ENGINEERING TOMORROW



Datasheets

Danfoss scroll compressors SM / SY / SZ / SH / WSH





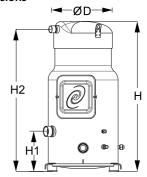


Datasheet, technical data

General Characteristics

Model number (on compressor nameplate)	SM185S4RC	SM185S4CC	
de number for Singlepack* SM185-4RI		SM185-4CAI	
Code number for Industrial pack**	SM185-4RM	SM185-4CAM	
Drawing number	8551119b	8551056c	
Suction and discharge connections	Rotolock	Brazed	
Suction connection	2-1/4 " Rotolock	1-5/8 " ODF	
Discharge connection	1-3/4 " Rotolock	1-1/8 " ODF	
Suction connection with supplied sleeve	1-3/8 " ODF		
Discharge connection with supplied sleeve	7/8 " ODF		
Oil sight glass	Threaded	Threaded	
Oil equalisation connection	3/8" flare SAE	3/8" flare SAE	
Oil drain connection	1/4" flare	1/4" flare	
LP gauge port	Schrader	Schrader	
IPR valve	None	None	
Swept volume	249,9 cm3/rev		
Displacement @ Nominal speed	43.5 m3/h @ 2900 rpm	- 52.5 m3/h @ 3500 rpm	
Net weight	100 kg		
Oil charge	6,2 litre, Mineral - 160P		
Maximum system test pressure Low Side / High side	25 bar(g) <i>i</i>	25 bar(g) / 32 bar(g)	
Maximum differential test pressure	24	24 bar	
Maximum number of starts per hour	1	12	
Refrigerant charge limit	13,5	13,5 kg	
Approved refrigerants	R22, R417	R22, R417A-160SZ	

Dimensions



D=317 mm H=678 mm H1=180 mm H2=643 mm H3=- mm

Electrical Characteristics

Electrical characteristics	
Nominal voltage	380-400V/3/50Hz - 460V/3/60Hz
Voltage range	340-440 V @ 50Hz - 414-506 V @ 60Hz
Winding resistance (between phases) +/- 7% at 25℃	0.77 Ω
Maximum Must Trip current (MMT)	35 A
Locked Rotor Amps (LRA)	175 A
Motor protection	Internal thermostat, ext. overload protector needed

Recommended Installation torques

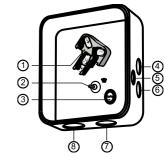
Suction Rotolock nut or valve	130 Nm
Discharge Rotolock nut or valve	110 Nm
Oil sight glass	50 Nm
Power connections / Earth connection	3 Nm / 2 Nm
Terminal box cover screws	2,3 Nm
Mounting bolts	21 Nm

Parts shipped with compressor

Mounting kit with grommets, bolts, nuts, sleeves and washers
Initial oil charge
Installation instructions

Approvals: CE certified, UL certified (file SA6873), -

Terminal box



IP54 (with cable gland)

- 1: Power connection, 3 x 4.8 mm (3/16")
- 2: Earth M5
- 3: Thermostat connector
- 4: Knock-out Ø 22 mm (7/8") for 1/2" conduit
- 5: Knock-out Ø 16.5 mm (0.65")
- 6: Knock-out Ø 20.5 mm (0.81")
- 7: Double knock-out Ø 32.1 mm (1.26") & Ø 25.4 mm (1")
- 8: Double knock-out Ø 44 mm (1-3/4") for 1-1/4" conduit & Ø 34 mm (1-3/8") for 1" conduit

^{*}Singlepack: Compressor in cardboard box

^{**}Industrial pack: 6 Unboxed compressors on pallet (order per multiples of 6)



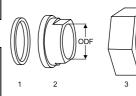
Datasheet, accessories and spare parts

Danfoss scroll compressor, SM185-4

Rotolock accessories, suction side	Code no.
Solder sleeve, P08 (2-1/4" Rotolock, 1-3/8" ODF)	8153005
Solder sleeve, P03 (2-1/4" Rotolock, 1-5/8" ODF)	8153006
Rotolock valve, V08 (2-1/4" Rotolock, 1-3/8" ODF)	8168025
Rotolock valve, V03 (2-1/4" Rotolock, 1-5/8" ODF)	8168026
Gasket, 2-1/4"	8156133

Rotolock accessories, discharge side Code no. Solder sleeve, P07 (1-3/4" Rotolock, 7/8" ODF) 8153013 Solder sleeve, P02 (1-3/4" Rotolock, 1-1/8" ODF) 8153004 Angle adapter, C07 (1-3/4" Rotolock, 7/8" ODF) 8168008 Angle adapter, C02 (1-3/4" Rotolock, 1-1/8" ODF) 8168005 Rotolock valve, V07 (1-3/4" Rotolock, 7/8" ODF) 8168032 Rotolock valve, V02 (1-3/4" Rotolock, 1-1/8" ODF) 8168028 8156132 Gasket, 1-3/4"

Gaskets, sleeves and nuts



1: Gasket
2: Solder sleeve
3: Rotolock nut

Rotolock accessories, sets	Code no.
C. I. J (2.4/4/P I. J. 4.5/0/I.O.D.F.) (4.2/4/P I. J. 4/4/0.O.D.F.)	7745000

Solder sleeve adapter set, (2-1/4" Rotolock, 1-5/8" ODF), (1-3/4" Rotolock, 1"1/8 ODF)	7765028
Valve set, V08 (2-1/4"~1-3/8"), V07 (1-3/4"~7/8")	7703010
Gasket set, 1-1/4", 1-3/4", 2-1/4", OSG gaskets black & white	8156013

Oil / lubricants	Code no.	
Mineral oil, 160P, 2 litre can	7754001	
Mineral oil 160P 5 litre can	7754002	

Solder	sleeve	ada	oter	set



Mineral oil, 160P, 2 litre can	7754001
Mineral oil, 160P, 5 litre can	7754002

Crankcase heaters	Code no.
Surface sump heater + bottom insulation, 56 W, 24 V, CE mark, UL	120Z0360
Surface sump heater + bottom insulation, 56 W, 230 V, CE mark, UL	120Z0376
Surface sump heater + bottom insulation, 56 W, 400 V, CE mark, UL	120Z0377
Surface sump heater + bottom insulation, 56 W, 460 V, CE mark, UL	120Z0378
Belt type crankcase heater, 75 W, 230 V, CE mark, UL	7773108
Belt type crankcase heater, 75 W, 400 V, CE mark, UL	7773118
Belt type crankcase heater, 75 W, 460 V, CE mark, UL	120Z0464

1: Rotolock adapter (Suc & Dis)

2: Gasket (Suc & Dis)

3: Solder sleeve (Suc & Dis)

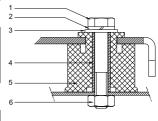
4: Rotolock nut (Suc & Dis)

Miscellaneous accessories

Miscellatieous accessories	Code no.
Electronic soft start kit, MCI 25 C	7705007
Acoustic hood for scroll compressor S175-S185	7755007
Acoustic bottom insulation for scroll compressor	120Z0353
Discharge thermostat kit	7750009

Mounting kit

Codono



Spare parts	Code no.

