

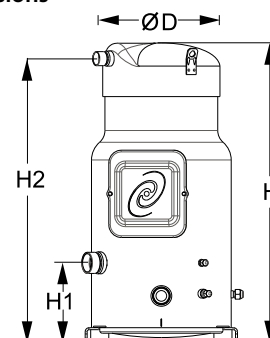
Datasheets

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



General Characteristics

Model number (on compressor nameplate)	SM175S4RC	SM175S4CC
Code number for Singlepack*	SM175-4RI	SM175-4CAI
Code number for Industrial pack**	SM175-4RM	SM175-4CAM
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	233 cm ³ /rev	
Displacement @ Nominal speed	40.5 m ³ /h @ 2900 rpm - 48.9 m ³ /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	12	
Refrigerant charge limit	13,5 kg	
Approved refrigerants	R22, R417A-160SZ	

Dimensions


D=317 mm

H=678 mm

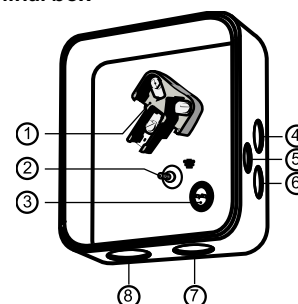
H1=180 mm

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°C	0.77 Ω
Maximum Must Trip current (MMT)	35 A
Locked Rotor Amps (LRA)	175 A
Motor protection	Internal thermostat, ext. overload protector needed

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

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), -

*Singlepack: Compressor in cardboard box

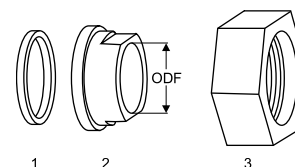
**Industrial pack: 6 Unboxed compressors on pallet (order per multiples of 6)

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.

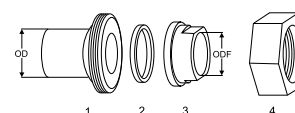
Solder sleeve, P07 (1-3/4" Rotolock, 7/8" ODF)	8153013
Solder sleeve, P02 (1-3/4" Rotolock, 1-1/8" ODF)	8153004
Angle adapter, C07 (1-3/4" Rotolock, 7/8" ODF)	8168008
Angle adapter, C02 (1-3/4" Rotolock, 1-1/8" ODF)	8168005
Rotolock valve, V07 (1-3/4" Rotolock, 7/8" ODF)	8168032
Rotolock valve, V02 (1-3/4" Rotolock, 1-1/8" ODF)	8168028
Gasket, 1-3/4"	8156132

Gaskets, sleeves and nuts


- 1: Gasket
2: Solder sleeve
3: Rotolock nut

Rotolock accessories, sets
Code no.

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

Solder sleeve adapter set


- 1: Rotolock adapter (Suc & Dis)
2: Gasket (Suc & Dis)
3: Solder sleeve (Suc & Dis)
4: Rotolock nut (Suc & Dis)

Oil / lubricants
Code no.

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

Crankcase heaters
Code no.

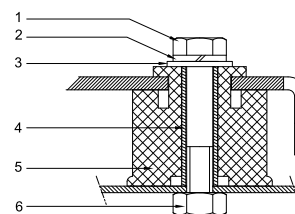
Surface sump heater + bottom insulation, 56 W, 24 V, CE mark, UL	120Z0360
Surface sump heater + bottom insulation, 56 W, 230 V, CE mark, UL	120Z0376
Surface sump heater + bottom insulation, 56 W, 400 V, CE mark, UL	120Z0377
Surface sump heater + bottom insulation, 56 W, 460 V, CE mark, UL	120Z0378
Belt 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 S175-S185	7755007
Acoustic bottom insulation for scroll compressor	120Z0353
Discharge thermostat kit	7750009

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)

Datasheet, performance data

Performer scroll compressor. SM175-4

Performance data at 50 Hz, EN 12900 rating conditions

R22

Cond. temp. in °C (tc)	Evaporating temperature in °C (to)							
	-20	-15	-10	-5	0	5	10	15

Cooling capacity in W

30	16 913	21 120	26 035	31 724	38 249	45 674	54 065	63 484	-
35	15 950	20 057	24 843	30 373	36 708	43 914	52 055	61 194	-
40	14 972	18 962	23 601	28 953	35 082	42 051	49 924	58 765	-
45	-	17 816	22 286	27 439	33 338	40 047	47 629	56 148	-
50	-	-	20 924	25 861	31 514	37 946	45 220	53 400	-
55	-	-	-	24 198	29 583	35 717	42 662	50 482	-
60	-	-	-	-	27 537	33 350	39 942	47 376	-
65	-	-	-	-	25 406	30 880	37 101	44 132	-

