

MAKING MODERN LIVING POSSIBLE

Danfoss

Danfoss Compressors



Commercial Freezers
220-240 V • 50/60 Hz • LBP

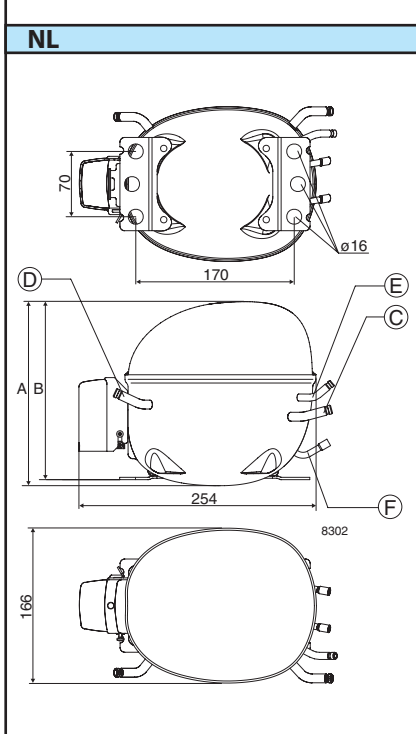
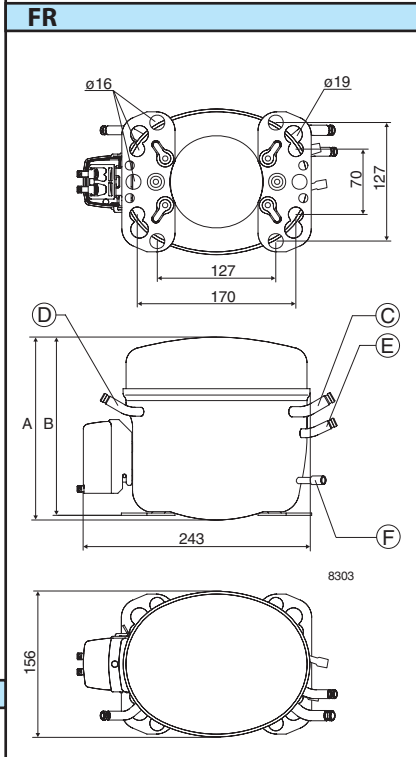
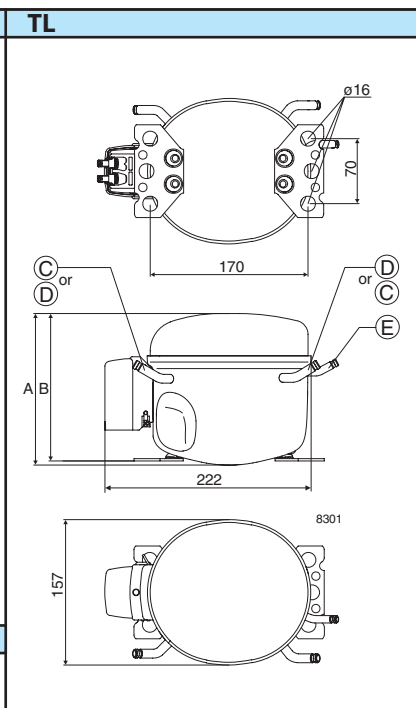
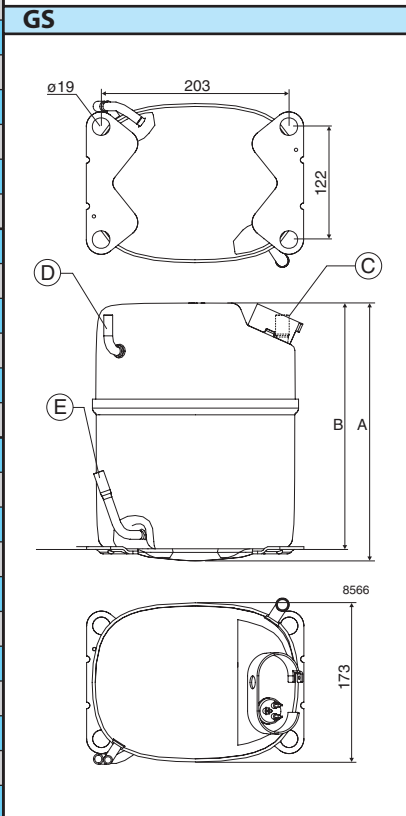
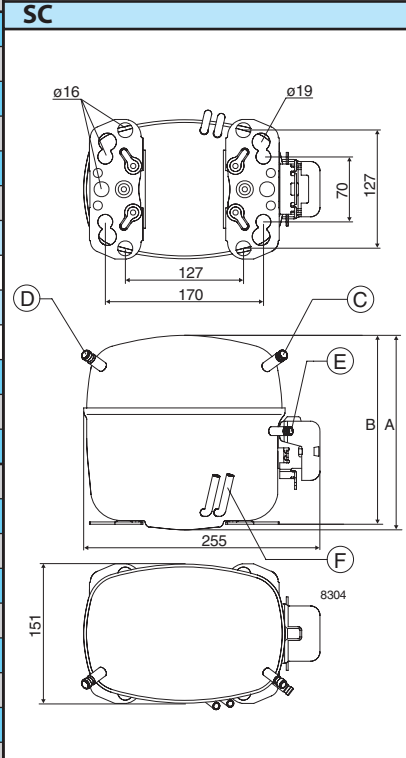
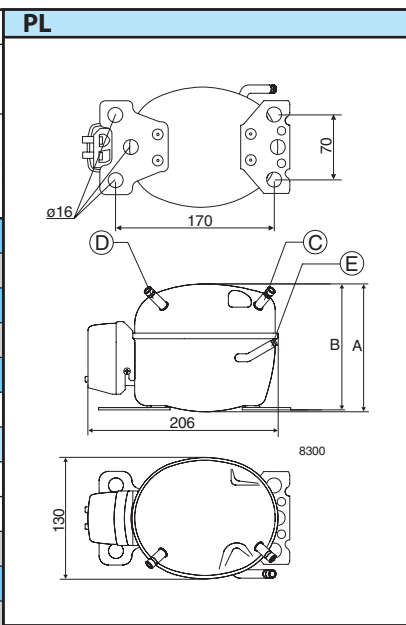
REFRIGERATION AND
AIR CONDITIONING

