

ENGINEERING  
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Quick reference

# Light commercial reciprocating compressors **for beverage coolers**

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



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Compressor	Voltage & frequencies	Electrical equipment								Dimensions (mm)					
		LST (RSIR)		HST (CSIR)		HST (CSR)		LST / HST		Height		Connectors location / I.D.			
		PTC starting device		Starting relay	Starting capacitor	Starting device	Starting kit					Suction	Process	Dis-charge	Oil cooler
		Spades 6.3 mm	Spades 4.8 mm	Spades 6.3 mm	Spades 6.3 mm	Spades 6.3 mm	Spades 6.3 mm	Cord relief	Cover	A	B	C	D	E	F
PL35G	1/5	103N0011	103N0018	117U6021	117U5014			103N1010	103N0491	137	135	6.2	6.2	5.0	
TL2.5G	1/2/3/4	103N0011	103N0018	117U6007	117U5014			103N1010	103N2011	163	159	6.2	6.2	5.0	
TL3G	1/2/3	103N0011	103N0018	117U6009	117U5014			103N1010	103N2010	163	159	6.2	6.2	5.0	
TL4G	1/2/3	103N0011	103N0018	117U6004	117U5014			103N1010	103N2010	173	169	6.2	6.2	5.0	
TL5G	1/2/3	103N0011	103N0018	117U6000	117U5014			103N1010	103N2010	173	169	6.2	6.2	5.0	
NL6.1MF	7/5	103N0011	103N0018	117U6015	117U5015			103N1010	103N2011	190	184	8.2	6.2	6.2	
NL7.3MF	7/5	103N0011	103N0018	117U6016	117U5015			103N1010	103N2011	197	191	8.2	6.2	6.2	
NL8.4MF	7/5	103N0011	103N0018	117U6016	117U5015			103N1010	103N2011	197	191	8.2	6.2	6.2	
NL10MF	7/5	103N0011	103N0018	117U6022	117U5018			103N1010	103N2011	203	197	8.2	6.2	6.2	6.2
NL11MF	7	103N0011	103N0018	117U6022	117U5018			103N1010	103N2011	203	197	8.2	6.2	6.2	
NLE10MF	1	103N0011	103N0018	117U6003	117U5015			103N1010	103N2011	203	197	8.2	6.2	6.2	
FR6G	1/2/3	103N0011	103N0018	117U6000	117U5015			103N1010	103N2010	196	191	8.2	6.2	6.2	
FR7.5G	1/2/3	103N0011	103N0018	117U6001	117U5015			103N1010	103N2010	196	191	8.2	6.2	6.2	6.2
FR8.5G	1/2/3	103N0011	103N0018	117U6015	117U5015			103N1010	103N2010	196	191	8.2	6.2	6.2	6.2
FR10G	1/2/3	103N0011	103N0018	117U6010	117U5015			103N1010	103N2010	196	191	8.2	6.2	6.2	6.2
FR11G	1/2	103N0011	103N0018	117U6010	117U5015			103N1010	103N2010	196	191	8.2	6.2	6.2	
SC10G	1/2/3	103N0011		117U6002	117U5017			103N1004	103N2009	199	193	8.2	8.2	6.2	
SC12G	1/2/3	103N0011		117U6003	117U5017			103N1004	103N2009	209	203	10.2	6.2	6.2	
SC15G	1/2/3			117U6005	117U5017			103N1004	103N2009	209	203	10.2	6.2	6.2	6.2
SC18G	2/3			117U6019	117U5017			103N1004	103N2009	219	213	10.2	6.2	6.2	6.2
SC21G	1/2/3					117-7029		103N1004	103N2009	219	213	10.2	6.2	6.2	
SC21MF	7			117U6019	117U5017	117-7039		103N1004	103N2009	219	213	10.2	6.2	6.2	