Power input in W

30	7 289	7 367	7 443	7 515	7 581	7 639	7 686	7 721	-
35	8 069	8 149	8 226	8 300	8 367	8 427	8 477	8 515	-
40	8 942	9 022	9 101	9 176	9 246	9 308	9 361	9 401	-
45	-	9 996	10 076	10 153	10 225	10 290	10 345	10 389	-
50	-	-	11 159	11 239	11 313	11 381	11 439	11 486	-
55	-	-	-	12 441	12 518	12 588	12 649	12 700	-
60	-	-	-	-	13 847	13 920	13 985	14 039	-
65	-	-	-	-	15 309	15 386	15 454	15 512	-

Current consumption in A

30	16.13	16.21	16.29	16.36	16.41	16.44	16.45	16.42	-
35	16.97	17.06	17.15	17.22	17.28	17.32	17.34	17.33	-
40	17.94	18.04	18.13	18.21	18.28	18.33	18.36	18.36	-
45	-	19.15	19.25	19.34	19.42	19.49	19.53	19.54	-
50	-	-	20.53	20.63	20.72	20.80	20.85	20.88	-
55	-	-	-	22.09	22.19	22.28	22.34	22.39	-
60	-	-	-	-	23.85	23.94	24.03	24.08	-
65	-	-	-	-	25.70	25.81	25.91	25.98	-

Mass flow in kg/h

30	364	449	546	657	782	924	1 082	1 258	-
35	357	443	541	653	780	922	1 081	1 258	-
40	349	436	535	648	775	918	1 077	1 255	-
45	-	428	528	641	768	912	1 071	1 249	-
50	-	-	519	632	760	903	1 063	1 240	-
55	-	-	-	621	749	891	1 051	1 228	-
60	-	-	-	-	735	877	1 036	1 212	-
65	-	-	-	-	718	859	1 017	1 192	-

Coefficient of performance (C.O.P.)

30	2.32	2.87	3.50	4.22	5.05	5.98	7.03	8.22	-
35	1.98	2.46	3.02	3.66	4.39	5.21	6.14	7.19	-
40	1.67	2.10	2.59	3.16	3.79	4.52	5.33	6.25	-
45	-	1.78	2.21	2.70	3.26	3.89	4.60	5.40	-
50	-	-	1.88	2.30	2.79	3.33	3.95	4.65	-
55	-	-	-	1.95	2.36	2.84	3.37	3.97	-
60	-	-	-	-	1.99	2.40	2.86	3.37	-
65	-	-	-	-	1.66	2.01	2.40	2.84	-

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

Cooling capacity	37 946	W
Power input	11 381	W
Current consumption	20.80	A
Mass flow	903	kg/h
C.O.P.	3.33	

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 acoustic hood	72	dB(A)

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

All performance data +/- 5%

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Datasheet, performance data

Performer scroll compressor. SM175-4

Performance data at 50 Hz, ARI rating conditions

R22

Cond. temp. in °C (tc)	Evaporating temperature in °C (to)							
	-20	-15	-10	-5	0	5	10	15

Cooling capacity in W

30	17 945	22 391	27 581	33 583	40 461	48 284	57 116	67 025	-
35	16 984	21 339	26 410	32 262	38 962	46 576	55 171	64 813	-
40	16 002	20 247	25 178	30 861	37 363	44 749	53 087	62 442	-
45	-	19 114	23 886	29 380	35 664	42 803	50 863	59 912	-
50	-	-	22 531	27 818	33 864	40 735	48 500	57 223	-
55	-	-	-	26 173	31 962	38 547	45 996	54 373	-
60	-	-	-	-	29 959	36 238	43 350	51 363	-
65	-	-	-	-	27 853	33 806	40 563	48 191	-

Power input in W

30	7 289	7 367	7 443	7 515	7 581	7 639	7 686	7 721	-
35	8 069	8 149	8 226	8 300	8 367	8 427	8 477	8 515	-
40	8 942	9 022	9 101	9 176	9 246	9 308	9 361	9 401	-
45	-	9 996	10 076	10 153	10 225	10 290	10 345	10 389	-
50	-	-	11 159	11 239	11 313	11 381	11 439	11 486	-
55	-	-	-	12 441	12 518	12 588	12 649	12 700	-
60	-	-	-	-	13 847	13 920	13 985	14 039	-
65	-	-	-	-	15 309	15 386	15 454	15 512	-

Current consumption in A

30	16.13	16.21	16.29	16.36	16.41	16.44	16.45	16.42	-
35	16.97	17.06	17.15	17.22	17.28	17.32	17.34	17.33	-
40	17.94	18.04	18.13	18.21	18.28	18.33	18.36	18.36	-
45	-	19.15	19.25	19.34	19.42	19.49	19.53	19.54	-
50	-	-	20.53	20.63	20.72	20.80	20.85	20.88	-
55	-	-	-	22.09	22.19	22.28	22.34	22.39	-
60	-	-	-	-	23.85	23.94	24.03	24.08	-
65	-	-	-	-	25.70	25.81	25.91	25.98	-

Mass flow in kg/h

30	362	447	543	653	778	919	1 076	1 251	-
35	355	441	538	650	775	917	1 075	1 250	-
40	347	434	532	644	771	913	1 071	1 248	-
45	-	426	525	638	764	907	1 065	1 242	-
50	-	-	516	629	756	898	1 057	1 233	-
55	-	-	-	618	745	886	1 045	1 221	-
60	-	-	-	-	731	872	1 030	1 205	-
65	-	-	-	-	714	855	1 011	1 185	-

Coefficient of performance (C.O.P.)

