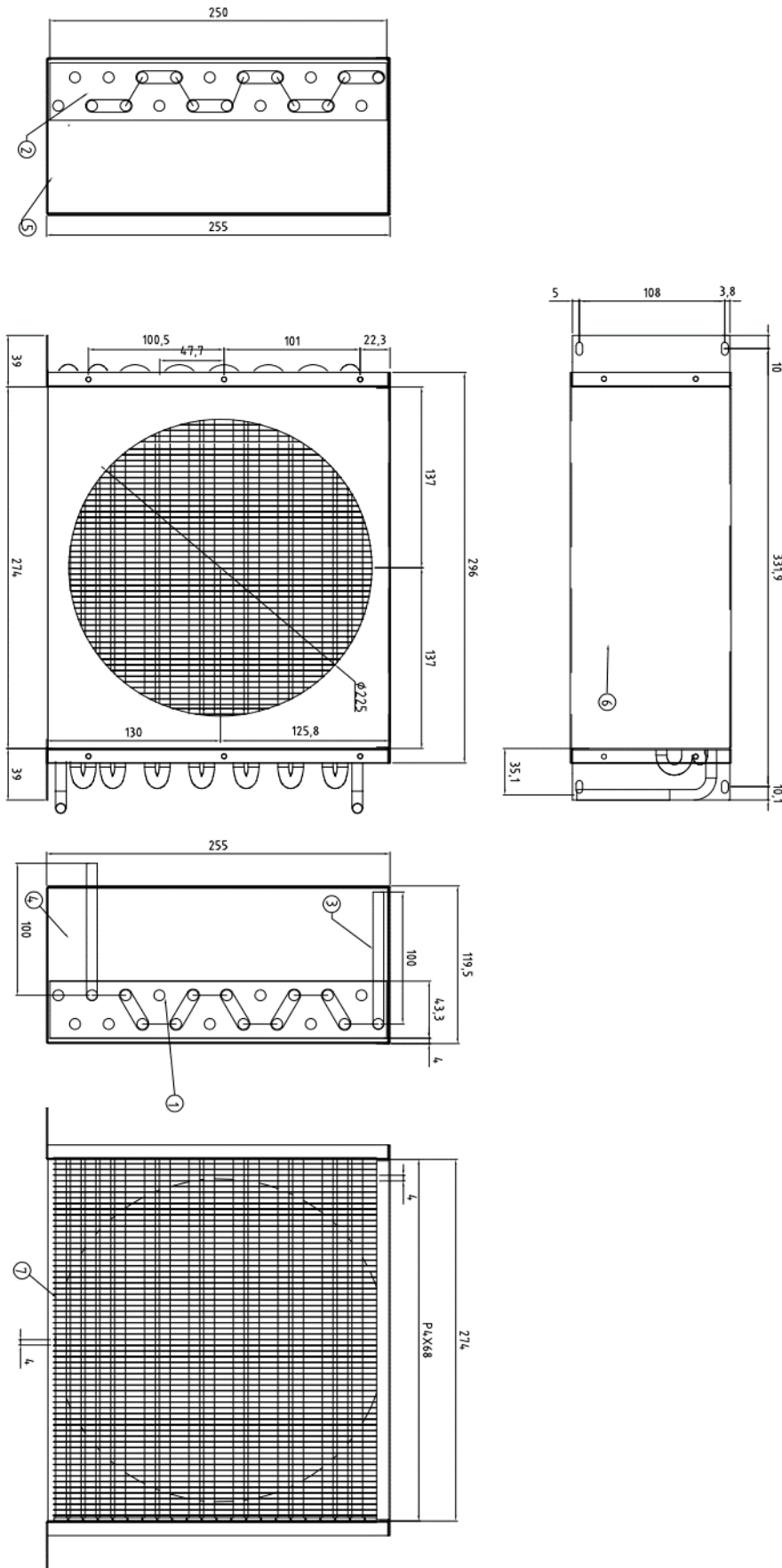


Note:

- 1) for SD580F, SD690F: 1 pcs eva. fan motor, 1 pcs door switch, 1 pcs compressor
- 2) for SD1180F, SD1390F: 2 pcs eva. fan motor, 2 pcs door switch, 1 pcs compressor
- 3) for SD1780F, SD2090F: 2 pcs eva. fan motor, 3 pcs door switch, 2 pcs compressor, 2 con. Fan motor

