

Quick reference

Light commercial reciprocating compressors **for refrigeration**

R404A - R507 - R134a - R290 115V 60 Hz



Refrigerant	Application	Compressor	Code numbers		Test conditions	ASHRAE Capacity [BTU/h]															Power consumption (W)			Displacement	Recommended compressor cooling at ambient temperatures					
						Evaporating temperature (°F)																			100°F			110°F		
			Compressor	Compressor with oil cooling		-40	-30	-20	-10	0	10	20	30	40	45	50	59	-10	20	45	cu. inch	LBP	MBP	HBP	LBP	MBP	HBP			
R134a	LBP	TF3.5F	102G3304	a		134	207	305	429	583								93			0.22	S			S					
		TFS4F	102G3431	a		156	239	356	509	699								97			0.23	S			S					
		TFS4.5FT	102G3433	a		245	340	477	654	875								127			0.29	S			S					
		TLS4.5F	102G3420	a		245	340	477	654	875	1135							129	199		0.29	S			S					
		TTE4.6FK	102G3448	a		219	344	488	664	866								105			0.28	S			S					
		TTY6F	102G3647	a		294	437	611	825	1084								133			0.35	S			S					
		NTY5.5FK	105G5620	a		390	517	698	940	1250								139			0.37	S			S					
		NTY6FK	105G5621	a		428	580	787	1056	1393								156			0.40	S			S					
		NTY9FK	105G5921	a		558	755	1018	1358	1787								196			0.51	F ₁			F ₁					
		NTX5.2FK	105G5650	a		277	424	601	814	1069								107			0.31	S			S					
		NTX5.7FK	105G5651	a		318	473	672	921	1229								118			0.34	S			S					
		NTX7.3FK	105G5750	a		444	628	872	1184	1570								151			0.44	S			S					
	LBP/MBP	PL30F	101G9100	a				103	156	221	302	399	517	584	657	804	51	66	81	0.09	S	S	S	S	S	S				
		PL50F	101G9202	a				175	249	335	437	557					65	89		0.12	S	S		S	S					
		TFS4.5FT	102G3432	a		245	340	477	654	875	1135	1445	1793	1987			127	197	270	0.29	F ₁	F ₁		F ₁	F ₁					
		TL2.5F	102G3206	b				180	255	354	466						65	104		0.16	S	S		S	S					
		TL3F	102G3300	a				253	352	479	639						77	125		0.19	S	S		S	S					
		TL4F	102G3400	b		161	203	276	383	529	714						91	142		0.23	S	S		S	S					
		TT2.5F	102G3248	b				187	268	373	496						69	107		0.16		S			S					
		NF6FK	105G5636	b		254	411	593	811	1071	1384	1758	2202	2452			172	259	323	0.37	F ₁	F ₁		F ₁	F ₁					
		NF7FK	105G5736	b		357	533	740	988	1288	1651	2089	2611	2907			204	303	385	0.44	S	S		F ₁	F ₁					
		NF9FK	105G5928	b		421	598	820	1098	1439	1853	2348	2932	3261			233	339	447	0.51	F ₂	F ₂		F ₂	F ₂					
		NF9.5FK	105G5929	b		474	667	910	1214	1587	2039	2580	3220	3580			264	379	496	0.57	F ₂	F ₂		F ₂	F ₂					
		NF10FX	105G5941	b			663	930	1254	1647	2123	2693	3372	3756			261	391	512	0.62	F ₂	F ₁		F ₂	F ₁					
		NF6.1FX.2	105G5631	b		276	440	643	888	1186	1541	1959	2445	2716			178	255	327	0.37	F ₁	F ₁		F ₂	F ₂					
		NF7.3FX.2	105G5722	b		363	556	796	1085	1438	1857	2351	2925	3244			226	322	412	0.44	F ₁	F ₁		F ₂	F ₂					
		NF8.4FX.2	105G5918	b		432	651	915	1243	1637	2106	2658	3300	3658			248	361	467	0.51	F ₂	F ₁		F ₂	F ₁					