30	2.46	3.04	3.71	4.47	5.34	6.32	7.43	8.68	-
35	2.10	2.62	3.21	3.89	4.66	5.53	6.51	7.61	-
40	1.79	2.24	2.77	3.36	4.04	4.81	5.67	6.64	-
45	-	1.91	2.37	2.89	3.49	4.16	4.92	5.77	-
50	-	-	2.02	2.48	2.99	3.58	4.24	4.98	-
55	-	-	-	2.10	2.55	3.06	3.64	4.28	-
60	-	-	-	-	2.16	2.60	3.10	3.66	-
65	-	-	-	-	1.82	2.20	2.62	3.11	-

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

Cooling capacity	42 000	W
Power input	12 465	W
Current consumption	22.12	A
Mass flow	956	kg/h
C.O.P.	3.37	

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 acoustic hood	72	dB(A)

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

All performance data +/- 5%

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Performance data at 60 Hz, EN 12900 rating conditions
R22

Cond. temp. in °C (tc)	Evaporating temperature in °C (to)							
	-20	-15	-10	-5	0	5	10	15

Cooling capacity in W

30	21 047	26 138	32 045	38 838	46 583	55 349	65 204	76 216	-
35	19 845	24 822	30 581	37 190	44 718	53 232	62 801	73 492	-
40	18 635	23 476	29 066	35 472	42 763	51 005	60 268	70 617	-
45	-	22 080	27 476	33 654	40 682	48 626	57 555	67 536	-
50	-	-	25 843	31 773	38 518	46 146	54 722	64 316	-
55	-	-	-	29 806	36 245	43 530	51 730	60 912	-
60	-	-	-	-	33 850	40 768	48 563	57 304	-
65	-	-	-	-	31 373	37 902	45 273	53 552	-

Power input in W

30	8 942	9 108	9 271	9 427	9 571	9 700	9 810	9 896	-
35	9 813	9 981	10 147	10 306	10 455	10 589	10 704	10 796	-
40	10 796	10 967	11 136	11 300	11 453	11 592	11 714	11 813	-
45	-	12 076	12 249	12 417	12 575	12 721	12 848	12 955	-
50	-	-	13 494	13 666	13 831	13 982	14 117	14 231	-
55	-	-	-	15 058	15 228	15 386	15 529	15 651	-
60	-	-	-	-	16 777	16 942	17 093	17 224	-
65	-	-	-	-	18 486	18 659	18 818	18 958	-

Current consumption in A

30	15.21	15.40	15.58	15.75	15.89	16.01	16.10	16.15	-
35	16.11	16.31	16.50	16.67	16.83	16.96	17.06	17.13	-
40	17.16	17.36	17.56	17.75	17.92	18.07	18.19	18.27	-
45	-	18.58	18.79	18.99	19.18	19.34	19.48	19.59	-
50	-	-	20.21	20.43	20.63	20.81	20.97	21.10	-
55	-	-	-	22.06	22.28	22.48	22.66	22.82	-
60	-	-	-	-	24.16	24.39	24.59	24.76	-
65	-	-	-	-	26.29	26.53	26.76	26.96	-

Mass flow in kg/h

30	453	555	672	804	953	1 119	1 304	1 510	-
35	444	548	666	800	950	1 117	1 304	1 510	-
40	435	540	659	794	945	1 113	1 301	1 508	-
45	-	531	651	786	938	1 107	1 295	1 502	-
50	-	-	641	777	929	1 098	1 286	1 494	-
55	-	-	-	765	917	1 086	1 274	1 481	-
60	-	-	-	-	903	1 072	1 259	1 466	-
65	-	-	-	-	887	1 055	1 241	1 447	-

Coefficient of performance (C.O.P.)

30	2.35	2.87	3.46	4.12	4.87	5.71	6.65	7.70	-
35	2.02	2.49	3.01	3.61	4.28	5.03	5.87	6.81	-
40	1.73	2.14	2.61	3.14	3.73	4.40	5.15	5.98	-
45	-	1.83	2.24	2.71	3.24	3.82	4.48	5.21	-
50	-	-	1.92	2.32	2.79	3.30	3.88	4.52	-
55	-	-	-	1.98	2.38	2.83	3.33	3.89	-
60	-	-	-	-	2.02	2.41	2.84	3.33	-
65	-	-	-	-	1.70	2.03	2.41	2.82	-

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

Cooling capacity	46 146	W
Power input	13 982	W
Current consumption	20.81	A
Mass flow	1 098	kg/h
C.O.P.	3.30	

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 acoustic hood	75	dB(A)

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

All performance data +/- 5%

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Datasheet, performance data
Performer scroll compressor. SM175-4
Performance data at 60 Hz, ARI rating conditions
R22