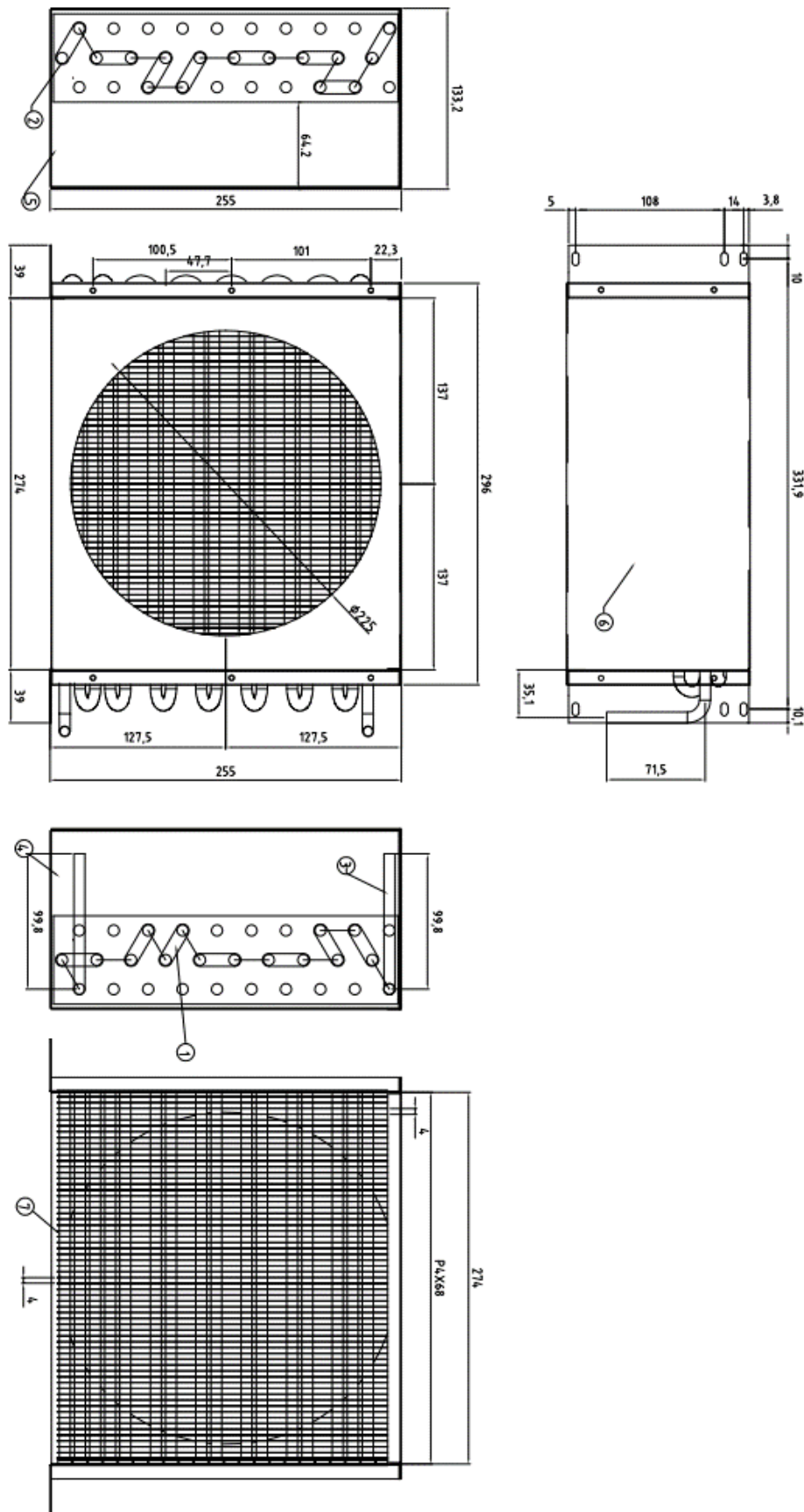
7.0 Illustrations

Illustration 7.1 - Condenser Drawing - ST27BR / ST27BRG / ST27BRGC



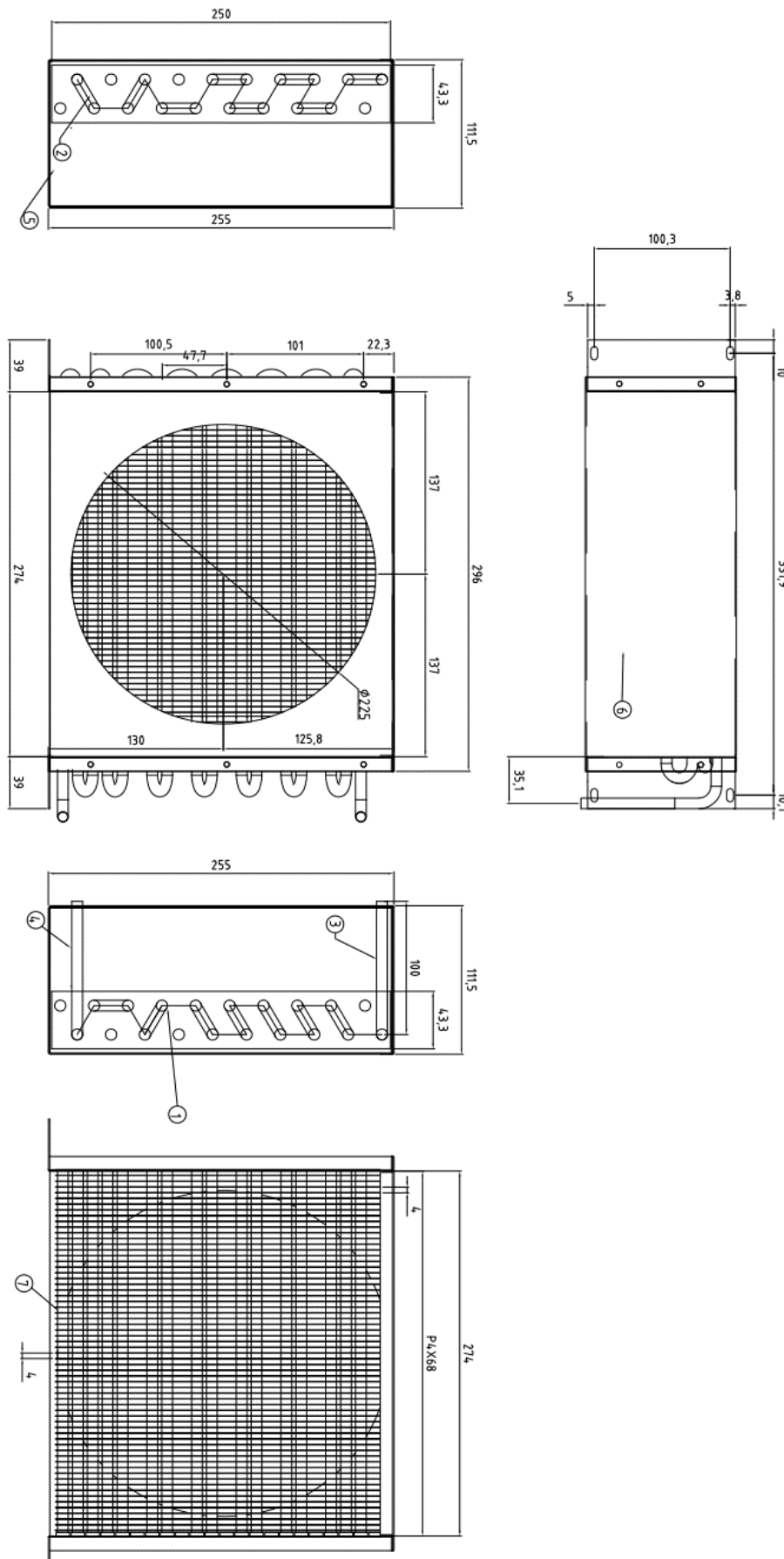
7.0 Illustrations

Illustration 7.2 - Condenser Drawing - ST27BF, ST54BR, ST54BRG, ST54BRGC



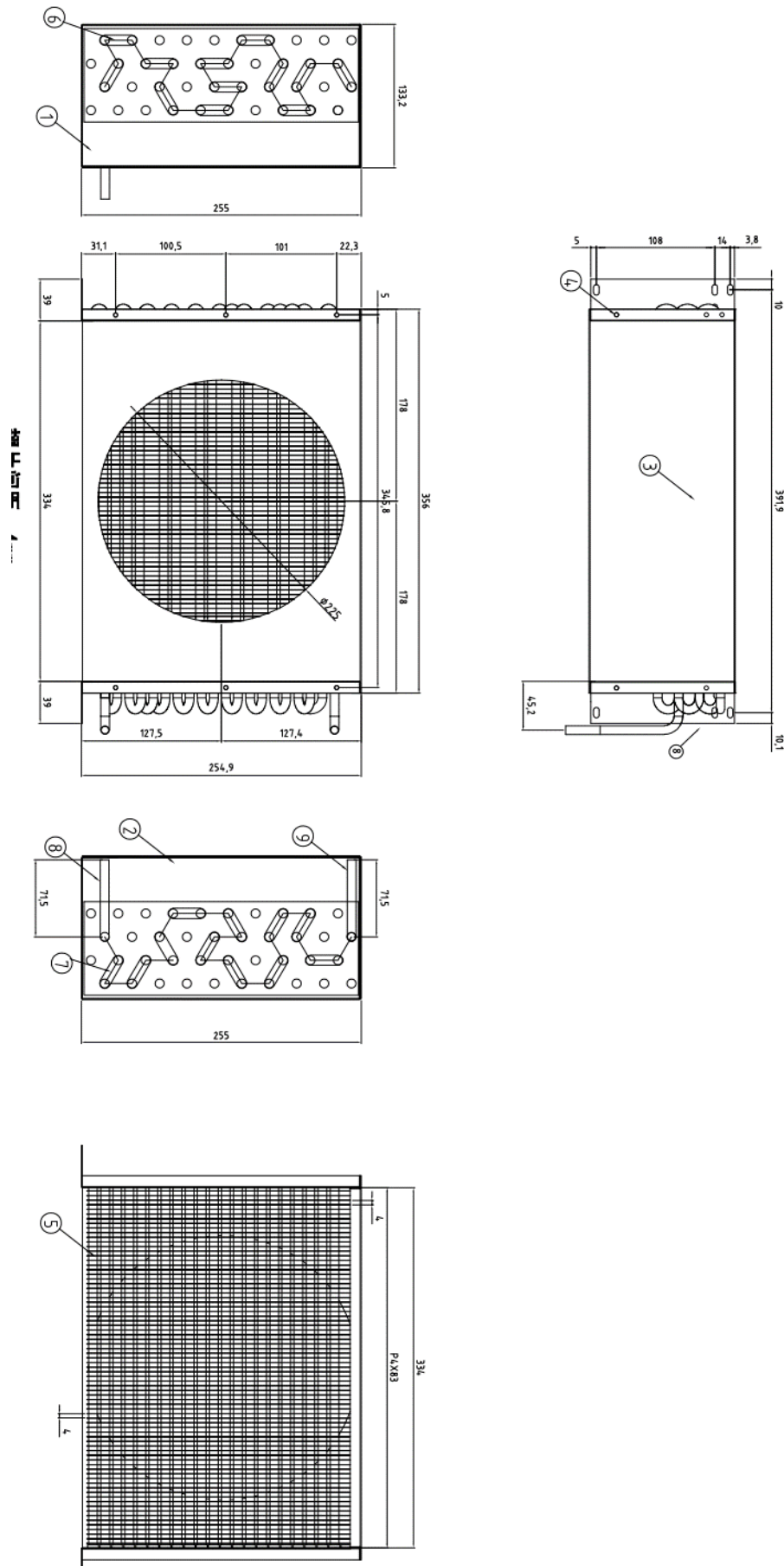
7.0 Illustrations

Illustration 7.3 - Condenser Drawing - SC350F, SC420F, SC580F, SC690F



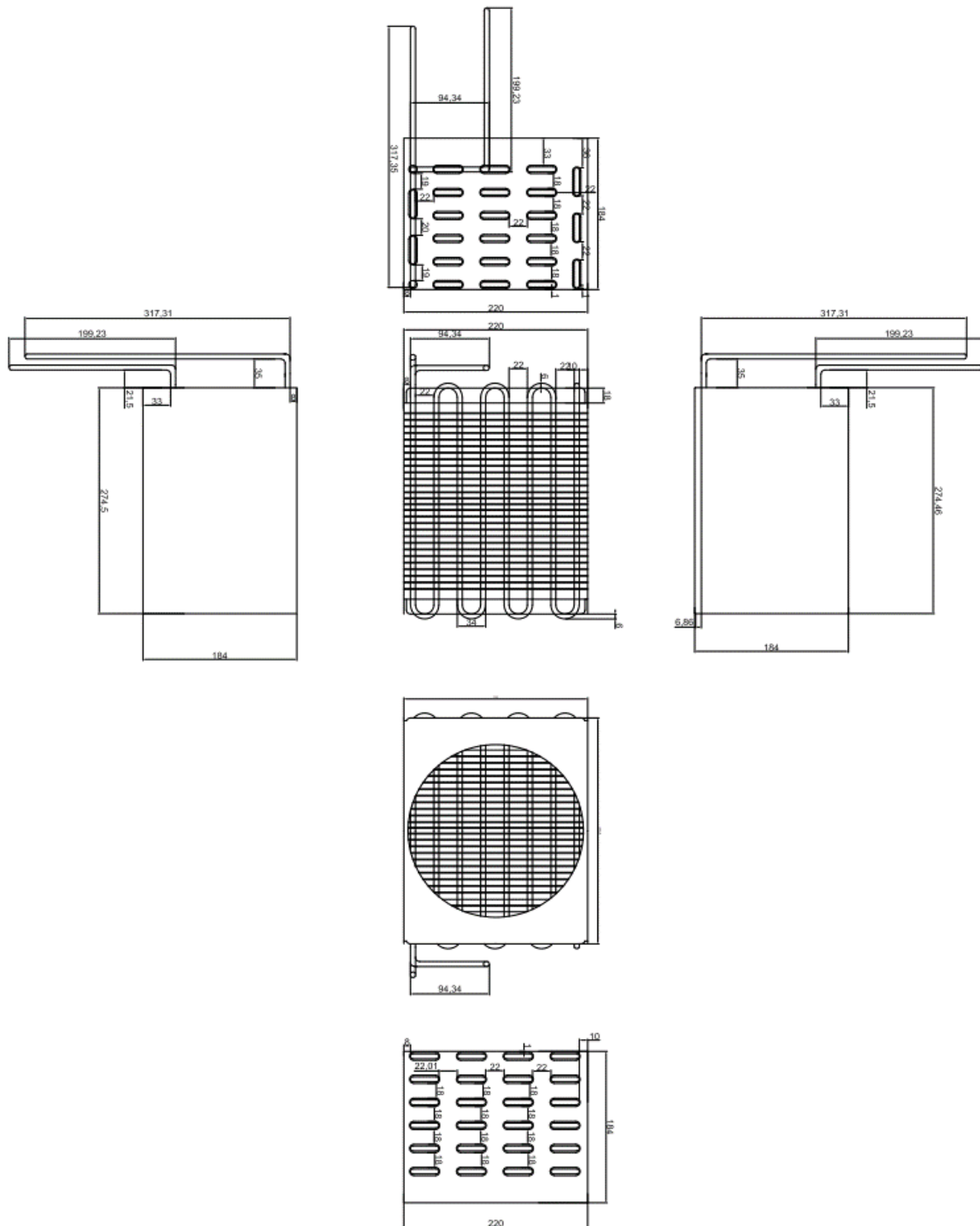
7.0 Illustrations

Illustration 7.4 - Condenser Drawing - ST54BF, SC630F, SC630FS, SC908F, SC908FS, SC1180F, SC1390F, SC1780F, SC2090F



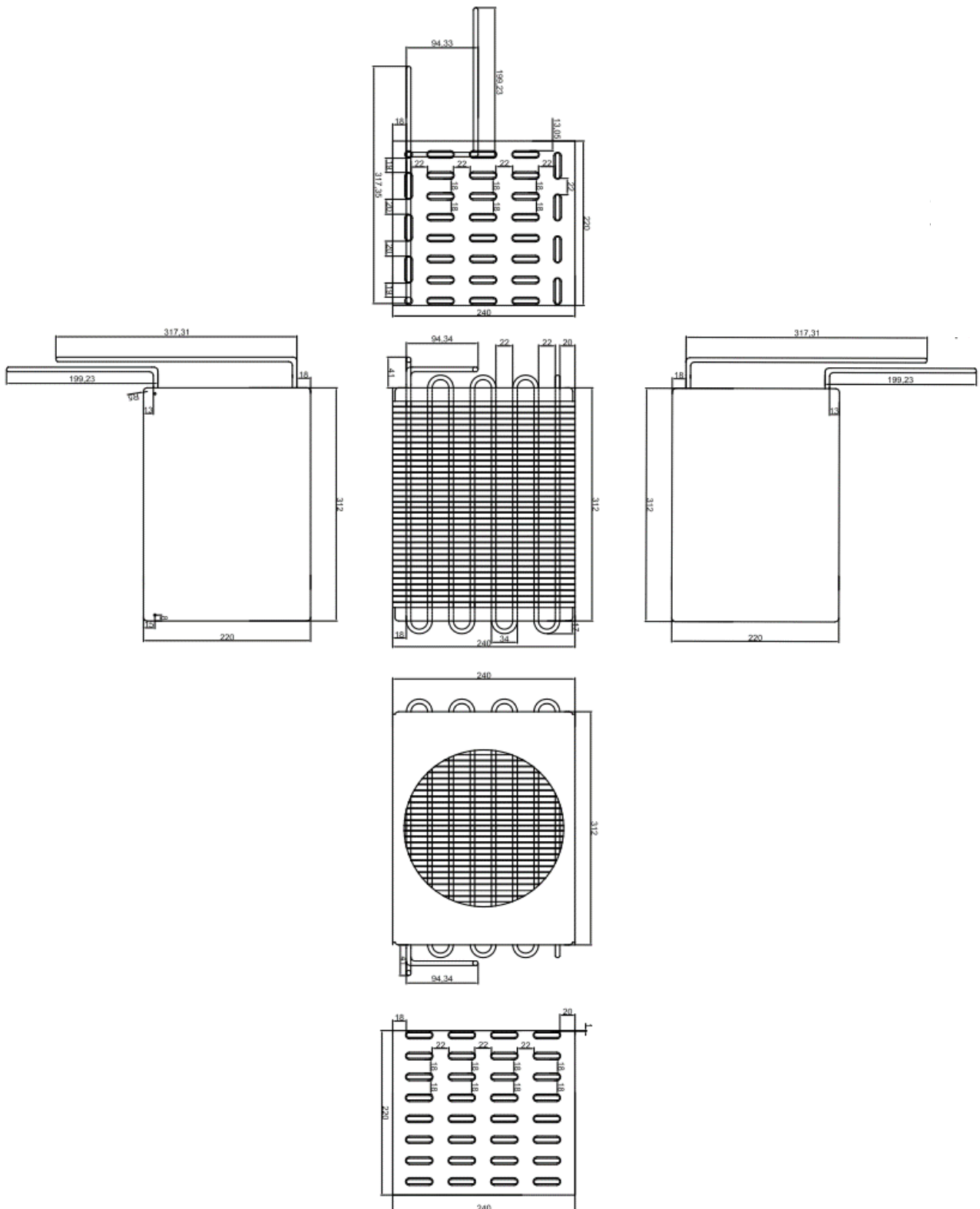
7.0 Illustrations

Illustration 7.5 - Alternative Condenser Drawing - SC350F, SC420F, SC580F, SC690F



