MAKING MODERN LIVING POSSIBLE

R134a • R404A/R507

Danfoss Compressors

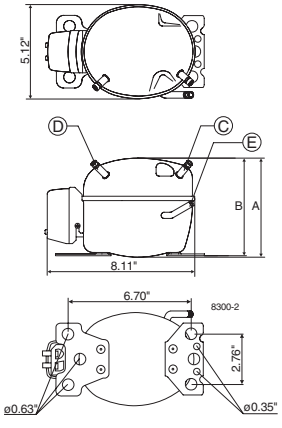
115 V • 60 Hz

REFRIGERATION &
AIR CONDITIONING DIVISION

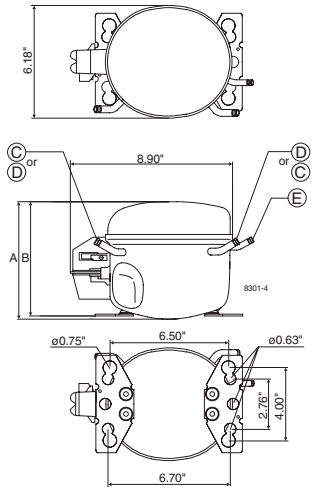
Quick reference

Refrigerant	Application	Compressor	Code numbers		Test conditions	ASHRAE Capacity [Btu/h]												ASHRAE Power consumption [W]		
			Compressor	Compressor with oil cooling		Evaporating temperature [°F]												Evporating temp. [°F]		
						-40	-30	-20	-10	0	10	20	30	40	45	50	59	-10	20	45
R134a	LBP	TF3.5F	102G3304		a		134	207	305	429	583							93		
		TFS4F	102G3431		a		156	239	356	509	699							97		
		TFS4.5FT	102G3439		a		245	341	478	656	877							127		
		TLS4.5F	102G3420		a		245	341	478	656	877	1140						129	199	
		TTE3FK	102G3341		a		110	181	280	400	550	650						72		
		TTE4F	102G3444		a		164	269	397	553	740							94		
		TTE4.6FK	102G3448		a		219	344	488	664	866							105		
		TTY5F	102G3546		a		275	412	590	814	1091							126		
		NTY5.5FK	105G5620		a		390	517	698	940	1250							139		
		NTY6FK	105G5621		a		428	580	787	1056	1393							156		
		NTY7FK	105G5720		a		492	659	887	1187	1567							169		
		NTY9FK	105G5921		a		558	755	1018	1358	1787							196		
		NTY10FK	105G5922		a		636	875	1185	1584	2089							238		
		NTX5.2FK	105G5650		a		277	424	601	814	1069							107		
		NTX5.7FK	105G5651		a		318	473	672	921	1229							118		
		NTX7.3FK	105G5750		a		444	628	872	1184	1570							151		
	LBP HBP	PL30F	101G9100		a				103	156	221	302	399	517	584	657	804	51	66	81
	LBP / MBP	PL50F	101G9202		a				175	249	335	437	557					65	89	
		TFS4.5FT	102G3432		a		245	341	478	656	877	1140	1448	1800	1994			127	197	270
		TL2.5F	102G3206		b				180	255	354	466						65	104	
		TL3F	102G3300		a				253	352	479	639						77	125	
		TL4F	102G3400		b		161	203	310	383	529	714						91	142	
		TT2.5F	102G3248		b				187	268	373	496						69	107	
		NF6FK	105G5636		b		254	411	593	811	1071	1384	1758	2202	2452			172	259	323
		NF7FK	105G5736		b		357	533	740	988	1288	1651	2089	2611	2907			204	303	385
		NF9FK	105G5928		b		421	598	820	1098	1439	1853	2348	2932	3261			233	339	447
		NF9.5FK	105G5929		b		474	667	910	1214	1587	2039	2580	3220	3580			264	379	496
		NF10FX	105G5941		b			663	930	1254	1647	2123	2693	3372	3756			261	391	512
		NF6.1FX.2	105G5631		b		276	440	643	892	1191	1547	1966	2453	2724			178	255	327
		NF7.3FX.2	105G5722		b		363	556	796	1090	1443	1864	2359	2934	3254			226	322	412
		NF8.4FX.2	105G5918		b			651	919	1247	1643	2114	2667	3311	3669			248	361	467
		NF11FX.2	105G5916		b					1586	2097	2705	3420	4251	4714				483	626
		SC12FTX	104G7205		a		563	889	1280	1753	2324	3008						360	537	
		SC15FTX	104G7505		a		711	1094	1550	2096	2750	3531						405	632	
	LBP / HBP	TL2.5G	102G3255		b				169	249	358	496	663	860	970	1087	1312	72	101	131
		TL4G	102G3460		b		116	180	271	391	542	729	954	1220	1369	1530	1849	96	147	197
		FF6GK	103G5680	103G5690	b			221	368	578	850	1184	1581	2042	2296	2566		132	221	295
		FF7.5GK	103G5780	103G5790	b			291	458	689	984	1344	1769	2259	2529	2816		148	250	340
		FF8.5GX	103G5880		b			392	587	848	1176	1570	2029	2555	2842	3146		209	321	418
		FF10GX	103G5980		b			420	635	923	1285	1721	2234	2823	3147	3490		232	359	468
		SC12G	104G7250	104G7260	b		216	488	861	1335	1911	2588	3367	4250	4730	5236		269	451	615
		SC15G	104G7550	104G7560	b		403	692	1100	1628	2276	3045	3934	4945	5496	6078		329	566	766
		SC18G	104G7800		a				1357	2112	2952	3908	5008	6285	6999	7768	9308	404	691	912
R404A/R507	LBP / MBP	TF4CLX	102U2102		c	290	421	582	776	1008	1282	1603	1973	2398	2632			175	259	374
		TFS4.5CLX	102U2103		c	407	569	769	1010	1298	1637	2034						215	340	
		NF5.5CLX	105F1621		c	565	788	1056	1376	1756	2202	2723	3325	4017	4399			288	404	524
		NF7CLX	105F1721		c	672	959	1304	1716	2205	2780	3451	4226	5117	5609			356	499	649
		SC10CL	104L1503		c	344	773	1275	1863	2553	3360	4298	5384	6633	7324			435	620	782
		SC12CLX.2	104L1696		c	894	1414	2012	2706	3512	4447	5530						618	905	
		SC15CLX.2	104L1853		c	1244	1828	2532	3375	4375	5551	6522						694	989	
		SC18CLX.2	104L2198		c	1362	2190	3002	3867	4856	6039							795		
		SC12MLX	104L1606		d				1964	2567	3298	4174	5209	6419	7096			588	833	1052
		SC15MLX	104L1805		d				2268	2964	3809	4820	6015	7412	8194			728	1031	1302
		SC15MLX.2	104L1807		d				2366	3042	3863	4845	6007	7364	8124			687	973	1228
		SC18MLX	104L2105		d				2922	3749	4753	5954	7374	9034	9964			888	1224	1525