		NF11FX.2	105G5916	b					1573	2088	2700	3420	4259	4726				465	614	0.68		F ₂			F ₂					
		SC12FTX	104G7205	a		563	889	1280	1753	2324	3008						360	537		0.78	F ₂	F ₂		F ₂	F ₂					
		SC15FTX	104G7505	a		711	1094	1550	2096	2750	3531						405	632		0.93	F ₂	F ₂		F ₂	F ₂					
	LBP/HBP	TL2.5G	102G3255	b				169	249	358	496	663	860	970	1087	1312	72	101	131	0.16	S	S		S	S					
		TL4G	102G3460	b		116	180	271	391	542	729	954	1220	1369	1530	1849	96	147	197	0.23	S	S		S	S					
		FF6GK	103G6580	103G5690	b			221	368	578	850	1184	1581	2042	2296	2566		132	221	295	0.38	O/F ₁	O/F ₁	O/F ₁	O/F ₁	O/F ₁	O/F ₁			
		FF7.5GK	103G5780	103G5790	b			291	458	689	984	1344	1769	2259	2529	2816		148	250	340	0.42	O/F ₁	O/F ₁	O/F ₁	O/F ₁	O/F ₁	O/F ₁			
		FF8.5GX	103G5880		b			392	587	848	1176	1570	2029	2555	2842	3146		209	321	418	0.48	F ₁	F ₁	F ₁	F ₁	F ₁	F ₁			
		FF10GX	103G5980		b			420	635	923	1285	1721	2234	2823	3147	3490		232	359	468	0.55	F ₁	F ₁	F ₁	F ₁	F ₁	F ₁			
SC12G		104G7250	104G7260	b		216	488	861	1335	1911	2588	3367	4250	4730	5236		269	451	615	0.78	O/F ₁	O/F ₁	O/F ₁	O/F ₁	O/F ₁	O/F ₁				
SC15G		104G7550	104G7560	b		403	692	1100	1628	2276	3045	3934	4945	5496	6078		329	566	766	0.93	O/F ₁	O/F ₁	O/F ₁	O/F ₁	O/F ₁	O/F ₁				
SC18G		104G7800		a				1357	2112	2952	3908	5008	6285	6999	7768	9308	404	691	912	1.08	F ₂	F ₂	F ₂	F ₂	F ₂	F ₂				
R404A / R507		LBP/MBP	TF4CLX	102U2102	c	289	419	579	773	1004	1278	1596	1965	2388	2622			175	259	374	0.23	F ₁	F ₁		F ₁	F ₁				
	TFS4.5CLX		102U2103	c	407	569	769	1010	1298	1637	2034						215	340		0.29	F ₁			F ₁						
	NF5.5CLX		105F1621	c	565	788	1056	1376	1756	2202	2723	3325	4017	4399			288	404	524	0.37	F ₂	F ₂		F ₂	F ₂					
	NF7CLX		105F1721	c	672	959	1304	1716	2205	2780	3451	4226	5213	5609			356	499	649	0.44	F ₂	F ₂		F ₂	F ₂					
	SC10CL		104L1503	c	344	773	1275	1863	2553	3360	4298	5384	6633	7324			435	620	782	0.63	F ₂	F ₂		F ₂	F ₂					
	SC12CLX.2		104L1696	c	894	1414	2012	2706	3512	4447	5530						618	905		0.78	F ₂			F ₂						
	SC15CLX.2		104L1853	c	1244	1828	2532	3375	4375	5551	6921						694	989		0.93	F ₂			F ₂						
	SC18CLX.2		104L2198	c	1362	2190	3002	3867	4856	6039							795			1.08	F ₂			F ₂						
	SC12MLX		104L1606	b					1987	2640	3435	4391	5527	6865	7616			581	865	1058	0.78		F ₂			F ₂				
	SC15MLX		104L1805	b					2295	3049	3967	5070	6383	7928	8795			719	1070	1371	0.93		F ₂			F ₂				
	SC15MLX.2		104L1807	b					2423	3156	4048	5120	6396	7897	8740			678	1010	1293	0.93		F ₂			F ₂				
	SC18MLX		104L2105	b					2997	3894	4984	6296	7855	9691	10722			878	1266	1602	1.08		F ₂			F ₂				
R290	LBP/MBP	SC10CNX.2	104H7070	a	204	571	1007	1523	2133	2848	3682	4649	5762	6378			383	517	580	0.63	F ₂	F ₂		F ₂	F ₂					
		SC12CNX.2	104H7270	a	589	1005	1500	2085	2776	3587	4533	5627	6887	7583			475	635	748	0.78	F ₂	F ₂		F ₂	F ₂					