GS26MF	1					117-7055		107B9100/9101/9104*		259	247	12.9	6.5	8.2	
GS34MF	1					117-7056		107B9100/9101/9104*		259	247	12.9	6.5	8.2	
TL2.5G	1/2/3/4	103N0011	103N0018	117U6007	117U5014			103N1010	103N2010	163	159	6.2	6.2	5.0	
TL4GH	1/4			117U6000	117U5014			103N1010	1032011	173	169	6.2	6.2	5.0	
NL6.1MF	7/8	103N0011	103N0018	117U6015	117U5015			103N1010	103N2011	190	184	8.2	6.2	6.2	
NL7.3MF	7/8	103N0011	103N0018	117U6016	117U5015			103N1010	103N2011	197	191	8.2	6.2	6.2	
NL8.4MF	7/8	103N0011	103N0018	117U6016	117U5015			103N1010	103N2011	197	191	8.2	6.2	6.2	
NL10MF	7/8	103N0011	103N0018	117U6022	117U5018			103N1010	103N2011	203	197	8.2	6.2	6.2	6.2
SC12G	8			117U6011	117U5017			103N1004	103N2008	209	203	10.2	6.5	6.5	
SC15G	8			117U6011	117U5017			103N1004	103N2008	209	203	10.2	6.5	6.5	
SC18G	8					117-7039		103N1004	103N2008	219	213	10.2	6.5	6.5	
TL4DL	1			117U6011	117U5014			103N1010	103N2010	173	169	6.2	6.2	5.0	
FR6DL	1			117U6010	117U5015			103N1010	103N2010	196	191	8.2	6.2	6.2	
NF7MLX	7/8			117U4139	117U5018			2x117U0349	117U1021	203	197	9.7	6.5	6.5	
SC10MLX	7/8			117U6011	117U5017			103N1004	103N2008	209	203	8.2	6.5	6.5	
SC12MLX	7/8			117U6011	117U5017			103N1004	103N2008	219	213	8.2	6.5	6.5	
SC15MLX	1			117U6013	117U5012			103N1004	103N2009	219	213	10.2	6.2	6.2	
SC18MLX	1					117-7027		103N1004	103N2009	219	213	10.2	6.2	6.2	
SC18MLX.3	1					117-7027		103N1004	103N2009	219	213	10.2	6.2	6.2	
GS21MLX	1					117-7070		107B9100/9101/9104*		259	247	12.9	6.5	8.2	
GS26MLX	1					117-7072		107B9100/9101/9104*		279	267	16.1	6.5	9.7	
GS34MLX	1					117-7056		107B9100/9101/9104*		279	267	16.1	6.5	9.7	
NF7MLX	7/8			117U4139	117U5018			2x117U0349	117U1021	203	197	9.7	6.5	6.5	
SC10MLX	7/8			117U6011	117U5017			103N1004	103N2008	209	203	8.2	6.5	6.5	
SC12MLX	7/8			117U6011	117U5017			103N1004	103N2008	219	213	8.2	6.5	6.5	
SC15MLX.2	8					117-7058		103N1004	103N2008	219	213	9.7	6.5	6.5	
TL3CN	1	103N0011	103N0018	117U7004	117U5014			103N1010	103N2010	163	159	6.2	6.2	5.0	
TL4CN	1	103N0011	103N0018	117U7004	117U5014			103N1010	103N2010	173	169	6.2	6.2	5.0	
TL5CN	1	103N0011	103N0018	117U7000	117U5014			103N1010	103N2010	173	169	6.2	6.2	5.0	
NL7CN	1	103N0011	103N0018	117U7002	117U5014			103N1010	103N2010	203	197	8.2	6.2	6.2	
NL9CN	1	103N0011	103N0018	117U7002	117U5014			103N1010	103N2010	203	197	8.2	6.2	6.2	
SC10CNX	1					117-7025	117-9719	103N1004	103N2009	209	203	8.2	6.2	6.2	
SC12CNX	1					117-7025	117-9719	103N1004	103N2009	209	203	8.2	6.2	6.2	
SC15CNX	1					117-7031	117-9711	103N1004	103N2009	209	203	10.2	6.2	6.2	
SC18CNX	1					117-7052	117-9718	103N1004	103N2009	209	203	10.2	6.2	6.2	