Cond. temp. in °C (tc)	Evaporating temperature in °C (to)							
	-20	-15	-10	-5	0	5	10	15

Cooling capacity in W

30	22 330	27 710	33 948	41 114	49 278	58 511	68 884	80 467	-
35	21 132	26 409	32 509	39 504	47 464	56 459	66 561	77 838	-
40	19 917	25 068	31 009	37 811	45 544	54 279	64 086	75 037	-
45	-	23 689	29 448	36 035	43 519	51 971	61 463	72 063	-
50	-	-	27 828	34 177	41 390	49 538	58 691	68 920	-
55	-	-	-	32 239	39 159	46 980	55 772	65 607	-
60	-	-	-	-	36 827	44 298	52 707	62 125	-
65	-	-	-	-	34 394	41 494	49 498	58 477	-

Power input in W

30	8 942	9 108	9 271	9 427	9 571	9 700	9 810	9 896	-
35	9 813	9 981	10 147	10 306	10 455	10 589	10 704	10 796	-
40	10 796	10 967	11 136	11 300	11 453	11 592	11 714	11 813	-
45	-	12 076	12 249	12 417	12 575	12 721	12 848	12 955	-
50	-	-	13 494	13 666	13 831	13 982	14 117	14 231	-
55	-	-	-	15 058	15 228	15 386	15 529	15 651	-
60	-	-	-	-	16 777	16 942	17 093	17 224	-
65	-	-	-	-	18 486	18 659	18 818	18 958	-

Current consumption in A

30	15.21	15.40	15.58	15.75	15.89	16.01	16.10	16.15	-
35	16.11	16.31	16.50	16.67	16.83	16.96	17.06	17.13	-
40	17.16	17.36	17.56	17.75	17.92	18.07	18.19	18.27	-
45	-	18.58	18.79	18.99	19.18	19.34	19.48	19.59	-
50	-	-	20.21	20.43	20.63	20.81	20.97	21.10	-
55	-	-	-	22.06	22.28	22.48	22.66	22.82	-
60	-	-	-	-	24.16	24.39	24.59	24.76	-
65	-	-	-	-	26.29	26.53	26.76	26.96	-

Mass flow in kg/h

30	451	552	668	800	948	1 113	1 297	1 501	-
35	442	545	663	796	945	1 111	1 297	1 502	-
40	433	537	656	790	940	1 107	1 293	1 499	-
45	-	528	647	782	933	1 101	1 287	1 494	-
50	-	-	638	773	924	1 092	1 279	1 485	-
55	-	-	-	761	912	1 080	1 267	1 473	-
60	-	-	-	-	898	1 066	1 252	1 457	-
65	-	-	-	-	882	1 049	1 234	1 439	-

Coefficient of performance (C.O.P.)

30	2.50	3.04	3.66	4.36	5.15	6.03	7.02	8.13	-
35	2.15	2.65	3.20	3.83	4.54	5.33	6.22	7.21	-
40	1.84	2.29	2.78	3.35	3.98	4.68	5.47	6.35	-
45	-	1.96	2.40	2.90	3.46	4.09	4.78	5.56	-
50	-	-	2.06	2.50	2.99	3.54	4.16	4.84	-
55	-	-	-	2.14	2.57	3.05	3.59	4.19	-
60	-	-	-	-	2.20	2.61	3.08	3.61	-
65	-	-	-	-	1.86	2.22	2.63	3.08	-

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

Cooling capacity	51 057	W
Power input	15 275	W
Current consumption	22.35	A
Mass flow	1 162	kg/h
C.O.P.	3.34	

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 acoustic hood	75	dB(A)