Compressor	Voltage & frequencies	Electrical equipment									Dimensions (inch)					
		LST (RSIR / RSCR)				HST (CSIR & CSR)			LST / HST		Height		Connectors location / I.D			
		PTC starting device		Starting relay	Protector (external)	Starting relay	Starting capacitor	Starting device					Suc-tion	Pro-cess	Dis-charge	Oil cooler
		Spades 1/4 inch	Spades 3/16 inch	Spades 1/4 inch	Spades 1/4 inch	Spades 1/4 inch	Spades 1/4 inch	Spades 1/4 inch	Cord relief	Cover	A	B	C	D	E	F
TF3.5F	2			117U4122					117U0349	117U1021	6.81	6.65	0.252	0.252	0.202	
TFS4F	2			117U4122					117U0349	117U1021	6.81	6.65	0.252	0.252	0.202	
TFS4.5FT	2			117U4113					117U0349	117U1021	6.81	6.65	0.252	0.252	0.202	
TLS4.5F	1	103N0026	103N0023			117U6003	117U5023		103N1010	103N2011	6.42	6.26	0.252	0.252	0.202	
TTE4.6FK	1	117U6106 ¹			117U3302					117U1026	6.81	6.65	0.252	0.252	0.202	
TTY6F	1	117U6106 ¹			117U3303					117U1026	6.81	6.65	0.252	0.252	0.202	
NTY5.5FK	1	117U6106 ¹			117U3306					117U1026	8.00	7.76	0.320	0.252	0.252	
NTY6FK	1	117U6106 ¹			117U3306					117U1026	8.00	7.76	0.320	0.252	0.252	
NTY9FK	1	117U6106 ¹			117U3310					117U1026	8.00	7.76	0.320	0.252	0.252	
NTX5.2FK	1	117U6106 ³			117U3302					117U1026	8.00	7.76	0.320	0.252	0.252	
NTX5.7FK	1	117U6106 ¹			117U3312					117U1026	8.00	7.76	0.320	0.252	0.252	
NTX7.3FK	1	117U6106 ¹			117U3312					117U1026	8.00	7.76	0.320	0.252	0.252	
PL30F	2	103N0026	103N0023			117U6000	117U5015		103N1010	103N0492	5.28	5.20	0.252	0.252	0.202	
PL50F	1	103N0026	102N0023			117U6000	117U5015		103N1010	103N0492	5.28	5.20	0.252	0.252	0.202	
TFS4.5FT	2			117U4113		117U4126	117U5022		2x117U0349	117U1021	6.81	6.65	0.252	0.252	0.202	
TL2.5F	1	103N0026	103N0023						103N1010	103N2011	6.42	6.26	0.252	0.252	0.202	
TL3F	1	103N0026	103N0023						103N1010	102N2011	6.42	6.30	0.378	0.252	0.252	
TL4F	1	103N0026	103N0023						103N1010	103N3011	6.42	6.26	0.252	0.252	0.202	
TT2.5F	1	117U6102			117U3301					117U1026	6.22	5.98	0.252	0.252	0.189	
NF6FK	2			117U4131		117U4132 ⁵	117U5022 ⁵		2x117U0349	117U1021	7.72	7.52	0.242	0.242	0.202	
NF7FK	2			117U4131		117U4132 ⁵	117U5022 ⁵		2x117U0349	117U1021	8.00	7.76	0.242	0.242	0.202	
NF9FK	2			117U4133		117U4134 ⁵	117U5022 ⁵		2x117U0349	117U1021	8.00	7.76	0.320	0.252	0.252	
NF9.5FK	2			117U4141		117U4142 ⁵	117U5028 ⁵		2x117U0349	117U1021	8.00	7.76	0.320	0.252	0.252	
NF10FX	2					117U4129	117U5022		2x117U0349	117U1021	7.76	7.52	0.320	0.252	0.252	