Spare parts	Code no.
Mounting kit for 1 scroll compressor including 4 grommets, 4 sleeves, 4 bolts, 4 washers	8156138
Mounting kit for 1 scroll compressor including 4 grommets, 4 sleeves, 4 bolts, 4 washers,	8156147
2 rotolock nuts, 2 solder sleeves, 2 gaskets	
Oil sight glass with gaskets (black & white)	8156019
Gasket for oil sight glass (white teflon)	8156129
Terminal box 186 x 198 mm, incl cover	8156139
T block connector 60 x 75 mm	8173021

1: Bolt (4x) 2: Lock washer (4x) 3: Flat washer (4x)

4: Sleeve (4x) 5: Grommet (4x)

6: Nut (4x)



Performer scroll compressor. SM185-4

Performance data at 50 Hz, EN 12900 rating conditions

R22

Cond. temp. in				Evapora	ating temperature	in °C (to)			
°C (tc)	-20	-15	-10	-5	0	5	10	15	
•		•	•	•	•	•	•		
Cooling capacity		1	T	1		Т	1	1	
30	18 321	22 879	28 204	34 366	41 435	49 479	58 569	68 774	-
35	17 280	21 729	26 914	32 904	39 768	47 575	56 393	66 294	-
40	16 221	20 543	25 569	31 367	38 006	45 556	54 085	63 663	-
45	-	19 302	24 144	29 727	36 118	43 386	51 599	60 828	-
50	-	-	22 668	28 017	34 141	41 109	48 989	57 851	-
55	-	-	-	26 214	32 048	38 693	46 217	54 689	-
60	-	-	-	-	29 832	36 128	43 270	51 324	-
65	-	-	-	-	27 523	33 453	40 192	47 810	-
Power input in V	v								
30	7 964	8 050	8 133	8 212	8 284	8 347	8 399	8 437	_
35	8 819	8 906	8 991	9 071	9 145	9 211	9 265	9 306	
40	9 773	9 861	9 947	10 030	10 106	10 174	10 231	10 275	
	-	10 925		11 097			11 307		
45 50	-		11 013		11 176 12 364	11 247		11 354	
50		-	12 196	12 283	1	12 438	12 501	12 553	
55	-	-	-	13 596	13 680	13 757	13 824	13 879	-
60	-	-	-	-	15 132	15 212	15 283	15 342	-
65	-	-	-	-	16 731	16 814	16 889	16 953	-
Current consum	ntion in A								
		17.72	17.90	17 00	17.02	17.97	17.99	17.00	
30	17.62		17.80	17.88	17.93		1	17.98	-
35	18.55	18.65	18.74	18.82	18.88	18.93	18.95	18.95	-
40	19.61	19.72	19.82	19.90	19.97	20.03	20.06	20.08	-
45	-	20.94	21.05	21.14	21.22	21.29	21.33	21.36	-
50	-	-	22.45	22.55	22.64	22.72	22.78	22.82	-
55	-	-	-	24.14	24.25	24.34	24.42	24.48	-
60	-	-	-	-	26.06	26.17	26.26	26.34	-
65	-	-	-	-	28.09	28.21	28.32	28.42	-
/lass flow in kg/	h								
30	394	486	592	712	848	1 001	1 172	1 363	-
35	387	480	586	707	844	999	1 171	1 363	-
40	378	472	580	702	840	994	1 167	1 359	-
45	-	464	572	694	832	988	1 161	1 353	-
50	-	-	562	685	823	978	1 151	1 343	-
55	-	-	-	673	811	966	1 138	1 330	-
60	-	-	-	-	796	950	1 122	1 313	-
65	-	-	-	-	778	931	1 102	1 292	-
'			1	1	-	-			
Coefficient of pe	•	1	T	1			0.5-		
30	2.30	2.84	3.47	4.18	5.00	5.93	6.97	8.15	-
35	1.96	2.44	2.99	3.63	4.35	5.17	6.09	7.12	-
40	1.66	2.08	2.57	3.13	3.76	4.48	5.29	6.20	-
45	-	1.77	2.19	2.68	3.23	3.86	4.56	5.36	-
50	-	-	1.86	2.28	2.76	3.31	3.92	4.61	-
55	-	-	-	1.93	2.34	2.81	3.34	3.94	-
60	-	-	-	-	1.97	2.37	2.83	3.35	-
65	-	-	_	_	1.65	1.99	2.38	2.82	_

Nominal performance at to = 5 °C, tc = 50 °C

	•• •	
Cooling capacity	41 109	W
Power input	12 438	W
Current consumption	22.72	Α
Mass flow	978	kg/h
C.O.P.	3.31	

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

Rating conditions : Superheat = 10 K , Subcooling = 0 K

Pressure switch settings

Maximum HP switch setting	28	bar(g)
Minimum LP switch setting	0.5	bar(g)
LP pump down setting	1.3	bar(g)

Sound power data

Sound power level	80	dB(A)
With accoustic hood	72	dB(A)

All performance data +/- 5%





Performer scroll compressor. SM185-4

Performance data at 50 Hz, ARI rating conditions

R22

Cond. temp. in				Evapora	ting temperature	in °C (to)			
°C (tc)	-20	-15	-10	-5	0	5	10	15	
Cooling capacity	v in W			•		•			
30	19 439	24 255	29 878	36 380	43 832	52 306	61 875	72 610	-
35	18 400	23 118	28 611	34 951	42 209	50 458	59 770	70 215	-
40	17 337	21 936	27 278	33 434	40 478	48 480	57 512	67 647	-
45	-	20 708	25 877	31 829	38 637	46 371	55 103	64 906	-
50	-	-	24 409	30 136	36 686	44 131	52 542	61 992	-
55	-	-	-	28 354	34 625	41 760	49 828	58 904	-
60	-	-	-	-	32 455	39 257	46 962	55 642	-
65	-	-	-	-	30 174	36 623	43 943	52 207	-
Power input in V	v								
30	7 964	8 050	8 133	8 212	8 284	8 347	8 399	8 437	-
35	8 819	8 906	8 991	9 071	9 145	9 211	9 265	9 306	-
40	9 773	9 861	9 947	10 030	10 106	10 174	10 231	10 275	-
45	-	10 925	11 013	11 097	11 176	11 247	11 307	11 354	-
50	-	-	12 196	12 283	12 364	12 438	12 501	12 553	-
55	-	-	-	13 596	13 680	13 757	13 824	13 879	-
60	-	-	-	-	15 132	15 212	15 283	15 342	-
65	-	-	-	-	16 731	16 814	16 889	16 953	-
Current consum	ention in A								
30	17.62	17.72	17.80	17.88	17.93	17.97	17.99	17.98	_
35	18.55	18.65	18.74	18.82	18.88	18.93	18.95	18.95	
40	19.61	19.72	19.82	19.90	19.97	20.03	20.06	20.08	-
45	-	20.94	21.05	21.14	21.22	21.29	21.33	21.36	-
50	-	-	22.45	22.55	22.64	22.72	22.78	22.82	-
55	-	-	-	24.14	24.25	24.34	24.42	24.48	-
60	_	-	_	_	26.06	26.17	26.26	26.34	-
65	-	-	-	-	28.09	28.21	28.32	28.42	-
Mass flow in kg/	'h								
30	392	484	589	708	843	995	1 165	1 355	
35	385	477	583	704	840	993	1 164	1 355	-
40	376	470	577	698	835	989	1 161	1 352	-
45	-	461	569	691	828	982	1 154	1 345	-
50	-	-	559	681	819	973	1 145	1 336	-
55	-	-	-	669	807	960	1 132	1 323	-
60	-	-	-	-	792	945	1 116	1 305	-
65	-	-	-	-	774	926	1 096	1 284	-
Coefficient of pe	erformance (C.C).P.)							
30	2.44	3.01	3.67	4.43	5.29	6.27	7.37	8.61	-
35	2.09	2.60	3.18	3.85	4.62	5.48	6.45	7.55	-
40	1.77	2.22	2.74	3.33	4.01	4.77	5.62	6.58	-
45	-	1.90	2.35	2.87	3.46	4.12	4.87	5.72	-
50	-	-	2.00	2.45	2.97	3.55	4.20	4.94	-
55	-	-	-	2.09	2.53	3.04	3.60	4.24	-
60	-	-	-	-	2.14	2.58	3.07	3.63	-
65	-	-	-	-	1.80	2.18	2.60	3.08	-

Nominal performance at to = 7.2 °C, tc = 54.4 °C

Nominal performance at to - 1.2	0, 10 - 04.4 0		
Cooling capacity	45 500	W	
Power input	13 622	W	
Current consumption	24.17	Α	
Mass flow	1 035	kg/h	
C.O.P.	3.34		