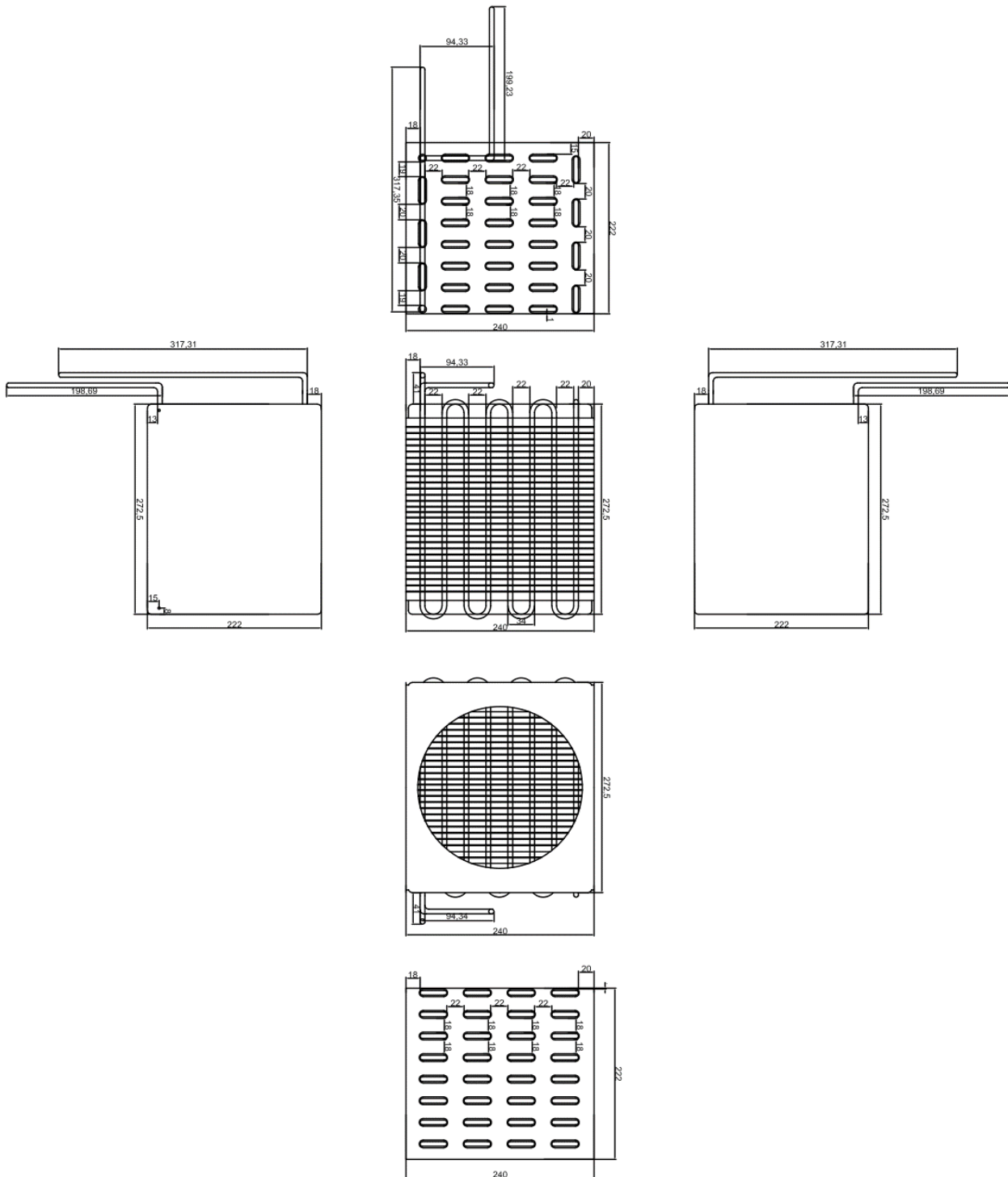
7.0 Illustrations

Illustration 7.6 - Alternative Condenser Drawing - SC630F, SC630FS, SC908F, SC908FS, SC1180F, SC1390F



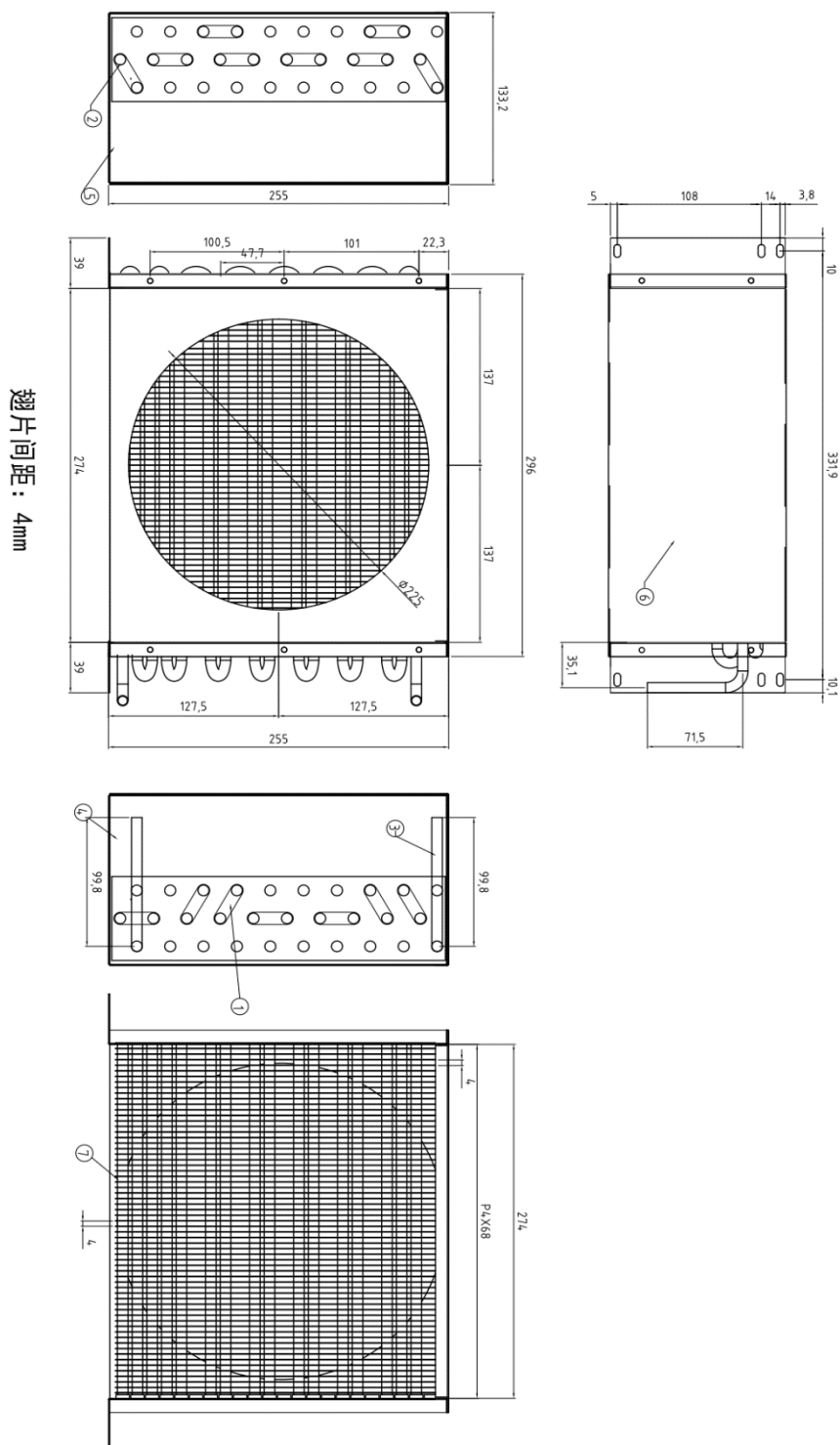
7.0 Illustrations

Illustration 7.7 - Alternative Condenser Drawing - SC1780F, SC2090F



7.0 Illustrations

Illustration 7.8 - Condenser Drawing - ST27BFG, ST27BFGC, ST54BFG, ST54BFGC, SD series

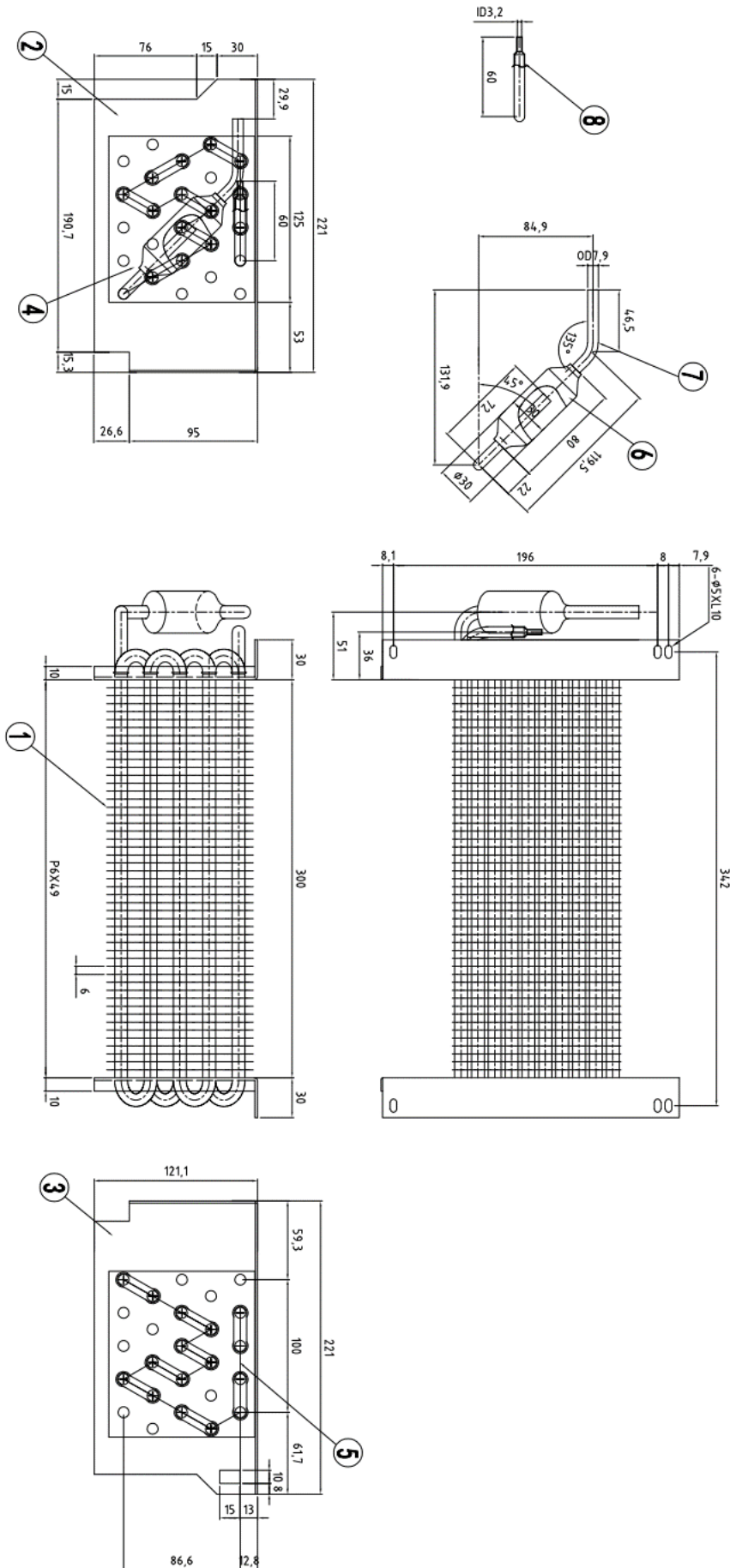


Note:

for ST27BFG,ST27BFGC,ST54BFG,ST54BFGC,SD580F,SD690F,SD1180F,SD1390F, 1 pcs condenser used
 for SD1780F,SD2090F, 2 pcs condenser used