NF6.1FX.2	2					117U4127	117U5025		2x117U0349	117U1021	7.76	7.52	0.320	0.252	0.252	
NF7.3FX.2	2					117U4061	117U5025		2x117U0349	117U1021	7.76	7.52	0.320	0.252	0.252	
NF8.4FX.2	2					117U4129	117U5025		2x117U0349	117U1021	7.76	7.52	0.320	0.252	0.252	
NF11FX.2	2					117U4151	117U5028		2x117U0349	117U1021	8.00	7.76	0.320	0.252	0.252	
SC12FTX	2					117U6012	117U5023		103N1004	103N2008	8.23	8.00	0.320	0.252	0.252	
SC15FTX	2/6/7					117U6020	117U5023		103N1004	103N2008	8.23	8.00	0.320	0.252	0.252	
TL2.5G	1	103N0026	103N0023						103N1010	103N2011	6.42	6.26	0.252	0.252	0.202	
TL4G	3/4/6/7	103N0026	103N0023			117U6003	117U5023		103N1010	103N2011	6.81	6.65	0.252	0.252	0.202	
FF6GK	1	117U4085 ⁴							117U0349	117U1021	7.72	7.52	0.320	0.252	0.252	0.252
FF7.5GK	1	117U4085 ⁴							117U0349	117U1021	7.72	7.52	0.320	0.252	0.252	
FF8.5GX	1					117U4060	117U5041		2x117U0349	117U1021	7.72	7.52	0.320	0.252	0.252	
FF10GX	1					117U4061	117U5040		2x117U0349	117U1021	7.72	7.52	0.320	0.252	0.252	
SC12G	1					117U6020	117U5023		103N1004	103N2008	8.23	8.00	0.320	0.252	0.252	0.252
SC15G	1					117U6020	117U5023		103N1004	103N2008	8.23	8.00	0.320	0.252	0.252	0.252
SC18G	2				Mounted	117-7441	117U5042			mounted	8.62	8.39	0.378	0.252	0.252	
TF4CLX	2					117U4148	117U5025		2x117U0349	117U1021	6.81	6.65	0.252	0.252	0.189	
TFS4.5CLX	5					117U4148	117U5025		2x117U0349	117U1021	6.81	6.65	0.252	0.252	0.189	
NF5.5CLX	2					117U4061	117U5025		2x117U0349	117U1021	8.00	7.76	0.320	0.252	0.252	
NF7CLX	2					117U4129	117U5022		2x117U0349	117U1021	8.00	7.76	0.320	0.252	0.252	
SC10CL	1					117U6020	117U5023		103N1004	103N2008	8.23	8.00	0.320	0.252	0.252	
SC12CLX.2	2					117U6020	117U5023			117U1021	8.23	8.00	0.320	0.252	0.252	
SC15CLX.2	3				Mounted	117-7441	117U5043	117-7045		mounted	8.62	8.39	0.378	0.252	0.252	
SC18CLX.2	1				Mounted	117-7441	117U5043	117-7045		mounted	8.62	8.39	0.378	0.252	0.252	
SC12MLX	2				Mounted	117-7441	117U5042			mounted	8.62	8.39	0.320	0.252	0.252	
SC15MLX	2				Mounted	117-7441	117U5043	117-7045		mounted	8.62	8.39	0.378	0.252	0.252	
SC15MLX.2	1				Mounted	117-7441	117U5043	117-7045		mounted	8.62	8.39	0.378	0.252	0.252	
SC18MLX	1				Mounted	117-7441	117U5043	117-7045		mounted	8.62	8.39	0.378	0.252	0.252	
SC10CNX.2	2					117U7020	117U5023		103N1004	103N2008	8.23	8.00	0.378	0.252	0.252	
SC12CNX.2	2					117U7020	117U5023		103N1004	103N2008	8.23	8.00	0.378	0.252	0.252	

