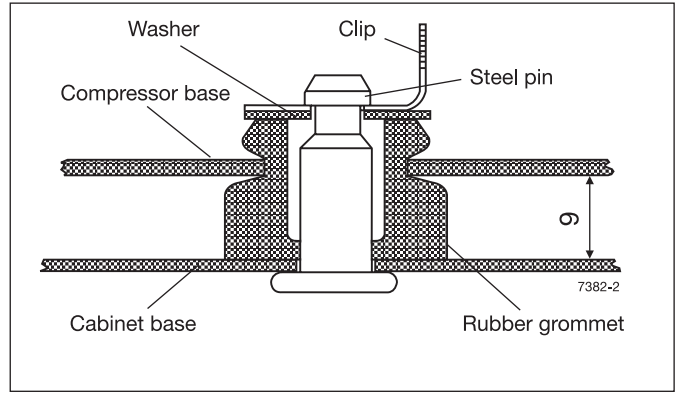
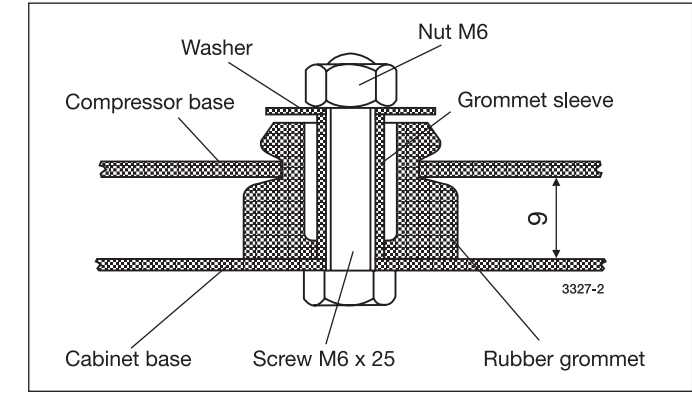
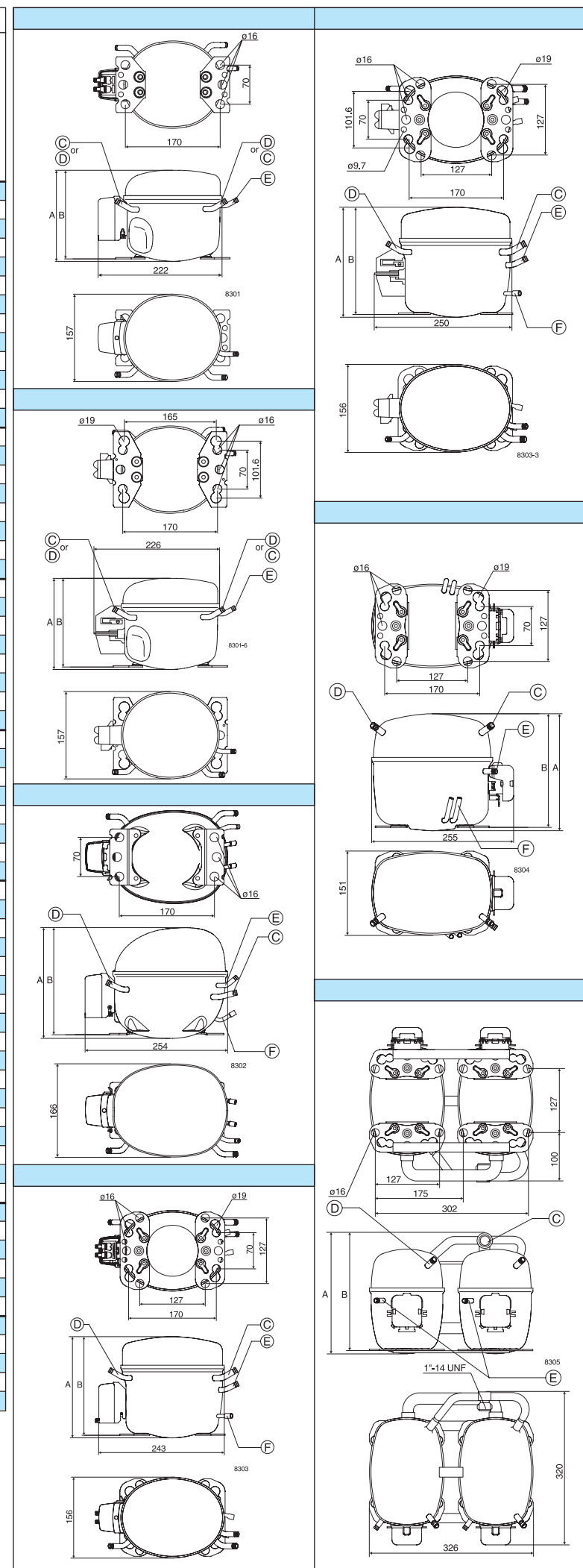
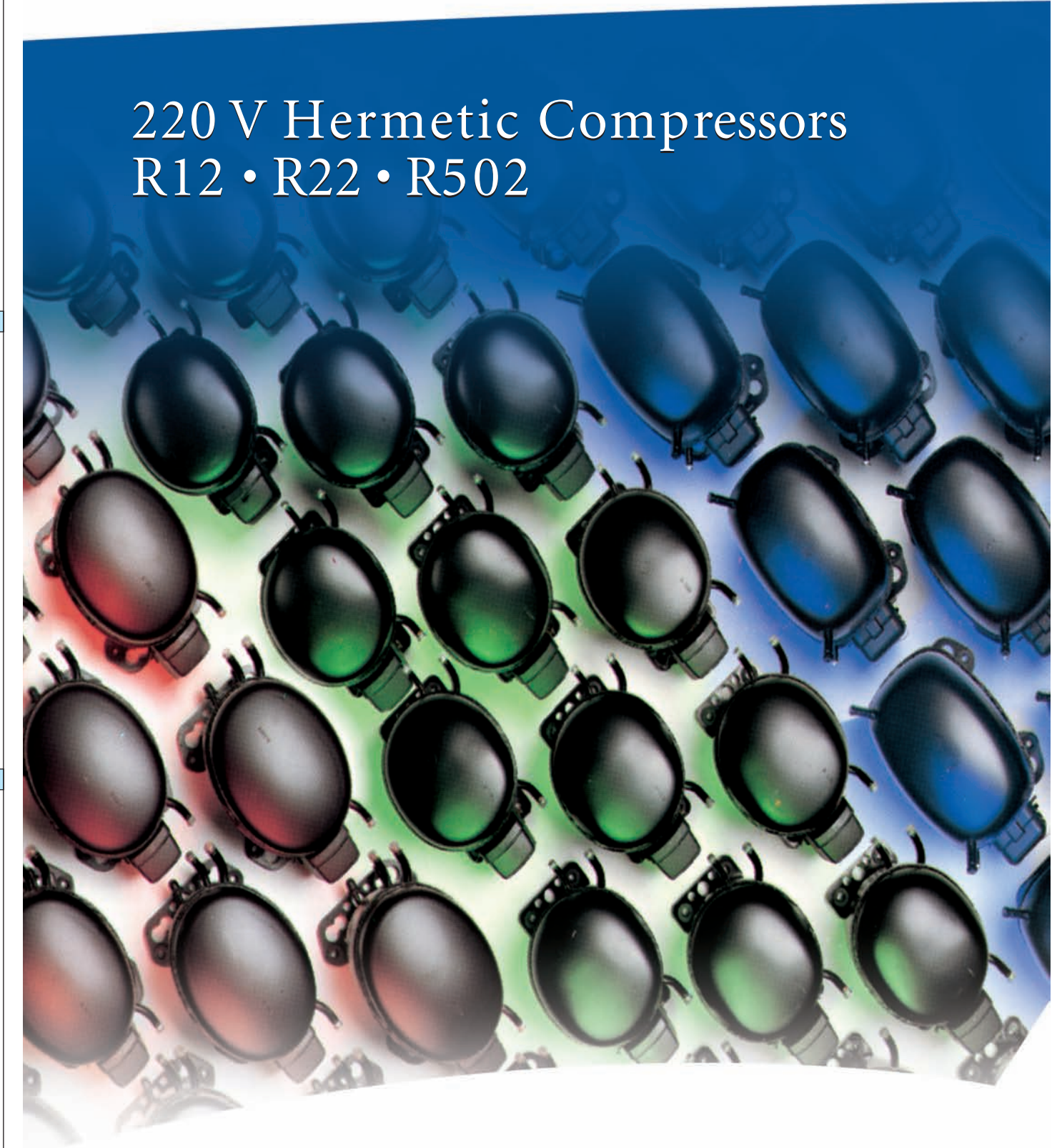