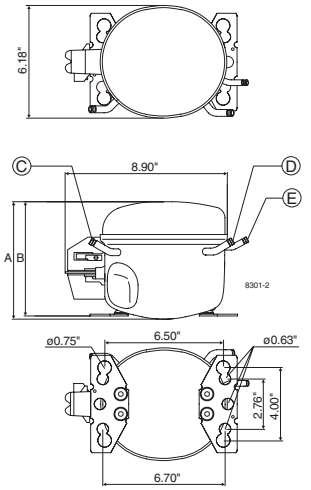
PL



TF/TT



TFS/TTE/TTY



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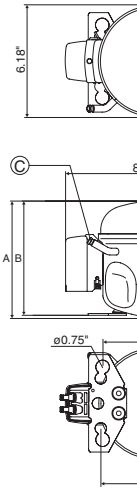
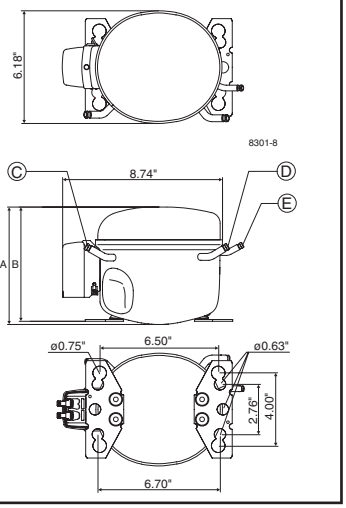
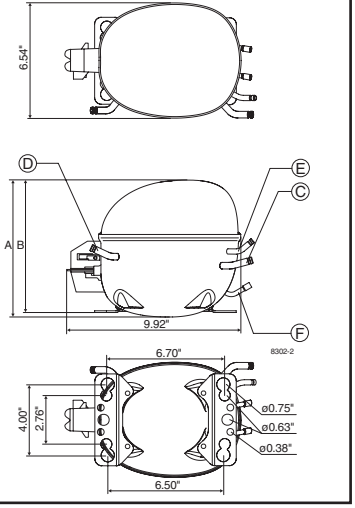


