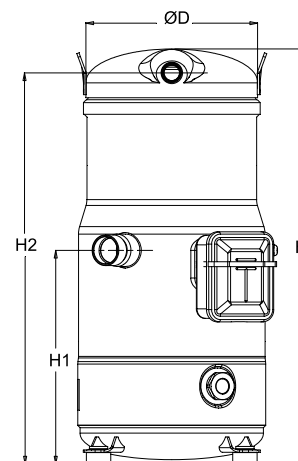




Performer Scroll compressors

General Characteristics

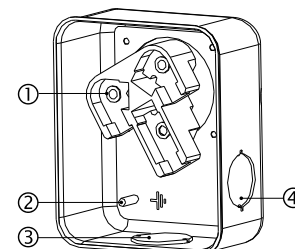
Model number (on compressor nameplate)		SM124A4ALB
Code number for Singlepack*		120H0185
Code number for Industrial pack**		120H0186
Drawing number		8560003d
Suction and discharge connections		Brazed
Suction connection		1-3/8 " ODF
Discharge connection		7/8 " ODF
Oil sight glass		Threaded
Oil equalisation connection		1-3/4" Rotolock
Oil drain connection		None
LP gauge port		Schrader
IPR valve		None
Swept volume	169.5 cm ³ /rev	
Displacement @ Nominal speed	29.5 m ³ /h @ 2900 rpm - 35.6 m ³ /h @ 3500 rpm	
Net weight	64.2 kg	
Oil charge	3.3 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	7.9 kg	
Approved refrigerants	R22	

Dimensions


D=243 mm
 H=540 mm
 H1=278 mm
 H2=509 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	1.05 Ω
Rated Load Amps (RLA)	17.9 A
Maximum Continuous Current (MCC)	25 A
Locked Rotor Amps (LRA)	142 A
Motor protection	Internal overload protector

Terminal box

Recommended Installation torques

Oil sight glass	50 Nm
Power connections / Earth connection	3 Nm / 2 Nm
Mounting bolts	15 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: 8 Unboxed compressors on pallet (order per multiples of 8)

IP54 (with cable gland)

- 1: Power connection, 3 x 4.8 mm (3/16")
- 2: Earth M4-12, torque 2 Nm (17 in.lb)
- 3: Knock-out Ø 29 mm (1.14")
- 4: Knock-out Ø 25.5 mm (1.00")

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.
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Solder sleeve adapter set (1-3/4" Rotolock, 1-3/8" ODF), (1-1/4" Rotolock, 7/8" ODF)	120Z0405
Valve set, V10 (1-3/4"~1-3/8"), V05 (1-1/4"~7/8")	7703392
Gasket set, 1", 1-1/4", 1-3/4", OSG gaskets black & white	8156009

Oil / lubricants	Code no.
------------------	----------

Mineral oil, 160P, 2 litre can	7754001
Mineral oil, 160P, 5 litre can	7754002
Mineral oil, 160P, 1 gallon can	5402007

Crankcase heaters	Code no.
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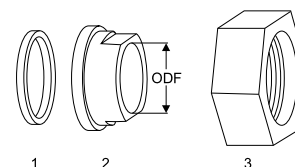
Surface sump heater, 80 W, 24 V, CE mark, UL	120Z0388
Surface sump heater, 80 W, 230 V, CE mark, UL	120Z0389
Surface sump heater, 80 W, 400 V, CE mark, UL	120Z0390
Belt type crankcase heater, 50 W, 460 V, UL	7773006

Miscellaneous accessories	Code no.
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Acoustic hood for scroll compressor SH105-161 & SM124, SM147	120Z0035
Gasket, 1-3/4"	8156132
Discharge thermostat kit	7750009

Spare parts	Code no.
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Mounting kit for 1 scroll compressor including 4 grommets, 4 sleeves, 4 bolts, 4 washers	120Z0066
Oil sight glass with gaskets (black & white)	8156019
Gasket for oil sight glass (white teflon)	8156129
Service kit for terminal box 96 x 115 mm, including 1 cover, 1 clamp, 1 T block connector 52 x 57 mm	8156135
T block connector 52 x 57 mm	8173230

Gaskets, sleeves and nuts


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

Datasheet, performance data

Performer scroll compressor. SM124-4

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	12 915	15 896	19 365	23 379	27 994	33 269	39 259	46 022	-
35	12 338	15 251	18 633	22 541	27 031	32 162	37 989	44 570	-
40	11 715	14 545	17 824	21 610	25 959	30 930	36 578	42 962	-
45	-	13 784	16 945	20 594	24 787	29 582	35 036	41 206	-
50	-	-	16 007	19 502	23 523	28 127	33 371	39 311	-
55	-	-	-	18 343	22 176	26 573	31 591	37 286	-
60	-	-	-	-	20 755	24 929	29 705	35 139	-
65	-	-	-	-	19 268	23 204	27 722	32 880	-