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

Rating conditions : Superheat = 11.1 K , Subcooling = 8.3 K

Pressure switch settings

Maximum HP switch setting	28	bar(g)
Minimum LP switch setting	0.5	bar(g)
LP pump down setting	1.3	bar(g)

Sound power data

Sound power level	80	dB(A)
With accoustic hood	72	dB(A)

All performance data +/- 5%





Performer scroll compressor. SM185-4

Performance data at 60 Hz, EN 12900 rating conditions

R22

Cond. temp. in				Evapora	ating temperature	in °C (to)			
°C (tc)	-20	-15	-10	-5	0	5	10	15	
Cooling capacity	ı in W								
30	22 382	27 798	34 083	41 309	49 548	58 873	69 357	81 072	-
35	21 114	26 408	32 535	39 566	47 574	56 632	66 811	78 184	
40	19 829	24 979	30 926	37 742	45 497	54 266	64 119	75 130	
45	-	23 493	29 234	35 806	43 282	51 734	61 232	71 850	
50		20 430	27 493	33 802	40 978	49 092	58 216	68 422	
55		-	-	31 705	38 555	46 306	55 029	64 797	_
60		_	-	-	36 006	43 365	51 659	60 957	_
65		_	_	_	33 373	40 319	48 161	56 968	
				I	000.0	100.0	10.00	00000	
Power input in W	<i>I</i>	1				1	,	, ,	
30	9 493	9 669	9 842	10 008	10 161	10 298	10 415	10 506	-
35	10 422	10 600	10 777	10 946	11 104	11 246	11 368	11 467	-
40	11 468	11 649	11 829	12 002	12 165	12 313	12 442	12 548	-
45	-	12 827	13 010	13 188	13 357	13 511	13 647	13 760	-
50	-	-	14 331	14 514	14 689	14 850	14 993	15 114	-
55	-	-	-	15 990	16 171	16 339	16 491	16 620	-
60	-	-	-	-	17 815	17 991	18 151	18 290	-
65	-	-	-	-	19 632	19 816	19 985	20 133	-
Current consum	ntion in A								
30	16.16	16.36	16.55	16.73	16.88	17.01	17.10	17.15	_
35	17.11	17.32	17.52	17.71	17.87	18.01	18.12	18.19	
40	18.22	18.44	18.65	18.85	19.03	19.19	19.31	19.40	
45	-	19.73	19.96	20.17	20.37	20.54	20.69	20.80	-
50	<u>-</u>	-	21.46	21.69	21.91	22.10	22.27	22.40	
55		-	-	23.43	23.67	23.88	24.07	24.23	
60			_	25.45				1	
65	<u>-</u>	-		-	25.66 27.92	25.90 28.18	26.11 28.42	26.30 28.63	-
05	-	-	_	-	21.92	20.10	20.42	26.03	
Mass flow in kg/l	h								
30	482	591	715	855	1 013	1 191	1 388	1 606	-
35	472	583	709	851	1 010	1 189	1 387	1 607	-
40	462	574	701	844	1 005	1 184	1 384	1 604	-
45	-	565	692	836	998	1 178	1 377	1 598	-
50	-	-	682	826	988	1 168	1 368	1 589	-
55	-	-	-	814	976	1 156	1 355	1 576	-
60	-	-	-	-	961	1 140	1 340	1 560	-
65	-	-	-	-	943	1 122	1 320	1 539	-
Coefficient of pe	rformance (C C) P)							
30	2.36	2.87	3.46	4.13	4.88	5.72	6.66	7.72	_
35	2.03	2.49	3.02	3.61	4.28	5.04	5.88	6.82	_
40	1.73	2.49	2.61	3.14	3.74	4.41	5.15	5.99	
45	-	1.83	2.25	2.71	3.24	3.83	4.49	5.22	_
50	<u>-</u>	-	1.92	2.33	2.79	3.31	3.88	4.53	
		-	-	1.98	2.79	2.83	3.34	3.90	
55		1 -		1.30	2.00	2.00		0.90	
55 60	-	-	-	-	2.02	2.41	2.85	3.33	-

Nominal performance at to = 5 °C, tc = 50 °C

reciminal performance at to 0 0, to	00 0	
Cooling capacity	49 092	W
Power input	14 850	W
Current consumption	22.10	Α
Mass flow	1 168	kg/h
C.O.P.	3.31	

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

Rating conditions : Superheat = 10 K , Subcooling = 0 K

Pressure switch settings

Maximum HP switch setting	28	bar(g)
Minimum LP switch setting	0.5	bar(g)
LP pump down setting	1.3	bar(g)

Sound power data

Sound power level	82.5	dB(A)
With accoustic hood	75	dB(A)

All performance data +/- 5%





Performer scroll compressor. SM185-4

Performance data at 60 Hz, ARI rating conditions

R22

Cond. temp. in				Evapora	iting temperature	in °C (to)			
°C (tc)	-20	-15	-10	-5	0	5	10	15	
Cooling conscit-	ı in W								
Cooling capacity 30	23 747	29 471	36 106	43 729	52 415	62 237	73 272	85 594	
35	22 483	28 096	34 586	42 027	50 495	60 065	70 811	82 808	
40	21 194	26 673	32 993	40 229	48 456	57 749	68 182	79 831	
45	21 194	25 205	31 332	38 339	46 301	55 293	65 390	76 667	
50	-	25 205						1	
55		-	29 605	36 359 34 294	44 033	52 701 49 975	62 438 59 329	73 320 69 791	
	-	-			41 655	+		 	-
60 65	-	-	-	-	39 172 36 587	47 121 44 140	56 067	66 086	-
05	-	_	_	_	30 367	44 140	52 655	62 208	
Power input in W	1			T	T	1	T		
30	9 493	9 669	9 842	10 008	10 161	10 298	10 415	10 506	-
35	10 422	10 600	10 777	10 946	11 104	11 246	11 368	11 467	-
40	11 468	11 649	11 829	12 002	12 165	12 313	12 442	12 548	-
45	-	12 827	13 010	13 188	13 357	13 511	13 647	13 760	-
50	-	-	14 331	14 514	14 689	14 850	14 993	15 114	-
55	-	-	-	15 990	16 171	16 339	16 491	16 620	-
60	-	-	-	-	17 815	17 991	18 151	18 290	-
65	-	-	-	-	19 632	19 816	19 985	20 133	-
Current consum	ption in A								
30	16.16	16.36	16.55	16.73	16.88	17.01	17.10	17.15	-
35	17.11	17.32	17.52	17.71	17.87	18.01	18.12	18.19	
40	18.22	18.44	18.65	18.85	19.03	19.19	19.31	19.40	_
45	-	19.73	19.96	20.17	20.37	20.54	20.69	20.80	-
50	-	-	21.46	21.69	21.91	22.10	22.27	22.40	-
55	-	_	_	23.43	23.67	23.88	24.07	24.23	_
60	_	_	_	-	25.66	25.90	26.11	26.30	
65	-	_	_	_	27.92	28.18	28.42	28.63	_
						<u> </u>	l.		
Mass flow in kg/	h	•	•	T	•	_	1		
30	479	588	711	851	1 008	1 184	1 380	1 597	-
35	470	580	705	846	1 005	1 182	1 379	1 598	-
40	460	571	698	840	1 000	1 178	1 376	1 595	-
45	-	562	689	832	992	1 171	1 370	1 589	-
50	-	-	678	822	983	1 162	1 360	1 580	-
55	-	-	-	810	970	1 149	1 348	1 567	-
60	-	-	-	-	956	1 134	1 332	1 551	-
65	-	-	-	-	938	1 116	1 313	1 530	-
Coefficient of pe	rformance (C.C).P.)							
30	2.50	3.05	3.67	4.37	5.16	6.04	7.04	8.15	-
35	2.16	2.65	3.21	3.84	4.55	5.34	6.23	7.22	-
40	1.85	2.29	2.79	3.35	3.98	4.69	5.48	6.36	-
45	_	1.97	2.41	2.91	3.47	4.09	4.79	5.57	-
50	-	-	2.07	2.51	3.00	3.55	4.16	4.85	-
55	-	-	-	2.14	2.58	3.06	3.60	4.20	-
60	-	_	-	-	2.20	2.62	3.09	3.61	-
		1	1	1			1		