ASHRAE Power consumption [W]			Displacement	Recommended compressor cooling at ambient temperature						Voltage and frequencies	Electrical Equipment									Compressor
											LST (RSIR/RSCR)				HST (CSIR & CSR)			LST/HST		
Evporating temp. [°F]				100 °F			110 °F				PTC Starting device		Starting relay	Protector (external)	Starting relay	Starting capacitor	Starting device	Cord relief	Cover	
											spades				spades					
-10	20	45	[cu. inch]	LBP	MBP	HBP	LBP	MBP	HBP		1/4 inch	3/16 inch	1/4 inch	1/4 inch	1/4 inch	1/4 inch	1/4 inch			
93			0.22	S			S			2			117U4122					117U0349	117U1021	**TF3.5F**
97			0.23	S			S			2			117U4122					117U0349	117U1021	**TFS4F**
127			0.29	S			S			2			117U4113					117U0349	117U1021	**TFS4.5FT**
129	199		0.29	S			S			1	103N0003	103N0023			117U6003	117U5023		103N1010	103N2011	**TLS4.5F**
72			0.19	S			S			1	117U6106[1]			117U3313					117U1026	**TTE3FK**
94			0.23	S			S			1	117U6106[1]			117U3304					117U1026	**TTE4F**
105			0.28	S			S			1	117U6106[1]			117U3302					117U1026	**TTE4.6FK**
126			0.34	S			S			1	117U6106[1]			117U3302					117U1026	**TTY5F**
139			0.37	S			S			1	117U6106[1]			117U3306					117U1026	**NTY5.5FK**
156			0.40	S			S			1	117U6106[1]			117U3306					117U1026	**NTY6FK**
169			0.44	F1			F1			1	117U6106[1]			117U3306					117U1026	**NTY7FK**
196			0.51	F1			F1			1	117U6106[1]			117U3310					117U1026	**NTY9FK**
238			0.62	F1			F1			1	117U6106[1]			117U3311					117U1026	**NTY10FK**
107			0.31	S			S			1	117U6106[3]			117U3302					117U1026	**NTX5.2FK**
118			0.34	S			S			1	117U6106[1]			117U3312					117U1026	**NTX5.7FK**
151			0.44	S			S			1	117U6106[1]			117U3312					117U1026	**NTX7.3FK**
51	66	81	0.09	S	S	S	S	S	S	2	103N0003	103N0023			117U6000	117U5015		103N1010	103N0492	**PL30F**
65	89		0.12	S	S		S	S		1	103N0003	103N0023			117U6000	117U5015		103N1010	103N0492	**PL50F**
127	197	270	0.29	F1	F1		F1	F1		2			117U4113		117U4126	117U5022		2x117U0349	117U1021	**TFS4.5FT**
65	104		0.16	S	S		S	S		1	103N0003	103N0023						103N1010	103N2011	**TL2.5F**
77	125		0.19	S	S		S	S		1	103N0003	103N0023						103N1010	103N2011	**TL3F**
91	142		0.23	S	S		S	S		1	103N0003	103N0023						103N1010	103N2011	**TL4F**
69	107		0.16		S			S		1	117U6102			117U3301					117U1026	**TT2.5F**
172	259	323	0.37	F1	F1		F1	F1		2			117U4131		117U4132[5]	117U5022[5]		2x117U0349	117U1021	**NF6FK**
204	303	385	0.44	F1	F1		F1	F1		2			117U4131		117U4132[5]	117U5022[5]		2x117U0349	117U1021	**NF7FK**
233	339	447	0.51	F1	F1		F1	F1		2			117U4133		117U4134[5]	117U5022[5]		2x117U0349	117U1021	**NF9FK**
