

# FR8.5G

## Universal Compressor

### R134a

### 220-240V 50Hz

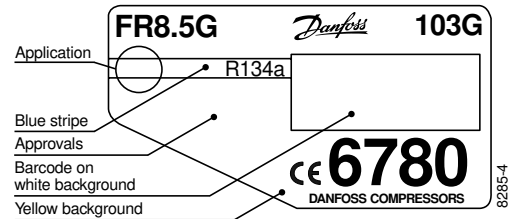
Data Sheet (CG.43.H1.02)

**General**

Compressor	<b>FR8.5G</b>
Code number	103G6780
Code number compressor with oil cooler	103G6790

**Application**

Application		LBP/HBP	
Evaporating temperature range	°C	-30 to 10	
Voltage range	V/Hz	LBP: 187 - 254 /50	
		LBP: 198 - 254 /60	
		HBP: 198 - 254 /50	
Motor type		RSIR/CSIR	
Max. ambient temperature	°C	43	
Comp. cooling at ambient temp.	32°C	LBP: S	
		HBP: F <sub>2</sub>	
		38°C	LBP: O/F <sub>1</sub>
		43°C	LBP: O/F <sub>1</sub>
		HBP: F <sub>2</sub>	



- S = Static cooling normally sufficient
- O = Oil cooling
- F<sub>1</sub> = Fan cooling 1.5 m/s  
(compressor compartment temperature equal to ambient temperature)
- F<sub>2</sub> = Fan cooling 3.0 m/s necessary

**Design**

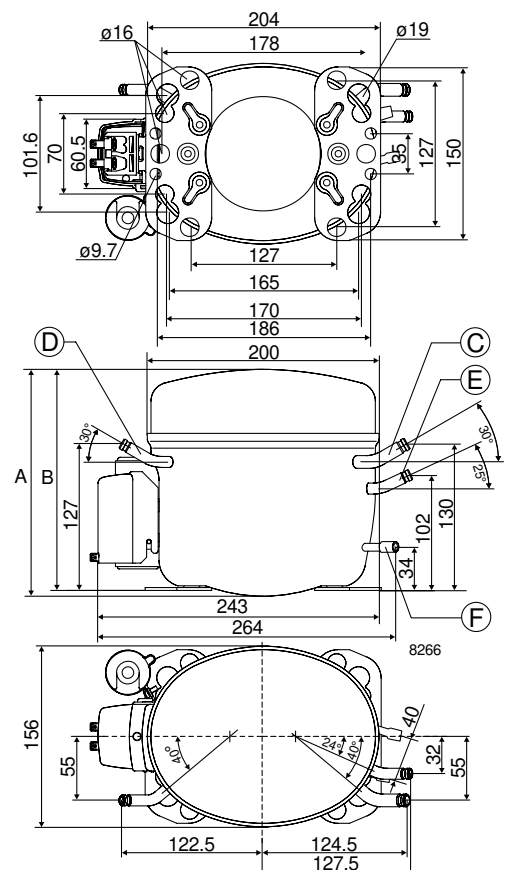
Displacement	cm <sup>3</sup>	7.95
Oil quantity	cm <sup>3</sup>	450
Maximum refrigerant charge	g	900
Free gas vol. in compressor	cm <sup>3</sup>	1350
Weight without electrical equipment	kg	10.6

**Motor**

Motor size	watt	215
LRA (rated after 4 sec. UL984) LST/HST	A	8.1/8.2
Cut-in current LST/HST	A	12.8/8.2
Resistance, main and start winding (25°C)	Ω	8.9/12.0
Approvals		EN 60335-2-34, CCIB

**Dimensions**

Height	mm	A	196
		B	191
Suction connector	location/I.D. mm	C	8.2 ± 0.09
Process connector	location/I.D. mm	D	6.2 ± 0.09
Discharge connector	location/I.D. mm	E	6.2 ± 0.09
Oil cooler	location/I.D. mm	F	6.2 ± 0.09
Compressors on a pallet	pcs.		80



### Capacity (EN 12900/CECOMAF)

watt

Evap. temp in °C	-30	-25	-23.3	-20	-15	-10	-5	0	5	7.2	10
FR8.5G, 50Hz	84.9	123	138	171	228	298	381	478	592	647	722
FR8.5G, 60Hz	92.3	138	156	195	263	345					