## Test conditions

Test Conditions	EN 12900 CECOMAF (220 V / 50 & 60 Hz)	EN 12900 CECOMAF (220 V / 50 & 60 Hz)	EN 12900 CECOMAF LBP (220 V / 50 & 60 Hz)	EN 12900 CECOMAF MBP (220 V / 50 & 60 Hz)
Compressors	PL/TL/NL/FR/SC	TL/NL/NF/FR/SC	GS	GS
Refrigerant	R134a	R404A/R507 - R290	LBP	MBP
Condensing temperature	55°C	45°C	40°C	45°C
Ambient temperature	32°C	32°C	32°C	32°C
Suction gas temperature	32°C	32°C	20°C	20°C
Liquid temperature	no sub cooling	no sub cooling	no sub cooling	no sub cooling

## 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.



**Model designation**

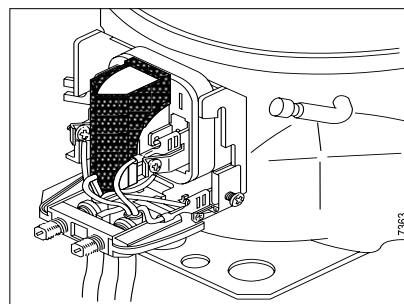
Compressor design	Optimization level	Compressor size	Application range	Start characteristics	Generation
PL	<b>Blank:</b> Standard energy level  <b>E:</b> Energy optimised (optimised motor)	Nominal displacement in cm <sup>3</sup>  <b>Exception:</b> For PL compressors the capacity at rating point is stated	<b>CN:</b> R290 / LBP <b>DL:</b> R404A/R507 HBP <b>F:</b> R134a LBP / (MBP) <b>G:</b> R134a LBP / MBP / HBP <b>GH:</b> R134a Heat pumps <b>MF:</b> R134a MBP <b>ML:</b> R404A/R507 MBP	<b>Blank:</b> Universal (principal rule)  <b>X = HST</b> Characteristics (expansion valve)	<b>Blank</b> > first generation <b>.2</b> > Second generation <b>.3</b> > third generation etc...
TL					
NL					
NF					
FR					
SC					
GS					

Examples

Compressor design	Optimization level	Compressor size	Application range	Start characteristics	Generation
PL		35	G		
TL		4	DL		
NL	E	10	MF		
SC		18	ML	X	.3
GS		26	CL	X	

**Protection screen for PTC**

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



**Optional IP44 equipment for SC compressors**

Danfoss now offers special accessories, which provide a better IP protection class for a major part of the SC compressor models. All SC models for 220-240V/50Hz or 208-230V/60Hz and CSIR motor can be IP upgraded. The equipment consists of one additional part, the so called "back cover", and a special starting capacitor. Both are used instead of the normal starting capacitor. When using this equipment, the protection class is increased to IP44, i.e. the compressor and its electrical parts are splash-proof.

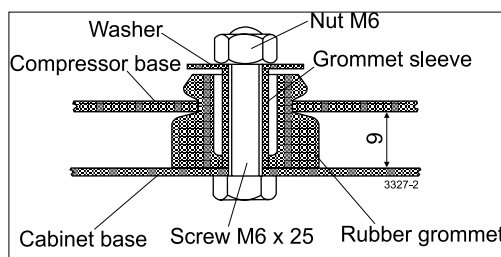


Code number	Description
130N2020	Back cover
117U5117**	IP44 starting capacitor 80µF

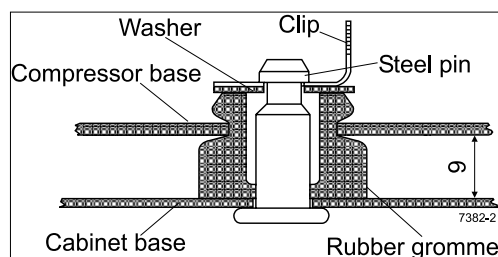
\*\* replaces standard capacitor 117U5017

**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.



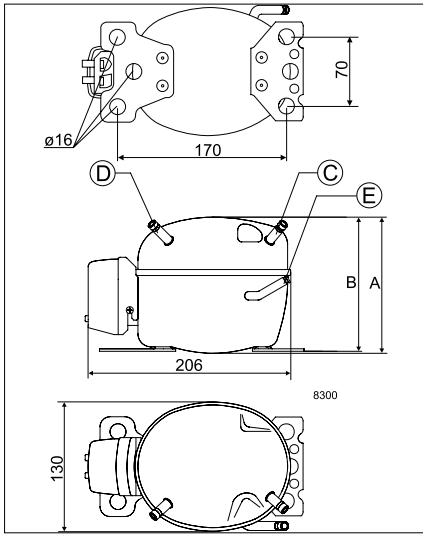
Bolt joint for  
 one compressor : 118-1917  
 in quantities : 118-1918



