

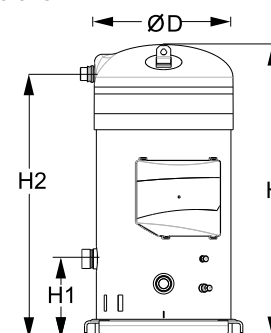
Datasheets

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



General Characteristics

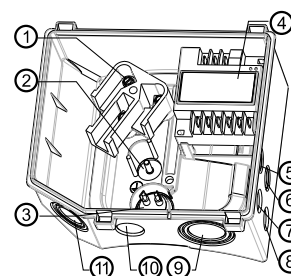
| | | |
|---------------------------------------------------|------------------------------------------------------------------------|-------------------|
| Model number (on compressor nameplate) | | SZ380A4CBE |
| Code number for Singlepack* | | SZ380A4CBI |
| Code number for Industrial pack** | | SZ380A4CBM |
| Drawing number | | 8556093b |
| Suction and discharge connections | | Brazed |
| Suction connection | | 2-1/8" ODF |
| Discharge connection | | 1-3/8" ODF |
| Oil sight glass | | Threaded |
| Oil equalisation connection | | 1/2" flare |
| Oil drain connection | | 1/4" flare |
| LP gauge port | | Schrader |
| IPR valve | | Yes |
| Reverse rotation protection | | Electronic module |
| Swept volume | 531.2 cm ³ /rev | |
| Displacement @ Nominal speed | 92.4 m ³ /h @ 2900 rpm - 111.6 m ³ /h @ 3500 rpm | |
| Net weight | 158 kg | |
| Oil charge | 8.4 litre, POE - 160SZ | |
| Maximum system test pressure Low Side / High side | 20 bar(g) / 29.6 bar(g) | |
| Maximum differential test pressure | 24 bar | |
| Maximum number of starts per hour | 12 | |
| Refrigerant charge limit | 20 kg | |
| Approved refrigerants | R407C, R134a | |

Dimensions


D=344 mm
H=726.9 mm
H1=195.7 mm
H2=654 mm
H3=- mm

Electrical Characteristics

| | |
|----------------------------------------------------|-----------------------------------------|
| Nominal voltage | 380-415V/3/50Hz - 460V/3/60Hz |
| Voltage range | 340-457 V @ 50Hz - 414-506 V @ 60Hz |
| Winding resistance (between phases) +/- 7% at 25°C | 0.410 Ω |
| Rated Load Amps (RLA) | 56.4 A |
| Maximum Continuous Current (MCC) | 79 A |
| Locked Rotor Amps (LRA) | 300 A |
| Motor protection | Electronic protection module, 115/230 V |

Terminal box


IP54 (with cable gland)

- 1: Power connection, 3 x 4.8 mm (3/16")
- 2: Earth M5
- 3: Thermistor connector
- 4: Electronic protection module
- 5: Double knock-out Ø 22.5 mm (7/8") & Ø 16.5 mm (0.65")
- 6: Double knock-out Ø 22.5 mm (7/8") & Ø 16.5 mm (0.65")
- 7: Knock-out Ø 20.7 mm (0.81")
- 8: Knock-out Ø 20.7 mm (0.81")
- 9: Triple knock-out Ø 50.8 mm (2") & Ø 43.7 mm (1.72") & Ø 34.5 mm (1.35")
- 10: Knock-out Ø 25.5 mm (1.00")
- 11: Triple knock-out Ø 40.5 mm (1.59") & Ø 32.2 mm (1.27") & Ø 25.5 mm (1")

Recommended Installation torques

| | |
|--------------------------------------|-------------|
| Oil sight glass | 50 Nm |
| Power connections / Earth connection | 3 Nm / 2 Nm |
| Mounting bolts | 40 Nm |

Parts shipped with compressor

| |
|------------------------------------------------------|
| Mounting kit with grommets and sleeves |
| Electronic protection module mounted in terminal box |
| Initial oil charge |
| Installation instructions |

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

*Singlepack: Compressor in cardboard box

**Industrial pack: 4 Unboxed compressors on pallet (order per multiples of 4)

Rotolock accessories, suction side
Code no.

| | |
|-----------------------------------------|----------|
| Flange type valve, V12 (Flange ~ 2"1/8) | 120Z0320 |
|-----------------------------------------|----------|

Rotolock accessories, discharge side
Code no.