Power input in W

30	4 917	5 023	5 146	5 278	5 411	5 534	5 639	5 716	-
35	5 450	5 546	5 670	5 811	5 960	6 110	6 249	6 370	-
40	6 039	6 120	6 235	6 377	6 536	6 704	6 870	7 026	-
45	-	6 759	6 859	6 994	7 155	7 333	7 518	7 701	-
50	-	-	7 558	7 678	7 833	8 013	8 209	8 412	-
55	-	-	-	8 446	8 586	8 761	8 960	9 175	-
60	-	-	-	-	9 432	9 593	9 788	10 007	-
65	-	-	-	-	10 386	10 526	10 708	10 923	-

Current consumption in A

30	12.30	12.43	12.57	12.72	12.90	13.11	13.36	13.65	-
35	12.77	12.89	13.03	13.17	13.34	13.54	13.77	14.04	-
40	13.32	13.44	13.57	13.71	13.87	14.06	14.27	14.53	-
45	-	14.09	14.22	14.35	14.51	14.68	14.88	15.12	-
50	-	-	14.98	15.11	15.26	15.43	15.62	15.84	-
55	-	-	-	16.01	16.16	16.32	16.50	16.71	-
60	-	-	-	-	17.21	17.36	17.54	17.74	-
65	-	-	-	-	18.43	18.58	18.75	18.94	-

Mass flow in kg/h

30	277	337	405	483	572	672	784	911	-
35	275	336	405	484	573	674	787	914	-
40	273	334	403	482	572	674	788	915	-
45	-	330	400	480	570	671	786	914	-
50	-	-	396	475	565	667	782	910	-
55	-	-	-	469	559	661	776	904	-
60	-	-	-	-	552	653	767	895	-
65	-	-	-	-	542	643	757	884	-

Coefficient of performance (C.O.P.)

30	2.63	3.16	3.76	4.43	5.17	6.01	6.96	8.05	-
35	2.26	2.75	3.29	3.88	4.54	5.26	6.08	7.00	-
40	1.94	2.38	2.86	3.39	3.97	4.61	5.32	6.11	-
45	-	2.04	2.47	2.94	3.46	4.03	4.66	5.35	-
50	-	-	2.12	2.54	3.00	3.51	4.07	4.67	-
55	-	-	-	2.17	2.58	3.03	3.53	4.06	-
60	-	-	-	-	2.20	2.60	3.03	3.51	-
65	-	-	-	-	1.86	2.20	2.59	3.01	-

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

Cooling capacity	28 127	W
Power input	8 013	W
Current consumption	15.43	A
Mass flow	667	kg/h
C.O.P.	3.51	

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	73	dB(A)
With acoustic hood	67	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. SM124-4

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	13 703	16 853	20 515	24 749	29 614	35 169	41 475	48 589	-
35	13 138	16 226	19 808	23 943	28 691	34 111	40 263	47 206	-
40	12 521	15 531	19 015	23 034	27 648	32 915	38 896	45 650	-
45	-	14 789	18 161	22 051	26 516	31 618	37 415	43 968	-
50	-	-	17 236	20 978	25 277	30 195	35 791	42 124	-
55	-	-	-	19 841	23 960	28 679	34 059	40 160	-
60	-	-	-	-	22 580	27 088	32 240	38 096	-
65	-	-	-	-	21 124	25 403	30 310	35 904	-

Power input in W

30	4 917	5 023	5 146	5 278	5 411	5 534	5 639	5 716	-
35	5 450	5 546	5 670	5 811	5 960	6 110	6 249	6 370	-
40	6 039	6 120	6 235	6 377	6 536	6 704	6 870	7 026	-
45	-	6 759	6 859	6 994	7 155	7 333	7 518	7 701	-
50	-	-	7 558	7 678	7 833	8 013	8 209	8 412	-
55	-	-	-	8 446	8 586	8 761	8 960	9 175	-
60	-	-	-	-	9 432	9 593	9 788	10 007	-
65	-	-	-	-	10 386	10 526	10 708	10 923	-

Current consumption in A

30	12.30	12.43	12.57	12.72	12.90	13.11	13.36	13.65	-
35	12.77	12.89	13.03	13.17	13.34	13.54	13.77	14.04	-
40	13.32	13.44	13.57	13.71	13.87	14.06	14.27	14.53	-
45	-	14.09	14.22	14.35	14.51	14.68	14.88	15.12	-
50	-	-	14.98	15.11	15.26	15.43	15.62	15.84	-
55	-	-	-	16.01	16.16	16.32	16.50	16.71	-
60	-	-	-	-	17.21	17.36	17.54	17.74	-
65	-	-	-	-	18.43	18.58	18.75	18.94	-

Mass flow in kg/h

30	276	335	403	481	569	668	780	905	-
35	274	334	403	481	570	670	783	909	-
40	271	332	401	480	569	670	783	910	-
45	-	329	398	477	567	668	781	909	-
50	-	-	394	473	562	664	777	905	-
55	-	-	-	467	556	658	771	899	-
60	-	-	-	-	549	649	763	890	-
65	-	-	-	-	539	639	752	879	-

Coefficient of performance (C.O.P.)