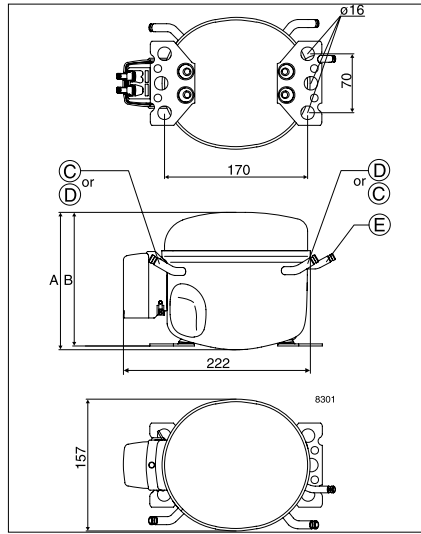
Snap-on  
 in quantities: 118-1919



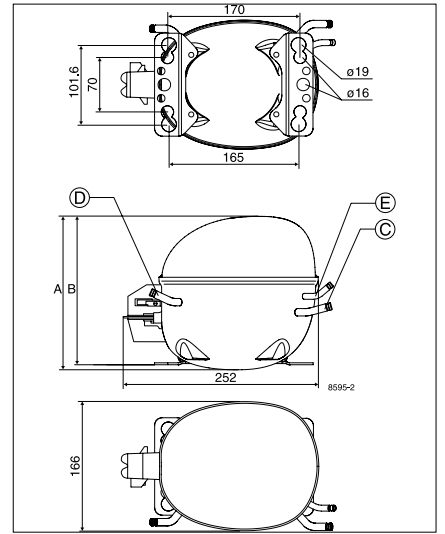
**PL**



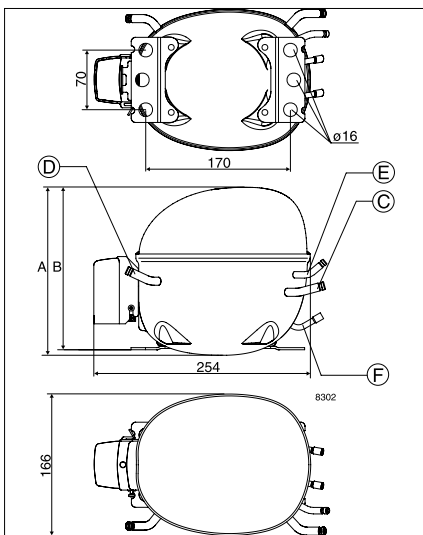
**TL**



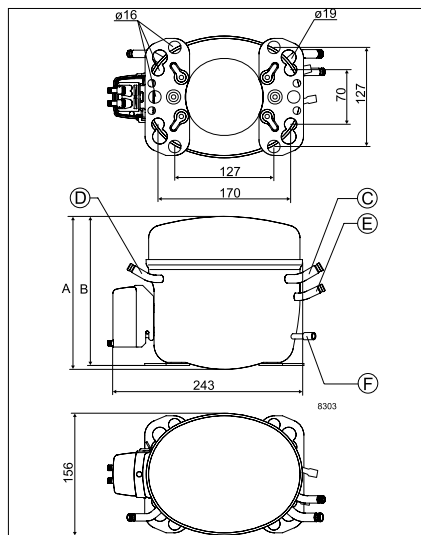
**NF**



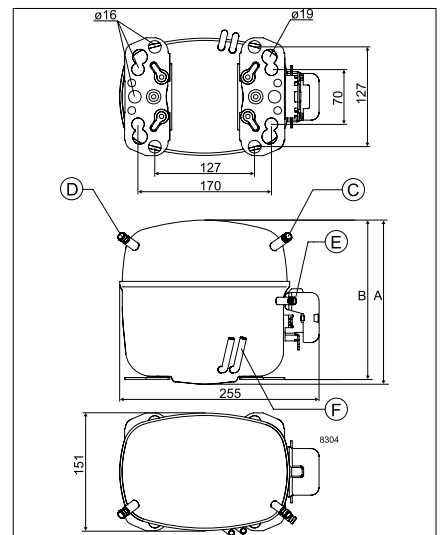
**NL**



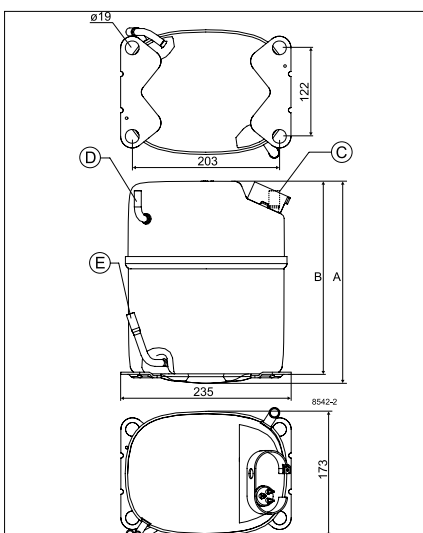
**FR**



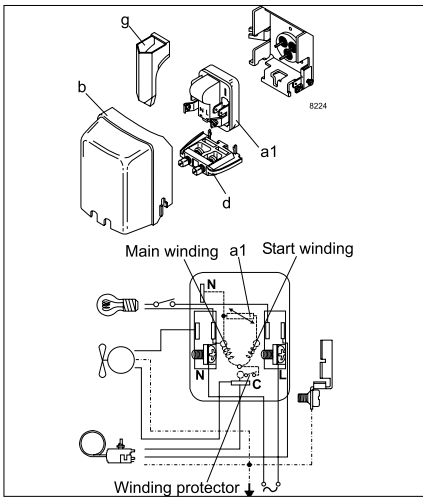
**SC**



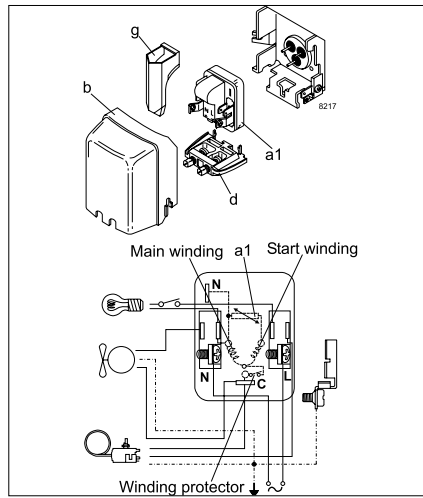
**GS**



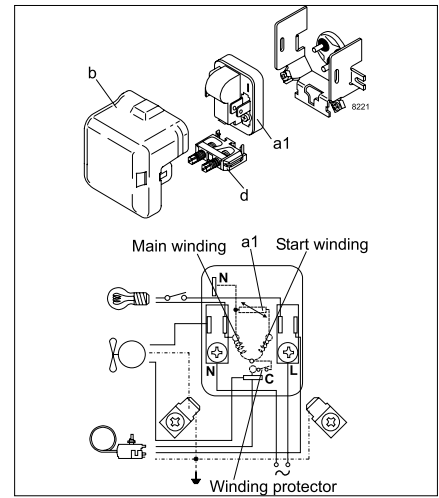
**LST - RSIR**



PL

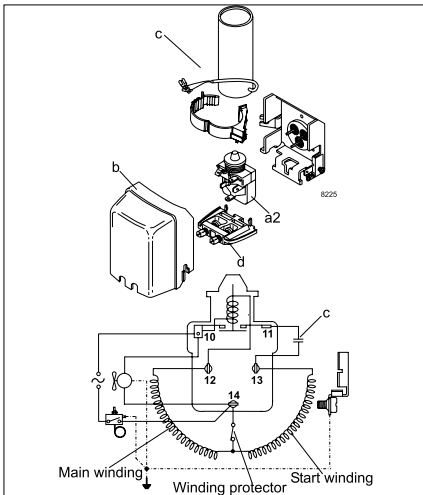


TL-NL-FR

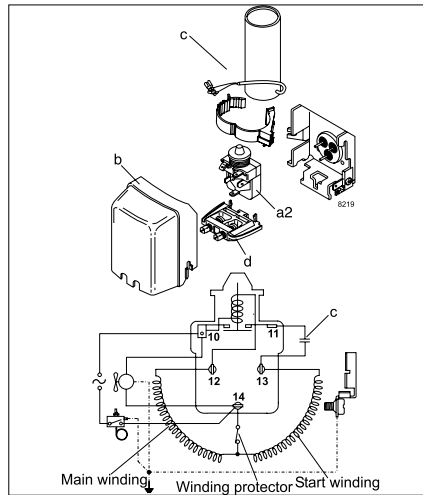


SC

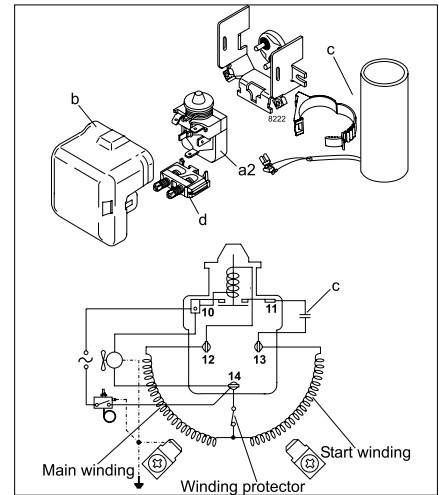
**HST - CSIR**



PL

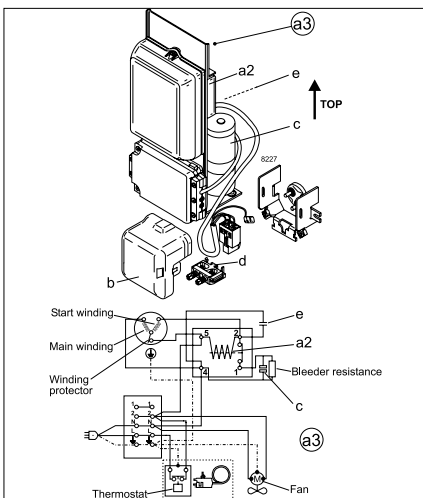