# 220 V Hermetic Compressors R12 • R22 • R502



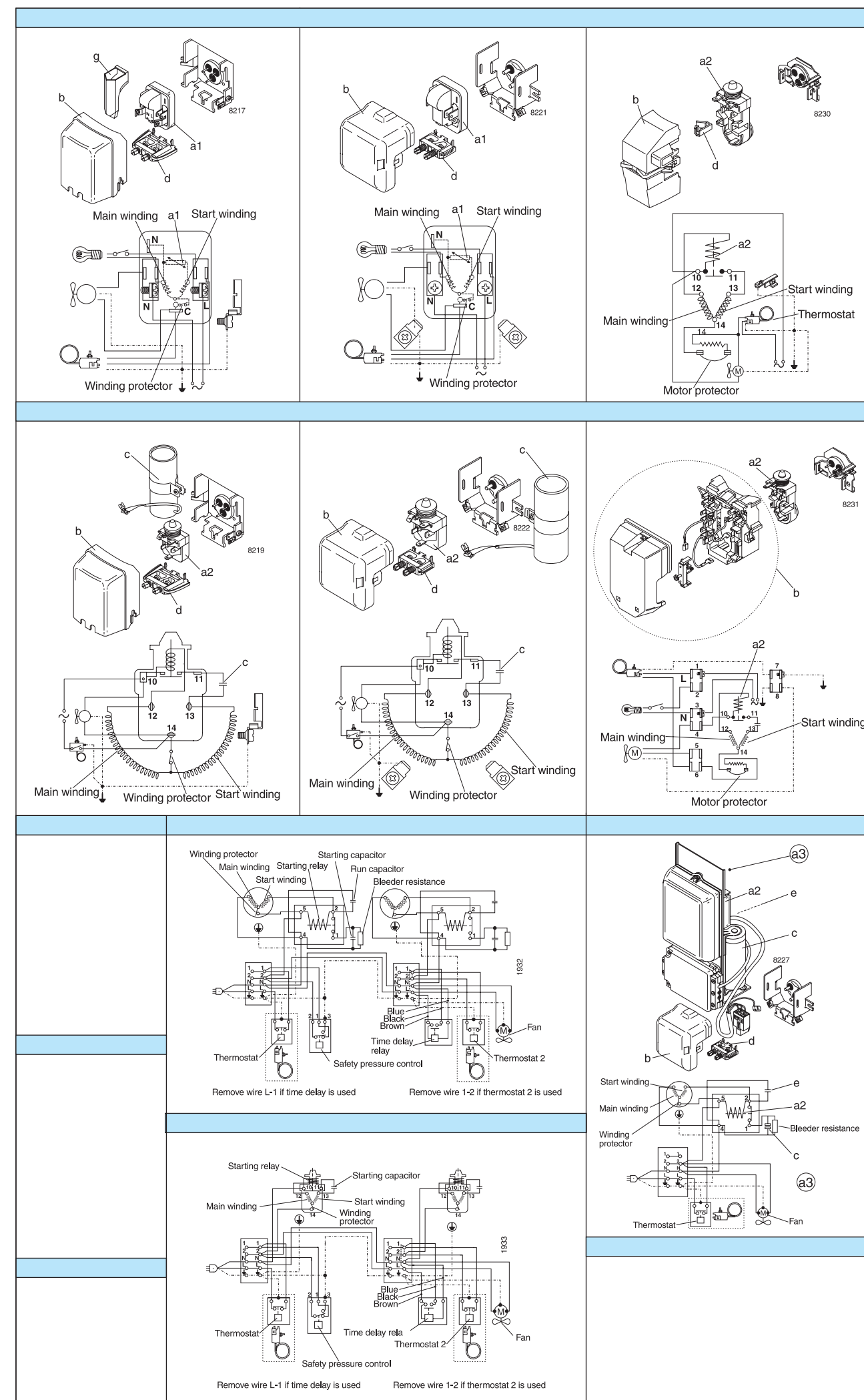
# Hermetic Compressors 220 V

Application	Compressor	Code numbers		Capacity [Watt]								Power consumption [Watt]		Displacement cm <sup>3</sup>	
		Compressor	Compressor with oil cooling	Evaporating temperature [°C]								-25°C	5°C		
				-45	-35	-25	-15	-10	-5	5	15				
R12 LBP	TL2A	102U2002		12	33	64	81	100			52		2.13		
	TL2.5A	102U2003		20	45	80	100	122			62		2.61		
	TL3A	102U2004		27	56	97	121	147			74		3.13		
	TL4A	102U2005		39	73	120	148	178			91		3.86		
	TL5A	102U2010		56	96	158	194	235			114		5.08		
	NL6A	105F3607		73	127	204	255				138		6.1		
	NL7A	105F3707		85	146	237	295				157		7.3		
	FR10A	103U2904	103U2914	85	158	255	315				180		9.05		
	FR11A	103U2104	103U2114	110	205	335	415				245		11.15		
	SC12A	104L2660	104L2680	95	230	395	495	600			260		12.9		
	SC15A	104L2820	104L2810	130	275	485	600	725			305		15.3		
SC18A	104L2100		170	340	575	715	860			365		17.7			
SC21A	104L2300		220	400	660	820	980			455		20.95			
R12 LBP	TFS3AT	102U2083		32	60	98	120				80		3.13		
	TFS4AT	102U2081		42	79	128	160				95		3.86		
	TFS5AT	102U2080		62	104	175	215				125		5.08		
	FF7.5AT	103U2750		65	132	220	280				147		6.93		
	FF8.5AT	103U2850	103U2760	65	132	220	280				147		6.93		
	FF8.5AT	103U2850	103U2860	77	152	255	315				169		7.95		
	FF10AT	103U2950		86	165	275	350				190		9.05		
R22 LBP	SC10C	104L2516		50	155	325	560	700	850			300		10.3	
	SC12C	104L2674		95	220	415	680	840	1020			380		12.9	
	SC15CM	104L2848		115	270	510	840	1050	1280			470		15.3	
	SC18CM	104L2120		130	310	585	980	1230	1500			510		17.7	
	SC10/10C*	104L4076		100	310	650	1120	1400	1700			600		2x10.3	
	SC12/12C*	104L4077		190	440	830	1360	1680	2040			760		2x12.9	
	SC15/15CM*	104L4079		230	540	1020	1680	2100	2560			940		2x15.3	
	SC18/18CM**	104L4081		260	620	1170	1960	2460	3000			1020		2x17.7	
R502 LBP	SC10C	104L2516		80	215	365	590	710	870			335		10.3	
	SC12C	104L2674		110	270	470	770	950	1140			420		12.9	
	SC15CM	104L2848		150	325	590	920	1120	1390			535		15.3	