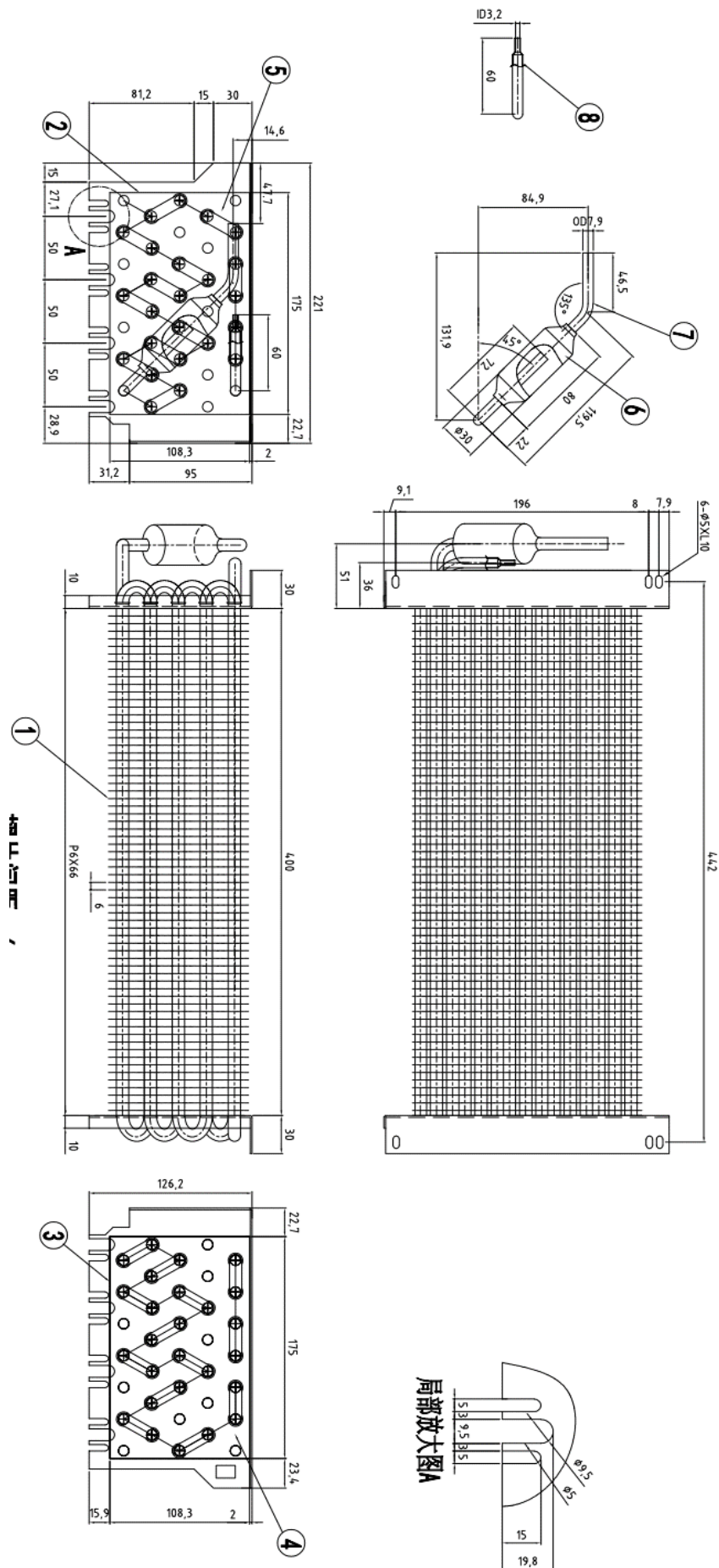
7.0 Illustrations

Illustration 8.1 - Evaporator Drawing - ST27BR, ST27BRG, ST27BRGC



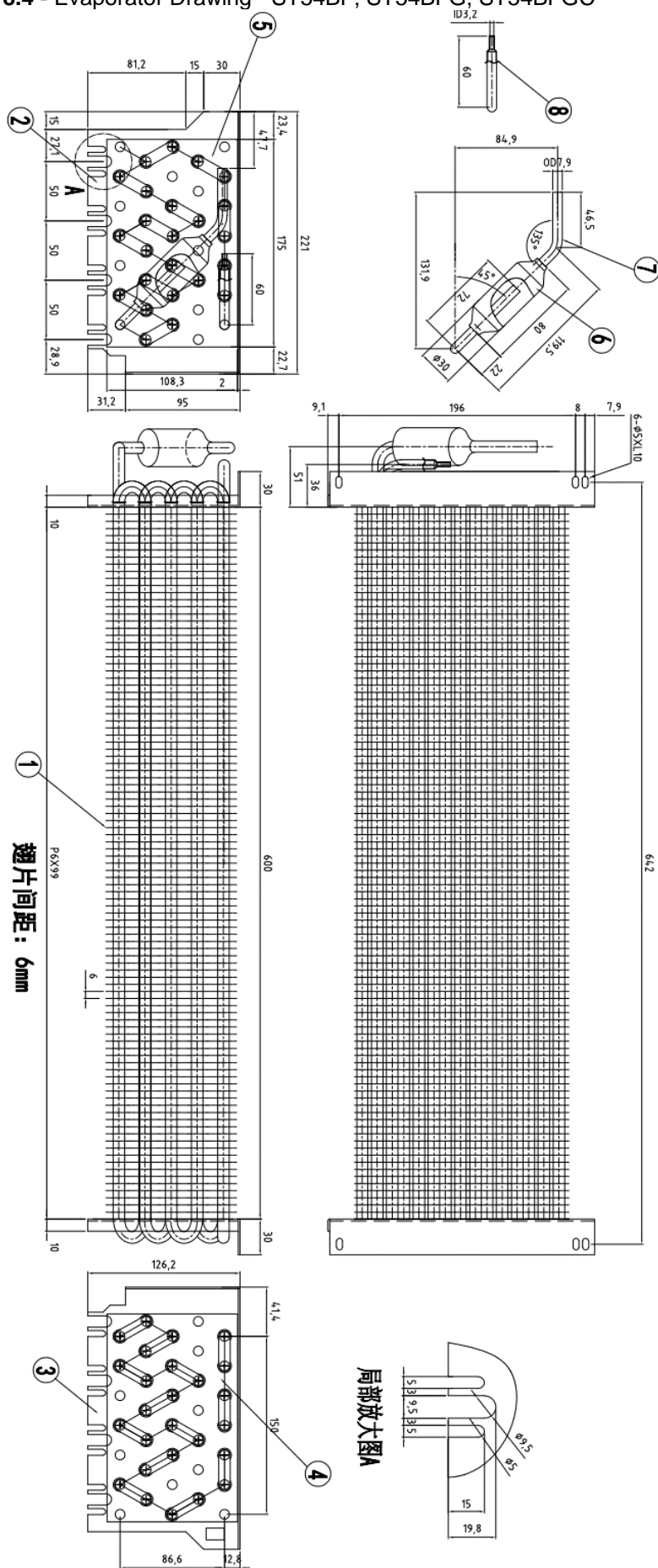
7.0 Illustrations

Illustration 8.2 - Evaporator Drawing - ST27BF



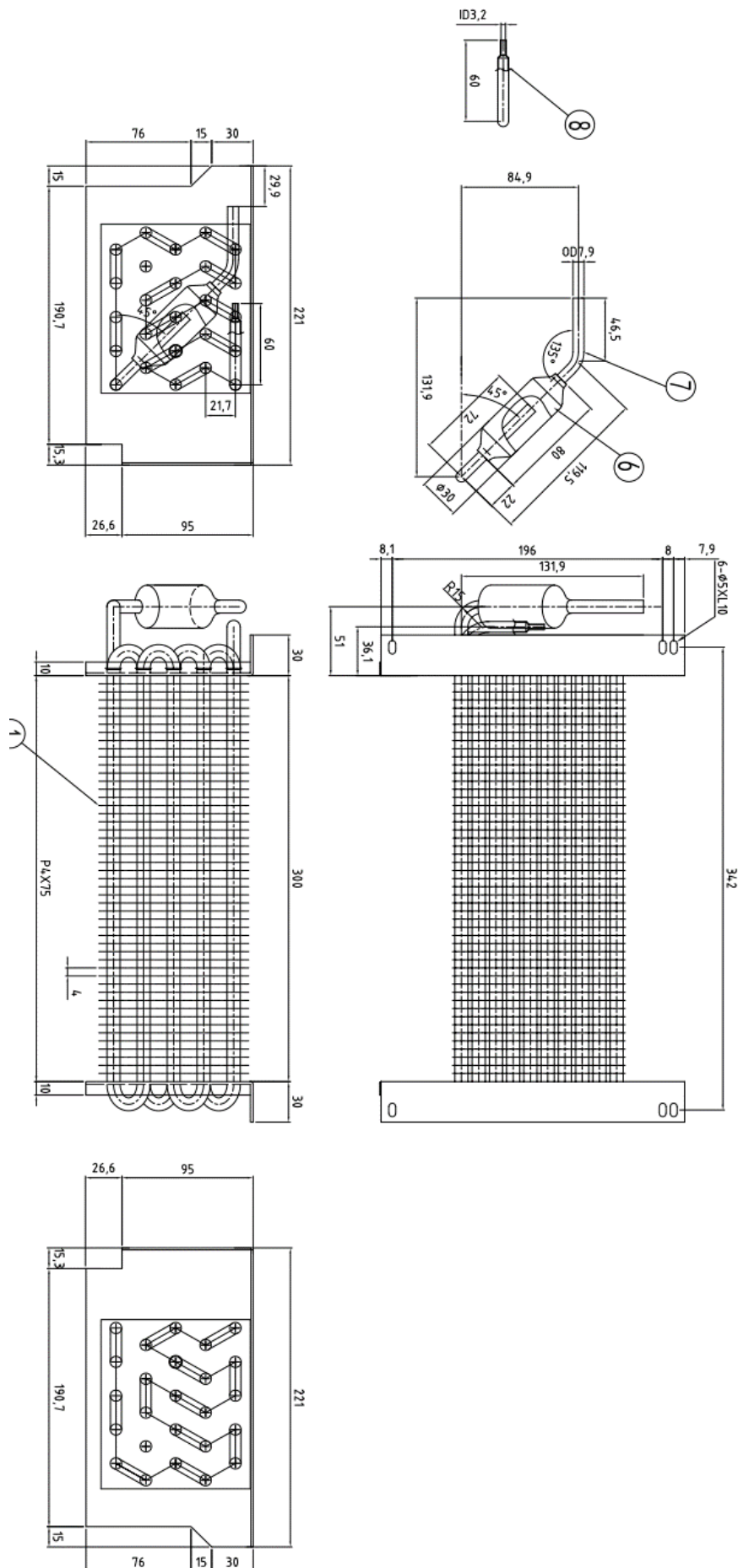
7.0 Illustrations

Illustration 8.4 - Evaporator Drawing - ST54BF, ST54BFG, ST54BFGC



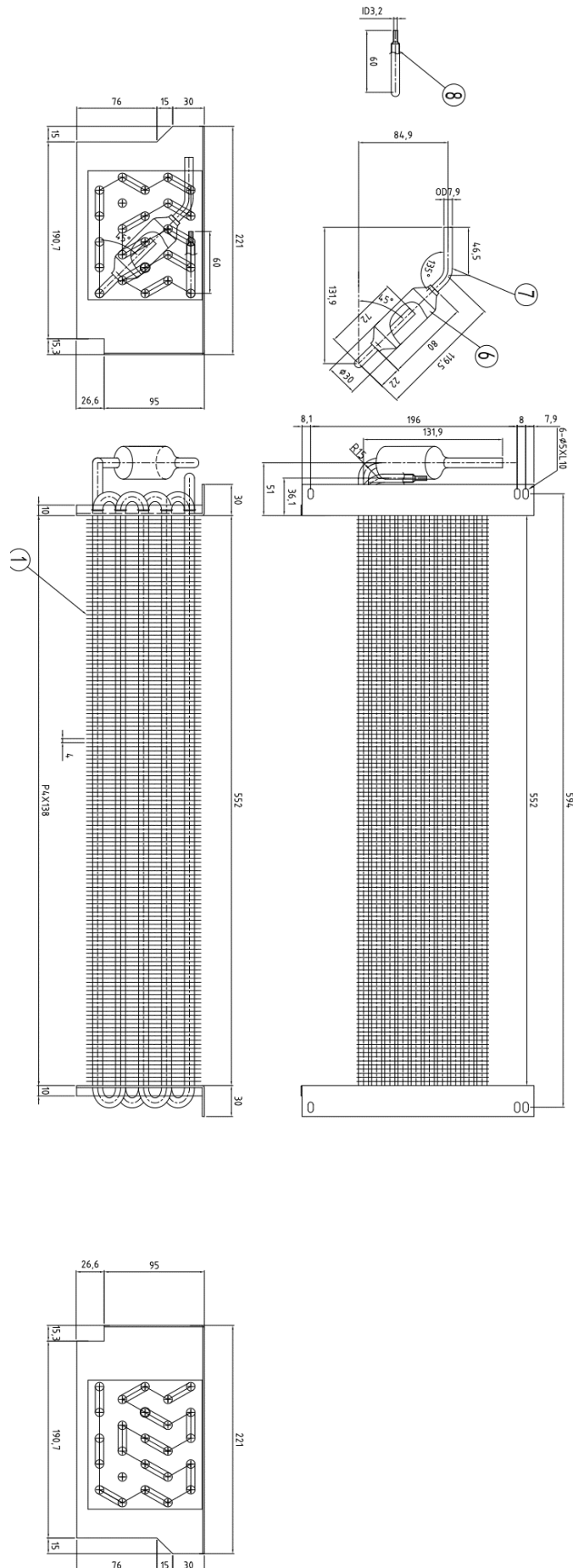
7.0 Illustrations

Illustration 8.5 - Evaporator Drawing - SC350F, SC420F, SC580F, SC690F