TL-NL-FR

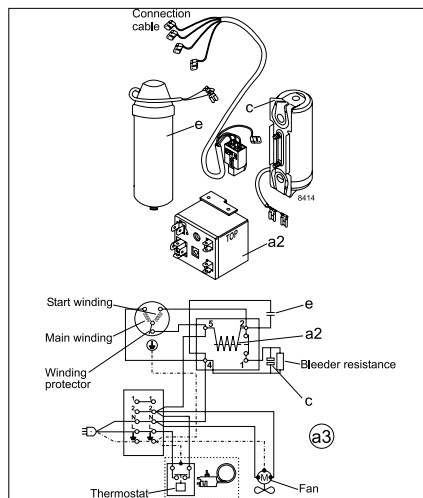


SC

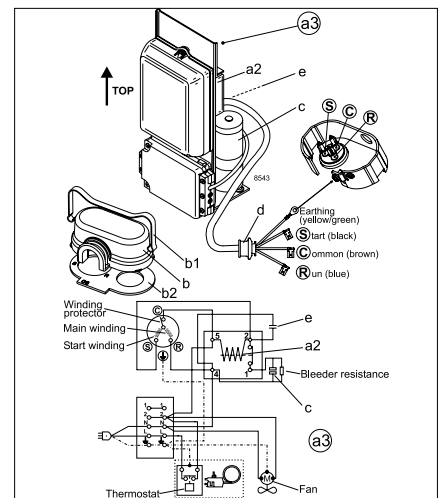
**HST - CSR**



SC



SC (kit)



GS

**Legend :**

- a1:** PTC starting device
- a2:** Starting relay
- a3:** Starting device

**b:** Cover

- b1:** Clamp (part of compressor)
- b2:** Gasket (part of compressor)
- c:** Starting capacitor

**d:** Cord relief

- e:** Run capacitor
- g:** Protection screen for PTC

Quick reference

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

# Danfoss Commercial Compressors

is a worldwide manufacturer of compressors and condensing units for refrigeration and HVAC applications. With a wide range of high quality and innovative products we help your company to find the best possible energy efficient solution that respects the environment and reduces total life cycle costs.

We have 40 years of experience within the development of hermetic compressors which has brought us amongst the global leaders in our business, and positioned us as distinct variable speed technology specialists. Today we operate from engineering and manufacturing facilities spread across three continents.



Our products can be found in a variety of applications such as rooftops, chillers, residential air conditioners, heatpumps, coldrooms, supermarkets, milk tank cooling and industrial cooling processes.

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