Quick reference

Refrigerant	Frequency	Compressor	Code numbers		Horse-power (approx.)	EN 12900 (CECOMAF) Capacity [W]										EN 12900 (CECOMAF) Power consumption [W]		Displacement [cm ³]	
			Compressor	Compressor w. oil cooling		Evaporating temperature [°C]										Evaporating temperature [°C]			
						-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5	-25	-10		
R134a	50Hz	PL50F	101G0220		1/12			14	26	40	45	56	74	95		60	86	2.50	
		TLS3FT	102G4324		1/10			21	34	50	56	69	92	120		62	92	3.13	
		TLS4FT	102G4424		1/8			27	43	63	71	88	117	152		87	123	3.86	
		TLS5FT	102G4524		1/6			48	71	98	109	131	170	216		114	165	5.08	
		NL6FT	105G6628		1/5			60	84	115	127	152	198	253		123	184	6.13	
		NL7FT	105G6728	105G6738	1/4			71	100	136	150	181	235	299		145	220	7.27	
		NL9FT	105G6828	105G6838	1/3			87	120	162	178	213	275	350		169	252	8.35	
		NL10FT	105G6829	105G6839	3/8			113	158	213	235	281	361	455		217	327	10.10	
		SC12FT	104G8205	104G8215	3/8			103	163	233	259	314	408	517	645	265	380	12.87	
		SC15FT	104G8505		1/2			126	197	280	311	376	489	620	772	311	451	15.28	
		SC18FTX	104G8805		5/8			144	229	325	361	437	567	719	896	365	517	17.69	
		SC21FTX	104G8105		3/4			192	296	415	460	553	713	901	1119	428	613	20.95	
	60Hz	PL35G	101G0250		1/16					34	39	48	64	82	104	52	79	2.00	
		TL2.5G	102G4251		1/16			14	27	42	48	60	80	105	134	67	96	2.61	
		TL3G	102G4350		1/12				30	47	54	69	95	125		70	111	3.13	
		TL4G	102G4452		1/10				48	70	78	96	127	166		87	135	3.86	
		TL5G	102G4550		1/8				65	92	102	123	162	207		106	170	5.08	
		FR6G	103G6660		1/6				51	93	108	141	199	266		119	197	6.23	
		FR7.5G	103G6680	103G6690	1/5				67	112	130	166	228	300		138	229	6.93	
		FR8.5G	103G6780	103G6790	1/4				92	138	156	195	263	345		164	273	7.95	
		FR10G	103G6880	103G6890	1/3				99	153	173	217	292	381		194	314	9.05	
		SC12FT	104G8205	104G8215	1/2			125	192	272	302	366	477	608	761	298	458	12.87	
		SC15FT	104G8505		5/8			154	235	330	365	441	571	724	904	356	537	15.28	
		SC18FTX	104G8805		3/4			187	280	390	432	520	675	857	1071	420	622	17.69	
	SC21FTX	104G8106		7/8			240	345	470	518	620	800	1012	1262	475	707	20.95		
	R404A/R507	50Hz	TL4CL	102U2071		1/8	52	65	84	110	142	155	182	230	286	352	140	198	3.86
			FR6CL	103U2670		1/6	77	108	145	189	243	263	307	383	473	578	242	353	6.23
			FR7.5CL	103U2790		1/5	86	114	154	202	262	285	333	418	515	630	267	395	6.93
FR8.5CL			103U2890		1/4	99	126	168	222	290	317	372	468	577		315	472	7.95	
NL7CLX			105F3710		1/3	102	146	199	263	340	369	430	536	657	796	274	381	7.27	
SC10CLX			104L2533		1/3			166	255	360	400	483	625	789	977	352	508	10.29	
SC12CL			104L2623		3/8	58	140	237	353	490	541	650	835	1048	1292	445	654	12.87	
SC12CLX.2			104L2697		1/2		206			515				1060		476	645	12.87	
SC15CL			104L2853		1/2		151	299	452	615	673	792	988	1208	1458	560	790	15.28	
SC15CLX.2			104L2896		1/2	159	250	358	486	637	694	813	1017	1251	1519	565	783	15.28	
SC18CL			104L2123		5/8	167	271	395	542	715	781	918	1154	1425	1735	615	894	17.69	
SC18CLX.2			104L2197		3/4	194	306	439	595	780	849	995	1245	1532		680	949	17.69	
SC21CL		104L2322		7/8	226	325	455	617	813	887	1042	1306	1606		702	989	20.95		
GS26CLX		107B0500		1	325	497	703	949	1240	1348	1580	1974	2427		888	1285	26.30		
GS34CLX		107B0501		1 1/4	418	639	903	1220	1594	1732	2031	2537	3119		1141	1651	33.80		
60Hz		SC10CLX	104L2533		3/8			224	335	455	499	588	738	906	1096	430	623	10.29	
		SC12CLX	104L2695		1/2		146	282	429	590	649	770	972	1200		540	748	12.87	
		SC12CLX.2	104L2697		1/2		235	380		645				1200		550	740	12.87	
		SC15CLX	104L2854		5/8		179	351	530	720	788	928	1158	1417		610	864	15.28	
		SC15CLX.2	104L2897		5/8	194	305	437	593	776	846	991	1239	1525		611	848	15.28	
	GS21CLX	107B0506		1	309	472	669	903	1180	1282	1503	1878	2309		845	1222	21.20		
R290	50Hz	TL5CNK	102H4590		1/6		81	109	143	183	198	230	283	345	416	162	211	5.08	
		NL7CNK	105H6756		1/4		118	166	223	290	315	368	458	561	679	221	291	7.27	
		NL9CNK	105H6856		1/3		138	194	259	335	364	423	526	643	778	250	334	8.35	
		SC10CNX	104H8065		1/3		126	179	245	325	355	420	531	660	809	274	362	10.29	
		SC12CNX	104H8265		3/8		178	250	331	426	462	540	678	846	1050	344	456	12.87	
		SC12CNX.2	104H8266		3/8		209	299	356	441	476	554	698	876		344	456	12.87	
		SC15CNX	104H8565		1/2		195	297	415	550	601	707	887	1093	1328	420	560	15.28	
		SC15CNX.2	104H8566		1/2		225	340	446	569	620	726	913	1132		420	560	15.28	
		SC18CNX	104H8865		5/8		219	341	480	640	700	824	1033	1272	1543	500	707	17.69	
		SC18CNX.2	104H8866		5/8		247	379	527	698	761	893	1114	1367		553	750	17.69	
SC21CNX.2	104H8166		3/4		293	449	624	827	901	1058	1320	1619		655	889	20.95			

