

MAKING MODERN LIVING POSSIBLE



Datasheets

Performer[®] scroll compressors **SM / SY / SZ / SH**



FRCC.UD.120806.193813

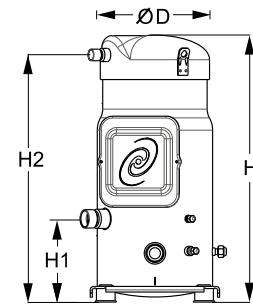
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Performer[®]
Air Conditioning Scroll Compressors

General Characteristics

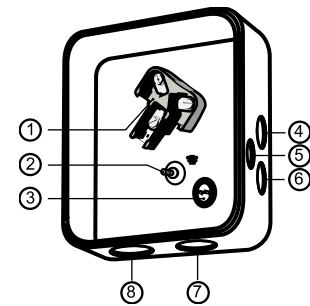
Model number (on compressor nameplate)	SM125S3RC	SM125S3CC
Code number for Singlepack*	SM125-3RI	SM125-3CAI
Code number for Industrial pack**	SM125-3RM	SM125-3CAM
Drawing number	8551121b	8551112b
Suction and discharge connections	Rotolock	Brazed
Suction connection	1-3/4 " Rotolock	1-3/8 " ODF
Discharge connection	1-1/4 " Rotolock	7/8 " ODF
Suction connection with supplied sleeve	1-1/8 " ODF	
Discharge connection with supplied sleeve	3/4 " ODF	
Oil sight glass	Threaded	Threaded
Oil equalization 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	10.17 in3/rev	
Displacement @ Nominal speed	1236 cfh @ 3500 rpm	
Net weight	172 lbs	
Oil charge	128 oz, Mineral - 160P	
Maximum system test pressure Low Side / High side	363 psi / 464 psi	
Maximum differential test pressure	348 psi	
Maximum number of starts per hour	12	
Refrigerant charge limit	24 lbs	
Approved refrigerants	R22, R417A-160SZ	

Dimensions



D=10 inch, H=22.8 inch,
H1=7.1 inch, H2=21.1 inch

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

Electrical Characteristics

Nominal voltage	200-230V/3/60Hz
Voltage range	180-253 V
Winding resistance (between phases) +/- 7% at 77°F	0.26 Ω
Maximum Must Trip current (MMT)	52 A
Locked Rotor Amps (LRA)	265 A
Motor protection	Internal thermostat, ext. overload protector needed

Recommended Installation torques

Suction Rotolock nut or valve	81 ft.lbs
Discharge Rotolock nut or valve	66 ft.lbs
Oil sight glass	37 ft.lbs
Power connections / Earth connection	2 ft.lbs / 1 ft.lbs
Terminal box cover screws	2 ft.lbs
Mounting bolts	15 ft.lbs

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, P02 (1-3/4" Rotolock, 1-1/8" ODF)	8153004
Solder sleeve, P10 (1-3/4" Rotolock, 1-3/8" ODF)	8153003
Angle adapter, C02 (1-3/4" Rotolock, 1-1/8" ODF)	8168005
Rotolock valve, V02 (1-3/4" Rotolock, 1-1/8" ODF)	8168028
Rotolock valve, V10 (1-3/4" Rotolock, 1-3/8" ODF)	8168022
Gasket, 1-3/4"	8156132

Rotolock accessories, discharge side
Code no.

Solder sleeve, P04 (1-1/4" Rotolock, 3/4" ODF)	8153008
Angle adapter, C04 (1-1/4" Rotolock, 3/4" ODF)	8168006
Rotolock valve, V04 (1-1/4" Rotolock, 3/4" ODF)	8168029
Rotolock valve, V05 (1-1/4" Rotolock, 7/8" ODF)	8168030
Gasket, 1-1/4"	8156131

Rotolock accessories, sets
Code no.

Solder sleeve adapter set, 1-3/8" ODF & 7/8" ODF	7765006
Angle adapter set, C02 (1-3/4"~1-1/8"), C04 (1-1/4"~3/4")	7703014
Valve set, V02 (1-3/4"~1-1/8"), V04 (1-1/4"~3/4")	7703009
Gasket set, 1-1/4", 1-3/4", 2-1/4", OSG gaskets black & white	8156013

Oil / lubricants
Code no.

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

Crankcase heaters
Code no.

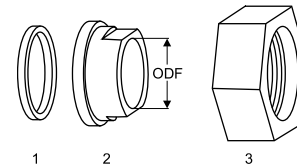
Surface sump heater + bottom insulation, 48 W, 24 V, CE mark, UL	120Z0363
Surface sump heater + bottom insulation, 48 W, 230 V, CE mark, UL	120Z0384
Belt type crankcase heater, 65 W, 110 V, CE mark, UL	7773109
Belt type crankcase heater, 65 W, 230 V, CE mark, UL	7773107

Miscellaneous accessories
Code no.