| | |
|---------------------------------------------------|---------|
| Solder sleeve, P10 (1-3/4" Rotolock, 1-3/8" ODF) | 8153003 |
| Rotolock valve, V10 (1-3/4" Rotolock, 1-3/8" ODF) | 8168022 |
| Gasket, 1-3/4" | 8156132 |

Rotolock accessories, sets
Code no.

| | |
|---------------------------------------------------------------|----------|
| Flange | 120Z0317 |
| Valve set, V12 (flange ~ 2"1/8), V10(1"3/4~1"3/8) | 120Z0316 |
| Gasket set, 1-1/4", 1-3/4", 2-1/4", OSG gaskets black & white | 8156013 |

Oil / lubricants
Code no.

| | |
|-------------------------------------|----------|
| POE lubricant, 160SZ, 1 litre can | 7754023 |
| POE lubricant, 160SZ, 2.5 litre can | 120Z0571 |

Crankcase heaters
Code no.

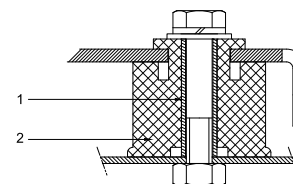
| | |
|-------------------------------------------------------------------|----------|
| Surface sump heater + bottom insulation, 80 W, 24 V, CE mark, UL | 120Z0359 |
| Surface sump heater + bottom insulation, 80 W, 230 V, CE mark, UL | 120Z0372 |
| Surface sump heater + bottom insulation, 80 W, 400 V, CE mark, UL | 120Z0373 |
| Surface sump heater + bottom insulation, 80 W, 460 V, CE mark, UL | 120Z0374 |
| Belt type crankcase heater, 130 W, 230 V, CE mark, UL | 7773122 |
| Belt type crankcase heater, 130 W, 400 V, CE mark, UL | 7773123 |

Miscellaneous accessories
Code no.

| | |
|------------------------------------------|----------|
| Electronic soft start kit, MCI 50 CM | 7705009 |
| Acoustic hood for scroll compressor S380 | 7755022 |
| Bottom insulation for scroll compressor | 120Z0355 |
| Discharge thermostat kit | 7750009 |

Spare parts
Code no.

| | |
|----------------------------------------------------------------------|----------|
| Electronic motor protection module, 115/230 V | 8169016 |
| Mounting kit for 1 scroll compressor including 4 grommets, 4 sleeves | 8156144 |
| Oil sight glass with gaskets (black & white) | 8156019 |
| Gasket for oil sight glass (white teflon) | 8156129 |
| Terminal box 210 x 190 incl. cover | 120Z0458 |
| T block connector 60 x 75 mm | 8173021 |

Mounting kit


1: Sleeve (4x)

2: Grommet (4x)

Bolts, nuts and washers not included

Performance data at 50 Hz, EN 12900 rating conditions

R407C

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

Cooling capacity in W

| | | | | | | | | | |
|----|--------|--------|--------|--------|--------|--------|---------|---------|---|
| 30 | 35 242 | 44 275 | 55 011 | 67 668 | 82 459 | 99 601 | 119 308 | 141 797 | - |
| 35 | 33 285 | 42 021 | 52 363 | 64 527 | 78 729 | 95 184 | 114 107 | 135 714 | - |
| 40 | 31 207 | 39 605 | 49 512 | 61 143 | 74 715 | 90 442 | 108 540 | 129 224 | - |
| 45 | 29 019 | 37 039 | 46 470 | 57 528 | 70 429 | 85 388 | 102 620 | 122 341 | - |
| 50 | - | 34 335 | 43 250 | 53 694 | 65 883 | 80 033 | 96 359 | 115 076 | - |
| 55 | - | 31 506 | 39 864 | 49 653 | 61 090 | 74 390 | 89 769 | 107 441 | - |
| 60 | - | - | 36 324 | 45 418 | 56 062 | 68 472 | 82 863 | 99 449 | - |
| 65 | - | - | - | - | 50 812 | 62 291 | 75 653 | 91 113 | - |

Power input in W

| | | | | | | | | | |
|----|--------|--------|--------|--------|--------|--------|--------|--------|---|
| 30 | 15 293 | 15 644 | 15 958 | 16 258 | 16 566 | 16 903 | 17 291 | 17 753 | - |
| 35 | 16 920 | 17 309 | 17 648 | 17 958 | 18 261 | 18 580 | 18 937 | 19 352 | - |
| 40 | 18 721 | 19 158 | 19 531 | 19 862 | 20 172 | 20 483 | 20 818 | 21 197 | - |
| 45 | 20 719 | 21 216 | 21 634 | 21 995 | 22 322 | 22 636 | 22 959 | 23 312 | - |
| 50 | - | 23 505 | 23 979 | 24 381 | 24 735 | 25 062 | 25 384 | 25 723 | - |
| 55 | - | 26 052 | 26 591 | 27 045 | 27 437 | 27 787 | 28 118 | 28 452 | - |
| 60 | - | - | 29 495 | 30 011 | 30 450 | 30 834 | 31 185 | 31 525 | - |
| 65 | - | - | - | - | 33 801 | 34 229 | 34 610 | 34 965 | - |