264	379	496	0.57	F1	F1		F1	F1		2			117U4141		117U4142[5]	117U5028[5]		2x117U0349	117U1021	**NF9.5FK**
261	391	512	0.62	F1	F1		F2	F1		2					117U4129	117U5022		2x117U0349	117U1021	**NF10FX**
178	255	327	0.37	F1	F1		F2	F1		2					117U4127	117U5022		2x117U0349	117U1021	**NF6.1FX.2**
226	322	412	0.44	F1	F1		F2	F1		2					117U4061	117U5022		2x117U0349	117U1021	**NF7.3FX.2**
248	361	467	0.51	F1	F1		F2	F1		2					117U4129	117U5022		2x117U0349	117U1021	**NF8.4FX.2**
	483	626	0.68		F2			F2		2					117U4151	117U5028		2x117U0349	117U1021	**NF11FX.2**
360	537		0.78	F2	F2		F2	F2		2					117U6012	117U5023		103N1004	103N2008	**SC12FTX**
405	632		0.93	F2	F2		F2	F2		2/6/7					117U6020	117U5023		103N1004	103N2008	**SC15FTX**
72	101	131	0.16	S	S	S	S	S	S	1	103N0003	103N0023						103N1010	103N2011	**TL2.5G**
96	147	197	0.23	S	S	S	S	S	S	3/4/6/7	103N0003	103N0023			117U6003	117U5023		103N1010	103N2011	**TL4G**
132	221	295	0.38	O/F1	O/F1	O/F1	O/F1	O/F1	O/F1	1			117U4085[4]					117U0349	117U1021	**FF6GK**
148	250	340	0.42	O/F1	O/F1	O/F1	O/F1	O/F1	O/F1	1			117U4085[4]					117U0349	117U1021	**FF7.5GK**
209	321	418	0.48	F1	F1	F1	F1	F1	F1	1					117U4060	117U5041		2x117U0349	117U1021	**FF8.5GX**
232	359	468	0.55	F1	F1	F1	F1	F1	F1	1					117U4061	117U5040		2x117U0349	117U1021	**FF10GX**
269	451	615	0.78	O/F1	O/F1	O/F1	O/F1	O/F1	O/F1	1					117U6020	117U5023		103N1004	103N2008	**SC12G**
329	566	766	0.93	O/F1	O/F1	O/F1	O/F1	O/F1	O/F1	1					117U6020	117U5023		103N1004	103N2008	**SC15G**
404	691	912	1.08	F2	F2	F2	F2	F2	F2	2				mounted	117-7441	117U5042			mounted	**SC18G**
175	259	374	0.23	F1	F1		F1	F1		2					117U4148	117U5025		2x117U0349	117U1021	**TF4CLX**
215	340		0.29	F1			F1			5					117U4148	117U5025		2x117U0349	117U1021	**TFS4.5CLX**
288	404	524	0.37	F1	F1		F2	F1		2					117U4061	117U5025		2x117U0349	117U1021	**NF5.5CLX**
356	499	649	0.44	F2	F2		F2	F2		2					117U4129	117U5022		2x117U0349	117U1021	**NF7CLX**
435	620	782	0.63	F2	F2		F2	F2		1					117U6020	117U5023		103N1004	103N2008	**SC10CL**
618	905		0.78	F2			F2			1					117U6020	117U5023			117U1021	**SC12CLX.2**
694	989		0.93	F2			F2			1				mounted	117-7441	117U5043	117-7045		mounted	**SC15CLX.2**
795			1.08	F2			F2			1				mounted	117-7441	117U5379	117-7045		mounted	**SC18CLX.2**
588	833	1052	0.78		F2			F2		2				mounted	117-7441	117U5042			mounted	**SC12MLX**
728	1031	1302	0.93		F2			F2		2				mounted	117-7441	117U5043	117-7045		mounted	**SC15MLX**
687	973	1228	0.93		F2			F2		1				mounted	117-7441	117U5043	117-7045		mounted	**SC15MLX.2**
888	1224	1525	1.08		F2			F2		1				mounted	117-7441	177U5043	117-7045		mounted	**SC18MLX**