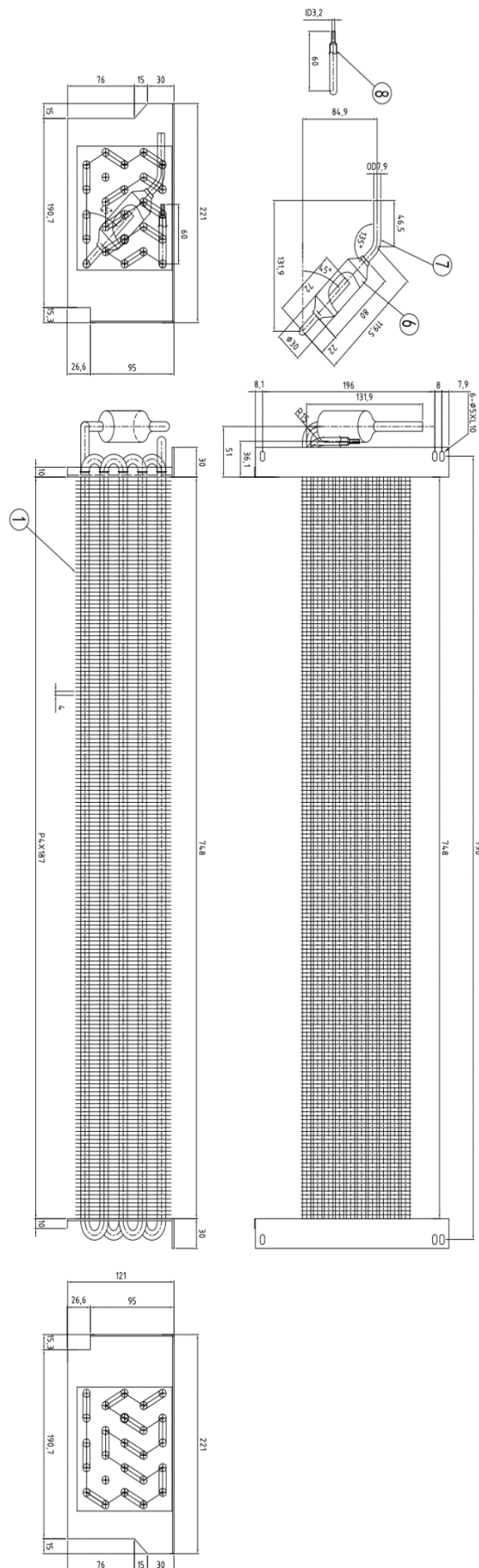
7.0 Illustrations

Illustration 8.6 - Evaporator Drawing - SC630F, SC630FS, SC908F, SC908FS, SC1180F, SC1390F



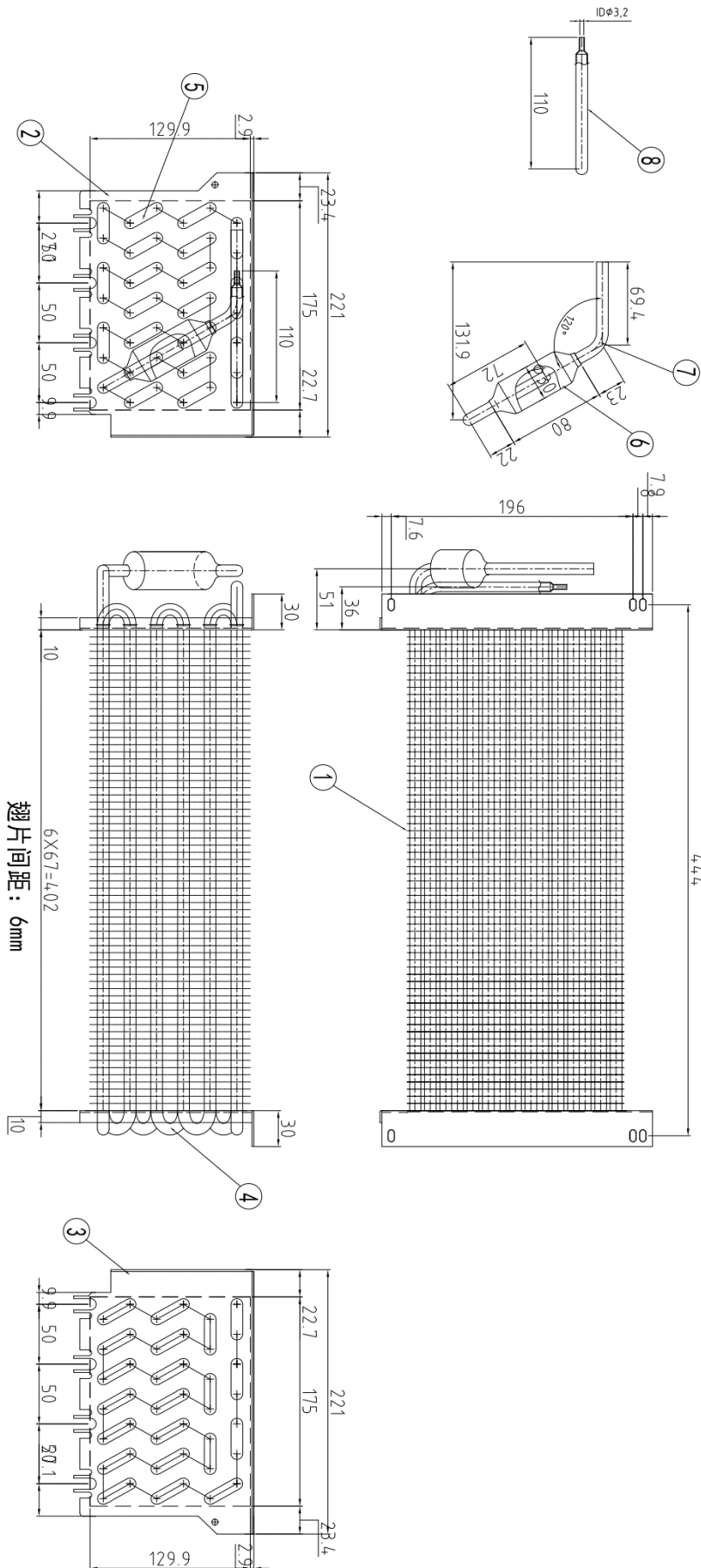
7.0 Illustrations

Illustration 8.7 - Evaporator Drawing - SC1780F, SC2090F



7.0 Illustrations

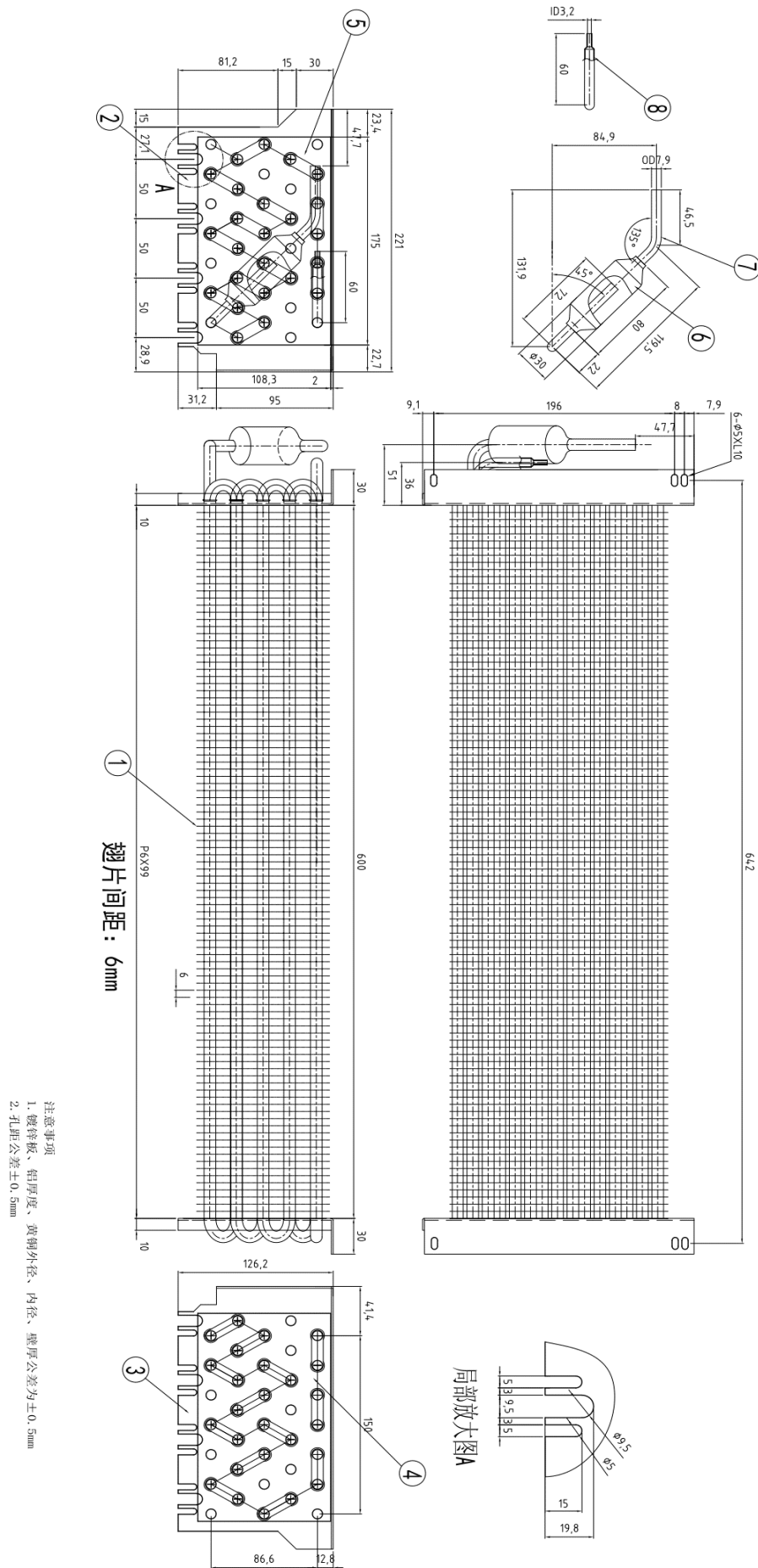
Illustration 8.8 - Evaporator Drawing - ST27BFG, ST27BFGC, SD580F, SD690F, SD1780F, SD2090F