Current consumption in A

| | | | | | | | | | |
|----|-------|-------|-------|-------|-------|-------|-------|-------|---|
| 30 | 29.28 | 29.58 | 29.99 | 30.48 | 31.05 | 31.67 | 32.32 | 32.98 | - |
| 35 | 31.22 | 31.57 | 32.00 | 32.48 | 33.01 | 33.55 | 34.09 | 34.60 | - |
| 40 | 33.40 | 33.83 | 34.30 | 34.80 | 35.31 | 35.80 | 36.25 | 36.65 | - |
| 45 | 35.87 | 36.41 | 36.96 | 37.49 | 38.00 | 38.47 | 38.86 | 39.17 | - |
| 50 | - | 39.35 | 40.00 | 40.60 | 41.15 | 41.61 | 41.97 | 42.22 | - |
| 55 | - | 42.72 | 43.49 | 44.18 | 44.79 | 45.27 | 45.63 | 45.83 | - |
| 60 | - | - | 47.47 | 48.28 | 48.97 | 49.51 | 49.88 | 50.07 | - |
| 65 | - | - | - | - | 53.74 | 54.36 | 54.78 | 54.99 | - |

Mass flow in kg/h

| | | | | | | | | | |
|----|-----|-----|-------|-------|-------|-------|-------|-------|---|
| 30 | 742 | 918 | 1 122 | 1 358 | 1 629 | 1 939 | 2 292 | 2 692 | - |
| 35 | 735 | 912 | 1 118 | 1 354 | 1 626 | 1 937 | 2 290 | 2 689 | - |
| 40 | 726 | 904 | 1 110 | 1 347 | 1 619 | 1 929 | 2 282 | 2 681 | - |
| 45 | 713 | 892 | 1 099 | 1 336 | 1 607 | 1 917 | 2 269 | 2 666 | - |
| 50 | - | 878 | 1 084 | 1 320 | 1 591 | 1 899 | 2 250 | 2 646 | - |
| 55 | - | 860 | 1 065 | 1 300 | 1 570 | 1 877 | 2 225 | 2 619 | - |
| 60 | - | - | 1 042 | 1 276 | 1 544 | 1 849 | 2 195 | 2 586 | - |
| 65 | - | - | - | - | 1 513 | 1 816 | 2 159 | 2 547 | - |

Coefficient of performance (C.O.P.)

| | | | | | | | | | |
|----|------|------|------|------|------|------|------|------|---|
| 30 | 2.30 | 2.83 | 3.45 | 4.16 | 4.98 | 5.89 | 6.90 | 7.99 | - |
| 35 | 1.97 | 2.43 | 2.97 | 3.59 | 4.31 | 5.12 | 6.03 | 7.01 | - |
| 40 | 1.67 | 2.07 | 2.53 | 3.08 | 3.70 | 4.42 | 5.21 | 6.10 | - |
| 45 | 1.40 | 1.75 | 2.15 | 2.62 | 3.16 | 3.77 | 4.47 | 5.25 | - |
| 50 | - | 1.46 | 1.80 | 2.20 | 2.66 | 3.19 | 3.80 | 4.47 | - |
| 55 | - | 1.21 | 1.50 | 1.84 | 2.23 | 2.68 | 3.19 | 3.78 | - |
| 60 | - | - | 1.23 | 1.51 | 1.84 | 2.22 | 2.66 | 3.15 | - |
| 65 | - | - | - | - | 1.50 | 1.82 | 2.19 | 2.61 | - |

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

| | | |
|---------------------|--------|------|
| Cooling capacity | 80 033 | W |
| Power input | 25 062 | W |
| Current consumption | 41.61 | A |
| Mass flow | 1 899 | kg/h |
| C.O.P. | 3.19 | |



Pressure switch settings

| | | |
|---------------------------|------|--------|
| Maximum HP switch setting | 29.5 | bar(g) |
| Minimum LP switch setting | 0.5 | bar(g) |
| LP pump down setting | 1 | bar(g) |