TL



NF/NTX/NTY



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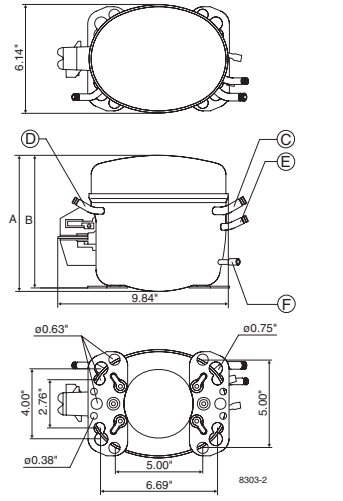
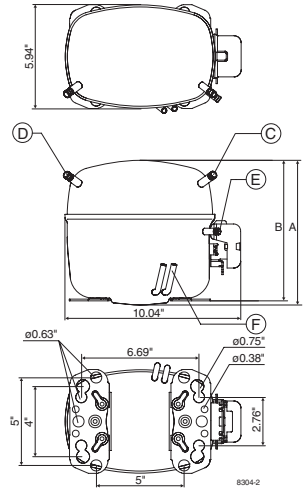


SC



Hermetic Compressors type TF, TL, TT, NF, NT, FF and SC
R134a • R404A/R507 • 115 V • 60 Hz

Dimensions					
Height [inch]		Connectors location/I.D. [inch]			
		Suction	Process	Discharge	Oil cooler
A	B	C	D	E	F
6.81	6.65	0.252	0.252	0.202	
6.81	6.65	0.252	0.252	0.202	
6.81	6.65	0.242	0.242	0.202	
6.42	6.26	0.252	0.252	0.202	
6.42	6.26	0.252	0.252	0.189	
6.81	6.65	0.252	0.252	0.202	
6.81	6.65	0.252	0.252	0.202	
6.81	6.65	0.252	0.252	0.202	
8.00	7.76	0.320	0.252	0.252	
8.00	7.76	0.320	0.252	0.252	
8.00	7.76	0.320	0.252	0.252	
8.00	7.76	0.320	0.252	0.252	
8.00	7.76	0.320	0.252	0.252	
8.00	7.76	0.320	0.252	0.252	
8.00	7.76	0.320	0.252	0.252	
5.28	5.20	0.252	0.252	0.202	
5.28	5.20	0.252	0.252	0.202	
6.81	6.65	0.252	0.252	0.202	
6.42	6.26	0.252	0.252	0.202	
6.42	6.30	0.378	0.252	0.252	
6.42	6.26	0.252	0.252	0.202	
6.22	5.98	0.252	0.252	0.189	
8.00	7.76	0.320	0.252	0.252	
8.00	7.76	0.320	0.252	0.252	
8.00	7.76	0.320	0.252	0.252	
8.00	7.76	0.320	0.252	0.252	
7.76	7.52	0.320	0.252	0.252	
7.76	7.52	0.320	0.252	0.252	
7.76	7.52	0.320	0.252	0.252	
7.76	7.52	0.320	0.252	0.252	
8.00	7.76	0.320	0.252	0.252	
8.23	8.00	0.320	0.252	0.252	
8.23	8.00	0.320	0.252	0.252	
6.42	6.26	0.252	0.252	0.202	
6.81	6.65	0.252	0.252	0.202	
7.72	7.52	0.320	0.252	0.252	0.252
7.72	7.52	0.320	0.252	0.252	
7.72	7.52	0.320	0.252	0.252	
7.72	7.52	0.320	0.252	0.252	
8.23	8.00	0.320	0.252	0.252	0.252
8.23	8.00	0.320	0.252	0.252	0.252
8.62	8.39	0.378	0.252	0.252	
6.81	6.65	0.252	0.252	0.189	
6.81	6.65	0.252	0.252	0.189	
8.00	7.76	0.320	0.252	0.252	
8.00	7.76	0.320	0.252	0.252	
8.23	8.00	0.320	0.252	0.252	
8.23	8.00	0.320	0.252	0.252	
8.62	8.39	0.378	0.252	0.252	
8.62	8.39	0.378	0.252	0.252	
8.62	8.39	0.320	0.252	0.252	
8.62	8.39	0.378	0.252	0.252	
8.62	8.39	0.378	0.252	0.252	
8.62	8.39	0.378	0.252	0.252	