30	2.79	3.36	3.99	4.69	5.47	6.36	7.36	8.50	-
35	2.41	2.93	3.49	4.12	4.81	5.58	6.44	7.41	-
40	2.07	2.54	3.05	3.61	4.23	4.91	5.66	6.50	-
45	-	2.19	2.65	3.15	3.71	4.31	4.98	5.71	-
50	-	-	2.28	2.73	3.23	3.77	4.36	5.01	-
55	-	-	-	2.35	2.79	3.27	3.80	4.38	-
60	-	-	-	-	2.39	2.82	3.29	3.81	-
65	-	-	-	-	2.03	2.41	2.83	3.29	-

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

Cooling capacity	31 159	W
Power input	8 752	W
Current consumption	16.28	A
Mass flow	707	kg/h
C.O.P.	3.56	

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	73	dB(A)
With acoustic hood	67	dB(A)

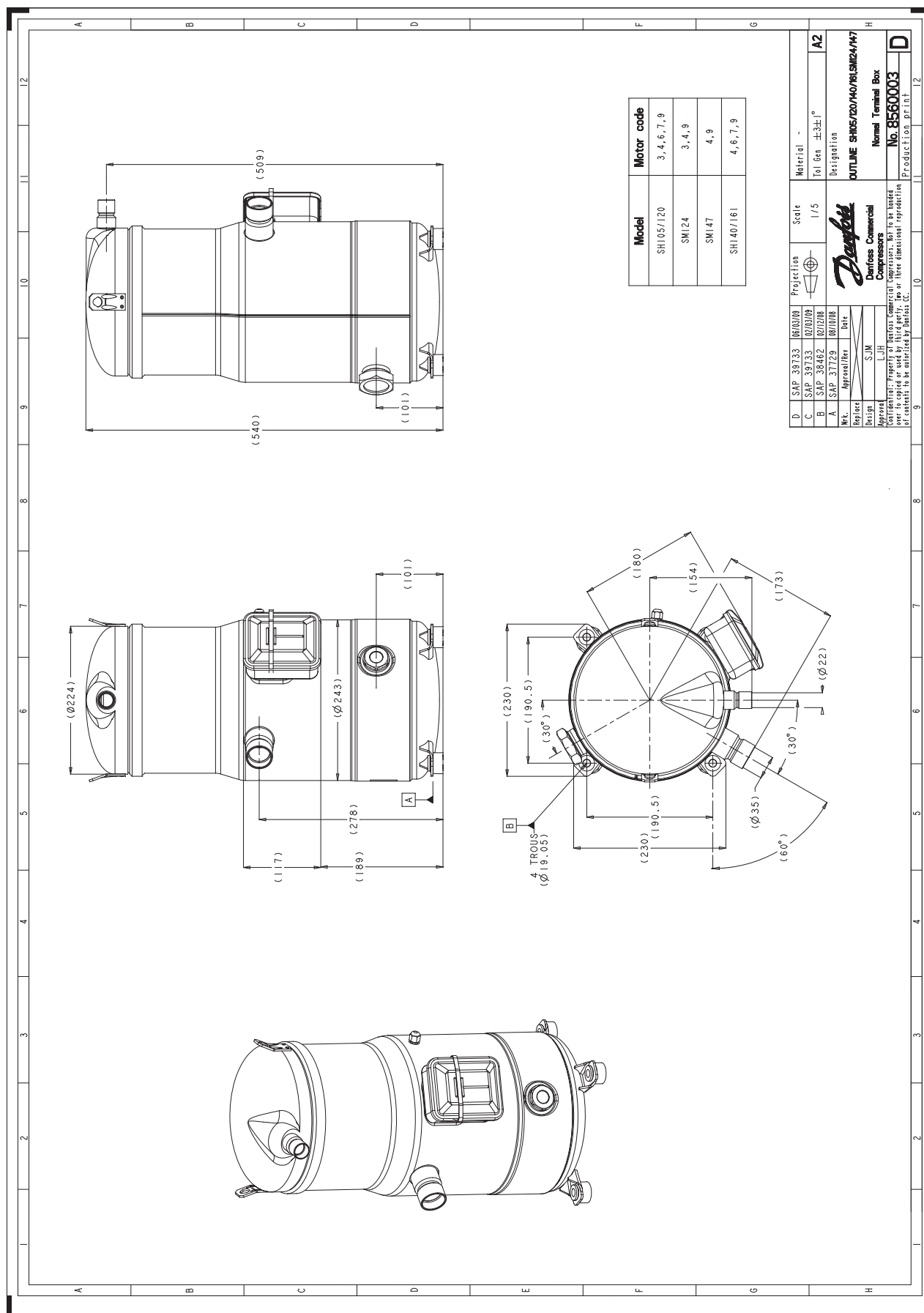
to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

All performance data +/- 5%

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