Sound power data

| | | |
|--------------------|------|-------|
| Sound power level | 87.5 | dB(A) |
| With acoustic hood | 80.5 | 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
R407C

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

Cooling capacity in W

| | | | | | | | | | |
|----|--------|--------|--------|--------|--------|---------|---------|---------|---|
| 30 | 37 798 | 47 431 | 58 867 | 72 333 | 88 054 | 106 253 | 127 156 | 150 985 | - |
| 35 | 35 874 | 45 230 | 56 292 | 69 287 | 84 441 | 101 978 | 122 125 | 145 104 | - |
| 40 | 33 823 | 42 862 | 53 510 | 65 994 | 80 540 | 97 376 | 116 727 | 138 818 | - |
| 45 | 31 659 | 40 341 | 50 534 | 62 466 | 76 366 | 92 461 | 110 978 | 132 143 | - |
| 50 | - | 37 679 | 47 377 | 58 718 | 71 932 | 87 248 | 104 893 | 125 096 | - |
| 55 | - | 34 891 | 44 055 | 54 766 | 67 256 | 81 755 | 98 492 | 117 697 | - |
| 60 | - | - | 40 584 | 50 627 | 62 356 | 76 003 | 91 799 | 109 975 | - |
| 65 | - | - | - | - | 57 260 | 70 024 | 84 849 | 101 970 | - |

Power input in W

| | | | | | | | | | |
|----|--------|--------|--------|--------|--------|--------|--------|--------|---|
| 30 | 15 293 | 15 644 | 15 958 | 16 258 | 16 566 | 16 903 | 17 291 | 17 753 | - |
| 35 | 16 920 | 17 309 | 17 648 | 17 958 | 18 261 | 18 580 | 18 937 | 19 352 | - |
| 40 | 18 721 | 19 158 | 19 531 | 19 862 | 20 172 | 20 483 | 20 818 | 21 197 | - |
| 45 | 20 719 | 21 216 | 21 634 | 21 995 | 22 322 | 22 636 | 22 959 | 23 312 | - |
| 50 | - | 23 505 | 23 979 | 24 381 | 24 735 | 25 062 | 25 384 | 25 723 | - |
| 55 | - | 26 052 | 26 591 | 27 045 | 27 437 | 27 787 | 28 118 | 28 452 | - |
| 60 | - | - | 29 495 | 30 011 | 30 450 | 30 834 | 31 185 | 31 525 | - |
| 65 | - | - | - | - | 33 801 | 34 229 | 34 610 | 34 965 | - |

Current consumption in A

| | | | | | | | | | |
|----|-------|-------|-------|-------|-------|-------|-------|-------|---|
| 30 | 29.28 | 29.58 | 29.99 | 30.48 | 31.05 | 31.67 | 32.32 | 32.98 | - |
| 35 | 31.22 | 31.57 | 32.00 | 32.48 | 33.01 | 33.55 | 34.09 | 34.60 | - |
| 40 | 33.40 | 33.83 | 34.30 | 34.80 | 35.31 | 35.80 | 36.25 | 36.65 | - |
| 45 | 35.87 | 36.41 | 36.96 | 37.49 | 38.00 | 38.47 | 38.86 | 39.17 | - |
| 50 | - | 39.35 | 40.00 | 40.60 | 41.15 | 41.61 | 41.97 | 42.22 | - |
| 55 | - | 42.72 | 43.49 | 44.18 | 44.79 | 45.27 | 45.63 | 45.83 | - |
| 60 | - | - | 47.47 | 48.28 | 48.97 | 49.51 | 49.88 | 50.07 | - |
| 65 | - | - | - | - | 53.74 | 54.36 | 54.78 | 54.99 | - |

Mass flow in kg/h

| | | | | | | | | | |
|----|-----|-----|-------|-------|-------|-------|-------|-------|---|
| 30 | 738 | 913 | 1 116 | 1 350 | 1 620 | 1 928 | 2 279 | 2 675 | - |
| 35 | 731 | 908 | 1 112 | 1 347 | 1 617 | 1 926 | 2 276 | 2 673 | - |
| 40 | 722 | 899 | 1 104 | 1 340 | 1 610 | 1 918 | 2 269 | 2 664 | - |
| 45 | 710 | 888 | 1 093 | 1 328 | 1 598 | 1 906 | 2 255 | 2 650 | - |
| 50 | - | 873 | 1 078 | 1 313 | 1 582 | 1 888 | 2 237 | 2 630 | - |
| 55 | - | 855 | 1 059 | 1 293 | 1 561 | 1 866 | 2 212 | 2 603 | - |
| 60 | - | - | 1 037 | 1 269 | 1 535 | 1 838 | 2 182 | 2 570 | - |
| 65 | - | - | - | - | 1 505 | 1 805 | 2 146 | 2 532 | - |