Model designation					
Compressor design	Optimization level	Compressor size	Application range	Start characteristics	Generation
PL	Blank Standard energy level	Nominal displacement in cm^3	F R134a LBP/(MBP)	Blank => universal (principal rule)	Blank => first generation
TF, TL,TT	S Semi-direct intake		FT R134a LBP/(MBP) tropical	K = LST characteristics (capillary tube)	.2 => second generation
NF, NT	E Energy-optimized (optimized motor)	Exception: For PL compressors the capacity at rating point is stated.	G R134a LBP/MBP/HBP	X = HST characteristics (expansion valve)	etc.
FF	Y, X High Energy-optimized (high optimization level)		CL R404A/R507 LBP		
SC			ML R404A/R507 MBP		

Examples

TF	S	4.5	FT		
NT	X	7.3	F	K	
FF		8.5	G	X	
SC		15	ML	X	.2

Electrical equipment

[1] Run capacitor 15 µF compulsory 1/4 inch spade connectors (Code number: 117-7118)

[2] Run capacitor 15 µF compulsory 3/16 inch spade connectors (Code number: 117-7120)

[3] Run capacitor 10 µF compulsory 1/4 inch spade connectors (Code number: 117-7121)

[4] 117U4085: for fan-cooled FF-GK compressors, 117U4086: for oil-cooled FF-GK compressors

[5] In capillary tube systems where non-equalized pressures may occur at compressor start, or in areas with short power supply drop-outs, a starting capacitor can be used for ensuring a successful start (CSIR). Please refer to the individual compressor datasheets.

Starting devices

LST: Low Starting Torque

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.

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

HST: High Starting Torque

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

Applications

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

Motor types

RSIR: Resistant Start Induction Run
RSCR: Resistant Start Capacitor Run
CSIR: Capacitor Start Induction Run
CSR: Capacitor Start Run

Test conditions (ASHRAE):

a) LBP

Application	**R134a**
Condensing temperature	130° F
Ambient temperature	90° F
Suction gas temperature	90° F
Liquid temperature	90° F

115 V / 60 Hz

b) MBP/HBP

Application	**R134a**
Condensing temperature	130° F
Ambient temperature	95° F
Suction gas temperature	95° F
Liquid temperature	115° F

115 V / 60 Hz

c) LBP

Application	**R404A/R507**
Condensing temperature	110° F
Ambient temperature	90° F
Suction gas temperature	90° F
Liquid temperature	90° F

115 V / 60 Hz

d) MBP (ARI 540)

Application	**R404A/R507**
Condensing temperature	120° F
Ambient temperature	95° F
Suction gas temperature	65° F
Liquid temperature	no subcooling