Note: for ST27BFG, ST27BFGC, SD580F, SD690F, 1 pcs evaporator used
 for SD1780F, SD2090F, 2 pcs evaporators used

7.0 Illustrations

Illustration 8.9 - Evaporator Drawing - SD1180F, SD1390F



8.0 Test Summary			
Evaluation Period	2022-5-16 to 2022-10-19		Project No. 220516067GZU
Sample Rec. Date	5/16/2022	Condition	Prototype
			Sample ID. S220516067-001~011
Test Location	Intertek Testing Services Shenzhen Limited Guangzhou Branch (Room 02, &101/E201/E301/E401/E501/E601/E701/E801 of Room 01 1-8/F., No. 7-2, Caipin Road, Science City, GETDD Guangzhou, China)		
Test Procedure	Testing Lab		
Determination of the result includes consideration of measurement uncertainty from the test equipment and methods. The product was tested as indicated below with results in conformance to the relevant test criteria.			
The following tests were performed:			
Test Description	UL 471:2010 Ed.10+R:12Sep 2019 / Clause	CSA C22.2#120:2013 Ed.4 / Clause	
Leakage Current Test - Cord Connected Refrigerators / Leakage Current	41	6.9	
Input Test / Rating	42	6.3	
Starting Test	43	6.13	
Temperature and Pressure Test / Temperature (Norma load)	44	6.4	
Heating Test - Condensation Wiring / Temperature (condensation Wiring)	45	6.6	
Defrost Test / Temperature (defrost)	47	6.7	
Dielectric Voltage-Withstand Test / Dielectric Strength	48	6.10	
Condenser Fan Motor Failure Test / Temperature (Abnormal Operation)	49	6.11.1	
Overflow Test	52	6.23	
Stability	54	6.29	
Strain Relief Test / Strain Relief (Supply Cord)	56	6.24	
Abnormal Operation Test - Electric Heater / Temperature (Abnormal Operation)	59	6.11.6	
Insulation Resistance Test / Insulation Resistance(defrost heater)	65	6.8	
Strength Tests- Pressure Containing Components / Pressure Tests	68	6.26	
Shelf Strength Test	72	6.31	
Component Restraint Test	73	6.32	
Glass Strength Test / Impact test (Glass Assemblies)	74	6.17	
Accelerated Aging Test - Electric Heaters	76	-	
Reliability Test - Heater Terminations	77	-	
Cabinet Strength Test	--	6.15	
Impact test (Enclosures)	--	6.16	
Moisture Absorption Resistance	--	6.20	
Door Latch Release	--	6.22	
Spill Test	--	6.30	
Leakage Test	SB5.1	E5.1	
Temperature Test	SB5.3	E5.3	

8.0 Test Summary

Evaluation Period	2022-12-20 to 2023-1-16		Project No.	221220038GZU
Sample Rec. Date	12/20/2022	Condition	Prototype	Sample ID. S221220038-001~006
Test Location	Intertek Testing Services Shenzhen Limited Guangzhou Branch (Room 02, &101/E201/E301/E401/E501/E601/E701/E801 of Room 01 1-8/F., No. 7-2, Caipin Road, Science City, GETDD Guangzhou, China)			
Test Procedure	Testing Lab			
Determination of the result includes consideration of measurement uncertainty from the test equipment and methods. The product was tested as indicated below with results in conformance to the relevant test criteria.				
The following tests were performed:				
Test Description			UL 471:2010 Ed.10+R:12Sep 2019 / Clause	CSA C22.2#120:2013 Ed.4 / Clause
Leakage Current Test - Cord Connected Refrigerators / Leakage Current			41	6.9
Input Test / Rating			42	6.3
Starting Test			43	6.13
Temperature and Pressure Test / Temperature (Norma load)			44	6.4
Defrost Test / Temperature (defrost)			47	6.7
Dielectric Voltage-Withstand Test / Dielectric Strength			48	6.10
Condenser Fan Motor Failure Test / Temperature (Abnormal Operation)			49	6.11.1
Strain Relief Test / Strain Relief (Supply Cord)			56	6.24
Abnormal Operation Test - Electric Heater / Temperature (Abnormal Operation)			59	6.11.6
Insulation Resistance Test / Insulation Resistance(defrost heater)			65	6.8
Strength Tests- Pressure Containing Components / Pressure Tests			68	6.26
Shelf Strength Test			72	6.31
Glass Strength Test / Impact test (Glass Assemblies)			74	6.17
Accelerated Aging Test - Electric Heaters			76	-
Reliability Test - Heater Terminations			77	-
Moisture Absorption Resistance			--	6.20
Leakage Test			SB5.1	E5.1
Temperature Test			SB5.3	E5.3

8.1 Signatures

A representative sample of the product covered by this report has been evaluated and found to comply with the applicable requirements of the standards indicated in Section 1.0.

Completed by:	John Li	Reviewed by:	Kelvin Guan
Title:	Sr. Project Engineer	Title:	Supervisor
Signature:	<i>Signature on file</i>	Signature:	<i>Signature on file</i>

9.0 Correlation Page For Multiple Listings

The following products, which are identical to those identified in this report except for model number and Listee name, are authorized to bear the ETL label under provisions of the Intertek Multiple Listing Program.

BASIC LISTEE	Shandong Xinhai Intelligent Technology Co., Ltd.
Address	No. 37, Huaihe Road, Shibe Economic Development Zone, Wulian County, Rizhao City, Shandong Province
Country	China
Product	Commercial Refrigerator / Freezer

MULTIPLE LISTEE 1	Genkraft Technologies Corp
Address	11990 Rivera Rd Santa Fe Springs, CA 90670
Country	USA
Brand Name	GENKRAFT

ASSOCIATED MANUFACTURER	Shandong Xinhai Intelligent Technology Co., Ltd.
Address	No. 37, Huaihe Road, Shibe Economic Development Zone, Wulian County, Rizhao City, Shandong Province
Country	China

MULTIPLE LISTEE 1 MODELS	BASIC LISTEE MODELS
GST23-BR	ST27BR
GST23-BF	ST27BF
GST49-BR	ST54BR
GST49-BF	ST54BF
GST23-BRG	ST27BRG
GST49-BRG	ST54BRG

MULTIPLE LISTEE 2	Greenfield World Trade Inc dba The Legacy Companies
Address	3355 Enterprise Avenue, Weston, FL, 33331
Country	USA
Brand Name	KRATOS, MAXX COLD, DURRA

ASSOCIATED MANUFACTURER	Shandong Xinhai Intelligent Technology Co., Ltd.
Address	No. 37, Huaihe Road, Shibe Economic Development Zone, Wulian County, Rizhao City, Shandong Province
Country	China

MULTIPLE LISTEE 2 MODELS	BASIC LISTEE MODELS
69K-759HC, 69K-887PHC, MXSR-23FDHC, DUR1	ST27BR
69K-765HC, 69K-889PHC, MXSF-23FDHC, DUF1	ST27BF
69K-773HC, 69K-888PHC, MXSR-49FDHC, DUR2	ST54BR
69K-774HC, 69K-890PHC, MXSF-49FDHC, DUF2	ST54BF
69K-760HC, MXSR-23GDHC, DUR1G	ST27BRG
69K-761HC, MXSR-49GDHC, DUR2G	ST54BRG

9.0 Correlation Page For Multiple Listings

MULTIPLE LISTEE 3	Broich Enterprises, Inc
Address	7550 Market Place Drive, Eden Prairie, MN 55344
Country	USA
Brand Name	ARCTIC AIR, GENKRAFT

ASSOCIATED MANUFACTURER	Shandong Xinhai Intelligent Technology Co., Ltd.
Address	No. 37, Huaihe Road, Shibe Economic Development Zone, Wulian County, Rizhao City, Shandong Province
Country	China

MULTIPLE LISTEE 3 MODELS	BASIC LISTEE MODELS
AGR23	ST27BRG
AGR49	ST54BRG
AGDF23	ST27BFG
AGDF49	ST54BFG

MULTIPLE LISTEE 4	Blueline Technology INC
Address	11331 183rd Street #1091, Cerritos, CA, 90703
Country	USA
Brand Name	Bluelinetech

ASSOCIATED MANUFACTURER	Shandong Xinhai Intelligent Technology Co., Ltd.
Address	No. 37, Huaihe Road, Shibe Economic Development Zone, Wulian County, Rizhao City, Shandong Province
Country	China

MULTIPLE LISTEE 4 MODELS	BASIC LISTEE MODELS
BRI27RA	ST27BR
BRI27FA	ST27BF
BRI54RA	ST54BR
BRI54FA	ST54BF
BMD27RGA	ST27BRG
BMD27RGLA	ST27BRGC
BMD54RGA	ST54BRG
BMD54RGLA	ST54BRGC
SC690FA	SC690F
SC1390FA	SC1390F
SC2090FA	SC2090F
SC580FA	SC580F
SC1180FA	SC1180F
SC1780FA	SC1780F

9.0 Correlation Page For Multiple Listings

MULTIPLE LISTEE 5	US Restaurant Group Inc.
Address	P.O. Box 1323 Long Island City, NY 11101
Country	USA
Brand Name	COLDLINE

ASSOCIATED MANUFACTURER	Shandong Xinhai Intelligent Technology Co., Ltd.
Address	No. 37, Huaihe Road, Shibei Economic Development Zone, Wulian County, Rizhao City, Shandong Province
Country	China

MULTIPLE LISTEE 5 MODELS	BASIC LISTEE MODELS
C-1RE	ST27BR
C-1FE	ST27BF
C-2RE	ST54BR
C-2FE	ST54BF
C-1RG	ST27BRG
C-1RGL	ST27BRGC
C-2FG	ST54BRG
C-2FGL	ST54BRGC
SC690F	SC690F
SC1390F	SC1390F
SC2090F	SC2090F
SC580F	SC580F
SC1180F	SC1180F
SC1780F	SC1780F
ST27BFG	ST27BFG
ST27BFGC	ST27BFGC
ST54BFG	ST54BFG
ST54BFGC	ST54BFGC
SD690F	SD690F
SD1390F	SD1390F
SD2090F	SD2090F
SD580F	SD580F
SD1180F	SD1180F
SD1780F	SD1780F
SC350F	SC350F
SC420F	SC420F
SC630FS	SC630FS
SC908FS	SC908FS
SC630F	SC630F
SC908F	SC908F
SC1390FS	SC1390FS
SC2090FS	SC2090FS
SC1180FS	SC1180FS
SC1780FS	SC1780FS