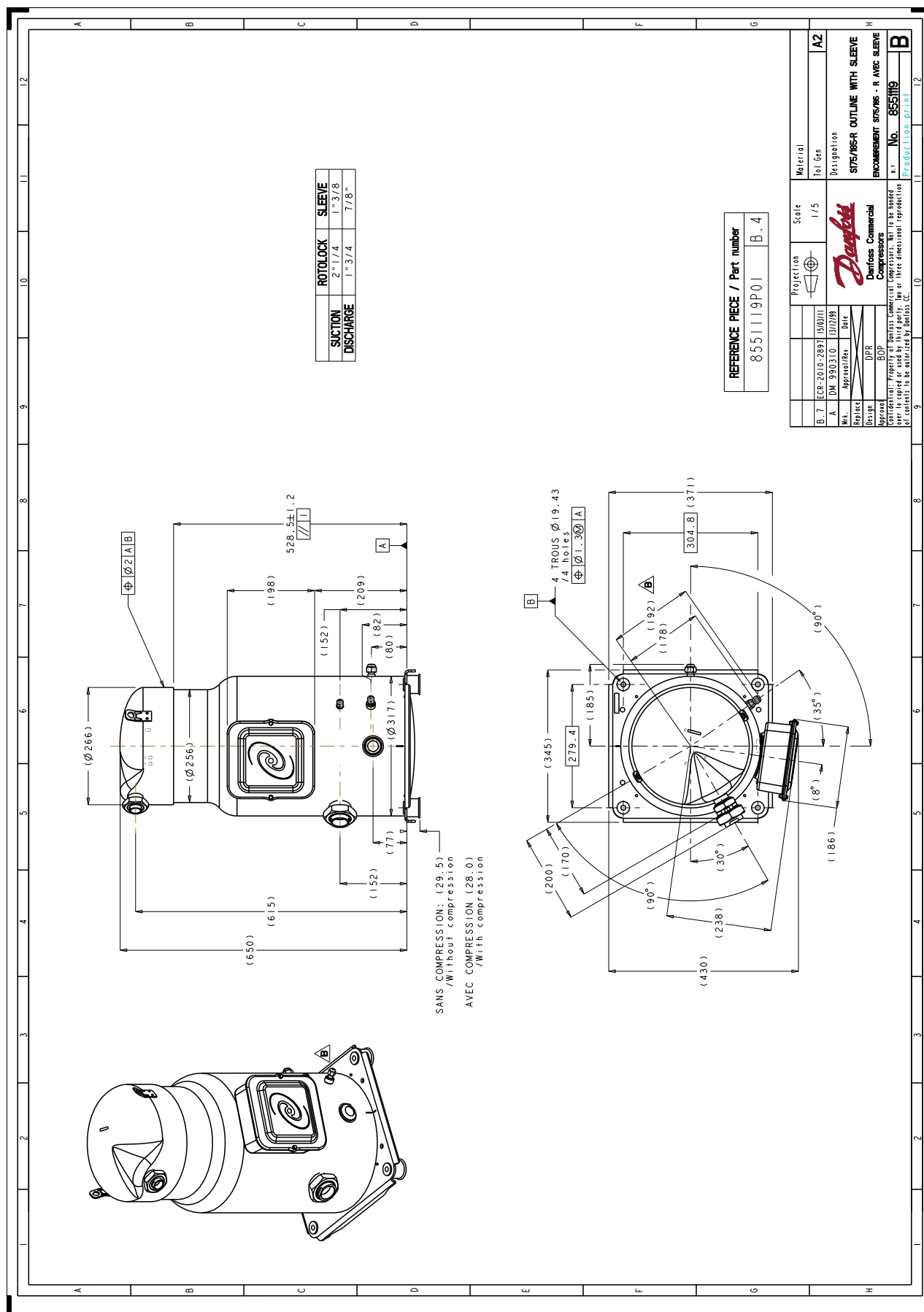
to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

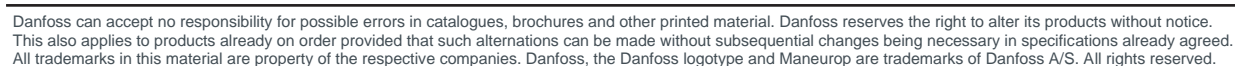
Rating conditions : Superheat = 11.1 K , Subcooling = 8.3 K

All performance data +/- 5%

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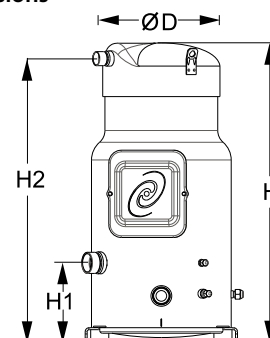
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General Characteristics

Model number (on compressor nameplate)		SM175S4QC
Code number for Singlepack*		SM175-4QAI
Code number for Industrial pack**		SM175-4QAM
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	233 cm ³ /rev	
Displacement @ Nominal speed	40.5 m ³ /h @ 2900 rpm - 48.9 m ³ /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	12	
Refrigerant charge limit	13,5 kg	
Approved refrigerants	R22, R417A-160SZ	

Dimensions



D=317 mm

H=678 mm

H1=180 mm

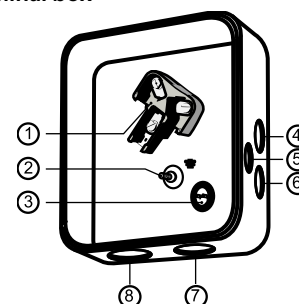
H2=643 mm

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°C	0.77 Ω
Maximum Must Trip current (MMT)	35 A
Locked Rotor Amps (LRA)	175 A
Motor protection	Internal thermostat, ext. overload protector needed

Terminal box



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

Parts shipped with compressor

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

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

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

*Singlepack: Compressor in cardboard box

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

Rotolock accessories, suction side	Code no.
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Rotolock accessories, discharge side	Code no.
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Rotolock accessories, sets	Code no.
-----------------------------------	-----------------

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

Crankcase heaters	Code no.
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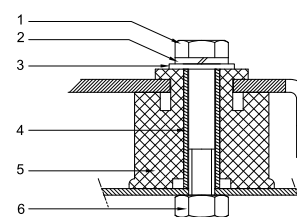
Surface sump heater + bottom insulation, 56 W, 24 V, CE mark, UL	120Z0360
Surface sump heater + bottom insulation, 56 W, 230 V, CE mark, UL	120Z0376
Surface sump heater + bottom insulation, 56 W, 400 V, CE mark, UL	120Z0377
Surface sump heater + bottom insulation, 56 W, 460 V, CE mark, UL	120Z0378
Belt 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 S175-S185	7755007
Acoustic bottom insulation for scroll compressor	120Z0353
Discharge thermostat kit	7750009