115 V / 60 Hz

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

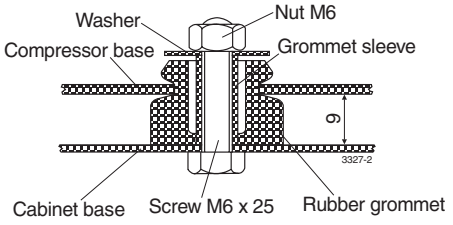
Voltages and frequencies

1 = 103-127 V, 60 Hz
2 = 95-135 V, 60Hz
3 = 95-127 V, 60 Hz
4 = 95-127 V, 50 Hz
5 = 103-135 V, 60 Hz
6 = 90-110 V, 50 Hz
7 = 90-110 V, 60 Hz,
8 = 187-254 V, 60 Hz

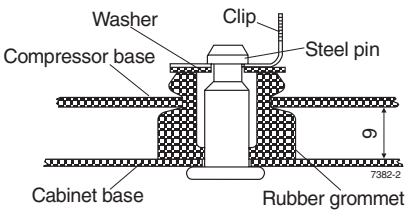
Legend *(for drawings on next page)*

a1: PTC starting device
a2: Starting relay
a3: Starting device
b: Cover
c: Starting capacitor
d: Cord relief
e: Run capacitor
f: Protector
h: Holder

Mounting accessories



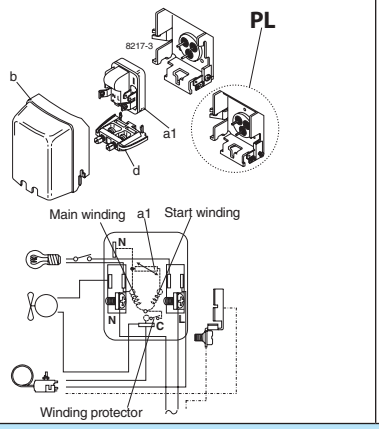
Bolt joint for
one compressor: 118-1917
in quantities: 118-1918