	SC18CM	104L2120		180	400	685	1080	1330	1600			580		17.7	
	SC10/10C*	104L4076		160	230	730	1180	1420	1740			670		2x10.3	
	SC12/12C*	104L4077		220	540	940	1540	1900	2280			840		2x12.9	
	SC15/15CM*	104L4079		300	650	1180	1840	2240	2780			1070		2x15.3	
SC18/18CM**	104L4081		360	800	1370	2160	2660	3200			1160		2x17.7		
R12 LBP HBP	TL2.5B	102U2021		20	45	80	102	126	182	248			112		2.61
	TL3B	102U2023		27	56	96	120	148	215	296			141		3.13
	TL4B	102U2016		39	73	116	145	182	264	364			157		3.86
	FR6B	103U2654		55	110	190	235	295	438	620			243		6.24
	FR7.5B	103U2754	103U2764	65	127	210	275	340	495	695			280		6.93
	FR8.5B	103U2854	103U2864	72	146	240	300	375	555	770			326		7.95
	FR10B	103U2954	103U2964	85	158	268	340	420	620	860			375		9.05
	FR11B	103U2154		110	205	340	420	520	758	1050			485		11.15
	SC10B	104L2510	104L2511	70	170	310	400	490	760	1080			390		10.3
	SC12B	104L2670	104L2671	95	230	410	520	630	950	1330			500		12.9
	SC15B	104L2830	104L2831	130	275	490	615	760	1090	1590			595		15.3
	SC18B	104L2110		170	340	575	715	870	1280	1820			720		17.7
	SC21B	104L2310		220	400	670	840	1010	1450	2080			730		20.95
SC12/12B*	104L4072		190	460	820	1040	1260	1900	2660			1000		2x12.9	
SC15/15B*	104L4073		260	550	980	1230	1520	2180	3180			1190		2x15.3	
SC18/18B**	104L4074		340	680	1150	1430	1740	2560	3640			1440		2x17.7	
SC21/21B**	104L4075		440	800	1340	1680	2020	2900	4160			1460		2x20.95	
R22 HBP	SC10D	104L2529	104L2517			510	655	835	1295	1895			545		10.3
	SC12D	104L2694	104L2684			650	840	1070	1615	2290			660		12.9
	SC15D	104L2859	104L2839			800	1045	1325	1975	2750			715		15.3
	SC10/10D*	104L4084				1020	1310	1670	2590	3790			1090		2x10.3
	SC12/12D**	104L4085				1300	1680	2140	3230	4580			1320		2x12.9
	SC15/15D**	104L4086				1600	2090	2650	3950	5500			1430		2x15.3
R12 HBP Heat pump compressors	FR7H		103U2763			215	280	355	520	770			260		6.93
	SC10H		104L2515			260	345	455	730	1060			350		10.3
	SC10HH		104L2514			260	345	455	730	1060			320		10.3
	SC15H		104L2836			455	610	765	1120	1560			5500		15.3
SC15HH		104L2835			455	610	765	1120	1560			510		15.3	