Nominal performance at to = 7.2 °C, tc = 54.4 °C

monimum portormanoo at to	0,	04.4	
Cooling capacity		54 313	W
Power input		16 221	W
Current consumption		23.74	Α
Mass flow		1 236	kg/h
C.O.P.		3.35	

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

Rating conditions : Superheat = 11.1 K , Subcooling = 8.3 K

Pressure switch settings

Maximum HP switch setting	28	bar(g)
Minimum LP switch setting	0.5	bar(g)
LP pump down setting	1.3	bar(g)

Sound power data

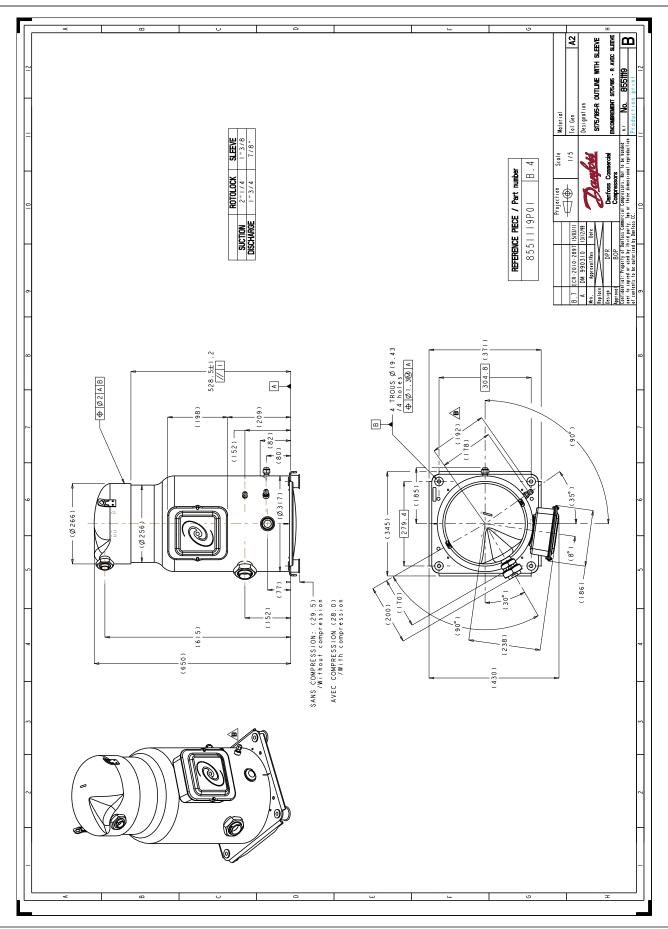
Sound power level	82.5	dB(A)
With accoustic hood	75	dB(A)

All performance data +/- 5%



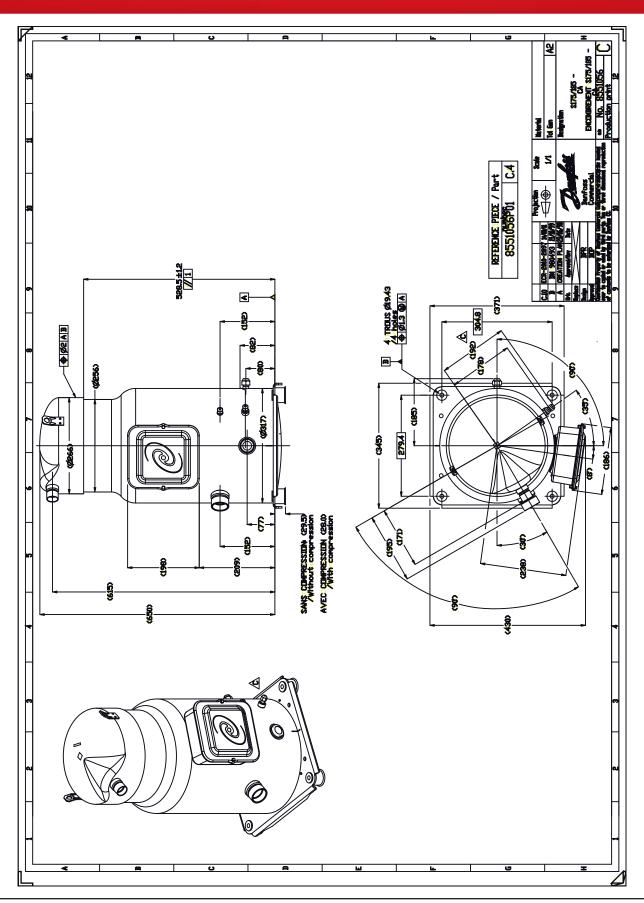


Datasheet, drawing Scroll compressor











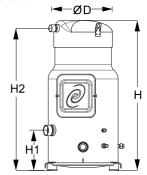
Datasheet, technical data

Danfoss scroll compressor, SM185-4

General Characteristics

Model number (on compressor nameplate)		SM185S4QC	
Code number for Singlepack*		SM185-4QAI	
Code number for Industrial pack**		SM185-4QAM	
Drawing number		8551065c	
Suction and discharge connections		Brazed	
Suction connection		1-5/8 " ODF	
Discharge connection		1-1/8 " ODF	
Oil sight glass		Threaded	
Oil equalisation connection		3/8" ODF	
Oil drain connection		1/4" flare	
LP gauge port		Schrader	
IPR valve		None	
Swept volume	249,9 c	m3/rev	
Displacement @ Nominal speed	43.5 m3/h @ 2900 rpm	- 52.5 m3/h @ 3500 rpm	
Net weight	100) kg	
Oil charge	6,2 litre, Mineral - 160P		
Maximum system test pressure Low Side / High side	25 bar(g) ,	/ 32 bar(g)	
Maximum differential test pressure	24 bar		
Maximum number of starts per hour	1	2	
Refrigerant charge limit	13,5 kg		
Approved refrigerants	R22, R417	7A-160SZ	

Dimensions



D=317 mm H=678 mm H1=180 mm H2=643 mm H3=- mm

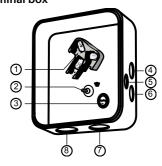
Electrical Characteristics

Nominal voltage	380-400V/3/50Hz - 460V/3/60Hz
Voltage range	340-440 V @ 50Hz - 414-506 V @ 60Hz
Winding resistance (between phases) +/- 7% at 25℃	0.77 Ω
Maximum Must Trip current (MMT)	35 A
Locked Rotor Amps (LRA)	175 A
Motor protection	Internal thermostat, ext. overload protector needed

Recommended Installation torques

Oil sight glass	50 Nm	
Power connections / Earth connection	3 Nm / 2 Nm	
Terminal box cover screws	2,3 Nm	
Mounting bolts	21 Nm	

Terminal box



Parts shipped with compressor

Mounting kit with grommets, bolts, nuts, sleeves and washers
Initial oil charge
Installation instructions

Approvals: CE certified, UL certified (file SA6873), -

- *Singlepack: Compressor in cardboard box
- **Industrial pack: 6 Unboxed compressors on pallet (order per multiples of 6)

IP54 (with cable gland)

- 1: Power connection, 3 x 4.8 mm (3/16")
- 2: Earth M5
- 3: Thermostat connector
- 4: Knock-out Ø 22 mm (7/8") for 1/2" conduit
- 5: Knock-out Ø 16.5 mm (0.65")
- 6: Knock-out Ø 20.5 mm (0.81")
- 7: Double knock-out Ø 32.1 mm (1.26") & Ø 25.4 mm (1")
- 8: Double knock-out Ø 44 mm (1-3/4") for 1-1/4" conduit & Ø 34 mm (1-3/8") for 1" conduit