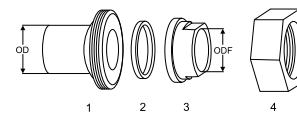
Acoustic hood for scroll compressor S115-S125	7755009
Discharge thermostat kit	7750009

Spare parts
Code no.

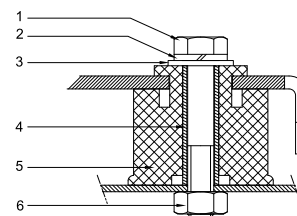
Mounting kit for 1 scroll compressor including 4 grommets, 4 sleeves, 4 bolts, 4 washers	8156138
Mounting kit for 1 scroll compressor including 4 grommets, 4 sleeves, 4 bolts, 4 washers	8156146
Oil sight glass with gaskets (black & white)	8156019
Gasket for oil sight glass (white teflon)	8156129
Terminal box 7.3" x 7.8" incl cover	8156139
T block connector 2.4" x 3"	8173021

Gaskets, sleeves and nuts


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

Solder sleeve adapter set


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

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 60 Hz, ARI rating conditions
R22

Cond. temp. in °F (tc)	Evaporating temperature in °F (to)								
	0	10	20	30	35	40	45	50	55

Cooling capacity in Btu/h

90	60 848	77 233	95 626	116 103	127 145	138 736	150 885	163 601	176 893
100	57 147	73 293	91 379	111 480	122 310	133 671	145 572	158 024	171 036
110	-	68 990	86 724	106 405	116 999	128 107	139 739	151 905	164 613
120	-	64 303	81 640	100 855	111 191	122 024	133 364	145 220	157 602
130	-	-	76 102	94 807	104 862	115 398	126 423	137 948	149 981
140	-	-	-	88 239	97 990	108 206	118 894	130 065	141 726
150	-	-	-	-	-	100 425	110 754	121 548	132 816

Power input in W

90	6 645	6 707	6 773	6 841	6 876	6 911	6 945	6 980	7 013
100	7 525	7 578	7 633	7 687	7 714	7 741	7 766	7 791	7 814
110	-	8 575	8 617	8 656	8 674	8 691	8 707	8 721	8 733
120	-	9 710	9 737	9 760	9 768	9 775	9 780	9 782	9 783
130	-	-	11 008	11 011	11 009	11 005	10 998	10 988	10 976
140	-	-	-	12 422	12 410	12 394	12 374	12 352	12 325
150	-	-	-	-	-	13 954	13 921	13 884	13 843

Current consumption in A

90	24.12	24.26	24.44	24.66	24.79	24.93	25.07	25.23	25.40
100	25.97	26.08	26.22	26.39	26.49	26.60	26.71	26.84	26.98
110	-	28.32	28.42	28.54	28.61	28.69	28.77	28.86	28.96
120	-	31.06	31.10	31.17	31.20	31.25	31.30	31.35	31.41
130	-	-	34.32	34.32	34.32	34.33	34.34	34.35	34.36
140	-	-	-	38.05	38.01	37.98	37.95	37.92	37.89
150	-	-	-	-	-	42.26	42.18	42.10	42.02

Mass flow in lbs/h

90	800	1 002	1 224	1 467	1 597	1 733	1 873	2 020	2 172
100	783	990	1 217	1 465	1 597	1 735	1 878	2 026	2 181
110	-	973	1 205	1 458	1 592	1 732	1 877	2 028	2 185
120	-	949	1 186	1 444	1 581	1 724	1 871	2 025	2 184
130	-	-	1 160	1 424	1 563	1 708	1 858	2 014	2 176
140	-	-	-	1 394	1 537	1 684	1 837	1 996	2 160
150	-	-	-	-	-	1 651	1 807	1 968	2 135

Energy Efficiency Ratio (E.E.R.)

90	9.16	11.52	14.12	16.97	18.49	20.08	21.72	23.44	25.22
100	7.59	9.67	11.97	14.50	15.85	17.27	18.74	20.28	21.89
110	-	8.05	10.06	12.29	13.49	14.74	16.05	17.42	18.85
120	-	6.62	8.38	10.33	11.38	12.48	13.64	14.84	16.11
130	-	-	6.91	8.61	9.53	10.49	11.49	12.55	13.66
140	-	-	-	7.10	7.90	8.73	9.61	10.53	11.50
150	-	-	-	-	-	7.20	7.96	8.75	9.59

Nominal performance at to = 45 °F, tc = 130 °F

Cooling capacity	126 423	Btu/h	Current consumption	34.34	A
Power input	10 998	W	Mass flow	1 858	lbs/h
E.E.R.	11.49				

Pressure switch settings

Maximum HP switch setting	406	psi(g)
Minimum LP switch setting	7	psi(g)
LP pump down setting	19	psi(g)

T 0 : Evaporating temperature at dew point

T C : Condensing temperature at dew point

Rating conditions : Superheat = 20 °F , Subcooling = 15 °F

All performance data +/- 5%

Sound power data

Sound power level	79	dB(A)
With acoustic hood	71	dB(A)