**Testing conditions (CECOMAF)**  
 Application: R12, R502 / R22  
 Condensing temperature: 55°C, 45°C  
 Ambient temperature: 32°C, 32°C  
 Suction gas temperature: 32°C, 32°C  
 Liquid temperature: 55°C, 45°C  
 220 V / 50 Hz

**Conversion of capacity**  
 If a stated capacity is required at 32°C liquid temperature, multiply the capacity with one of the following factors.  
 R12: From 55°C to 32°C liquid: 1.20  
 R22: From 45°C to 32°C liquid: 1.11  
 R502: From 45°C to 32°C liquid: 1.41

**Conversion of units**  
 1 Watt = 0.86 kcal/h  
 1 Watt = 3.41 Btu/h



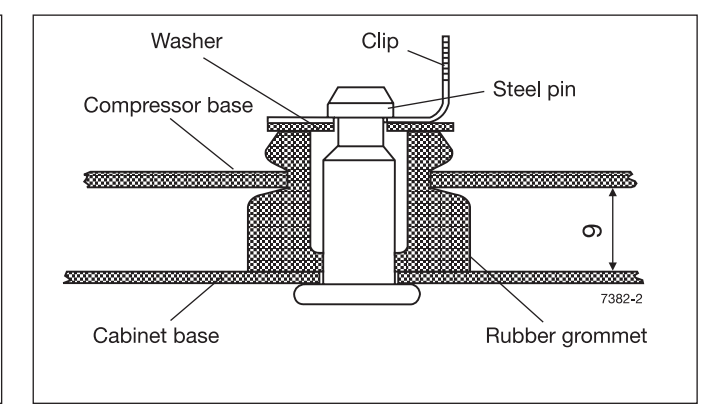
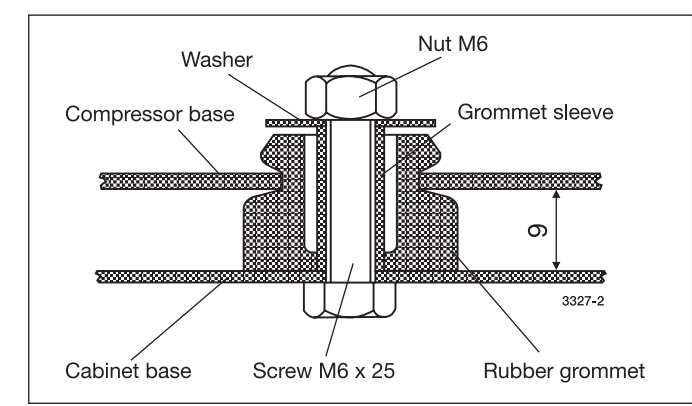
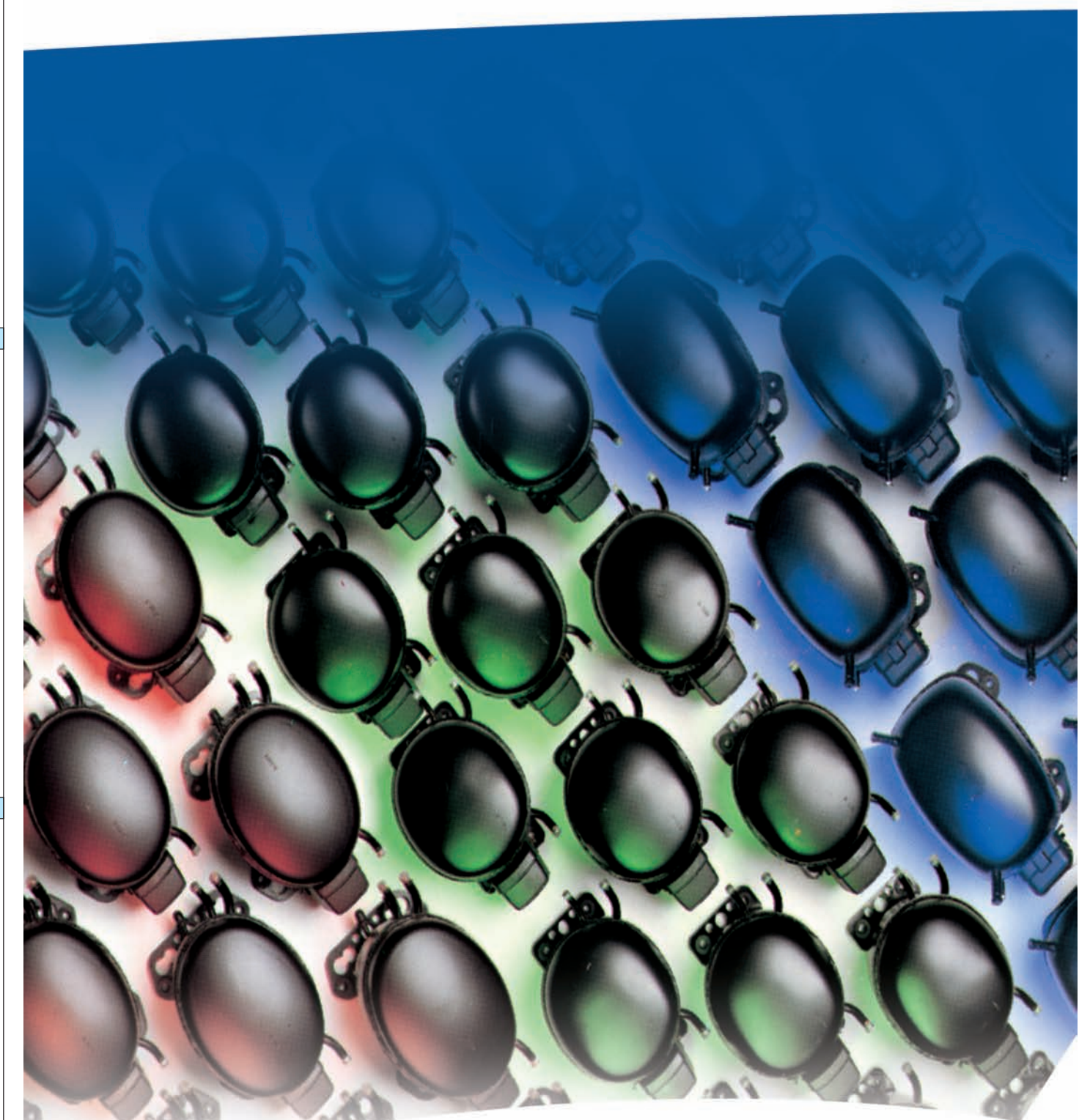
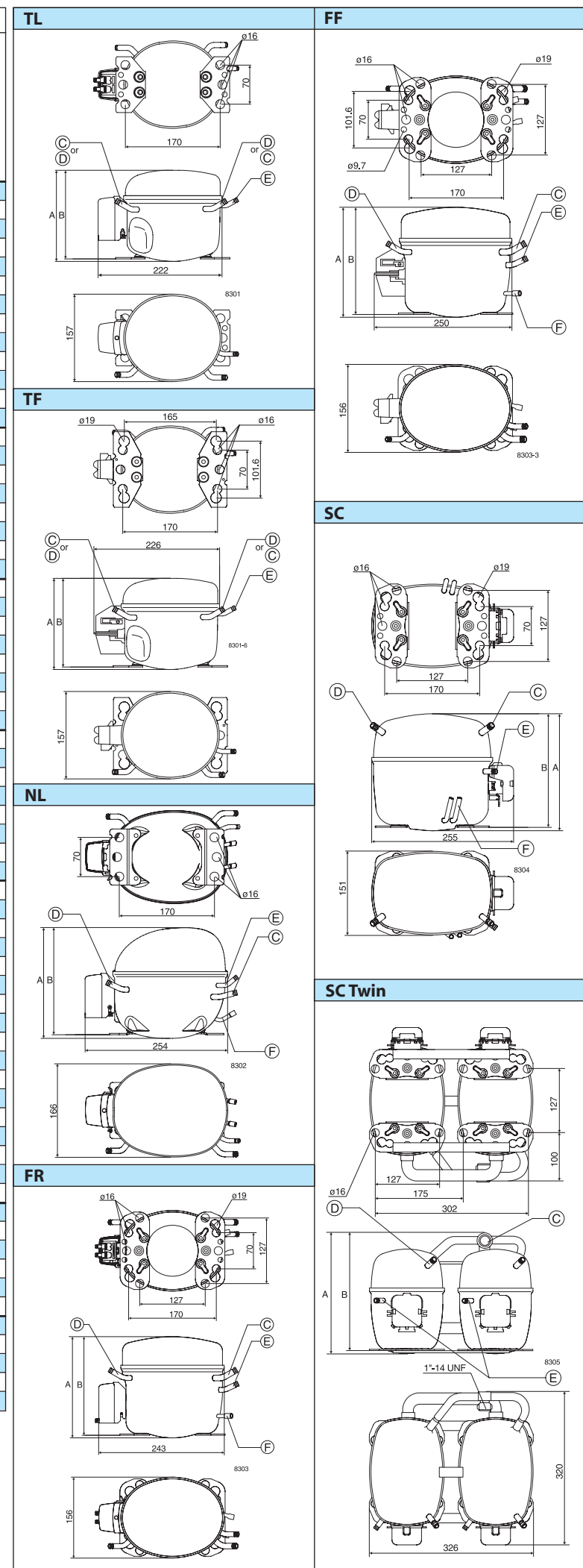