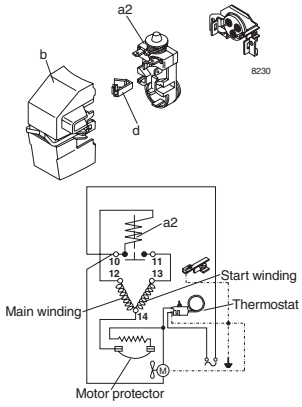
Snap-on
in quantities: 118-1919

LST - RSIR

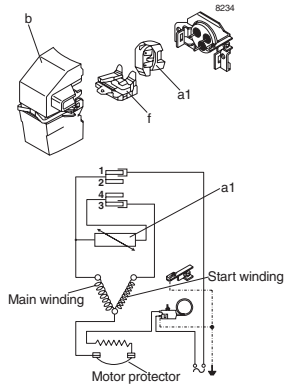
TL



TF-TFS-NF-FF

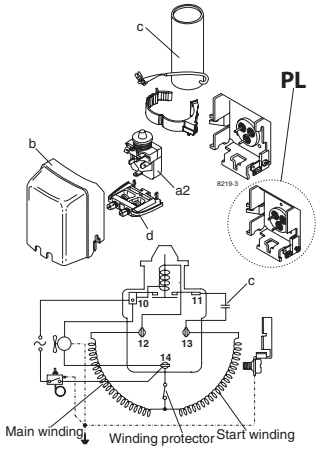


TT

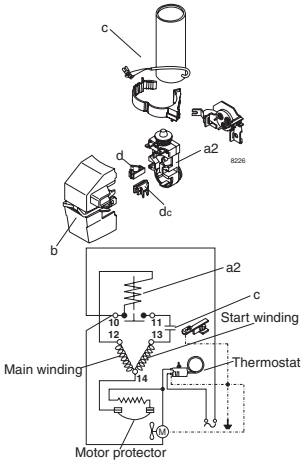


HST - CSIR

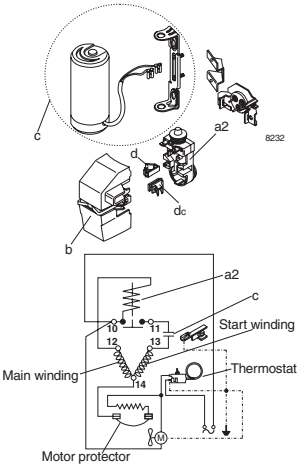
TL



TL-TFS-NF-FF

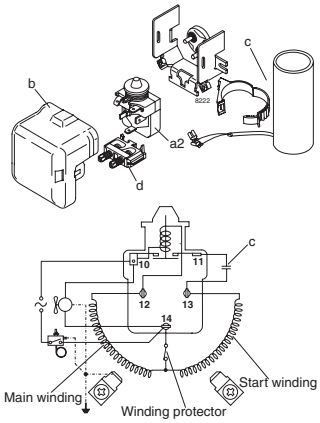


FF-X



HST - CSIR

SC



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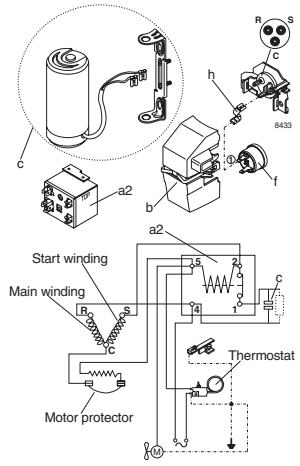

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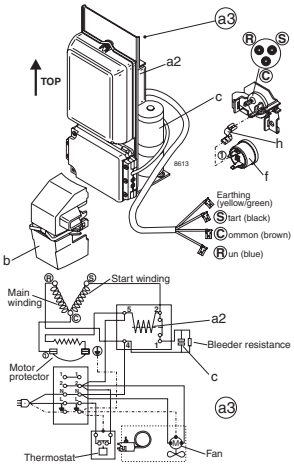
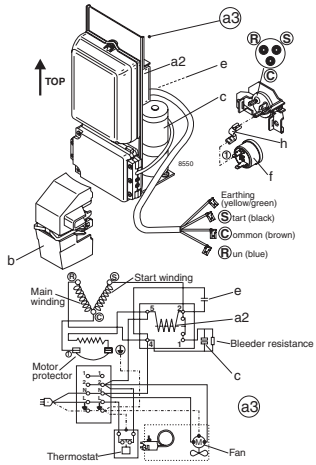


HST - CSR

SC



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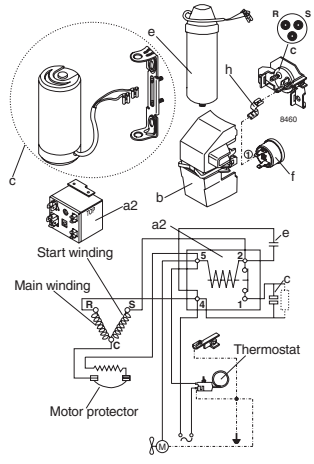
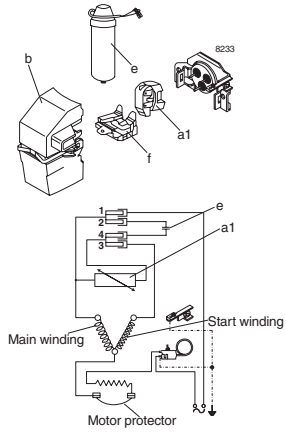


LST - RSCR

TTE-TTY-NTX-NTY



Applications

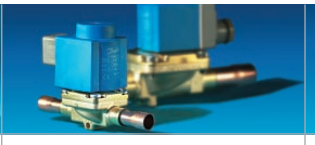
This compressor range will perfectly fit various applications like:

- Laboratory and medical equipment
- Clip-on units and condensing units
- Compressed air dryers
- Glass door merchandisers
- Bakery refrigeration equipment
- Ice cream cabinets
- Display cabinets
- Vending machines
- Soft ice cream machines
- Ice making machines
- Blast freezers
- Slush/frozen beverage makers
- Heat pumps
- Bottle coolers

Refrigeration Controls programme consists of:

Thermostatic expansion valves

Hermetic filter drier with solid core



Direct or servo operated solenoid valve

Sight glass with moisture indicator

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