Dis- place- ment	Recommended compressor cooling at ambient temperature									Voltage and frequen- cies	Electrical Equipment							Compressor	
	32°C			38°C			43°C				LST (RSIR)		HST (CSIR)		HST (CSR)	HST (CSR)	LST/HST		
	PTC Starting device		Starting relay	Starting capacitor	Starting unit	Starting kit	Cord relief	Cover	spades		spades		spades	spades					
	6.3 mm		4.8 mm		6.3 mm				6.3 mm		6.3 mm		6.3 mm						
	[cm ³]	LBP	MBP	HBP	LBP	MBP	HBP	LBP	MBP		HBP	6.3 mm	4.8 mm	6.3 mm	6.3 mm	6.3 mm	6.3 mm		
2.50	S			S						1	103N0011	103N0018					103N1010	103N0491	PL50F
3.13	S			S			S			2	103N0011	103N0018	117U6007	117U5014			103N1010	103N2010	TLS3FT
3.86	S			S			S			2	103N0011	103N0018	117U6004	117U5014			103N1010	103N2010	TLS4FT
5.08	S			S			S			2	103N0011	103N0018	117U6000	117U5014			103N1010	103N2010	TLS5FT
6.13	S			S			S			2/3	103N0011	103N0018	117U6000	117U5015			103N1010	103N2010	NL6FT
7.27	S			S			O/F1			2	103N0011	103N0018	117U6001	117U5015			103N1010	103N2010	NL7FT
8.35	S			O/F1			O/F1			2	103N0011	103N0018	117U6015	117U5015			103N1010	103N2010	NL9FT
10.10	S			O/F1			O/F1			2	103N0011	103N0018	117U6002	117U5015			103N1010	103N2010	NL10FT
12.87	O/F1			O/F1			F2			2/3	103N0002		117U6003	117U5017			103N1004	103N2009	SC12FT
15.28	F1			F1			F1			2/3	103N0002		117U6005	117U5017			103N1004	103N2009	SC15FT
17.69	F2			F2			F2			2/3			117U6019	117U5017			103N1004	103N2009	SC18FTX
20.95	F2			F2			F2			2			117U6019	117U5017			103N1004	103N2009	SC21FTX
2.00			F2	F2		F2	F2			1/5	103N0011	103N0018	117U6021	117U5014			103N1010	103N0491	PL35G
2.61	S	S	S	S	S	S	S	S	F2	1/2/3/6	103N0011	103N0018	117U6007	117U5014			103N1010	103N2010	TL2.5G
3.13	S			S			S			1/2/3	103N0011	103N0018	117U6009	117U5014			103N1010	103N2010	TL3G
3.86	S			S			S			1/2/3	103N0011	103N0018	117U6004	117U5014			103N1010	103N2010	TL4G
5.08	S			S			S			1/2/3	103N0011	103N0018	117U6000	117U5014			103N1010	103N2010	TL5G
6.23	S			S			S			1/2/3	103N0011	103N0018	117U6000	117U5015			103N1010	103N2010	FR6G
6.93	S			S			O/F1			1/2/3	103N0011	103N0018	117U6001	117U5015			103N1010	103N2010	FR7.5G
7.95	S			O/F1			O/F1			1/2/3	103N0011	103N0018	117U6015	117U5015			103N1010	103N2010	FR8.5G
9.05	S			O/F1			O/F1			1/2/3	103N0011	103N0018	117U6010	117U5015			103N1010	103N2010	FR10G
12.87	O/F1			O/F1			F2			2/3	103N0002		117U6003	117U5017			103N1004	103N2009	SC12FT
15.28	F1			F1			F1			2/3	103N0002		117U6005	117U5017			103N1004	103N2009	SC15FT
17.69	F2			F2			F2			2/3			117U6019	117U5017			103N1004	103N2009	SC18FTX