### Capacity (ASHRAE)

watt

Evap. temp in °C	-30	-25	-23.3	-20	-15	-10	-5	0	5	7.2	10
FR8.5G, 50Hz	105	152	171	211	282	368	471	592	734	803	898
FR8.5G, 60Hz	114	171	193	241	325	426					

### Power consumption

watt

Evap. temp in °C	-30	-25	-23.3	-20	-15	-10	-5	0	5	7.2	10
FR8.5G, 50Hz	127	151	159	176	203	231	261	291	321	335	352
FR8.5G, 60Hz	134	164	174	197	233	273					

### Current consumption

A

Evap. temp in °C	-30	-25	-23.3	-20	-15	-10	-5	0	5	7.2	10
FR8.5G, 50Hz	1.16	1.22	1.25	1.30	1.38	1.47	1.56	1.67	1.78	1.83	1.90
FR8.5G, 60Hz	1.02	1.12	1.16	1.24	1.37	1.53					

### COP (EN 12900/CECOMAF)

W/W

Evap. temp in °C	-30	-25	-23.3	-20	-15	-10	-5	0	5	7.2	10
FR8.5G, 50Hz	0.67	0.82	0.87	0.97	1.12	1.29	1.46	1.65	1.84	1.93	2.05
FR8.5G, 60Hz	0.69	0.85	0.90	0.99	1.13	1.26					

### COP (ASHRAE)

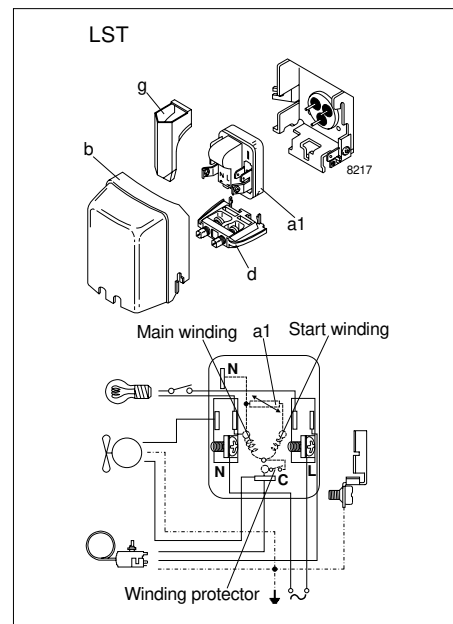
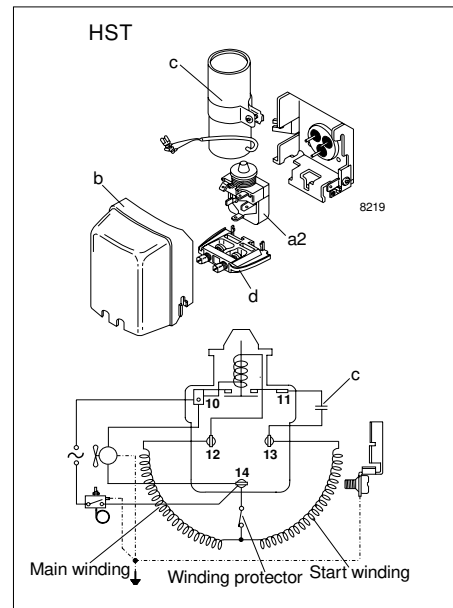
W/W

Evap. temp in °C	-30	-25	-23.3	-20	-15	-10	-5	0	5	7.2	10
FR8.5G, 50Hz	0.83	1.01	1.07	1.19	1.39	1.59	1.81	2.04	2.29	2.40	2.55
FR8.5G, 60Hz	0.85	1.04	1.11	1.22	1.39	1.56					

Test conditions	EN 12900/CECOMAF	ASHRAE
Condensing temperature	55°C	55°C
Ambient and suction gas temp.	32°C	32°C
Liquid temperature	55°C	32°C
50Hz: Fan cooling $F_{2, 220V}$		
60Hz: Fan cooling $F_{2, 220V}$		

### Accessories

Devices	Fig.	FR8.5G	
PTC starting device	6.3 mm spades 4.8 mm spades	a1	103N0011 103N0018
Starting relay	a2	117U6015	
Cover	b	103N2010	
Starting capacitor 80 µF	c	117U5015	
Cord relief	d	103N1010	
Protection screen for PTC	g	103N0476	
Mounting accessories			
Bolt joint for one compressor		118-1917	
Bolt joint in quantities		118-1918	
Snap-on in quantities		118-1919	



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 subsequential 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.

