

Datasheet, technical data

General Characteristics

| Model number (on compressor nameplate) | | SM185S3QC | |
|---|------------------------|-------------|--|
| Code number for Singlepack* | | SM185-3QAI | |
| Code number for Industrial pack** | | SM185-3QAM | |
| 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 equalization connection | | 3/8" ODF | |
| Oil drain connection | | 1/4" flare | |
| LP gauge port | | Schrader | |
| IPR valve | | None | |
| Swept volume | 15.25 in3/rev | | |
| Displacement @ Nominal speed | 1853 cfh @ 3500 rpm | | |
| Net weight | 220 lbs | | |
| Oil charge | 210 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 | 30 lbs | | |
| Approved refrigerants | R22, R417A-160SZ | | |

Electrical Characteristics

| Nominal voltage | 200-230V/3/60Hz |
|--|---|
| Voltage range | 180-253 V |
| Winding resistance (between phases) +/- 7% at 77°F | 0.19 # |
| Maximum Must Trip current (MMT) | 75 A |
| Locked Rotor Amps (LRA) | 380 A |
| Motor protection | Internal thermostat, ext. overload protector needed |

Recommended Installation torques

| 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

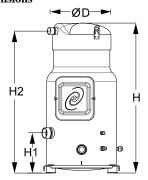
Mounting kit with grommets, bolts, nuts, sleeves and washers
Initial oil charge
Installation instructions

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

*Singlepack: Compressor in cardboard box

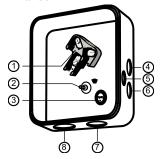
**Industrial pack: 6 Unboxed compressors on pallet (order per multiples of 6)

Dimensions



D=12.5 inch, H=26.7 inch, H1=7.1 inch, H2=25.3 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

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Datasheet, accessories and spare parts

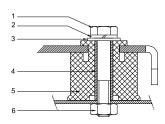
| Rotolock accessories, suction side | Code no. |
|--------------------------------------|----------|
| Rotolock accessories, discharge side | Code no. |
| Rotolock accessories, sets | Code no. |
| Oil / lubricants | Code no. |
| Mineral oil, 160P, 2 liter can | 7754001 |
| Mineral oil, 160P, 5 liter 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, | 120Z0376 |
| UL | |
| Belt type crankcase heater, 75 W, 110 V, CE mark, UL | 7773110 |
| Belt type crankcase heater, 75 W, 230 V, CE mark, UL | 7773108 |

| Miscellaneous accessories | Code no. |
|--|----------|
| Acoustic hood for scroll compressor S175-S185 | 7755007 |
| Acoustic bottom insulation for scroll compressor SH180-SH380 | 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 | 8156147 |
| 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 |

Mounting kit



- 1: Bolt (4x)
- 2: Lock washer (4x)
- 3: Flat washer (4x)
- 4: Sleeve (4x)
- 5: Grommet (4x)
- 6: Nut (4x)