Datasheet, accessories and spare parts

Danfoss scroll compressor, SM185-4

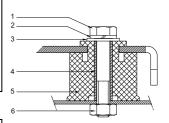
Rotolock accessories, suction side	Code no.
Rotolock accessories, discharge side	Code no.
Rotolock accessories, sets	Code no.
Oil / lubricants	Code no.
Mineral oil, 160P, 2 litre can	7754001
Mineral oil, 160P, 5 litre can	7754002

Crankcase heaters	Code no.
Surface sump heater + bottom insulation, 56 W, 24 V, CE mark, UL	120Z0360
Surface sump heater + bottom insulation, 56 W, 230 V, CE mark, UL	120Z0376
Surface sump heater + bottom insulation, 56 W, 400 V, CE mark, UL	120Z0377
Surface sump heater + bottom insulation, 56 W, 460 V, CE mark, UL	120Z0378
Belt type crankcase heater, 75 W, 230 V, CE mark, UL	7773108
Belt type crankcase heater, 75 W, 400 V, CE mark, UL	7773118
Belt type crankcase heater, 75 W, 460 V, CE mark, UL	120Z0464

Miscellaneous accessories Code no. Electronic soft start kit, MCI 25 C 7705007 Acoustic hood for scroll compressor \$175-\$185 7755007 Acoustic bottom insulation for scroll compressor 120Z0353 7750009 Discharge thermostat kit

Spare parts	Code no.
Mounting kit for 1 scroll compressor including 4 grommets, 4 sleeves, 4 bolts, 4 washers	8156138
Mounting kit for 1 scroll compressor including 4 grommets, 4 sleeves, 4 bolts, 4 washers, 2 rotolock nuts, 2 solder sleeves, 2 gaskets	8156147
Oil sight glass with gaskets (black & white)	8156019
Gasket for oil sight glass (white teflon)	8156129
Terminal box 186 x 198 mm, incl cover	8156139
T block connector 60 x 75 mm	8173021

Mounting kit



1: Bolt (4x)

2: Lock washer (4x) 3: Flat washer (4x)

4: Sleeve (4x)

5: Grommet (4x)

6: Nut (4x)



Danfoss scroll compressor. SM185-4

Performance data at 50 Hz, EN 12900 rating conditions

R22

Cond. temp. in			Evaporating temperature in °C (to)							
°C (tc)	-20	-15	-10	-5	0	5	10	15		
Cooling capacity	in W									
30	18 318	22 874	28 199	34 360	41 427	49 470	58 559	68 762	_	
35	17 278	21 728	26 912	32 902	39 765	47 572	56 390	66 290		
40	16 216	20 537	25 561	31 358	37 996	45 544	54 071	63 646		
45	-	19 302	24 145	29 728	36 119	43 387	51 601	60 830		
50		19 302	22 663	28 011	34 133	41 100	48 979	57 839		
55		-	-	26 206	32 039	38 682	46 204	54 673		
					1		ł	t t		
60 65	-	-	-	-	29 834 27 517	36 131	43 273 40 183	51 327 47 799	-	
00	-	-	-	-	2/ 5//	33 445	40 103	47 799	-	
ower input in W	1		_	_	_					
30	7 964	8 050	8 133	8 212	8 284	8 347	8 399	8 437	-	
35	8 819	8 906	8 991	9 071	9 145	9 211	9 265	9 306	-	
40	9 773	9 861	9 947	10 030	10 106	10 174	10 231	10 275	-	
45	-	10 925	11 013	11 097	11 176	11 247	11 307	11 354	-	
50	-	-	12 196	12 283	12 364	12 438	12 501	12 553	-	
55	-	-	-	13 596	13 680	13 757	13 824	13 879	-	
60	-	-	-	-	15 132	15 212	15 283	15 342	-	
65	-	-	-	-	16 731	16 814	16 889	16 953	-	
urrent consump		47.70	47.00	47.00	47.02	47.07	47.00	47.00		
30	17.62	17.72	17.80	17.88	17.93	17.97	17.99	17.98	-	
35	18.55	18.65	18.74	18.82	18.88	18.93	18.95	18.95	-	
40	19.61	19.72	19.82	19.90	19.97	20.03	20.06	20.08	-	
45	-	20.94	21.05	21.14	21.22	21.29	21.33	21.36	-	
50	-	-	22.45	22.55	22.64	22.72	22.78	22.82	-	
55	-	-	-	24.14	24.25	24.34	24.42	24.48	-	
60	-	-	-	-	26.06	26.17	26.26	26.34	-	
65	-	-	-	-	28.09	28.21	28.32	28.42	-	
Mass flow in kg/h	1									
30	394	486	592	712	848	1 001	1 172	1 363	-	
35	387	480	586	707	844	999	1 171	1 363	-	
40	378	472	580	702	840	994	1 167	1 359	-	
45	-	464	572	694	832	988	1 161	1 353	-	
50	-	-	562	685	823	978	1 151	1 343	-	
55	-	-	-	673	811	966	1 138	1 330	-	
60	-	-	-	-	796	950	1 122	1 313	-	
65	-	-	-	-	778	931	1 102	1 292	-	
Coefficient of per	rformance (C.C) P)								
30	2.30	2.84	3.47	4.18	5.00	5.93	6.97	8.15		
35	1.96	2.44	2.99	3.63	4.35	5.16	6.09	7.12	_	
40	1.66	2.08	2.57	3.13	3.76	4.48	5.28	6.19		
45	-	1.77	2.19	2.68	3.70	3.86	4.56	5.36		
50	-	-	1.86	2.00	2.76	3.30	3.92	4.61		
	<u> </u>	-	-		2.76			t	<u> </u>	
55 60				1.93		2.81	3.34 2.83	3.94		
	-	-	-	-	1.97	2.30	۷.03	3.35	-	

Nominal performance at to = 5 °C, tc = 50 °C

	•• •	
Cooling capacity	41 100	W
Power input	12 438	W
Current consumption	22.72	Α
Mass flow	978	kg/h
C.O.P.	3.30	

to: Evaporating temperature at dew point

Pressure switch settings

Maximum HP switch setting	28	bar(g)
Minimum LP switch setting	0.5	bar(g)
LP pump down setting	1.3	bar(g)

Sound power data

Sound power	level	80	dB(A)
With accoustic	hood	72	dB(A)