20.95	F2			F2			F2			3					117-7038		103N1004	103N2008	SC21FTX
3.86	F2	F2		F2	F2					1			117U6000	117U5014			103N1010	103N2010	TL4CL
6.23	F2	F2		F2	F2					1			117U6015	117U5015			103N1010	103N2010	FR6CL
6.93	F2	F2		F2	F2					1			117U6016	117U5015			103N1010	103N2010	FR7.5CL
7.95	F2			F2						1			117U6010	117U5015			103N1010	103N2010	FR8.5CL
7.27	F1	F1		F1	F1		F2	F2		1	103N0011	103N0018	117U6002	117U5015			103N1010	103N2010	NL7CLX
10.29	F2	F2		F2	F2					1			117U6005	117U5019			103N1004	103N2008	SC10CLX
12.87	F2	F2		F2	F2					1			117U6005	117U5017			103N1004	103N2009	SC12CL
12.87	F2			F2						1/3			117U6019	117U5019			103N1004	103N2008	SC12CLX.2
15.28	F2	F2		F2	F2					1			117U6019	117U5017			103N1004	103N2009	SC15CL
15.28	F2			F2			F2			1			117U6019	117U5017			103N1004	103N2009	SC15CLX.2
17.69	F2	F2		F2	F2					1					117-7012		103N1004	103N2009	SC18CL
17.69	F2			F2			F2			1			117U6013	117U5018			103N1004	103N2009	SC18CLX.2
20.95	F2			F2						1					117-7012		103N1004	103N2009	SC21CL
26.30	F2			F2			F2			1					117-7056		Cover: 107B9100/01/04		GS26CLX
33.80	F2			F2			F2			1					117-7056		Cover: 107B9100/01/04		GS34CLX
10.29	F2	F2		F2	F2					1/3			117U6005	117U5019			103N1004	103N2008	SC10CLX
12.87	F2			F2						3			117U6019	117U5019			103N1004	103N2008	SC12CLX
12.87	F2			F2						1/3			117U6019	117U5019			103N1004	103N2008	SC12CLX.2
15.28	F2			F2						3					117-7038		103N1004	103N2008	SC15CLX
15.28	F2			F2			F2			9					117-7038		103N1004	103N2008	SC15CLX.2
21.20	F2			F2			F2			8					117-7056		Cover: 107B9100/01/04		GS21CLX
5.08	F1	F1***		F1	F1***		F1	F1***		1	103N0016 ¹⁾	103N0021 ¹⁾					103N1010	103N2010	TL5CNK
7.27	F1	F1		F1	F1		F1	F2		1	103N0011	103N0018					103N1010	103N2010	NL7CNK
8.35	F1	F1		F1	F1		F2	F2***		1	103N0016 ¹⁾	103N0021 ¹⁾					103N1010	103N2010	NL9CNK
10.29	F2	F2		F2	F2		F2	F2		1					117-7049	117-9719	103N1004	103N2009	SC10CNX
12.87	F2	F2		F2	F2		F2	F2		1					117-7049	117-9719	103N1004	103N2009	SC12CNX
12.87	F2			F2			F2			1			explosion-proof electrical equipment soon available				103N1004	103N2009	SC12CNX.2
15.28	F2	F2		F2	F2		F2	F2		1					117-7051	117-9711	103N1004	103N2009	SC15CNX
15.28	F2			F2			F2			1			explosion-proof electrical equipment soon available				103N1004	103N2009	SC15CNX.2
17.69	F2	F2		F2	F2		F2	F2		1					117-7034	117-9718	103N1004	103N2009	SC18CNX
17.69	F2			F2			F2			1			explosion-proof electrical equipment soon available				103N1004	103N2009	SC18CNX.2
20.95	F2			F2			F2			1					explosion-proof electrical equipment soon available		103N1004	103N2009	SC21CNX.2