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Datasheet, performance data

Performer scroll compressor. SM185-3

Performance data at 60 Hz, ARI rating conditions

R22

| Cond. temp. | | | | Evapora | ating temperature in | n °F (to) | | | |
|-----------------|-------------------|---------|---------|---------|----------------------|-----------|---------|---------|---------|
| in °F (tc) | 0 | 10 | 20 | 30 | 35 | 40 | 45 | 50 | 55 |
| Cooling capaci | ty in Rtu/h | | | | | | | | |
| 90 | 87 412 | 110 613 | 137 768 | 169 227 | 186 680 | 205 341 | 225 254 | 246 462 | 269 010 |
| 100 | 82 380 | 104 993 | 131 391 | 161 927 | 178 855 | 196 950 | 216 255 | 236 813 | 258 669 |
| 110 | - | 99 119 | 124 650 | 154 151 | 170 500 | 187 973 | 206 614 | 226 466 | 247 575 |
| 120 | _ | 93 009 | 117 562 | 145 917 | 161 631 | 178 426 | 196 348 | 215 440 | 235 746 |
| 130 | _ | - | 110 143 | 137 242 | 152 265 | 168 327 | 185 474 | 203 750 | 223 198 |
| 140 | _ | _ | - | 128 142 | 142 418 | 157 693 | 174 010 | 191 413 | 209 947 |
| 150 | - | - | - | - | - | 146 539 | 161 970 | 178 447 | 196 011 |
| Power input in | 1A/ | | | | | | • | | |
| 90 | 9 971 | 10 167 | 10 356 | 10 533 | 10 615 | 10 691 | 10 761 | 10 825 | 10 880 |
| 100 | 11 068 | 11 267 | 11 461 | 11 644 | 11 728 | 11 808 | 11 882 | 11 950 | 12 009 |
| 110 | - | 12 521 | 12 720 | 12 909 | 12 997 | 13 081 | 13 159 | 13 230 | 13 295 |
| 120 | - | 13 942 | 14 147 | 14 342 | 14 435 | 14 522 | 14 605 | 14 681 | 14 750 |
| 130 | - | - | 15 756 | 15 960 | 16 056 | 16 148 | 16 235 | 16 316 | 16 391 |
| 140 | - | _ | - | 17 775 | 17 876 | 17 973 | 18 065 | 18 151 | 18 231 |
| 150 | - | _ | _ | _ | _ | 20 010 | 20 107 | 20 199 | 20 285 |
| | | | | | | | • | | |
| Current consur | 34.16 | 34.62 | 35.04 | 35.42 | 35.59 | 35.73 | 35.86 | 35.96 | 36.04 |
| 100 | 36.51 | 36.99 | 37.44 | 37.85 | 38.04 | 38.20 | 38.35 | 38.48 | 38.58 |
| 110 | - | 39.80 | 40.28 | 40.73 | 40.93 | 41.12 | 41.29 | 41.45 | 41.58 |
| 120 | _ | 43.09 | 43.61 | 44.10 | 44.33 | 44.54 | 44.74 | 44.91 | 45.07 |
| 130 | - | - | 47.48 | 48.01 | 48.26 | 48.50 | 48.73 | 48.94 | 49.12 |
| 140 | - | _ | - | 52.52 | 52.80 | 53.07 | 53.32 | 53.56 | 53.78 |
| 150 | - | - | - | - | - | 58.28 | 58.57 | 58.84 | 59.10 |
| Mass flow in lb | s/h | • | • | | | | | | |
| 90 | 1 151 | 1 436 | 1 764 | 2 139 | 2 345 | 2 564 | 2 796 | 3 042 | 3 303 |
| 100 | 1 129 | 1 418 | 1 750 | 2 128 | 2 335 | 2 556 | 2 790 | 3 037 | 3 299 |
| 110 | - | 1 397 | 1 731 | 2 112 | 2 320 | 2 541 | 2 776 | 3 025 | 3 287 |
| 120 | - | 1 372 | 1 708 | 2 089 | 2 298 | 2 520 | 2 755 | 3 004 | 3 267 |
| 130 | - | - | 1 679 | 2 060 | 2 269 | 2 491 | 2 726 | 2 975 | 3 237 |
| 140 | - | - | - | 2 025 | 2 233 | 2 454 | 2 689 | 2 936 | 3 198 |
| 150 | - | - | - | - | - | 2 410 | 2 643 | 2 889 | 3 150 |
| Energy Efficien | ıcy Ratio (E.E.R. | ` | | | | | | | |
| 90 | 8.77 | 10.88 | 13.30 | 16.07 | 17.59 | 19.21 | 20.93 | 22.77 | 24.72 |
| 100 | 7.44 | 9.32 | 11.46 | 13.91 | 15.25 | 16.68 | 18.20 | 19.82 | 21.54 |
| 110 | - | 7.92 | 9.80 | 11.94 | 13.12 | 14.37 | 15.70 | 17.12 | 18.62 |
| 120 | _ | 6.67 | 8.31 | 10.17 | 11.20 | 12.29 | 13.44 | 14.67 | 15.98 |
| 130 | _ | - | 6.99 | 8.60 | 9.48 | 10.42 | 11.42 | 12.49 | 13.62 |
| | | _ | - | 7.21 | 7.97 | 8.77 | 9.63 | 10.55 | 11.52 |
| 140 | - | - | | | | | | | |

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

| Cooling capacity | 185 474 | Btu/h | Current consumption | 48.73 | Α |
|------------------|---------|-------|---------------------|-------|-------|
| Power input | 16 235 | W | Mass flow | 2 726 | lbs/h |
| FFR | 11 42 | | | | |

T 0 : Evaporating temperature at dew point

T C : Condensing temperature at dew point

Rating conditions : Superheat = 20 $^{\circ}F$, Subcooling = 15 $^{\circ}F$

All performance data +/- 5%

Pressure switch settings

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

Sound power data

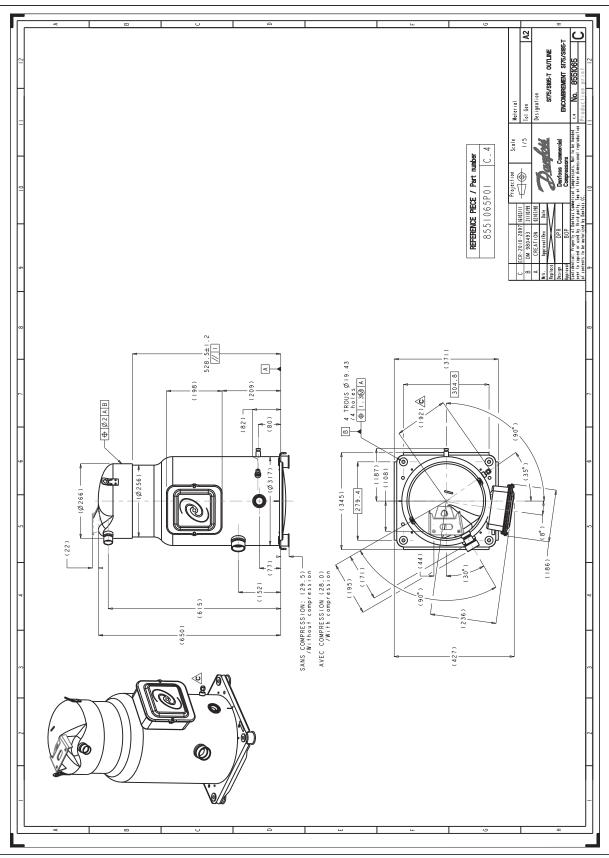
| Sound power level | 82.5 | dB(A) |
|---------------------|------|-------|
| With accoustic hood | 75 | dB(A) |

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Datasheet, drawing Scroll compressor



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