All performance data +/- 5%

tc: Condensing temperature at dew point

Rating conditions : Superheat = 10 K , Subcooling = 0 K



Danfoss scroll compressor. SM185-4

Performance data at 50 Hz, ARI rating conditions

R22

Coling capacity in W	Cond. temp. in	in Evaporating temperature in °C (to)								
30	°C (tc)	-20	-15	-10	-5	0	5	10	15	
30										
35	cooling capacity		1	1	T		1	1		
40	30	19 439	24 255	29 878	36 380	43 832	52 306	61 875	72 610	-
45	35	18 400	23 118	28 611	34 951	42 209	50 458	59 770	70 215	-
50	40	17 337	21 936	27 278	33 434	40 478	48 480	57 512	67 647	-
55	45	-	20 708	25 877	31 829	38 637	46 371	55 103	64 906	-
60	50	-	-	24 409	30 136	36 686	44 131	52 542	61 992	-
65 - - - 30 174 36 623 43 943 52 207 - cover input in W 30 7 964 8 050 8 133 8 212 8 284 8 347 8 399 8 437 - 35 8 8 199 8 906 8 991 9 9071 9 145 9 211 9 265 9 306 - 40 9 773 9 861 9 947 10 030 10 106 10 174 10 231 10 275 - 45 - 10 925 11 013 11 097 11 176 11 247 11 307 11 354 - 50 - - 12 196 12 283 12 384 12 438 12 601 12 553 - 60 - - - 13 596 13 880 13 757 13 824 13 879 - 66 - - - - 15 132 15 212 15 283 15 342 - urrent consumption in A	55	-	-	-	28 354	34 625	41 760	49 828	58 904	-
ower input in W 30 7 964 8 050 8 133 8 212 8 284 8 347 8 399 8 437 - 35 8 819 8 906 8 991 9 071 9 145 9 211 9 265 9 306 - 40 9 773 9 881 9 947 10 030 10 1006 10 174 10 231 10 275 - 45 - 10 925 11 013 11 097 11 176 11 247 11 307 11 354 - 50 - - 12 186 12 283 12 364 12 438 12 501 12 553 - 60 - - - - 13 966 13 860 13 757 13 824 13 879 - 60 - - - - 16 731 16 814 16 889 16 953 - urrent consumption in A 30 17 62 17.72 17.80 17.88 17.93 17.97 17.99 17.98	60	-	-	-	-	32 455	39 257	46 962	55 642	-
30	65	-	-	-	-	30 174	36 623	43 943	52 207	-
30	Power innut in V	v								
35			8 050	8 133	8 212	8 284	8 347	8 399	8 437	
40 9 773 9 861 9 947 10 030 10 106 10 174 10 231 10 275 - 4 45 - 10 925 11 013 11 097 11 176 11 247 11 307 11 364 - 5 50 - 12 196 12 283 12 364 12 438 12 501 12 553 - 5 55 1 - 13 596 13 680 13 757 13 824 13 879 - 6 60 15 13 2 15 212 15 283 15 342 - 6 65 16 731 16 814 16 889 16 953 - 6 wrent consumption in A 30 17.62 17.72 17.80 17.88 17.93 17.97 17.99 17.98 - 3 35 18.55 18.65 18.74 18.82 18.88 18.93 18.95 18.95 - 9 40 19.61 19.72 19.82 19.90 19.97 20.03 20.06 20.08 - 9 45 - 20.94 21.05 21.14 21.22 21.29 21.33 21.36 - 5 50 22.45 22.55 22.64 22.72 22.78 22.82 - 5 55 24.14 24.25 24.34 24.42 24.48 - 6 60 24.14 24.25 24.39 28.21 28.32 28.42 - 6 lass flow in kg/h 30 392 484 589 708 843 995 1165 1355 - 6 40 376 470 577 698 835 989 1161 1355 - 6 50										
45	1				†					
SO										
13 596	1									
60	-				1	1				
urrent consumption in A 30		-		-	19 990					-
urrent consumption in A 30 17.62 17.72 17.80 17.88 17.93 17.97 17.99 17.98 - 35 18.55 18.65 18.74 18.82 18.88 18.93 18.95 18.95 - 40 19.61 19.72 19.82 19.90 19.97 20.03 20.06 20.08 - 45 - 20.94 21.05 21.14 21.22 21.29 21.33 21.36 - 50 - - 22.45 22.55 22.64 22.72 22.78 22.82 - 55 - - - 24.14 24.25 24.34 24.42 24.48 - 60 - - - - 28.09 28.21 28.32 28.42 - ass flow in kg/h 30 392 484 589 708 843 995 1 165 1 355 - 35	-	-		-	-	1			1	-
17.62	00	-	-	-	-	10 /31	10 814	16 889	10 953	
17.62	urrent consum	ntion in A								
35		•	17 72	17.80	17.88	17 93	17 97	17 99	17 98	
40			+					1		
45										
50			+		1					
55	1					1				
60 26.06 26.17 26.26 26.34 - 65 28.09 28.21 28.32 28.42 - Sass flow in kg/h				1						
See See	-				1					
See See										
30 392 484 589 708 843 995 1 165 1 355 - 35 385 477 583 704 840 993 1 164 1 355 - 40 376 470 577 698 835 989 1 161 1 352 - 45 - 461 569 691 828 982 1 154 1 345 - 50 - - 559 681 819 973 1 145 1 336 - 55 - - - 669 807 960 1 132 1 323 - 60 - - - - 792 945 1 116 1 305 - 65 - - - - 774 926 1 096 1 284 - oefficient of performance (C.O.P.) 30 2.44 3.01 3.67 4.43 5.29 <t< td=""><td>03</td><td></td><td>-</td><td></td><td></td><td>20.09</td><td>20.21</td><td>20.32</td><td>20.42</td><td></td></t<>	03		-			20.09	20.21	20.32	20.42	
30 392 484 589 708 843 995 1 165 1 355 - 35 385 477 583 704 840 993 1 164 1 355 - 40 376 470 577 698 835 989 1 161 1 352 - 45 - 461 569 691 828 982 1 154 1 345 - 50 - - 559 681 819 973 1 145 1 336 - 55 - - - 669 807 960 1 132 1 323 - 60 - - - - 792 945 1 116 1 305 - 65 - - - - 774 926 1 096 1 284 - oefficient of performance (C.O.P.) 30 2.44 3.01 3.67 4.43 5.29 <t< td=""><td>lass flow in ka/</td><td>h</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	lass flow in ka/	h								
35 385 477 583 704 840 993 1 164 1 355 - 40 376 470 577 698 835 989 1 161 1 352 - 45 - 461 569 691 828 982 1 154 1 345 - 50 - - 559 681 819 973 1 145 1 336 - 55 - - - 669 807 960 1 132 1 323 - 60 - - - - 792 945 1 116 1 305 - 65 - - - - 774 926 1 096 1 284 - coefficient of performance (C.O.P.) 30 2.44 3.01 3.67 4.43 5.29 6.27 7.37 8.61 - 35 2.09 2.60 3.18 3.85 4.62			484	589	708	843	995	1 165	1 355	_
40 376 470 577 698 835 989 1 161 1 352 - 45 - 461 569 691 828 982 1 154 1 345 - 50 - - 559 681 819 973 1 145 1 336 - 55 - - - 669 807 960 1 132 1 323 - 60 - - - - 792 945 1 116 1 305 - 65 - - - - 774 926 1 096 1 284 - coefficient of performance (C.O.P.) 30 2.44 3.01 3.67 4.43 5.29 6.27 7.37 8.61 - 35 2.09 2.60 3.18 3.85 4.62 5.48 6.45 7.55 - 40 1.77 2.22 2.74 3.33 4.01										
45 - 461 569 691 828 982 1 154 1 345 - 50 - - 559 681 819 973 1 145 1 336 - 55 - - - 669 807 960 1 132 1 323 - 60 - - - - 792 945 1 116 1 305 - 65 - - - - 774 926 1 096 1 284 - cefficient of performance (C.O.P.) 30 2.44 3.01 3.67 4.43 5.29 6.27 7.37 8.61 - 35 2.09 2.60 3.18 3.85 4.62 5.48 6.45 7.55 - 40 1.77 2.22 2.74 3.33 4.01 4.77 5.62 6.58 - 45 - 1.90 2.35 2.87 3.46	-				1		1			
50 - - 559 681 819 973 1 145 1 336 - 55 - - - 669 807 960 1 132 1 323 - 60 - - - - 792 945 1 116 1 305 - 65 - - - - 774 926 1 096 1 284 - cefficient of performance (C.O.P.) 30 2.44 3.01 3.67 4.43 5.29 6.27 7.37 8.61 - 35 2.09 2.60 3.18 3.85 4.62 5.48 6.45 7.55 - 40 1.77 2.22 2.74 3.33 4.01 4.77 5.62 6.58 - 45 - 1.90 2.35 2.87 3.46 4.12 4.87 5.72 - 50 - - 2.00 2.45 2.97										
55 - - - 669 807 960 1 132 1 323 - 60 - - - - 792 945 1 116 1 305 - 65 - - - - 774 926 1 096 1 284 - cefficient of performance (C.O.P.) 30 2.44 3.01 3.67 4.43 5.29 6.27 7.37 8.61 - 35 2.09 2.60 3.18 3.85 4.62 5.48 6.45 7.55 - 40 1.77 2.22 2.74 3.33 4.01 4.77 5.62 6.58 - 45 - 1.90 2.35 2.87 3.46 4.12 4.87 5.72 - 50 - - 2.00 2.45 2.97 3.55 4.20 4.94 - 55 - - - 2.09 2.53	-	-			1	1				
60 792 945 1116 1305 - 65 774 926 1096 1284 - oefficient of performance (C.O.P.) 30 2.44 3.01 3.67 4.43 5.29 6.27 7.37 8.61 - 35 2.09 2.60 3.18 3.85 4.62 5.48 6.45 7.55 - 40 1.77 2.22 2.74 3.33 4.01 4.77 5.62 6.58 - 45 - 1.90 2.35 2.87 3.46 4.12 4.87 5.72 - 50 2.00 2.45 2.97 3.55 4.20 4.94 - 55 2.00 2.45 2.97 3.55 4.20 4.94 - 55 2.09 2.53 3.04 3.60 4.24 - 60 2.14 2.58 3.07 3.63 -		-								-
65 - - - - 774 926 1 096 1 284 - coefficient of performance (C.O.P.) 30 2.44 3.01 3.67 4.43 5.29 6.27 7.37 8.61 - 35 2.09 2.60 3.18 3.85 4.62 5.48 6.45 7.55 - 40 1.77 2.22 2.74 3.33 4.01 4.77 5.62 6.58 - 45 - 1.90 2.35 2.87 3.46 4.12 4.87 5.72 - 50 - - 2.00 2.45 2.97 3.55 4.20 4.94 - 55 - - - 2.09 2.53 3.04 3.60 4.24 - 60 - - - - 2.14 2.58 3.07 3.63 -										
oefficient of performance (C.O.P.) 30 2.44 3.01 3.67 4.43 5.29 6.27 7.37 8.61 - 35 2.09 2.60 3.18 3.85 4.62 5.48 6.45 7.55 - 40 1.77 2.22 2.74 3.33 4.01 4.77 5.62 6.58 - 45 - 1.90 2.35 2.87 3.46 4.12 4.87 5.72 - 50 - - 2.00 2.45 2.97 3.55 4.20 4.94 - 55 - - - 2.09 2.53 3.04 3.60 4.24 - 60 - - - - 2.14 2.58 3.07 3.63 -	-						1			
30 2.44 3.01 3.67 4.43 5.29 6.27 7.37 8.61 - 35 2.09 2.60 3.18 3.85 4.62 5.48 6.45 7.55 - 40 1.77 2.22 2.74 3.33 4.01 4.77 5.62 6.58 - 45 - 1.90 2.35 2.87 3.46 4.12 4.87 5.72 - 50 - - 2.00 2.45 2.97 3.55 4.20 4.94 - 55 - - - 2.09 2.53 3.04 3.60 4.24 - 60 - - - - 2.14 2.58 3.07 3.63 -	00	-	-	-	-	774	920	1 096	1 284	-
35 2.09 2.60 3.18 3.85 4.62 5.48 6.45 7.55 - 40 1.77 2.22 2.74 3.33 4.01 4.77 5.62 6.58 - 45 - 1.90 2.35 2.87 3.46 4.12 4.87 5.72 - 50 - - 2.00 2.45 2.97 3.55 4.20 4.94 - 55 - - - 2.09 2.53 3.04 3.60 4.24 - 60 - - - 2.14 2.58 3.07 3.63 -	- 1		1	0.07	4.00	5.00	0.07	7.07	0.04	
40 1.77 2.22 2.74 3.33 4.01 4.77 5.62 6.58 - 45 - 1.90 2.35 2.87 3.46 4.12 4.87 5.72 - 50 - - 2.00 2.45 2.97 3.55 4.20 4.94 - 55 - - - 2.09 2.53 3.04 3.60 4.24 - 60 - - - 2.14 2.58 3.07 3.63 -	-				1					
45 - 1.90 2.35 2.87 3.46 4.12 4.87 5.72 - 50 - - 2.00 2.45 2.97 3.55 4.20 4.94 - 55 - - - 2.09 2.53 3.04 3.60 4.24 - 60 - - - 2.14 2.58 3.07 3.63 -										
50 - - 2.00 2.45 2.97 3.55 4.20 4.94 - 55 - - - 2.09 2.53 3.04 3.60 4.24 - 60 - - - - 2.14 2.58 3.07 3.63 -					1					
55 - - - 2.09 2.53 3.04 3.60 4.24 - 60 - - - - 2.14 2.58 3.07 3.63 -										
60 2.14 2.58 3.07 3.63 -	-	-	+		1				1	-
				-						-
65 1.80 2.18 2.60 3.08 -	-	-	-	-	-					-
	65	-	-	-	-	1.80	2.18	2.60	3.08	
ominal performance at to = 7.2 °C, tc = 54.4 °C Pressure switch settings	ominai pertorn	iaiice at 10 = /.	2 °C, tc = 54.4 °C				Pressure switch		20	