Dimensions						PL	TL
Height [mm]		Connectors location/I.D. [mm]					
A	B	Suc-tion	Pro-cess	Dis-charge	Oil cooler		
		C	D	E	F		
137	135	6.2	6.2	5.0			
173	169	6.2	6.2	5.0			
173	169	6.2	6.2	5.0			
173	169	6.2	6.2	5.0			
197	191	6.2	6.2	5.0			
197	191	6.2	6.2	5.0	5.0		
197	191	6.2	6.2	5.0	5.0		
203	197	8.2	6.2	6.2	6.2		
209	203	8.2	6.2	6.2	6.2		
209	203	10.2	6.2	6.2			
219	213	10.2	6.2	6.2			
219	213	10.2	6.2	6.2			
137	135	6.2	6.2	5.0			
163	159	6.2	6.2	5.0			
163	159	6.2	6.2	5.0			
173	169	6.2	6.2	5.0			
173	169	6.2	6.2	5.0			
196	191	8.2	6.2	6.2			
196	191	8.2	6.2	6.2	6.2		
196	191	8.2	6.2	6.2	6.2		
196	191	8.2	6.2	6.2	6.2		
209	203	8.2	6.2	6.2	6.2		
209	203	10.2	6.2	6.2			
219	213	10.2	6.2	6.2			
219	213	10.2	6.2	6.2			
173	169	6.2	6.2	5.0			
196	191	8.2	6.2	6.2			
196	191	8.2	6.2	6.2			
196	191	8.2	6.2	6.2			
203	197	8.2	6.2	6.2			
209	203	8.2	6.2	6.2			
209	203	8.2	6.2	6.2			
219	213	8.2	6.2	6.2			
219	213	10.2	6.2	6.2			
219	213	10.2	6.2	6.2			
219	213	10.2	6.2	6.2			
259	247	12.9	6.5	8.2			
259	247	12.9	6.5	8.2			
209	203	8.2	6.2	6.2			
219	213	8.2	6.2	6.2			
219	213	8.2	6.2	6.2			
219	213	10.2	6.2	6.2			
219	213	9.7	6.5	6.5			
259	247	12.9	6.5	8.2			
173	169	6.2	6.2	5.0			
203	197	8.2	6.2	6.2			
203	197	8.2	6.2	6.2			
209	203	8.2	6.2	6.2			
209	203	8.2	6.2	6.2			
209	203	8.2	6.2	6.2			
209	203	8.2	6.2	6.2			
209	203	8.2	6.2	6.2			
219	213	10.2	6.2	6.2			
219	213	10.2	6.2	6.2			
219	213	10.2	6.2	6.2			