Coefficient of performance (C.O.P.)

| | | | | | | | | | |
|----|------|------|------|------|------|------|------|------|---|
| 30 | 2.47 | 3.03 | 3.69 | 4.45 | 5.32 | 6.29 | 7.35 | 8.50 | - |
| 35 | 2.12 | 2.61 | 3.19 | 3.86 | 4.62 | 5.49 | 6.45 | 7.50 | - |
| 40 | 1.81 | 2.24 | 2.74 | 3.32 | 3.99 | 4.75 | 5.61 | 6.55 | - |
| 45 | 1.53 | 1.90 | 2.34 | 2.84 | 3.42 | 4.08 | 4.83 | 5.67 | - |
| 50 | - | 1.60 | 1.98 | 2.41 | 2.91 | 3.48 | 4.13 | 4.86 | - |
| 55 | - | 1.34 | 1.66 | 2.02 | 2.45 | 2.94 | 3.50 | 4.14 | - |
| 60 | - | - | 1.38 | 1.69 | 2.05 | 2.46 | 2.94 | 3.49 | - |
| 65 | - | - | - | - | 1.69 | 2.05 | 2.45 | 2.92 | - |

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

| | | |
|---------------------|--------|------|
| Cooling capacity | 89 551 | W |
| Power input | 27 589 | W |
| Current consumption | 44.98 | A |
| Mass flow | 2 016 | kg/h |
| C.O.P. | 3.25 | |

Pressure switch settings

| | | |
|---------------------------|------|--------|
| Maximum HP switch setting | 29.5 | bar(g) |
| Minimum LP switch setting | 0.5 | bar(g) |
| LP pump down setting | 1 | bar(g) |

Sound power data

| | | |
|--------------------|------|-------|
| Sound power level | 87.5 | dB(A) |
| With acoustic hood | 80.5 | 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 50 Hz, EN 12900 rating conditions
R134a

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

Cooling capacity in W

| | | | | | | | | | |
|----|--------|--------|--------|--------|--------|--------|--------|---|---|
| 35 | 27 908 | 35 167 | 43 804 | 54 007 | 65 964 | 79 863 | 95 890 | - | - |
| 40 | 26 259 | 33 218 | 41 484 | 51 244 | 62 686 | 75 998 | 91 366 | - | - |
| 45 | 24 574 | 31 216 | 39 094 | 48 394 | 59 304 | 72 011 | 86 704 | - | - |
| 50 | 22 860 | 29 168 | 36 640 | 45 462 | 55 823 | 67 910 | 81 909 | - | - |
| 55 | - | 27 078 | 34 127 | 42 455 | 52 249 | 63 698 | 76 987 | - | - |
| 60 | - | - | 31 561 | 39 377 | 48 588 | 59 381 | 71 944 | - | - |
| 65 | - | - | - | 36 235 | 44 845 | 54 965 | 66 784 | - | - |
| 70 | - | - | - | - | 41 026 | 50 456 | 61 513 | - | - |

Power input in W

| | | | | | | | | | |
|----|--------|--------|--------|--------|--------|--------|--------|---|---|
| 35 | 12 268 | 12 510 | 12 724 | 12 926 | 13 132 | 13 359 | 13 623 | - | - |
| 40 | 13 432 | 13 707 | 13 943 | 14 156 | 14 362 | 14 578 | 14 819 | - | - |
| 45 | 14 710 | 15 025 | 15 290 | 15 521 | 15 734 | 15 945 | 16 170 | - | - |
| 50 | 16 114 | 16 477 | 16 778 | 17 034 | 17 260 | 17 473 | 17 690 | - | - |
| 55 | - | 18 076 | 18 420 | 18 707 | 18 954 | 19 177 | 19 392 | - | - |
| 60 | - | - | 20 228 | 20 554 | 20 829 | 21 068 | 21 288 | - | - |
| 65 | - | - | - | 22 589 | 22 898 | 23 160 | 23 392 | - | - |
| 70 | - | - | - | - | 25 173 | 25 466 | 25 718 | - | - |