Compressor	Dimensions					
	Height		Suction	Discharge	Oil cooler	Process
	A	B				
TL2A	163	159	6.2	5.0		6.2
TL2.5A	163	159	6.2	5.0		6.2
TL3A	163	159	6.2	5.0		6.2
TL4A	173	169	6.2	5.0		6.2
TL5A	173	169	6.2	5.0		6.2
NL6A	197	175	6.2	5.0		6.2
NL7A	197	178	6.2	5.0		6.2
FR10A	196	191	8.2	6.2	6.2	6.2
FR11A	196	191	8.2	6.2	6.2	6.2
SC12A	209	203	8.2	6.2	6.2	6.2
SC15A	209	203	8.2	6.2	6.2	6.2
SC18A	219	213	10.2	6.2		6.2
SC21A	219	213	10.2	6.2		6.2
TFS3AT	173	169	6.5	5.0		6.5
TFS4AT	173	169	6.5	5.0		6.5
TFS5AT	173	169	6.5	5.0		6.5
FF7.5AT	196	191	8.2	6.5	6.5	6.5
FF7.5AT	196	191	8.2	6.5	6.5	6.5
FF8.5AT	196	191	8.2	6.5	6.5	6.5
FF8.5AT	196	191	8.2	6.5	6.5	6.5
FF10AT	196	191	8.2	6.5	6.5	6.5
SC10C	199	193	8.2	6.2		6.2
SC12C	209	203	8.2	6.2		6.2
SC15CM	209	203	10.2	6.2		6.2
SC18CM	219	213	10.2	6.2		6.2
SC10/10C	249	244	*	6.2		6.2
SC12/12C	249	244	*	6.2		6.2
SC15/15CM	259	254	*	6.2		6.2
SC18/18CM	259	254	**	6.2		6.2
SC10C	199	193	8.2	6.2		6.2
SC12C	209	203	8.2	6.2		6.2
SC15CM	209	203	10.2	6.2		6.2
SC18CM	219	213	10.2	6.2		6.2
SC10/10C	249	244	*	6.2		6.2
SC12/12C	249	244	*	6.2		6.2
SC15/15CM	259	254	*	6.2		6.2
SC18/18CM	259	254	**	6.2		6.2
TL2.5B	163	159	6.2	5.0		6.2
TL3B	163	159	6.2	5.0		6.2
TL4B	173	169	6.2	5.0		6.2
FR6B	196	191	8.2	6.2		6.2
FR7.5B	196	191	8.2	6.2	6.2	6.2
FR8.5B	196	191	8.2	6.2	6.2	6.2
FR10B	196	191	8.2	6.2	6.2	6.2
FR11B	196	191	8.2	6.2	6.2	6.2
SC10B	199	193	8.2	6.2	6.2	6.2
SC12B	209	203	8.2	6.2	6.2	6.2
SC15B	209	203	10.2	6.2	6.2	6.2
SC18B	219	213	10.2	6.2	6.2	6.2
SC21B	219	213	10.2	6.2	6.2	6.2
SC12/12B	249	244	*	6.2		6.2
SC15/15B	249	244	*	6.2		6.2
SC18/18B	259	254	**	6.2		6.2
SC21/21B	259	254	**	6.2		6.2
SC10D	199	193	10.2	8.2	8.2	6.2
SC12D	209	203	10.2	8.2	8.2	6.2
SC15D	209	203	10.2	8.2	8.2	6.2
SC10/10D	249	244	*	8.2		6.2
SC12/12D	249	244	**	8.2		6.2
SC15/15D	259	254	**	8.2		6.2
FR7H	196	191	8.2	6.2	6.2	6.2
SC10H	199	193	10.2	8.2	8.2	6.2
SC10HH	199	193	10.2	8.2	8.2	6.2
SC15H	209	203	10.2	8.2	8.2	6.2
SC15HH	209	203	10.2	8.2	8.2	6.2