Applications
LBP: Low Back Pressure
HBP: High Back Pressure
MBP: Medium Back Pressure

Motor types
RSIR: Resistant Start Induction Run
CSIR: Capacitor Start Induction Run
CSR: Capacitor Start Run

Starting devices
LST: Low Starting Torque
HST: High Starting Torque

Test conditions EN 12900 (CECOMAF)
Application **R134a**
Condensing temperature 55°C
Ambient temperature 32°C
Suction gas temperature 32°C
Liquid temperature 55°C
220 V / 50 Hz / 60 Hz

Test conditions EN 12900 (CECOMAF)
Application **R404A/R507**
Condensing temperature 45°C
Ambient temperature 32°C
Suction gas temperature 32°C
No subcooling
220 V / 50 Hz / 60Hz

Test conditions EN 12900 (CECOMAF)
Application **R290**
Condensing temperature 45°C
Ambient temperature 32°C
Suction gas temperature 32°C
No subcooling
220 V / 50 Hz

Test conditions G-Series EN 12900
Application **R134a, R404A/R507**
Condensing temperature 40°C
Ambient temperature 32°C
Suction gas temperature 20°C
Liquid temperature No subcooling
220 V / 50 Hz

Heat output =
Capacity + Watt consumption
1 Watt = 0.86 kcal/h
1 Watt = 3.41 Btu/h

Compressor cooling
S = Static cooling normally sufficient
O = Oil cooling
F1 = Fan cooling 1.5 m/s (compressor compartment temp. equal to ambient temperature)
F2 = Fan cooling 3.0 m/s necessary
* = Not applicable below -25°C evaporating temperature in 43°C ambient temperature above 240 V.
** = O/F1 possible at 220 V nominal (187-242 V)
*** = run capacitor 4 µF compulsory

Voltages and frequencies
1 = 198-254 V, 50 Hz
2 = 187-254 V, 50 Hz, LBP
3 = 198-254 V, 60 Hz, LBP
4 = 198-254 V, 60 Hz, HBP
5 = 198-254 V, 60 Hz, MBP
6 = 207-254V, 60 Hz, HBP
7 = 187-254 V, 50 Hz, MBP
8 = 187-254 V, 60 Hz, MBP
9 = 187-254 V, 60 Hz, LBP

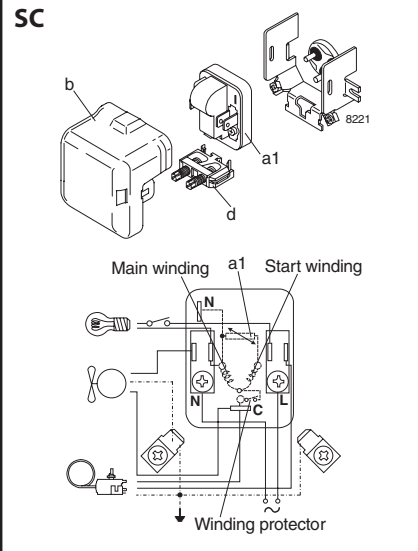
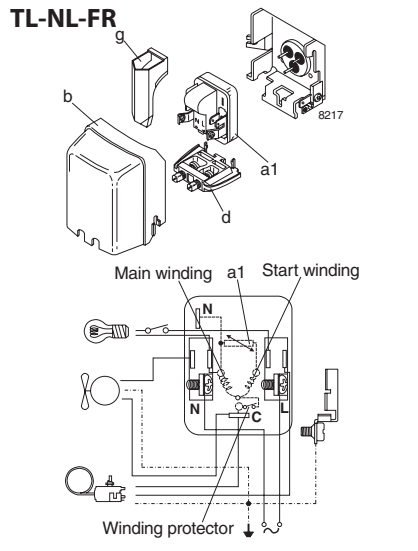
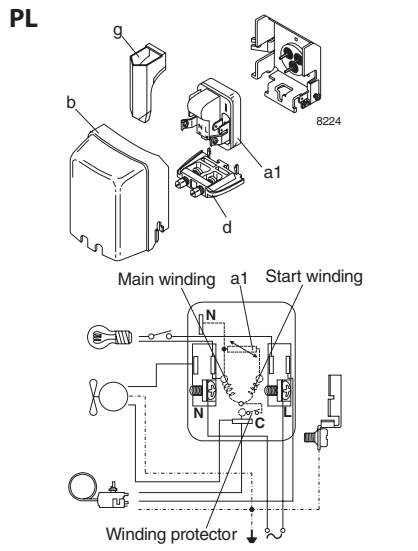
Note: To fulfil the requirements of EN 60355-2-34 the protection screen 103N0476 must be applied to the PTC starting device.