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)

Performance data at 50 Hz, EN 12900 rating conditions
R22

Cond. temp. in °C (tc)	Evaporating temperature in °C (to)							
	-20	-15	-10	-5	0	5	10	15

Cooling capacity in W

30	16 910	21 116	26 031	31 718	38 242	45 666	54 055	63 473	-
35	15 949	20 056	24 842	30 371	36 706	43 912	52 052	61 190	-
40	14 968	18 956	23 594	28 945	35 072	42 039	49 910	58 749	-
45	-	17 817	22 287	27 440	33 339	40 048	47 630	56 149	-
50	-	-	20 920	25 855	31 507	37 938	45 211	53 389	-
55	-	-	-	24 190	29 574	35 706	42 650	50 467	-
60	-	-	-	-	27 539	33 352	39 945	47 380	-
65	-	-	-	-	25 400	30 872	37 092	44 122	-

Power input in W

30	7 289	7 367	7 443	7 515	7 581	7 639	7 686	7 721	-
35	8 069	8 149	8 226	8 300	8 367	8 427	8 477	8 515	-
40	8 942	9 022	9 101	9 176	9 246	9 308	9 361	9 401	-
45	-	9 996	10 076	10 153	10 225	10 290	10 345	10 389	-
50	-	-	11 159	11 239	11 313	11 381	11 439	11 486	-
55	-	-	-	12 441	12 518	12 588	12 649	12 700	-
60	-	-	-	-	13 847	13 920	13 985	14 039	-
65	-	-	-	-	15 309	15 386	15 454	15 512	-

Current consumption in A

30	16.13	16.21	16.29	16.36	16.41	16.44	16.45	16.42	-
35	16.97	17.06	17.15	17.22	17.28	17.32	17.34	17.33	-
40	17.94	18.04	18.13	18.21	18.28	18.33	18.36	18.36	-
45	-	19.15	19.25	19.34	19.42	19.49	19.53	19.54	-
50	-	-	20.53	20.63	20.72	20.80	20.85	20.88	-
55	-	-	-	22.09	22.19	22.28	22.34	22.39	-
60	-	-	-	-	23.85	23.94	24.03	24.08	-
65	-	-	-	-	25.70	25.81	25.91	25.98	-

Mass flow in kg/h

30	364	449	546	657	782	924	1 082	1 258	-
35	357	443	541	653	780	922	1 081	1 258	-
40	349	436	535	648	775	918	1 077	1 255	-
45	-	428	528	641	768	912	1 071	1 249	-
50	-	-	519	632	760	903	1 063	1 240	-
55	-	-	-	621	749	891	1 051	1 228	-
60	-	-	-	-	735	877	1 036	1 212	-
65	-	-	-	-	718	859	1 017	1 192	-

Coefficient of performance (C.O.P.)

30	2.32	2.87	3.50	4.22	5.04	5.98	7.03	8.22	-
35	1.98	2.46	3.02	3.66	4.39	5.21	6.14	7.19	-
40	1.67	2.10	2.59	3.15	3.79	4.52	5.33	6.25	-
45	-	1.78	2.21	2.70	3.26	3.89	4.60	5.40	-
50	-	-	1.87	2.30	2.78	3.33	3.95	4.65	-
55	-	-	-	1.94	2.36	2.84	3.37	3.97	-
60	-	-	-	-	1.99	2.40	2.86	3.37	-
65	-	-	-	-	1.66	2.01	2.40	2.84	-

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

Cooling capacity	37 938	W
Power input	11 381	W
Current consumption	20.80	A
Mass flow	903	kg/h
C.O.P.	3.33	

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 acoustic hood	72	dB(A)

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

All performance data +/- 5%

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Performance data at 50 Hz, ARI rating conditions
R22

Cond. temp. in °C (tc)	Evaporating temperature in °C (to)							
	-20	-15	-10	-5	0	5	10	15

Cooling capacity in W

30	17 945	22 391	27 581	33 583	40 461	48 284	57 116	67 025	-
35	16 984	21 339	26 410	32 262	38 962	46 576	55 171	64 813	-
40	16 002	20 247	25 178	30 861	37 363	44 749	53 087	62 442	-
45	-	19 114	23 886	29 380	35 664	42 803	50 863	59 912	-
50	-	-	22 531	27 818	33 864	40 735	48 500	57 223	-
55	-	-	-	26 173	31 962	38 547	45 996	54 373	-
60	-	-	-	-	29 959	36 238	43 350	51 363	-
65	-	-	-	-	27 853	33 806	40 563	48 191	-