Test conditions

Test Conditions	a ASHRAE LBP (115V / 60 Hz)	b ASHRAE MBP/HBP (115V / 60 Hz)	c ASHRAE LBP (115V / 60 Hz)
Refrigerant	R134a & R290	R134a & R404A/R507	R404A/R507
Condensing temperature	130°F	130°F	110°F
Ambient temperature	90°F	95°F	90°F
Suction gas temperature	90°F	95°F	90°F
Liquid temperature	90°F	115°F	90°F

Electrical equipment¹ = 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 compressors⁵ = 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 data sheets.

Model designation

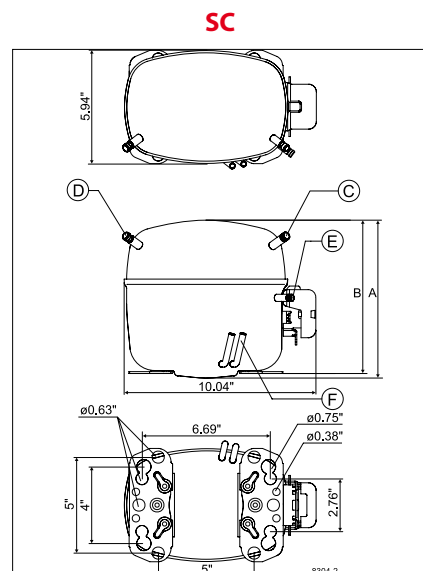
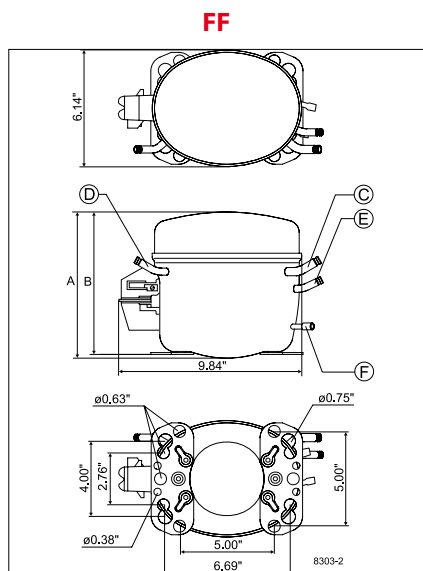
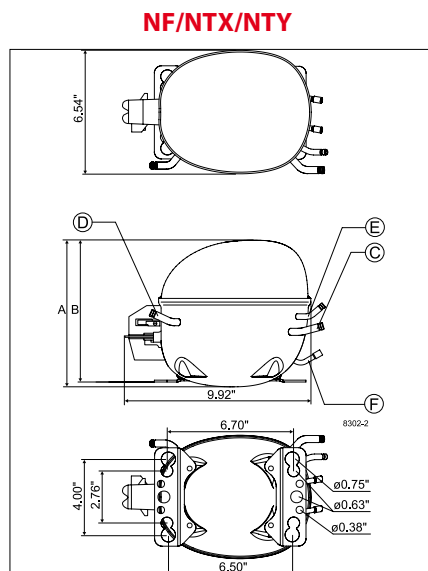
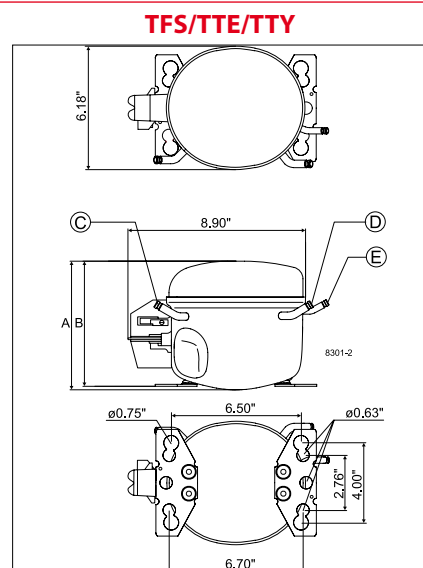
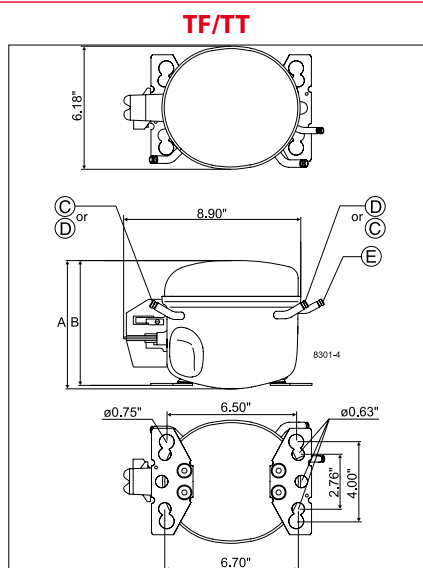
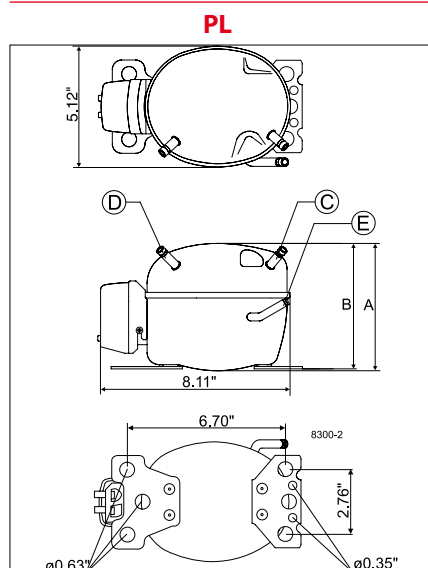
Compressor design	Optimization level	Compressor size	Application range	Start characteristics	Generation
PL	Blank : Standard energy level S : Semi direct intake E : Energy optimized (optimized motor) Y,X : High energy optimized (high optimization level)	Nominal displacement in cm3 Exception: For PL compressors the capacity at rating point is stated	F : R134a LBP / (MBP) FT : R134a LBP / (MBP) Tropical G : R134a LBP / MBP / HBP CL : R404A/R507 LBP ML : R404A/R507 MBP CN : R290 LBP	Blank : Universal (principal rule) K = LST Characteristics (capillary tube) X = HST Characteristics (expansion valve)	Blank > first generation .2 > Second generation .3 > third generation etc...
TF, TL, TT					
NF, NL					
FF					
SC					