Current consumption in A

| | | | | | | | | | |
|----|-------|-------|-------|-------|-------|-------|-------|---|---|
| 35 | 25.11 | 25.38 | 25.62 | 25.84 | 26.02 | 26.15 | 26.22 | - | - |
| 40 | 26.37 | 26.67 | 26.95 | 27.20 | 27.40 | 27.55 | 27.64 | - | - |
| 45 | 27.84 | 28.19 | 28.51 | 28.79 | 29.02 | 29.20 | 29.32 | - | - |
| 50 | 29.53 | 29.93 | 30.30 | 30.63 | 30.90 | 31.12 | 31.28 | - | - |
| 55 | - | 31.92 | 32.35 | 32.72 | 33.05 | 33.32 | 33.52 | - | - |
| 60 | - | - | 34.66 | 35.10 | 35.49 | 35.81 | 36.06 | - | - |
| 65 | - | - | - | 37.77 | 38.22 | 38.61 | 38.92 | - | - |
| 70 | - | - | - | - | 41.27 | 41.72 | 42.10 | - | - |

Mass flow in kg/h

| | | | | | | | | | |
|----|-----|-----|-------|-------|-------|-------|-------|---|---|
| 35 | 678 | 836 | 1 020 | 1 232 | 1 474 | 1 751 | 2 065 | - | - |
| 40 | 672 | 831 | 1 015 | 1 227 | 1 469 | 1 746 | 2 060 | - | - |
| 45 | 665 | 824 | 1 008 | 1 220 | 1 462 | 1 739 | 2 052 | - | - |
| 50 | 657 | 817 | 1 000 | 1 212 | 1 454 | 1 730 | 2 042 | - | - |
| 55 | - | 808 | 991 | 1 202 | 1 443 | 1 719 | 2 030 | - | - |
| 60 | - | - | 980 | 1 190 | 1 431 | 1 705 | 2 016 | - | - |
| 65 | - | - | - | 1 178 | 1 417 | 1 690 | 2 000 | - | - |
| 70 | - | - | - | - | 1 402 | 1 673 | 1 982 | - | - |

Coefficient of performance (C.O.P.)

| | | | | | | | | | |
|----|------|------|------|------|------|------|------|---|---|
| 35 | 2.27 | 2.81 | 3.44 | 4.18 | 5.02 | 5.98 | 7.04 | - | - |
| 40 | 1.95 | 2.42 | 2.98 | 3.62 | 4.36 | 5.21 | 6.17 | - | - |
| 45 | 1.67 | 2.08 | 2.56 | 3.12 | 3.77 | 4.52 | 5.36 | - | - |
| 50 | 1.42 | 1.77 | 2.18 | 2.67 | 3.23 | 3.89 | 4.63 | - | - |
| 55 | - | 1.50 | 1.85 | 2.27 | 2.76 | 3.32 | 3.97 | - | - |
| 60 | - | - | 1.56 | 1.92 | 2.33 | 2.82 | 3.38 | - | - |
| 65 | - | - | - | 1.60 | 1.96 | 2.37 | 2.85 | - | - |
| 70 | - | - | - | - | 1.63 | 1.98 | 2.39 | - | - |

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

| | | |
|---------------------|--------|------|
| Cooling capacity | 55 823 | W |
| Power input | 17 260 | W |
| Current consumption | 30.90 | A |
| Mass flow | 1 454 | kg/h |
| C.O.P. | 3.23 | |

Pressure switch settings

| | | |
|---------------------------|------|--------|
| Maximum HP switch setting | 20.5 | bar(g) |
| Minimum LP switch setting | 0.5 | bar(g) |
| LP pump down setting | 0.5 | bar(g) |

Sound power data

| | | |
|--------------------|--|-------|
| Sound power level | | dB(A) |
| With acoustic hood | | 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
R134a

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

Cooling capacity in W

| | | | | | | | | | |
|----|--------|--------|--------|--------|--------|--------|---------|---|---|
| 35 | 30 227 | 38 024 | 47 286 | 58 211 | 70 993 | 85 827 | 102 910 | - | - |
| 40 | 28 595 | 36 105 | 45 009 | 55 502 | 67 783 | 82 047 | 98 490 | - | - |
| 45 | 26 927 | 34 133 | 42 660 | 52 706 | 64 469 | 78 146 | 93 933 | - | - |
| 50 | 25 229 | 32 114 | 40 247 | 49 830 | 61 059 | 74 132 | 89 247 | - | - |
| 55 | - | 30 054 | 37 778 | 46 880 | 57 559 | 70 014 | 84 443 | - | - |
| 60 | - | - | 35 261 | 43 867 | 53 981 | 65 803 | 79 532 | - | - |
| 65 | - | - | - | 40 801 | 50 337 | 61 512 | 74 529 | - | - |
| 70 | - | - | - | - | 46 640 | 57 159 | 69 455 | - | - |