Yellow warning label

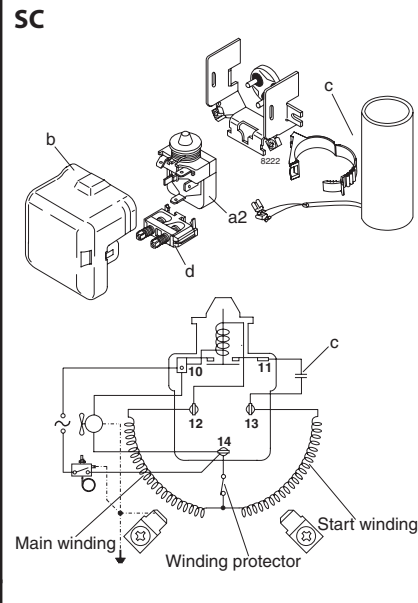
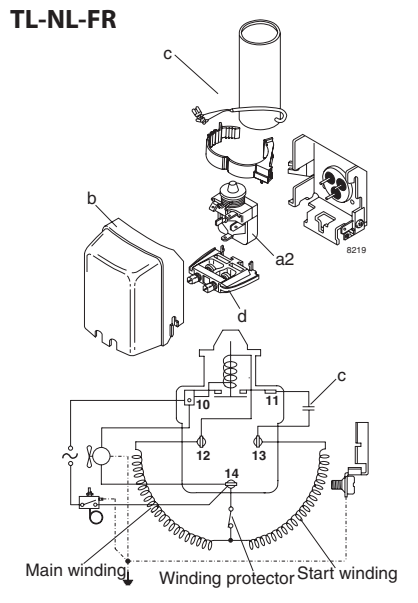
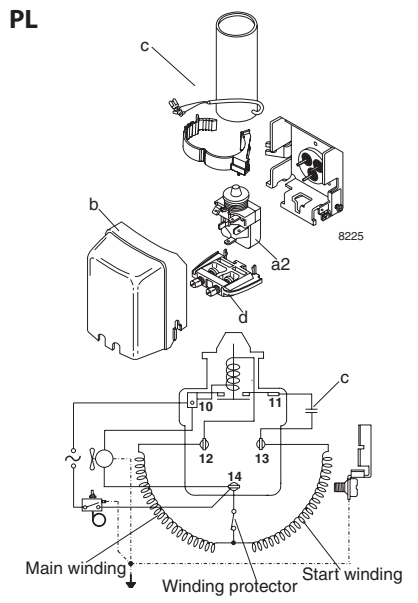
R290 is flammable in concentrations of air between approximately 2.1% and 9.5% by volume (LEL lower explosion limit and UEL upper explosion limit). An ignition source at a temperature higher than 470°C is needed for a combustion to occur.