9.0 Correlation Page For Multiple Listings

MULTIPLE LISTEE 6	NORTH AMERICAN RESTAURANT EQUIPMENT
Address	10 INDUSTRIAL DRIVE, SMITHFIELD RI 02917
Country	USA
Brand Name	NORTH AMERICAN REFRIGERATION

ASSOCIATED MANUFACTURER	Shandong Xinhai Intelligent Technology Co., Ltd.
Address	No. 37, Huaihe Road, Shibe Economic Development Zone, Wulian County, Rizhao City, Shandong Province
Country	China

MULTIPLE LISTEE 6 MODELS	BASIC LISTEE MODELS
A1DC-2	ST27BR
A1DF-2	ST27BF
A2DC-2	ST54BR
A2DF-2	ST54BF
AGDC-2	ST54BRG
AGDF-2	ST54BFG
AGDC-1	ST27BRG
AGDF-1	ST27BFG

9.0 Correlation Page For Multiple Listings

MULTIPLE LISTEE 7	HONEY MANAGEMENT GROUP,INC.
Address	14923 PROCTOR AVE, CITY OF INDUSTRY, CA 91746
Country	USA
Brand Name	COOLER DEPOT

ASSOCIATED MANUFACTURER	Shandong Xinhai Intelligent Technology Co., Ltd.
Address	No. 37, Huaihe Road, Shibe Economic Development Zone, Wulian County, Rizhao City, Shandong Province
Country	China

MULTIPLE LISTEE 7 MODELS	BASIC LISTEE MODELS
ST27BR	ST27BR
ST27BF	ST27BF
ST54BR	ST54BR
ST54BF	ST54BF
ST27BRG	ST27BRG
ST27BRGC	ST27BRGC
ST54BRG	ST54BRG
ST54BRGC	ST54BRGC
SC690F	SC690F
SC1390F	SC1390F
SC2090F	SC2090F
SC580F	SC580F
SC1180F	SC1180F
SC1780F	SC1780F
ST27BFG	ST27BFG
ST27BFGC	ST27BFGC
ST54BFG	ST54BFG
ST54BFGC	ST54BFGC
SD690F	SD690F
SD1390F	SD1390F
SD2090F	SD2090F
SD580F	SD580F
SD1180F	SD1180F
SD1780F	SD1780F
SC350F	SC350F
SC420F	SC420F
SC630FS	SC630FS
SC908FS	SC908FS
SC630F	SC630F
SC908F	SC908F
SC1390FS	SC1390FS
SC2090FS	SC2090FS
SC1180FS	SC1180FS
SC1780FS	SC1780FS

9.0 Correlation Page For Multiple Listings

MULTIPLE LISTEE 8	Anhui Weiye Refrigeration Technology Ltd	
Address	No. 168 North Jingqi Rd, Industrial Zone, Tianchang City, Anhui 239300	
Country	China	
Brand Name	FRICOOL	
ASSOCIATED MANUFACTURER	Shandong Xinhai Intelligent Technology Co., Ltd.	
Address	No. 37, Huaihe Road, Shibe Economic Development Zone, Wulian County, Rizhao City, Shandong Province	
Country	China	
MULTIPLE LISTEE 8 MODELS		
	SS23R	ST27BR
	SS23F	ST27BF
	SS54R	ST54BR
	SS54F	ST54BF
	SG23R	ST27BRG
	SG49R	ST54BRG
BASIC LISTEE MODELS		

MULTIPLE LISTEE 9	Consolidated Brands of America, LLC	
Address	251 LITTLE FALLS DRIVE, WILMINGTON, DE, 19808	
Country	USA	
Brand Name	ATLAS AIR	
ASSOCIATED MANUFACTURER	Shandong Xinhai Intelligent Technology Co., Ltd.	
Address	No. 37, Huaihe Road, Shibe Economic Development Zone, Wulian County, Rizhao City, Shandong Province	
Country	China	
MULTIPLE LISTEE 9 MODELS		
	A1, A1-SI	ST27BR
	A1F, A1F-SI	ST27BF
	A2, A2-SI	ST54BR
	A2F, A2F-SI	ST54BF
	A24GDM	SC690F
	A49GDM	SC1390F
	A72GDM	SC2090F
BASIC LISTEE MODELS		

10.0 General Information

The Applicant and Manufacturer have agreed to produce, test and label ETL Listed products in accordance with the requirements of this Report. The Manufacturer has also agreed to notify Intertek and to request authorization prior to using alternate parts, components or materials.

COMPONENTS

Components used shall be those itemized in this Intertek report covering the product, including any amendments

LISTING MARK

The ETL Listing mark applied to the products shall either be separable in form, such as labels purchased from Intertek, or on a product nameplate or other media only as specifically authorized by Intertek. Use of the mark is subject to the control of Intertek.

The mark must include the following four items:

- 1) applicable country identifiers "US" and/or "C" or "US", "C" and "EU"
- 2) the word "Listed" or "Classified" or "Recognized Component" (whichever is appropriate)
- 3) a control number issued by Intertek
- 4) a product descriptor that identifies the standards used for certification. Example:

For US standards, the words, "Conforms to" shall appear with the standard number along with the word, "Standard" or "Std." Example: "Conforms to ANSI/UL Std. XX."

For Canadian standards, the words "Certified to CAN/CSA Standard CXX No. XX." shall be used, or abbreviated, "Cert. to CAN/CSA Std. CXX No. XX."

Can be used together when both standards are used.

If all standards on the ATM have the same standard title, the shared title or its abbreviation may be used in place of the examples above. Example: "Medical Electrical Equipment" or "MEE"; "Information Technology Equipment" or "ITE"; "Audio/Video Information And Communication Technology Equipment" or "A/V ICTE".

Note: A facsimile must be submitted to Intertek, Attn: Follow-up Services for approval prior to use.

The facsimile need not have a control number. A control number will be issued **after signed Certification Agreements** have been received by the Follow-up Services office, approval of the facsimile of your proposed Listing Mark, satisfactory completion of the Listing Report, and scheduling of a factory assessment in your facility.

MANUFACTURING AND PRODUCTION TESTS

Manufacturing and Production Tests shall be performed as required in this Report.

FOLLOW-UP SERVICE

Periodic unannounced audits of the manufacturing facility (and any locations authorized to apply the mark) shall be scheduled by Intertek. An audit report shall be issued after each visit. Special attention will be given to the following:

1. Conformance of the manufactured product to the descriptions in this Report.
2. Conformance of the use of the ETL mark with the requirements of this Report and the Certification Agreement.
3. Manufacturing changes.
4. Performance of specified Manufacturing and Production Tests.

In the event that the Intertek representative identifies non-conformance(s) to any provision of this Report, the Applicant shall take one or more of the following actions:

1. Correct the non-conformance.
2. Remove the ETL Mark from non-conforming product.
3. Contact the issuing product safety evaluation center for instructions.

10.1 Evaluation of Unlisted Components

Because Unlisted Components are uncontrolled, and they do not fall under a third party follow up program, Intertek may require these components to be tested and/or evaluated at least once annually, more often for certain components, as part of the independent certification process. The Unlisted Components in Section 5.0 require testing and/or evaluation as indicated.

The Applicant will be notified, in writing, via the applicable contact methods, as defined in Section 1.0, when these components must be selected and sent to Component Evaluation Center (CEC) for re-evaluation.

Due to particular testing requirements, some components may be requested to be shipped to specific labs. Thus, specific shipment destination(s) for each sample will be provided in the written notification.

Managing CEC Location:

Intertek Testing Services Shenzhen Limited Guangzhou Branch

ETL Component Evaluation Center

Room 02, &101/E201/E301/E401/E501/E601/E701/E801 of Room 01 1-8/F., No. 7-2,

Caipin Road, Science City

GETDD Guangzhou, Guangdong, China

Attn: Ms. Joey Kuang

Sample Disposition: Due to the destructive nature of the testing, all samples will be discarded at the conclusion of testing unless, the manufacturer specifically requests the return of the samples. The request for return must accompany the initial component shipment.

11.0 Manufacturing and Production Tests

The manufacturer agrees to conduct the following Manufacturing and Production Tests as specified:

Required Tests

Dielectric Voltage Withstand Test
 Grounding Continuity Test
 Pressure Tests

11.1 Dielectric Voltage Withstand Test

Method

One hundred percent of production of the products covered by this Report shall be subjected to a routine production line dielectric withstand test.

The test shall be conducted on products, which are fully assembled. Prior to applying the test potential, all switches, contactors, relays, etc., should be closed so that all primary circuits are energized by the test potential. If all primary circuits cannot be tested at one time, then separate applications of the test potential shall be made.

The test voltage specified below shall be applied between primary circuits and accessible dead-metal parts. The test voltage may be gradually increased to the specified value but must be maintained at the specified value for one second or one minute as required.

Test Equipment

The test equipment shall incorporate a transformer with an essentially sinusoidal output, a means to indicate the applied test potential, and an audible and/or visual indicator of dielectric breakdown.

The test equipment shall incorporate a voltmeter in the output circuit to indicate directly the applied test potential if the rated output of the test equipment is less than 500VA.

If the rated output of the test equipment is 500VA or more, the applied test potential may be indicated by either:

- 1 - a voltmeter in the primary circuit;
- 2 - a selector switch marked to indicate the test potential; or
- 3 - a marking in a readily visible location to indicate the test potential for test equipment having a single test potential output.

In cases 2 and 3, the test equipment shall include a lamp or other visual means to indicate that the test potential is present at the test equipment output. All test equipment shall be maintained in current calibration.

Products Requiring Dielectric Voltage Withstand Test:

<u>Product</u>	<u>Test Voltage</u>	<u>Test Time</u>
All products covered by this Report.	AC1000V	60 s
	or	
	AC1200V	1 s

11.2 Grounding Continuity Test

Method

Each product listed below shall be subjected to a test to determine that there is continuity between accessible dead-metal parts of the product and the grounding pin or blade of the attachment plug.

If all accessible dead metal is connected, only a single test need be performed. A visual or audible device (ohmmeter, buzzer, etc.) may be used to indicate grounding continuity.

Products Requiring Grounding Continuity Test:

All products covered by this Report.

11.3 Pressure Tests for Leakage and Strength

Method

Each refrigerator covered by this report shall be tested and proved tight at not less than the design pressure(s) marked on the appliance.

If the final assembly is completed with flare-type fittings or telescoped tubing joints which are sealed with sliver solder, brazing, or the equivalent, the pressure test of the complete system may be at the low-side design pressure provided that the high-side parts are individually tested either by the Commercial Refrigerator / Freezer manufacturer or by the manufacturer of the part at not less than the high-side design pressure.

At least once each year, a strength test shall be conducted on refrigerant-containing components of the shell-type which have an inside diameter greater than 3 inches (76.2mm) including motor-compressor enclosures. The test shall be conducted on at least one sample of each size and type. The part shall comply with requirements of Strength Tests. Such tests may be conducted either by the Commercial Refrigerator / Freezer manufacturer or by the manufacturer of the component.

Products Requiring Pressure Tests for Leakage and Strength:

All products covered by this Report.