Examples

Examples					
Compressor design	Optimization level	Compressor size	Application range	Start characteristics	Generation
TF	S	4.5	FT		
NT	X	7.3	F	K	
FF		8.5	G	X	
SC		15	ML	X	.2
SC		12	CN	X	2

Warnings

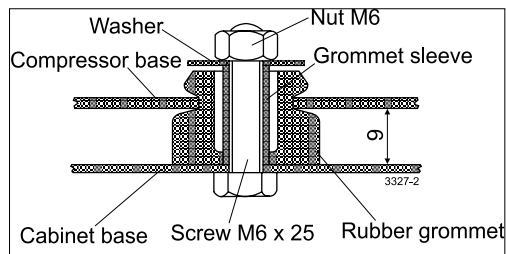
R290 is flammable in concentrations of air between approximately 2.1% and 9.5% by volume (LEL lower explosion limit and UEL upper explosion limit). An ignition source at a temperature higher than 470°C is needed for combustion to occur.



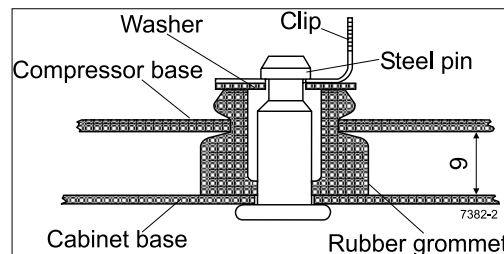
Mounting accessories

The mounting accessories for the compressors are available in two versions, with bolt joint or snap-on joint.

The rubber grommets are designed for the 16 mm holes of the baseplate.