Power input in W

30	7 289	7 367	7 443	7 515	7 581	7 639	7 686	7 721	-
35	8 069	8 149	8 226	8 300	8 367	8 427	8 477	8 515	-
40	8 942	9 022	9 101	9 176	9 246	9 308	9 361	9 401	-
45	-	9 996	10 076	10 153	10 225	10 290	10 345	10 389	-
50	-	-	11 159	11 239	11 313	11 381	11 439	11 486	-
55	-	-	-	12 441	12 518	12 588	12 649	12 700	-
60	-	-	-	-	13 847	13 920	13 985	14 039	-
65	-	-	-	-	15 309	15 386	15 454	15 512	-

Current consumption in A

30	16.13	16.21	16.29	16.36	16.41	16.44	16.45	16.42	-
35	16.97	17.06	17.15	17.22	17.28	17.32	17.34	17.33	-
40	17.94	18.04	18.13	18.21	18.28	18.33	18.36	18.36	-
45	-	19.15	19.25	19.34	19.42	19.49	19.53	19.54	-
50	-	-	20.53	20.63	20.72	20.80	20.85	20.88	-
55	-	-	-	22.09	22.19	22.28	22.34	22.39	-
60	-	-	-	-	23.85	23.94	24.03	24.08	-
65	-	-	-	-	25.70	25.81	25.91	25.98	-

Mass flow in kg/h

30	362	447	543	653	778	919	1 076	1 251	-
35	355	441	538	650	775	917	1 075	1 250	-
40	347	434	532	644	771	913	1 071	1 248	-
45	-	426	525	638	764	907	1 065	1 242	-
50	-	-	516	629	756	898	1 057	1 233	-
55	-	-	-	618	745	886	1 045	1 221	-
60	-	-	-	-	731	872	1 030	1 205	-
65	-	-	-	-	714	855	1 011	1 185	-

Coefficient of performance (C.O.P.)

30	2.46	3.04	3.71	4.47	5.34	6.32	7.43	8.68	-
35	2.10	2.62	3.21	3.89	4.66	5.53	6.51	7.61	-
40	1.79	2.24	2.77	3.36	4.04	4.81	5.67	6.64	-
45	-	1.91	2.37	2.89	3.49	4.16	4.92	5.77	-
50	-	-	2.02	2.48	2.99	3.58	4.24	4.98	-
55	-	-	-	2.10	2.55	3.06	3.64	4.28	-
60	-	-	-	-	2.16	2.60	3.10	3.66	-
65	-	-	-	-	1.82	2.20	2.62	3.11	-

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

Cooling capacity	42 000	W
Power input	12 465	W
Current consumption	22.12	A
Mass flow	956	kg/h
C.O.P.	3.37	

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 acoustic hood	72	dB(A)

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

All performance data +/- 5%

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Performance data at 60 Hz, EN 12900 rating conditions
R22

Cond. temp. in °C (tc)	Evaporating temperature in °C (to)							
	-20	-15	-10	-5	0	5	10	15

Cooling capacity in W

30	21 043	26 133	32 040	38 831	46 574	55 339	65 192	76 203	-
35	19 844	24 820	30 579	37 188	44 715	53 229	62 797	73 487	-
40	18 629	23 469	29 058	35 463	42 751	50 992	60 252	70 599	-
45	-	22 081	27 477	33 655	40 683	48 627	57 556	67 537	-
50	-	-	25 838	31 766	38 510	46 136	54 711	64 303	-
55	-	-	-	29 797	36 233	43 517	51 715	60 894	-
60	-	-	-	-	33 852	40 771	48 567	57 308	-
65	-	-	-	-	31 365	37 893	45 262	53 540	-

Power input in W

30	8 942	9 108	9 271	9 427	9 571	9 700	9 810	9 896	-
35	9 813	9 981	10 147	10 306	10 455	10 589	10 704	10 796	-
40	10 796	10 967	11 136	11 300	11 453	11 592	11 714	11 813	-
45	-	12 076	12 249	12 417	12 575	12 721	12 848	12 955	-
50	-	-	13 494	13 666	13 831	13 982	14 117	14 231	-
55	-	-	-	15 058	15 228	15 386	15 529	15 651	-
60	-	-	-	-	16 777	16 942	17 093	17 224	-
65	-	-	-	-	18 486	18 659	18 818	18 958	-

Current consumption in A

30	15.21	15.40	15.58	15.75	15.89	16.01	16.10	16.15	-
35	16.11	16.31	16.50	16.67	16.83	16.96	17.06	17.13	-
40	17.16	17.36	17.56	17.75	17.92	18.07	18.19	18.27	-
45	-	18.58	18.79	18.99	19.18	19.34	19.48	19.59	-
50	-	-	20.21	20.43	20.63	20.81	20.97	21.10	-
55	-	-	-	22.06	22.28	22.48	22.66	22.82	-
60	-	-	-	-	24.16	24.39	24.59	24.76	-
65	-	-	-	-	26.29	26.53	26.76	26.96	-

Mass flow in kg/h

30	453	555	672	804	953	1 119	1 304	1 510	-
35	444	548	666	800	950	1 117	1 304	1 510	-
40	435	540	659	794	945	1 113	1 301	1 508	-
45	-	531	651	786	938	1 107	1 295	1 502	-
50	-	-	641	777	929	1 098	1 286	1 494	-
55	-	-	-	765	917	1 086	1 274	1 481	-
60	-	-	-	-	903	1 072	1 259	1 466	-
65	-	-	-	-	887	1 055	1 241	1 447	-

Coefficient of performance (C.O.P.)