12.0 Revision Summary

The following changes are in compliance with the declaration of Section 8.1:

Date/ Proj # Site ID	Project Handler/ Reviewer	Section	Item	Description of Change
16-Jan-2023	John Li	2	-	Add new model SC1180FS, SC1390FS, SC1780FS, SC2090FS, ST27BFG, ST27BFGC, ST54BFG, ST54BFGC, SD580F, SD690F, SD1180F, SD1390F, SD1780F, SD2090F, updated model similarities, ratings and other ratings
221220038GZU	Kelvin Guan		2	Add new model " ST27BFG" in the description
			3	Add new model " ST27BFGC" in the description
			6	Add new model " ST54BFG" in the description
			7	Add new model " ST54BFGC" in the description
			10	Add new model " ST27BFG, ST54BFG" in the description
			11	Add new model " ST27BFG" in the description
			12	Add new model " ST27BFGC" in the description
			13	Add new model " ST54BFG" in the description
			14	Add new model " ST54BFGC" in the description
			15	Add new model " ST27BFG, ST27BFGC" in the description
			17	Add new model " ST54BFG, ST54BFGC" in the description
			20	Add " (represent model ST27BFG, ST27BFGC except for evaporator size)" in the description
			22	Add " (represent model ST54BFG, ST54BFGC except for evaporator size)" in the description
			23	Add new model " ST27BFG, ST27BFGC", "ST54BFG, ST54BFGC, SD series " in the description
			24	Add new model " ST27BFG, ST27BFGC, ST54BFG, ST54BFGC, SD series" in the description
			25, 26	Add new model "ST54BFG, ST54BFGC", " ST27BFG, ST27BFGC, SD series " in the description
			29	Add new model " ST27BFG" in the description
			30	Add new model " ST27BFG" in the description
			31	Delete model ST27BF in the description
			31a	Add picture of inside of electrical box view for ST27BF, ST27BFG
			32	Add new model " ST27BFG, ST27BFGC" in the description
			33	Add new model " ST54BFG" in the description
			34	Delete model ST54BF in the description
			34a	Add picture of inside of electrical box view for ST54BF, ST54BFG
			35	Add new model " ST54BFG, ST54BFGC" in the description
			36	Add new model " ST27BFGC" in the description
			37	Add new model " ST54BFGC" in the description
			38	Add new model " ST27BFGC, ST54BFGC" in the description
			39a	Add picture of Condenser part view for ST27BFGC
		3	39b	Add picture of inside of electrical box view for ST27BFGC
			40a	Add picture of Condenser part view for ST54BFGC
			40b	Add picture of inside of electrical box view for ST54BFGC
			44a	Add picture of compressor view for ST27BFG, ST27BFGC
			46	Add new model " ST54BFG, ST54BFGC" in the description
			48a	Add picture of compressor view for ST54BFG, ST54BFGC
			49,50	Add new model " SD690F" in the description
			51,52	Add new model " SD1180F, SD1390F" in the description
			53,54	Add new model " SD1780F, SD2090F" in the description
			55	Add new model " SD series" in the description

12.0 Revision Summary

The following changes are in compliance with the declaration of Section 8.1:

Date/ Proj # Site ID	Project Handler/ Reviewer	Section	Item	Description of Change
			56	Add new model " SD580F, SD690F" in the description
			57	Add new model " SD1180F, SD1390F" in the description
			58	Add new model " SD1780F, SD2090F" in the description
			59	Add new model " SD690F, SD580F" in the description
			60	Add new model " SD1180F, SD1390F" in the description
			61a	Add picture of internal of storage compartment for SD1780F, SD2090F
			62	Add new model " SD580F, SD690F" in the description
			63a	Add picture of evaporator fan motor part for SD690F, SD580F
			64	Add new model " SD1180F, SD1390F" in the description
			65a	Add picture of evaporator fan motor part for SD1180F, SD1390F
			65b	Add picture of evaporator fan motor part for SD1780F, SD2090F
			65c	Add picture of internal of evaporator fan motor part for SD1780F, SD2090F
			66	Add new model " SD series" in the description
			67,68	Add new model " SD1180F, SD1390F, SD1780F, SD2090F" in the description
			69,70	Add new model " SD series" in the description
			71	Add new model " SD580F, SD690F" in the description
			73	Add new model " SD1180F, SD1390F" in the description
			76a	Add picture of condenser part for SD1780F, SD2090F
			79a	Add picture of compressor part for SD580F, SD690F
			79b	Add picture of relay part for SD580F, SD690F
			79c	Add picture of compressor for SD580F, SD690F
			82a	Add picture of compressor part for SD1180F, SD1390F
			82b, 82c	Add picture of compressor for SD1180F, SD1390F
			86	Add picture of compressor part for SD1780F, SD2090F
			87,88	Add picture of compressor for SD1780F, SD2090F
			1	Add new model " ST27BFG", "ST54BFG" in the description of Technical data
			3	In 1st line: Add new model " ST27BFG", "ST54BFG" in the description of Technical data. In 2nd line: Add new model " ST27BFGC", "ST54BFGC", "SD series" in the description of Technical data.
			4	Add new model " ST27BFG, ST27BFGC", "ST54BFG, ST54BFGC", " SD580F, SD690F", "SD1180F, SD1390F", "SD1780F, SD2090F" in the description of Technical data
			5	Add new model " ST27BFG, ST27BFGC", "ST54BFG, ST54BFGC", " SD series" in the description of Technical data
			6	In 1st line: Add new model " ST27BFG", "ST54BFG" in the description of Technical data. In 2nd line: Add new model " ST27BFGC", "ST54BFGC", "SD series" in the description of Technical data.
			7,8	Add new model " ST27BFGC", "ST54BFGC", "SD series" in the description of Technical data.
			11	Add description " For models other than SD1780F, SD2090F:" in Technical data. And insert 2nd line to describe the technical data for model SD1780F, SD2090F
			13	In 2nd & 4th line: Add new model " ST27BFG, ST27BFGC, ST54BFG, ST54BFGC, SD series" in the description of Technical data.

12.0 Revision Summary				
The following changes are in compliance with the declaration of Section 8.1:				
Date/ Proj # Site ID	Project Handler/ Reviewer	Section	Item	Description of Change
		4	14	Add description " For models other than SD1780F, SD2090F:" in Technical data. And insert 2nd line to describe the technical data for model SD1780F, SD2090F
			15	In 1st line: Add new model " ST27BFG, ST27BFGC, ST54BFG, ST54BFGC" in the description of Technical data. In 2nd line: Add new model " SD series" in the description of Technical data.
			18	Add new model " SD580F, SD690F", "SD1180F, SD1390F", "SD1780F, SD2090F" in the description of Technical data.
			20	In 1st & 4th line: Add new model " ST27BFG, ST27BFGC, ST54BFG, ST54BFGC, SD1180F, SD1390F, SD1780F, SD2090F" in the description of Technical data. In 2nd line: Add new model " SD580F, SD690F" in the description of Technical data.
			27	Add new model " SD580F, SD690F", "SD1180F, SD1390F, SD1780F, SD2090F" in the description of Technical data.
			29	Revise the description from "Refer to illustration 8.1- 8.5" to "Refer to illustration 8.1- 8.9"
			30	Add new model " ST27BFG, ST27BFGC, SD580F, SD690F", "ST54BFG, ST54BFGC, SD1180F, SD1390F" in the description of Technical data. Add heater power rating for SD1780F, SD2090F
			34	Delete the description " For ST27BR series, ST54BR series, SC series:"
			35	Add new model " ST27BFG, ST27BFGC, ST54BFG, ST54BFGC, SD series" in the description
			36	Add new model " ST27BFG, ST27BFGC, ST54BFG, ST54BFGC, SD series, SD580F, SD690F, SD1780F, SD2090F, SD1180F, SD1390F" in the description, and add the parameter for these new models
			37	Add new model " ST27BFG, ST27BFGC, ST54BFG, ST54BFGC, SD series" in the description
			39	Revise the description from "Refer to illustration 7.1 - 7.4" to "Refer to illustration 7.1 - 7.4, 7.8"
			42	Add starting capacitor information for compressor NEU2178U
			43	In 4th line: Add new model " SD1780F, SD2090F" in the description of Technical data. In 5th line: Add new model " ST27BFG, ST27BFGC, SD580F, SD690F" in the description of Technical data. Add new compressor model NEU2178U
			44	Add running capacitor information for compressor NEU2178U
			45	Add new model " ST27BFG, ST27BFGC, SD580F, SD690F", "ST54BFG, ST54BFGC, SD1180F, SD1390F" in the description of Technical data. Add Capillary tube length for SD1780F, SD2090F
			48	Add new model " SD series" in the description of Technical data.
		50	Add motor controller information for model ST27BF series, ST54BF series, SD series	
		6	8	Revise the description from "Refer to Illustration No.6.1 to 6.5" to " Refer to Illustration No.6.1 to 6.8"

12.0 Revision Summary						
The following changes are in compliance with the declaration of Section 8.1:						
Date/ Proj # Site ID	Project Handler/ Reviewer	Section	Item	Description of Change		
		7	5	Add product parameter for model SC1180FS, SC1390FS, SC1780FS, SC2090FS,		
			5.1	Add product parameter for model ST27BFG, ST27BFGC, ST54BFG, ST54BFGC, SD580F, SD690F, SD1180F, SD1390F, SD1780F, SD2090F		
			6.4	Update circuit diagram for ST27BF, ST54BF (add motor controller to control compressor directly)		
			6.6 - 6.8	Add circuit diagrams for new model ST27BFG, ST54BFG, ST27BFGC, ST54BFGC, SD series		
			7.8	Add condenser drawing for new model ST27BFG, ST27BFGC, ST54BFG, ST54BFGC, SD series		
			8.4	Add new model ST54BFG, ST54BFGC in description		
			8.8, 8.9	Add evaporator drawing for new model ST27BFG, ST27BFGC, SD580F, SD690F, SD1780F, SD2090F, SD1180F, SD1390F		
		8	-	New test block added. Re-signed		
		9	5	Added ML "US Restaurant Group Inc" with brand name "COLDLINE", ML models refer to ML5 in section 9.0.		
			6	Added ML "NORTH AMERICAN RESTAURANT EQUIPMENT" with brand name "NORTH AMERICAN REFRIGERATION", ML models refer to ML6 in section 9.0.		
			7	Added ML "HONEY MANAGEMENT GROUP,INC." with brand name "COOLER DEPOT", ML models refer to ML7 in section 9.0.		
			8	Added ML "Anhui Weiye Refrigeration Technology Ltd" with brand name "FRICOOL", ML models refer to ML8 in section 9.0.		
		31-Jul-2023 230606018GZU	John Li/ Lock Li <i>John Li</i> <i>Lock Li</i>	1	--	Corrected CSA standard from "Refrigeration Equipment (R2018)>Partial superseding< [CSA C22.2#120:2013 Ed.4]" to "Refrigeration Equipment (R2018) [CSA C22.2#120:2013 Ed.4]".
				9	2	Added ML models DUR1, DUF1, DUR2, DUF2, DUR1G, DUR2G with brand name "KRATOS, MAXX COLD, DURRA", for ML "Greenfield World Trade Inc dba The Legacy Companies".
3	Added ML models AGDF23, AGDF49 with brand name "ARCTIC AIR, GENKRAFT", for ML "Broich Enterprises".					
6	1. Replaced ML models "A1DC-S, A1DF-S, A2DC-S-2, A2DF-S-2" with "A1DC-2, A1DF-2, A2DC-2, A2DF-2" 2. Added ML models AGDC-2, AGDF-2, AGDC-1, AGDF-1 with brand name "NORTH AMERICAN REFRIGERATION", for ML "NORTH AMERICAN RESTAURANT EQUIPMENT".					
9	Added new ML " Consolidated Brands of America, LLC" with brand name "ATLAS AIR", ML models refer to ML9 in section 9.0.					