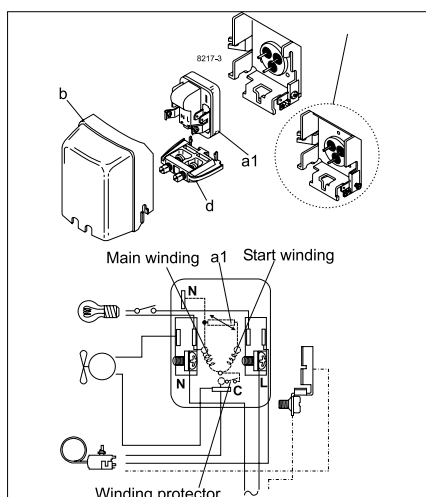


Bolt joint for
one compressor : 118-1917
in quantities : 118-1918

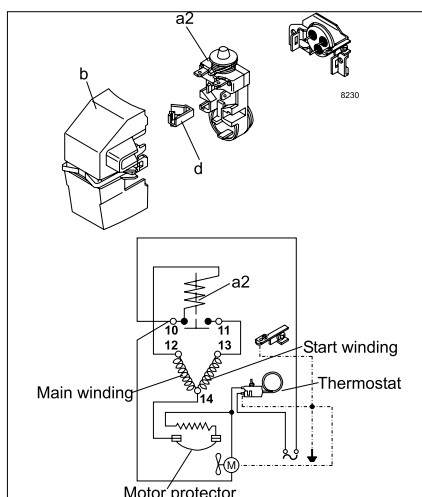


Snap-on
in quantities: 118-1919

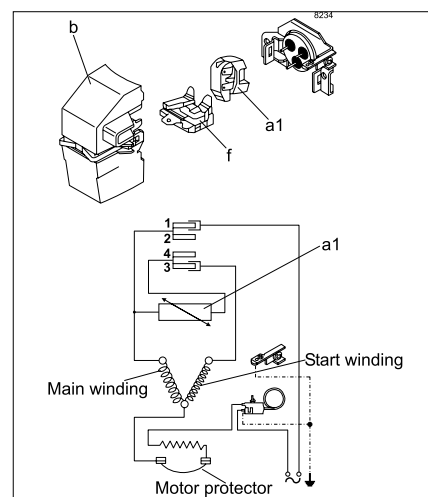
LST - RSIR



TL

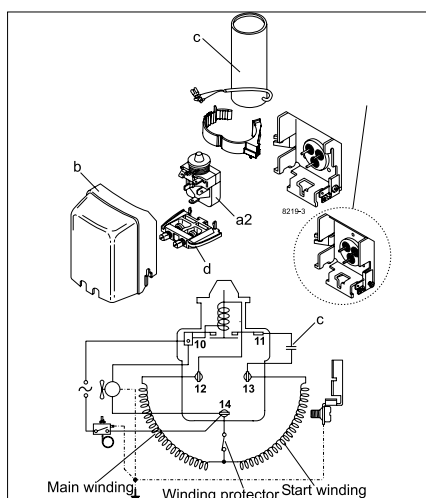


TF-TFS-NF-FF

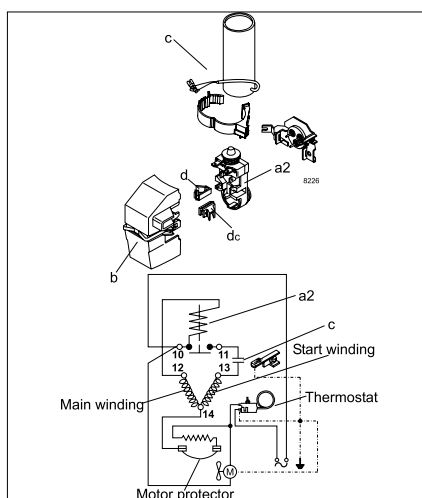


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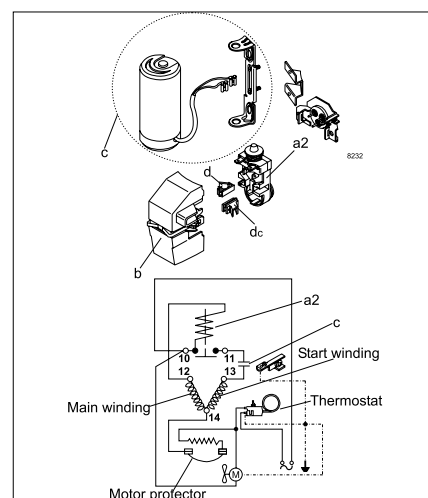
HST - CSIR