Power input in W

| | | | | | | | | | |
|----|--------|--------|--------|--------|--------|--------|--------|---|---|
| 35 | 12 268 | 12 510 | 12 724 | 12 926 | 13 132 | 13 359 | 13 623 | - | - |
| 40 | 13 432 | 13 707 | 13 943 | 14 156 | 14 362 | 14 578 | 14 819 | - | - |
| 45 | 14 710 | 15 025 | 15 290 | 15 521 | 15 734 | 15 945 | 16 170 | - | - |
| 50 | 16 114 | 16 477 | 16 778 | 17 034 | 17 260 | 17 473 | 17 690 | - | - |
| 55 | - | 18 076 | 18 420 | 18 707 | 18 954 | 19 177 | 19 392 | - | - |
| 60 | - | - | 20 228 | 20 554 | 20 829 | 21 068 | 21 288 | - | - |
| 65 | - | - | - | 22 589 | 22 898 | 23 160 | 23 392 | - | - |
| 70 | - | - | - | - | 25 173 | 25 466 | 25 718 | - | - |

Current consumption in A

| | | | | | | | | | |
|----|-------|-------|-------|-------|-------|-------|-------|---|---|
| 35 | 25.11 | 25.38 | 25.62 | 25.84 | 26.02 | 26.15 | 26.22 | - | - |
| 40 | 26.37 | 26.67 | 26.95 | 27.20 | 27.40 | 27.55 | 27.64 | - | - |
| 45 | 27.84 | 28.19 | 28.51 | 28.79 | 29.02 | 29.20 | 29.32 | - | - |
| 50 | 29.53 | 29.93 | 30.30 | 30.63 | 30.90 | 31.12 | 31.28 | - | - |
| 55 | - | 31.92 | 32.35 | 32.72 | 33.05 | 33.32 | 33.52 | - | - |
| 60 | - | - | 34.66 | 35.10 | 35.49 | 35.81 | 36.06 | - | - |
| 65 | - | - | - | 37.77 | 38.22 | 38.61 | 38.92 | - | - |
| 70 | - | - | - | - | 41.27 | 41.72 | 42.10 | - | - |

Mass flow in kg/h

| | | | | | | | | | |
|----|-----|-----|-------|-------|-------|-------|-------|---|---|
| 35 | 674 | 832 | 1 015 | 1 225 | 1 466 | 1 741 | 2 053 | - | - |
| 40 | 669 | 827 | 1 010 | 1 220 | 1 461 | 1 736 | 2 048 | - | - |
| 45 | 662 | 820 | 1 003 | 1 214 | 1 455 | 1 729 | 2 041 | - | - |
| 50 | 654 | 812 | 995 | 1 205 | 1 446 | 1 720 | 2 031 | - | - |
| 55 | - | 803 | 986 | 1 196 | 1 436 | 1 709 | 2 019 | - | - |
| 60 | - | - | 975 | 1 184 | 1 424 | 1 696 | 2 005 | - | - |
| 65 | - | - | - | 1 172 | 1 410 | 1 681 | 1 989 | - | - |
| 70 | - | - | - | - | 1 394 | 1 664 | 1 971 | - | - |

Coefficient of performance (C.O.P.)

| | | | | | | | | | |
|----|------|------|------|------|------|------|------|---|---|
| 35 | 2.46 | 3.04 | 3.72 | 4.50 | 5.41 | 6.42 | 7.55 | - | - |
| 40 | 2.13 | 2.63 | 3.23 | 3.92 | 4.72 | 5.63 | 6.65 | - | - |
| 45 | 1.83 | 2.27 | 2.79 | 3.40 | 4.10 | 4.90 | 5.81 | - | - |
| 50 | 1.57 | 1.95 | 2.40 | 2.93 | 3.54 | 4.24 | 5.05 | - | - |
| 55 | - | 1.66 | 2.05 | 2.51 | 3.04 | 3.65 | 4.35 | - | - |
| 60 | - | - | 1.74 | 2.13 | 2.59 | 3.12 | 3.74 | - | - |
| 65 | - | - | - | 1.81 | 2.20 | 2.66 | 3.19 | - | - |
| 70 | - | - | - | - | 1.85 | 2.24 | 2.70 | - | - |