**For Twin compressors**  
 Time delay relay: 117N0001  
 \* Service valve for 12 mm tube: 118-7350  
 \* Solder connector for 12 mm tube: 104B0584  
 \*\* Service valve for 16 mm tube: 118-7351  
 \*\* Solder connector for 16 mm tube: 118-7405  
 Seal ring: 118-3638

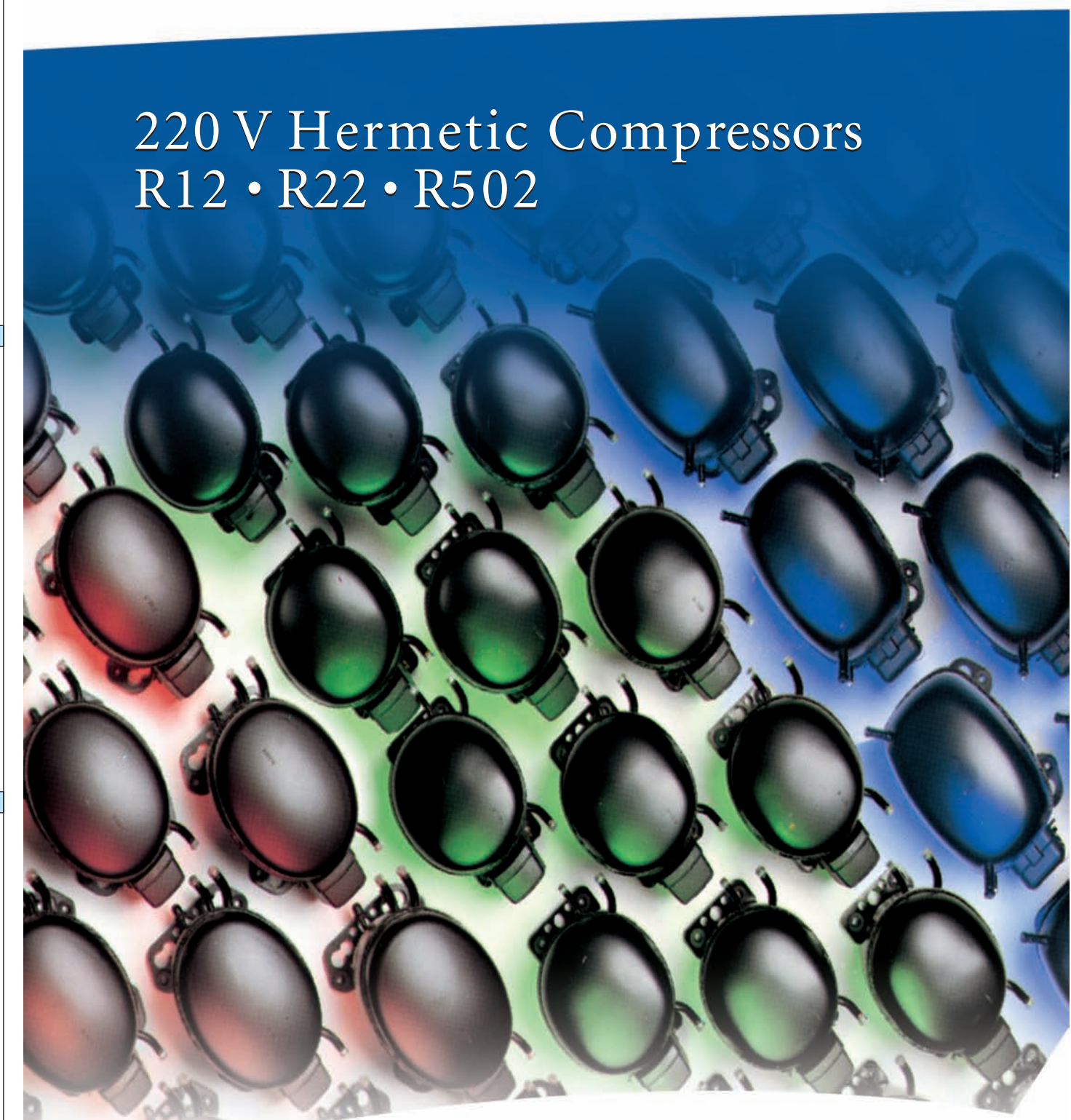
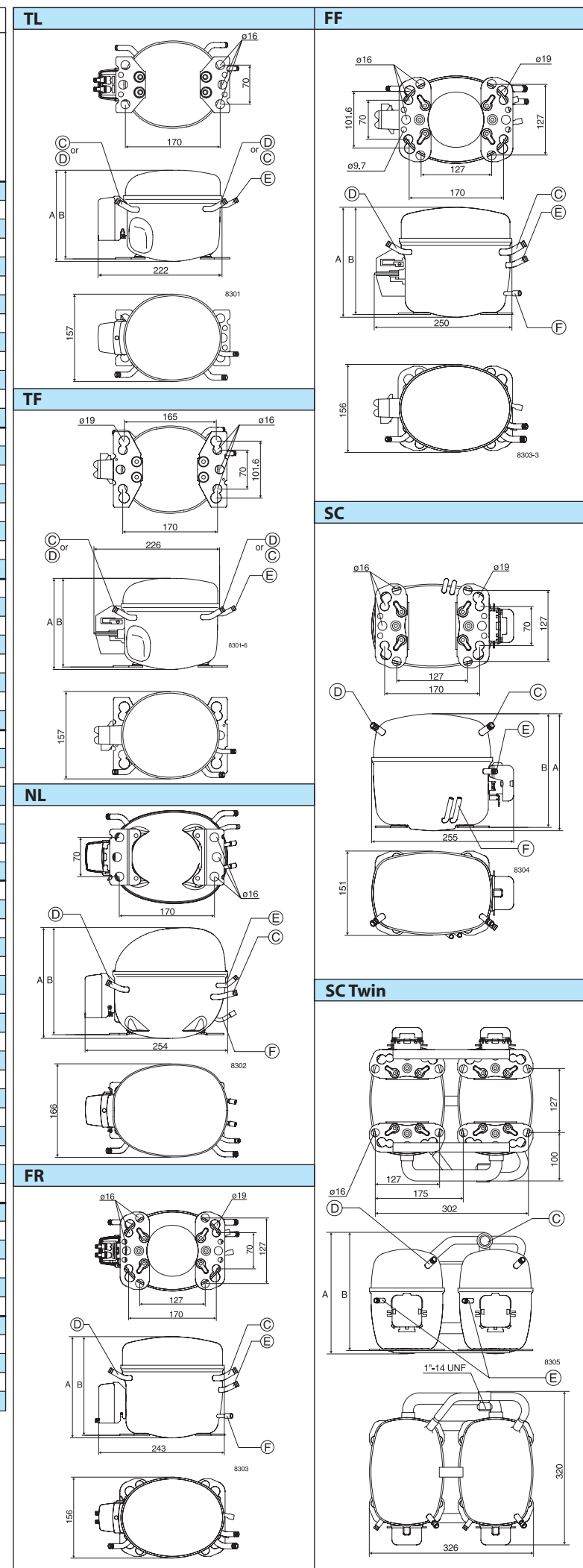


Danfoss can accept no responsibility for possible errors in catalogues, brochures and other printed material. Danfoss reserves the right to alter its products without notice. This also applies to products already on order provided that such alterations can be made without consequential changes being necessary in specifications already agreed. All trademarks in this material are property of the respective companies. Danfoss and the Danfoss logotype are trademarks of Danfoss A/S. All rights reserved.

Compressor	Dimensions					
	Height		Suction	Discharge	Oil cooler	Process
	A	B				
TL2A	163	159	6.2	5.0		6.2
TL2.5A	163	159	6.2	5.0		6.2
TL3A	163	159	6.2	5.0		6.2
TL4A	173	169	6.2	5.0		6.2
TL5A	173	169	6.2	5.0		6.2
NL6A	197	175	6.2	5.0		6.2
NL7A	197	178	6.2	5.0		6.2
FR10A	196	191	8.2	6.2	6.2	6.2
FR11A	196	191	8.2	6.2	6.2	6.2
SC12A	209	203	8.2	6.2	6.2	6.2
SC15A	209	203	8.2	6.2	6.2	6.2
SC18A	219	213	10.2	6.2	6.2	6.2
SC21A	219	213	10.2	6.2	6.2	6.2
TFS3AT	173	169	6.5	5.0		6.5
TFS4AT	173	169	6.5	5.0		6.5
TFS5AT	173	169	6.5	5.0		6.5
FF7.5AT	196	191	8.2	6.5	6.5	6.5