to: Evaporating temperature at dew point

Cooling capacity

Current consumption

Power input

Mass flow

C.O.P.

tc: Condensing temperature at dew point

Rating conditions : Superheat = 11.1 K , Subcooling = 8.3 K

45 500

13 622

24.17

1 035

3.34

W

W

kg/h

Maximum HP switch setting	28	bar(g)
Minimum LP switch setting	0.5	bar(g)
LP pump down setting	1.3	bar(g)

Sound	power	data
Oouna	power	uutt

Sound power level	80	dB(A)
With accoustic hood	72	dB(A)

All performance data +/- 5%



Danfoss scroll compressor. SM185-4

Performance data at 60 Hz, EN 12900 rating conditions

R22

Cond. temp. in			Evaporating temperature in °C (to)						
°C (tc)	-20	-15	-10	-5	0	5	10	15	
Cooling capacity	in W								
30	22 378	27 793	34 077	41 301	49 539	58 863	69 345	81 058	_
35	21 112	26 406	32 532	39 563	47 571	56 628	66 807	78 179	
40	19 823	24 972	30 917	37 731	45 485	54 251	64 102	75 110	
45	19 023	23 494	29 235	35 807	43 283	51 735	61 234	71 852	
50	-	23 494	29 233	33 794	40 969	49 081	58 204	68 408	
55		-	-	31 696	38 543	46 292	55 013	64 778	
					36 009		1	 	
60 65	-	-	-	-	33 365	43 368 40 309	51 662 48 149	60 961 56 956	-
00	-	-	-	-	33 305	40 309	40 149	56 956	
ower input in W	ı	1	1	1	1		1		
30	9 493	9 669	9 842	10 008	10 161	10 298	10 415	10 506	-
35	10 422	10 600	10 777	10 946	11 104	11 246	11 368	11 467	-
40	11 468	11 649	11 829	12 002	12 165	12 313	12 442	12 548	-
45	-	12 827	13 010	13 188	13 357	13 511	13 647	13 760	-
50	-	-	14 331	14 514	14 689	14 850	14 993	15 114	-
55	-	-	-	15 990	16 171	16 339	16 491	16 620	-
60	-	-	-	-	17 815	17 991	18 151	18 290	-
65	-	-	-	-	19 632	19 816	19 985	20 133	-
Current consum		40.00	40.55	40.70	40.00	47.04	47.40	47.45	
30	16.16	16.36	16.55	16.73	16.88	17.01	17.10	17.15	-
35	17.11	17.32	17.52	17.71	17.87	18.01	18.12	18.19	-
40	18.22	18.44	18.65	18.85	19.03	19.19	19.31	19.40	-
45	-	19.73	19.96	20.17	20.37	20.54	20.69	20.80	-
50	-	-	21.46	21.69	21.91	22.10	22.27	22.40	-
55	-	-	-	23.43	23.67	23.88	24.07	24.23	-
60	-	-	-	-	25.66	25.90	26.11	26.30	-
65	-	-	-	-	27.92	28.18	28.42	28.63	-
Mass flow in kg/l	h								
30	482	591	715	855	1 013	1 191	1 388	1 606	-
35	472	583	709	851	1 010	1 189	1 387	1 607	-
40	462	574	701	844	1 005	1 184	1 384	1 604	-
45	-	565	692	836	998	1 178	1 377	1 598	-
50	-	-	682	826	988	1 168	1 368	1 589	-
55	-	-	-	814	976	1 156	1 355	1 576	-
60	-	-	-	-	961	1 140	1 340	1 560	-
65	-	-	-	-	943	1 122	1 320	1 539	-
Coefficient of pe	rformance (C C) P)							
30	2.36	2.87	3.46	4.13	4.88	5.72	6.66	7.72	_
35	2.03	2.49	3.02	3.61	4.28	5.04	5.88	6.82	-
40	1.73	2.14	2.61	3.14	3.74	4.41	5.15	5.99	-
45	-	1.83	2.25	2.72	3.24	3.83	4.49	5.22	_
50		-	1.92	2.33	2.79	3.31	3.88	4.53	_
55		_	-	1.98	2.79	2.83	3.34	3.90	
60		-	-	-	2.02	2.63	2.85	3.33	
00	-	-	-	-	1.70	2.41	2.65	2.83	