30	2.35	2.87	3.46	4.12	4.87	5.71	6.65	7.70	-
35	2.02	2.49	3.01	3.61	4.28	5.03	5.87	6.81	-
40	1.73	2.14	2.61	3.14	3.73	4.40	5.14	5.98	-
45	-	1.83	2.24	2.71	3.24	3.82	4.48	5.21	-
50	-	-	1.91	2.32	2.78	3.30	3.88	4.52	-
55	-	-	-	1.98	2.38	2.83	3.33	3.89	-
60	-	-	-	-	2.02	2.41	2.84	3.33	-
65	-	-	-	-	1.70	2.03	2.41	2.82	-

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

Cooling capacity	46 136	W
Power input	13 982	W
Current consumption	20.81	A
Mass flow	1 098	kg/h
C.O.P.	3.30	

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 acoustic hood	75	dB(A)

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

All performance data +/- 5%

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Performance data at 60 Hz, ARI rating conditions
R22

Cond. temp. in °C (tc)	Evaporating temperature in °C (to)							
	-20	-15	-10	-5	0	5	10	15

Cooling capacity in W

30	22 330	27 710	33 948	41 114	49 278	58 511	68 884	80 467	-
35	21 132	26 409	32 509	39 504	47 464	56 459	66 561	77 838	-
40	19 917	25 068	31 009	37 811	45 544	54 279	64 086	75 037	-
45	-	23 689	29 448	36 035	43 519	51 971	61 463	72 063	-
50	-	-	27 828	34 177	41 390	49 538	58 691	68 920	-
55	-	-	-	32 239	39 159	46 980	55 772	65 607	-
60	-	-	-	-	36 827	44 298	52 707	62 125	-
65	-	-	-	-	34 394	41 494	49 498	58 477	-

Power input in W

30	8 942	9 108	9 271	9 427	9 571	9 700	9 810	9 896	-
35	9 813	9 981	10 147	10 306	10 455	10 589	10 704	10 796	-
40	10 796	10 967	11 136	11 300	11 453	11 592	11 714	11 813	-
45	-	12 076	12 249	12 417	12 575	12 721	12 848	12 955	-
50	-	-	13 494	13 666	13 831	13 982	14 117	14 231	-
55	-	-	-	15 058	15 228	15 386	15 529	15 651	-
60	-	-	-	-	16 777	16 942	17 093	17 224	-
65	-	-	-	-	18 486	18 659	18 818	18 958	-

Current consumption in A

30	15.21	15.40	15.58	15.75	15.89	16.01	16.10	16.15	-
35	16.11	16.31	16.50	16.67	16.83	16.96	17.06	17.13	-
40	17.16	17.36	17.56	17.75	17.92	18.07	18.19	18.27	-
45	-	18.58	18.79	18.99	19.18	19.34	19.48	19.59	-
50	-	-	20.21	20.43	20.63	20.81	20.97	21.10	-
55	-	-	-	22.06	22.28	22.48	22.66	22.82	-
60	-	-	-	-	24.16	24.39	24.59	24.76	-
65	-	-	-	-	26.29	26.53	26.76	26.96	-

Mass flow in kg/h

30	451	552	668	800	948	1 113	1 297	1 501	-
35	442	545	663	796	945	1 111	1 297	1 502	-
40	433	537	656	790	940	1 107	1 293	1 499	-
45	-	528	647	782	933	1 101	1 287	1 494	-
50	-	-	638	773	924	1 092	1 279	1 485	-
55	-	-	-	761	912	1 080	1 267	1 473	-
60	-	-	-	-	898	1 066	1 252	1 457	-
65	-	-	-	-	882	1 049	1 234	1 439	-

Coefficient of performance (C.O.P.)

30	2.50	3.04	3.66	4.36	5.15	6.03	7.02	8.13	-
35	2.15	2.65	3.20	3.83	4.54	5.33	6.22	7.21	-
40	1.84	2.29	2.78	3.35	3.98	4.68	5.47	6.35	-
45	-	1.96	2.40	2.90	3.46	4.09	4.78	5.56	-
50	-	-	2.06	2.50	2.99	3.54	4.16	4.84	-
55	-	-	-	2.14	2.57	3.05	3.59	4.19	-
60	-	-	-	-	2.20	2.61	3.08	3.61	-
65	-	-	-	-	1.86	2.22	2.63	3.08	-

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

Cooling capacity	51 057	W
Power input	15 275	W
Current consumption	22.35	A
Mass flow	1 162	kg/h
C.O.P.	3.34	

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 acoustic hood	75	dB(A)

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

All performance data +/- 5%

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