FF7.5AT	196	191	8.2	6.5	6.5	6.5
FF8.5AT	196	191	8.2	6.5	6.5	6.5
FF8.5AT	196	191	8.2	6.5	6.5	6.5
FF10AT	196	191	8.2	6.5	6.5	6.5
SC10C	199	193	8.2	6.2		6.2
SC12C	209	203	8.2	6.2		6.2
SC15CM	209	203	10.2	6.2		6.2
SC18CM	219	213	10.2	6.2		6.2
SC10/10C	249	244	*	6.2		6.2
SC12/12C	249	244	*	6.2		6.2
SC15/15CM	259	254	*	6.2		6.2
SC18/18CM	259	254	**	6.2		6.2
SC10C	199	193	8.2	6.2		6.2
SC12C	209	203	8.2	6.2		6.2
SC15CM	209	203	10.2	6.2		6.2
SC18CM	219	213	10.2	6.2		6.2
SC10/10C	249	244	*	6.2		6.2
SC12/12C	249	244	*	6.2		6.2
SC15/15CM	259	254	*	6.2		6.2
SC18/18CM	259	254	**	6.2		6.2
TL2.5B	163	159	6.2	5.0		6.2
TL3B	163	159	6.2	5.0		6.2
TL4B	173	169	6.2	5.0		6.2
FR6B	196	191	8.2	6.2		6.2
FR7.5B	196	191	8.2	6.2	6.2	6.2
FR8.5B	196	191	8.2	6.2	6.2	6.2
FR10B	196	191	8.2	6.2	6.2	6.2
FR11B	196	191	8.2	6.2	6.2	6.2
SC10B	199	193	8.2	6.2	6.2	6.2
SC12B	209	203	8.2	6.2	6.2	6.2
SC15B	209	203	10.2	6.2	6.2	6.2
SC18B	219	213	10.2	6.2	6.2	6.2
SC21B	219	213	10.2	6.2	6.2	6.2
SC12/12B	249	244	*	6.2		6.2
SC15/15B	249	244	*	6.2		6.2
SC18/18B	259	254	**	6.2		6.2
SC21/21B	259	254	**	6.2		6.2
SC10D	199	193	10.2	8.2	8.2	6.2
SC12D	209	203	10.2	8.2	8.2	6.2
SC15D	209	203	10.2	8.2	8.2	6.2
SC10/10D	249	244	*	8.2		6.2
SC12/12D	249	244	**	8.2		6.2
SC15/15D	259	254	**	8.2		6.2
FR7H	196	191	8.2	6.2	6.2	6.2
SC10H	199	193	10.2	8.2	8.2	6.2
SC10HH	199	193	10.2	8.2	8.2	6.2
SC15H	209	203	10.2	8.2	8.2	6.2
SC15HH	209	203	10.2	8.2	8.2	6.2