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

| | | |
|---------------------|--------|------|
| Cooling capacity | 63 265 | W |
| Power input | 18 841 | W |
| Current consumption | 32.90 | A |
| Mass flow | 1 553 | kg/h |
| C.O.P. | 3.36 | |

Pressure switch settings

| | | |
|---------------------------|------|--------|
| Maximum HP switch setting | 20.5 | bar(g) |
| Minimum LP switch setting | 0.5 | bar(g) |
| LP pump down setting | 0.5 | bar(g) |

Sound power data

| | | |
|--------------------|--|-------|
| Sound power level | | dB(A) |
| With acoustic hood | | dB(A) |

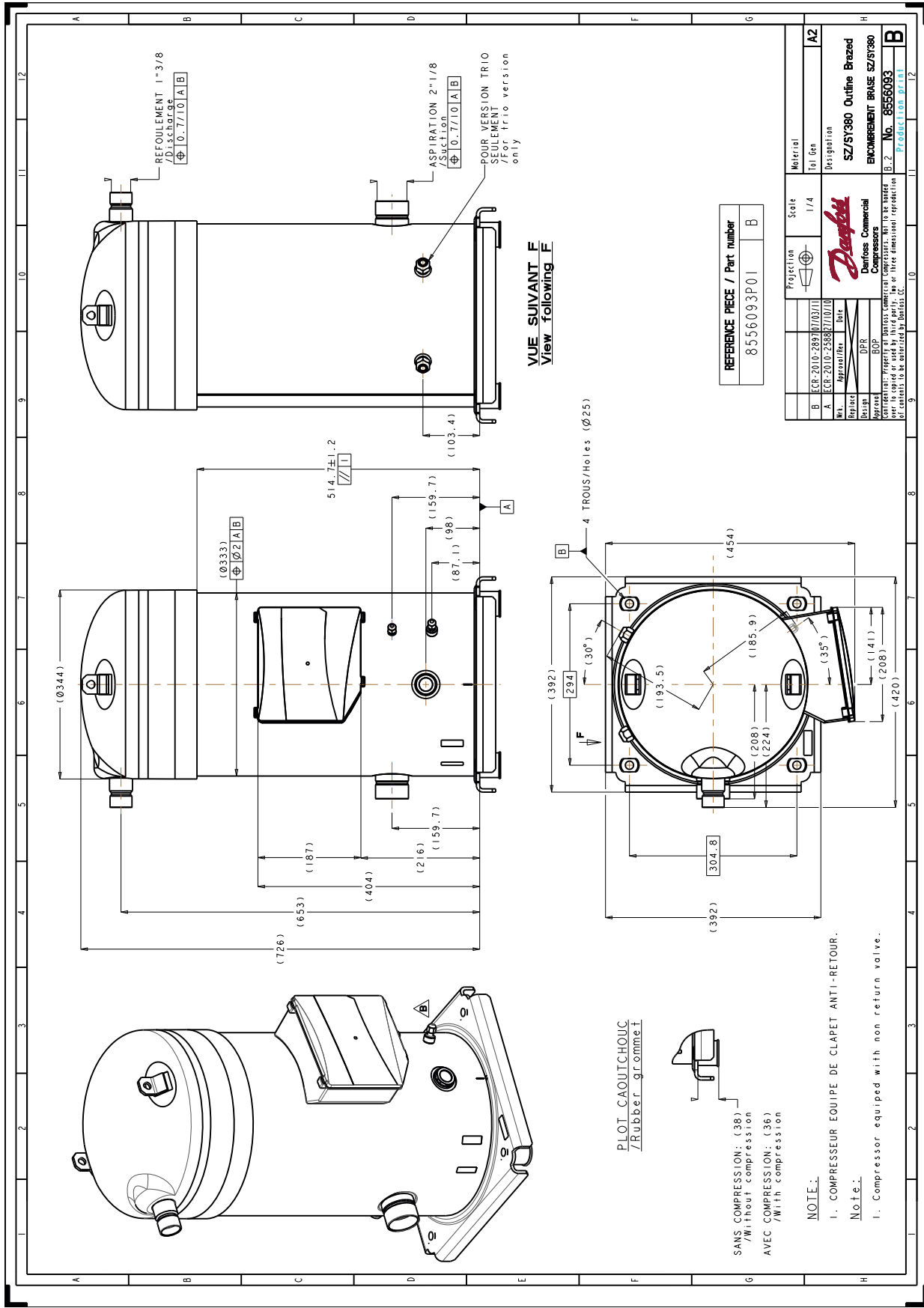
to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

All performance data +/- 5%

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