○ = preliminary data

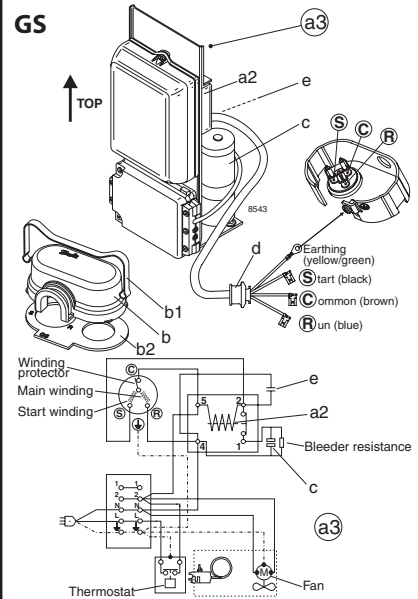
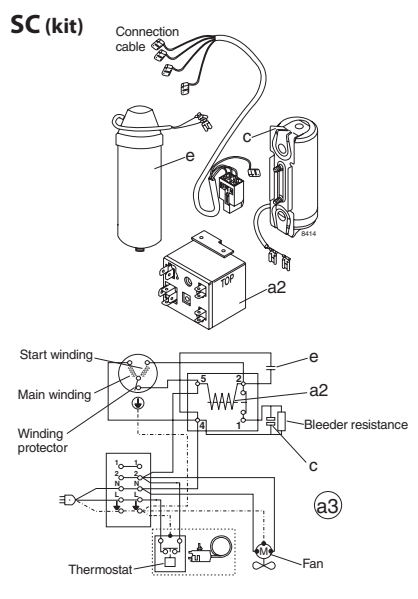
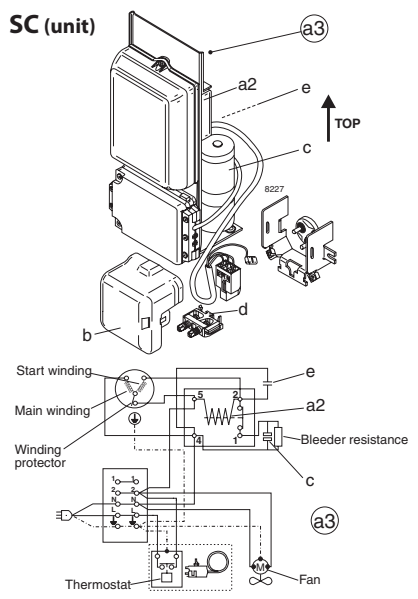
LST - RSIR



HST - CSIR



HST - CSR



Starting devices & Motor Types

- LST**
Low Starting Torque
- HST**
High Starting Torque
- RSIR**
Resistant Start Induction Run
- CSIR**
Capacitor Start Induction Run
- CSR**
Capacitor Start Run

Legend

- a1:** PTC starting device
- a2:** Starting relay
- a3:** Starting device
- b:** Cover
- b1:** Clamp
- b2:** Gasket
- c:** Starting capacitor
- d:** Cord relief
- e:** Run capacitor
- g:** Protection screen for PTC

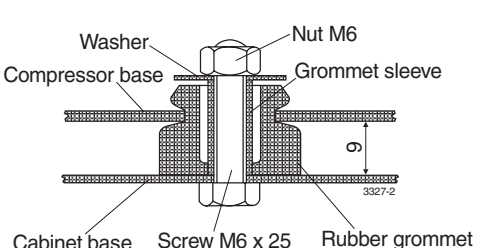
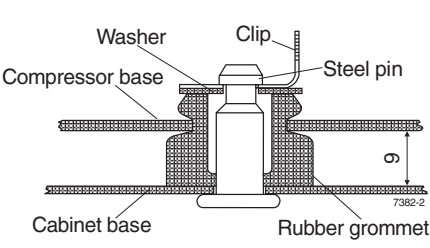
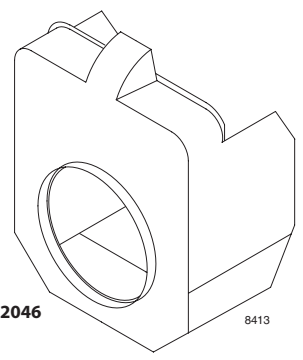
Starting device LST and HST

LST is used with capillary tube control and pressure equalizing. (Pressure equalizing may exceed 10 minutes). The PTC starting device requires 5 minutes cooling before each start.

HST consisting of relay and starting capacitor, is used for expansion valve control or for capillary tube control without pressure equalizing.

Commercial Freezers

R134a • R404A/R507 • R290 • 220-240 V • 50/60 Hz • LBP

Mounting accessories	Humidity protection cover for SC types
 <p>Washer, Nut M6, Compressor base, Grommet sleeve, Cabinet base, Screw M6 x 25, Rubber grommet</p> <p>Bolt joint for one compressor: 118-1917 in quantities: 118-1918</p>	 <p>Washer, Clip, Compressor base, Steel pin, Cabinet base, Rubber grommet</p> <p>Snap-on in quantities: 118-1919</p>
 <p>118U2046 8413</p>	

Model designation					
Compressor design	Optimization level	Compressor size	Application range	Start characteristics	Generation
PL	Blank Standard energy level S Semi-direct intake	Nominal displacement in cm ³ Exception: For PL compressors the capacity at rating point is stated.	CN R290 LBP CL R404A/R507 LBP F R134a LBP/(MBP) FT R134a LBP tropical G R134a LBP/MBP/HBP	Blank => universal (principal rule) X = HST characteristics (expansion valve)	Blank => first generation .2 => second generation etc.
TL					
NL					
FR					
SC					
GS					
Examples					
TL	S	5	FT		
NL		7	CL	X	
FR		8.5	G		
SC		15	CN	X	.2

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