**For Twin compressors**

Time delay relay: 117N0001  
 \* Service valve for 12 mm tube: 118-7350  
 \* Solder connector for 12 mm tube: 104B0584  
 \*\* Service valve for 16 mm tube: 118-7351  
 \*\* Solder connector for 16 mm tube: 118-7405  
 Seal ring: 118-3638



# 220 V Hermetic Compressors

## R12 • R22 • R502



## 220 V hermetic compressors type TL, NL, TF, FR, FF, SC, and Twin

### Application range

- Refrigerators, refrigerated display counters
- Refrigerated storage compartments
- Freezers, freezing compartments
- Liquid coolers
- Dehumidifiers
- Heat pumps

### Electrical equipment

- With 6.3 mm spade connectors
- Winding protector in TL, NL, FR, and SC
- Motor protector in TF and FF

### Starting device LST and HST

- LST** is used with capillary tube control and pressure equalizing. The PTC starting device for TL, NL, FR and SC requires 5 minutes cooling before each start. Relay and external motor protector for TF and FF.
- HST** consisting of relay and starting capacitor is used for expansion valve control or for capillary tube control without pressure equalizing.

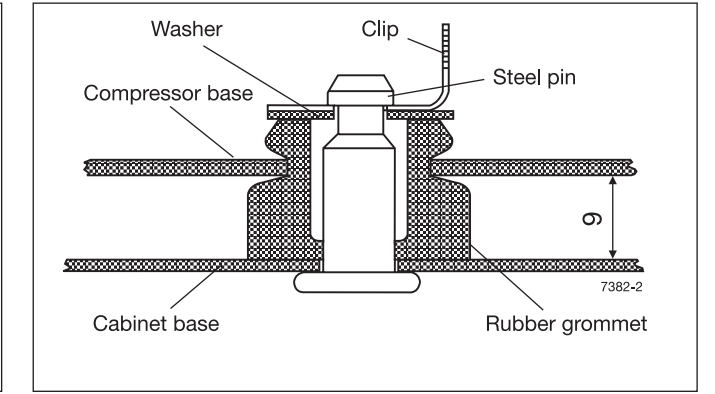
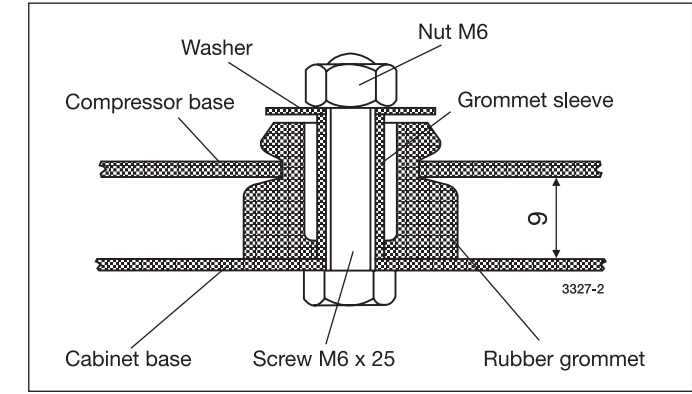
### Model designation

- TF54AT (example)
- TF = compressor type
  - S = semi-direct intake
  - 4 = nominal displacement in cm<sup>3</sup> (12/12 = Twin 2 x 12)
  - A = R12, LBP
  - B = R12, HBP / LBP
  - C = R502 (R22), LBP
  - CL = R404A, LBP
  - CM = R22 / R502, LBP
  - D = R22 / R502, HBP
  - F = R134a, LBP
  - G = R134a, HBP / LBP
  - GH = R134a, heat pump
  - T = tropical version

### Further programme

- Refrigeration compressors for 115 V / 60 Hz
- Refrigeration compressors for 12 and 24 V battery connection
- Refrigeration compressors for refrigerants R134a and R404A
- Fan-cooled condensing units
- Automatic controls

### Mounting accessories



### Danfoss Compressors GmbH

Mads-Clausen-Str. 7  
 P.O.Box 1443  
 D-24939 Flensburg  
 Tel.: +49 (0461) 4941-0  
 Fax: +49 (0461) 44175