TL

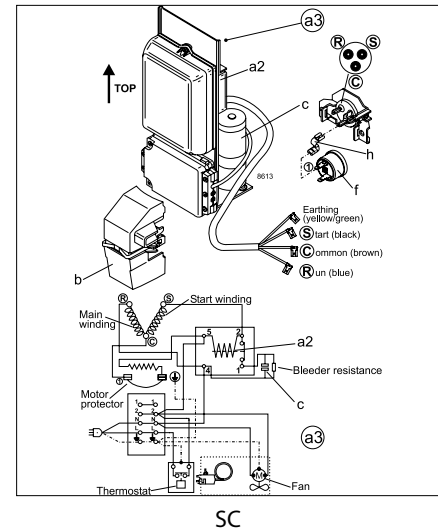
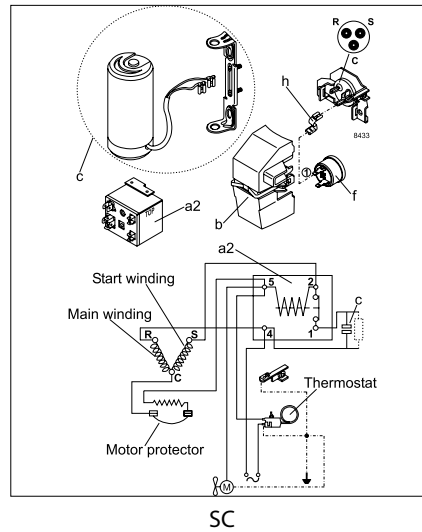
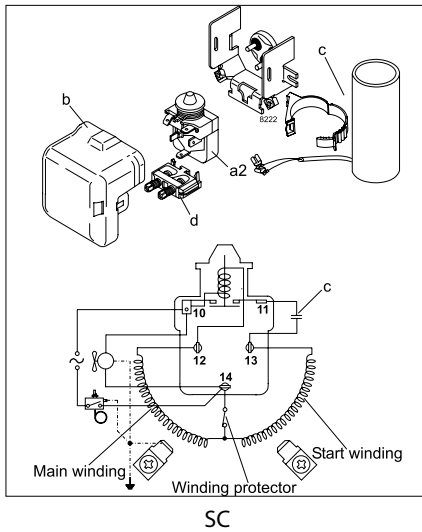


TL-TFS-NF-FF

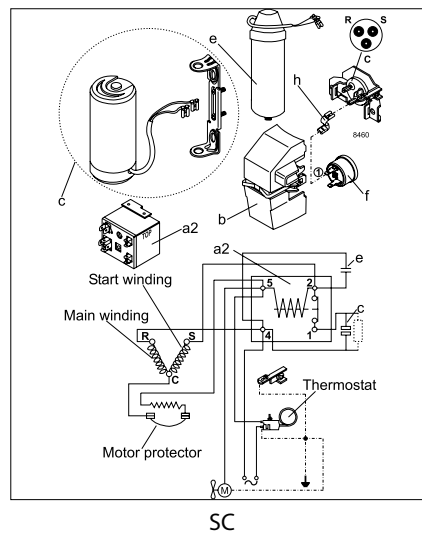
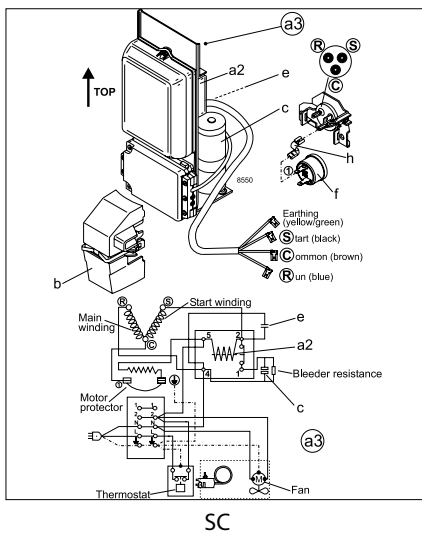


FF-X

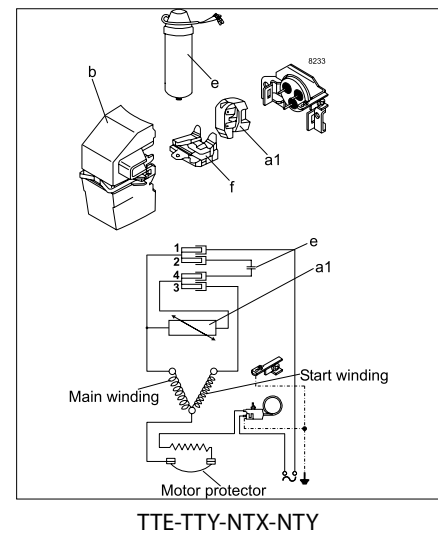
HST - CSIR



HST - CSR



LST - RSCR



Legend :

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

Quick reference

R404A - R507 - R134a - R290 115V 60 Hz

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Danfoss Scrolls



Danfoss Inverter Scrolls



Danfoss Maneurop Reciprocating Compressors



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Danfoss Turbocor Compressors



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