Nominal performance at to = 5 °C, tc = 50 °C

	•• •	
Cooling capacity	49 081	W
Power input	14 850	W
Current consumption	22.10	Α
Mass flow	1 168	kg/h
C.O.P.	3.31	

to: Evaporating temperature at dew point

Rating conditions : Superheat = 10 K , Subcooling = 0 K

Pressure switch settings

Maximum HP switch setting	28	bar(g)
Minimum LP switch setting	0.5	bar(g)
LP pump down setting	1.3	bar(g)

Sound power data

Sound power level	82.5	dB(A)
With accoustic hood	75	dB(A)

All performance data +/- 5%

tc: Condensing temperature at dew point



Danfoss scroll compressor. SM185-4

Performance data at 60 Hz, ARI rating conditions

R22

20	-15	-10	-5	0	5	10	45	
			•	U	5	10	15	
			T	T	T			
747 2	29 471	36 106	43 729	52 415	62 237	73 272	85 594	-
483 2	28 096	34 586	42 027	50 495	60 065	70 811	82 808	-
194 2	26 673	32 993	40 229	48 456	57 749	68 182	79 831	-
- 2	25 205	31 332	38 339	46 301	55 293	65 390	76 667	-
-	-	29 605	36 359	44 033	52 701	62 438	73 320	-
-	-	-	34 294	41 655	49 975	59 329	69 791	-
-	-	-	-	39 172	47 121	56 067	66 086	-
	-	-	-	36 587	44 140	52 655	62 208	-
193	9 669	9 842	10 008	10 161	10 298	10 415	10 506	-
	10 600	10 777	10 946	11 104	11 246	11 368	11 467	-
	11 649	11 829	12 002	12 165	12 313	12 442	12 548	-
	12 827	13 010	13 188	13 357	13 511	13 647	13 760	-
	-	14 331	14 514	14 689	14 850	14 993	15 114	-
-	-	-	15 990	16 171	16 339	16 491	16 620	-
	-	-	-	17 815	17 991	18 151	18 290	-
-	_	-	-	19 632	19 816	19 985	20 133	_
			1				00	
ı A								
	16.36	16.55	16.73	16.88	17.01	17.10	17.15	-
	17.32	17.52	17.71	17.87	18.01	18.12	18.19	_
	18.44	18.65	18.85	19.03	19.19	19.31	19.40	_
	19.73	19.96	20.17	20.37	20.54	20.69	20.80	_
	-	21.46	21.69	21.91	22.10	22.27	22.40	_
	_	-	23.43	23.67	23.88	24.07	24.23	_
	-	-	-	25.66	25.90	26.11	26.30	-
-	-	-	-	27.92	28.18	28.42	28.63	-
			1					
79	588	711	851	1 008	1 184	1 380	1 597	_
70	580	705	846	1 005	1 182	1 379	1 598	_
60	571	698	840	1 000	1 178	1 376	1 595	
	562	689	832	992	1 171	1 370	1 589	
	-	678	822	983	1 162	1 360	1 580	
<u> </u>	-	-	810	970	1 149	1 348	1 567	
-	-	-	-	956	1 134	1 332	1 557	-
	_		-	938	1 116	1 313	1 530	
	=	-		1 550	1 110	1010	1 330	<u>-</u>
nce (C.O.P.)					1		T	
	3.05	3.67	4.37	5.16	6.04	7.04	8.15	-
	2.65	3.21	3.84	4.55	5.34	6.23	7.22	-
	2.29	2.79	3.35	3.98	4.69	5.48	6.36	-
-	1.97	2.41	2.91	3.47	4.09	4.79	5.57	-
-	-	2.07	2.51	3.00	3.55	4.16	4.85	-
-	-	-	2.14	2.58	3.06	3.60	4.20	-
-	-	-	-	2.20	2.62	3.09	3.61	-
-	-	-	-	1.86	2.23	2.63	3.09	-
- - - -		1.97 - - - - o = 7.2 °C, tc = 54.4 °C	1.97 2.41 - 2.07	1.97 2.41 2.91 - 2.07 2.51 2.14	1.97 2.41 2.91 3.47 - 2.07 2.51 3.00 2.14 2.58 2.20 1.86 0 = 7.2 °C, tc = 54.4 °C	1.97 2.41 2.91 3.47 4.09 - 2.07 2.51 3.00 3.55 2.14 2.58 3.06 2.20 2.62 1.86 2.23 Pressure switch s	1.97 2.41 2.91 3.47 4.09 4.79 - 2.07 2.51 3.00 3.55 4.16 2.14 2.58 3.06 3.60 2.20 2.62 3.09 1.86 2.23 2.63 Pressure switch settings	1.97 2.41 2.91 3.47 4.09 4.79 5.57 - 2.07 2.51 3.00 3.55 4.16 4.85 - - 2.14 2.58 3.06 3.60 4.20 - - - 2.20 2.62 3.09 3.61 - - - 1.86 2.23 2.63 3.09 Pressure switch settings

to: Evaporating temperature at dew point

Cooling capacity

Current consumption

Power input

Mass flow

C.O.P.

Rating conditions : Superheat = 11.1 K , Subcooling = 8.3 K

54 313

16 221

23.74

1 236

3.35

W

W

kg/h

Maximum HP switch setting	28	bar(g)
Minimum LP switch setting	0.5	bar(g)
LP pump down setting	1.3	bar(g)

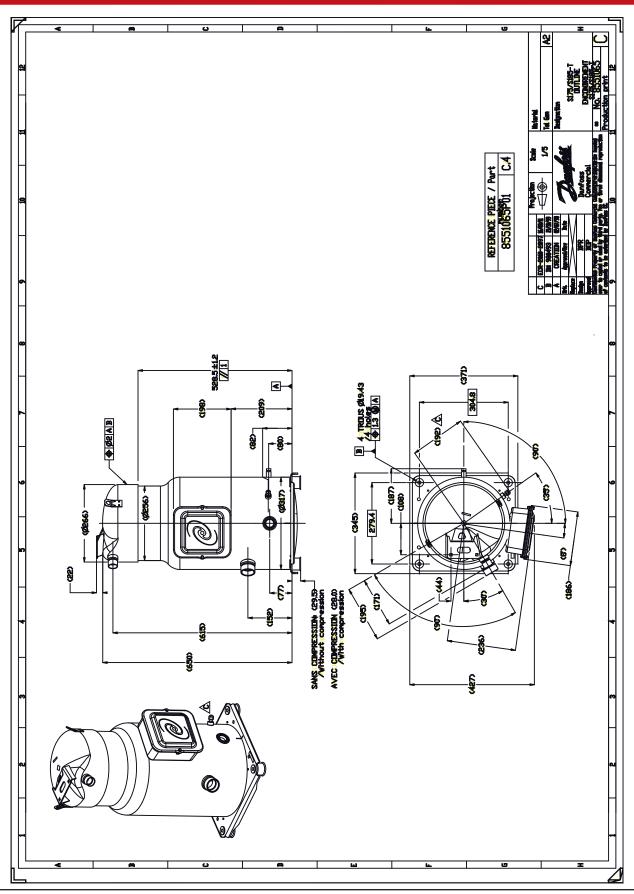
Sound	power	data
	P	

Sound power level	82.5	dB(A)
With accoustic hood	75	dB(A)

All performance data +/- 5%

tc: Condensing temperature at dew point





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