

Model: SZ300

Data

Type: Hermetic scroll compressors

Producer: Maneurop

Series: SZ

Model: SZ300

Technical data

| | |
|--|--------------|
| Displacement [m ³ /h]: | 76,1 |
| : | 437,5 |
| RPM [min ⁻¹]: | 2900 |
| Weight [kg]: | 157 |
| Oil charge [dm ³]: | 8 |
| Oil type: | 160SZ |
| Maximum system test pressure low side / high side: | 25 / 32 |
| Maximum number of starts without softstart [1/h]: | 12 |
| Refrigerant charge limit [dm ³]: | 20 |
| Refrigerant: | R407C, R134a |

Connections

| | <u>inches</u> |
|--|---------------|
| Suction Rotolock valve connection: | 2 1/4" |
| Discharge Rotolock valve connection: | 1 3/4" |
| Suction connection with supplied sleeve: | 1 5/8" |
| Discharge connection with supplied sleeve: | 1 1/8" |

Approvals

| | |
|-----|---|
| CCC | - |
| CE | + |
| UL | + |

Model: SZ300

Capacity

R134a

Cooling capacity [W]

| $t_c \setminus t_e$ | -15 | -10 | -5 | 0 | 5 | 10 | 15 |
|---------------------|--------|--------|--------|--------|--------|--------|--------|
| 30 | 23 221 | 29 286 | 36 550 | 45 170 | 55 302 | 67 104 | 80 733 |
| 35 | 21 926 | 27 748 | 34 715 | 42 986 | 52 717 | 64 065 | 77 186 |
| 40 | 20 606 | 26 167 | 32 823 | 40 728 | 50 041 | 60 917 | 73 514 |
| 45 | 19 268 | 24 553 | 30 879 | 38 402 | 47 280 | 57 669 | 69 725 |
| 50 | 17 919 | 22 912 | 28 892 | 36 017 | 44 443 | 54 328 | 65 827 |
| 55 | - | 21 251 | 26 869 | 33 579 | 41 537 | 50 901 | 61 827 |
| 60 | - | - | 24 819 | 31 097 | 38 571 | 47 397 | 57 733 |
| 65 | - | - | - | 28 578 | 35 551 | 43 824 | 53 553 |
| 70 | - | - | - | - | 32 486 | 40 188 | 49 293 |

Power input [W]

| $t_c \setminus t_e$ | -15 | -10 | -5 | 0 | 5 | 10 | 15 |
|---------------------|--------|--------|--------|--------|--------|--------|--------|
| 30 | 9 246 | 9 378 | 9 476 | 9 552 | 9 620 | 9 691 | 9 779 |
| 35 | 10 233 | 10 390 | 10 516 | 10 622 | 10 722 | 10 828 | 10 953 |
| 40 | 11 267 | 11 450 | 11 605 | 11 742 | 11 875 | 12 017 | 12 179 |
| 45 | 12 372 | 12 583 | 12 767 | 12 936 | 13 104 | 13 282 | 13 483 |
| 50 | 13 575 | 13 814 | 14 028 | 14 230 | 14 433 | 14 649 | 14 889 |
| 55 | - | 15 167 | 15 414 | 15 650 | 15 889 | 16 143 | 16 424 |
| 60 | - | - | 16 948 | 17 220 | 17 495 | 17 789 | 18 112 |
| 65 | - | - | - | 18 965 | 19 279 | 19 613 | 19 979 |
| 70 | - | - | - | - | 21 264 | 21 639 | 22 049 |

Current [A]

| $t_c \setminus t_e$ | -15 | -10 | -5 | 0 | 5 | 10 | 15 |
|---------------------|-------|-------|-------|-------|-------|-------|-------|
| 30 | 23.87 | 23.97 | 23.96 | 23.89 | 23.85 | 23.88 | 24.08 |
| 35 | 24.54 | 24.69 | 24.71 | 24.67 | 24.64 | 24.69 | 24.88 |
| 40 | 25.39 | 25.59 | 25.66 | 25.66 | 25.66 | 25.73 | 25.94 |
| 45 | 26.40 | 26.67 | 26.80 | 26.86 | 26.91 | 27.02 | 27.27 |
| 50 | 27.58 | 27.94 | 28.15 | 28.28 | 28.40 | 28.56 | 28.85 |
| 55 | - | 29.40 | 29.70 | 29.92 | 30.12 | 30.35 | 30.71 |
| 60 | - | - | 31.46 | 31.78 | 32.07 | 32.40 | 32.83 |
| 65 | - | - | - | 33.86 | 34.26 | 34.69 | 35.22 |
| 70 | - | - | - | - | 36.70 | 37.24 | 37.88 |

Model: SZ300

Capacity

Mass flow [kg/s]

| $t_c \setminus t_e$ | -15 | -10 | -5 | 0 | 5 | 10 | 15 |
|---------------------|--------|--------|--------|--------|----------|----------|----------|
| 30 | 537.07 | 664.33 | 812.51 | 984.11 | 1 181.66 | 1 407.65 | 1 664.62 |
| 35 | 532.53 | 659.92 | 808.31 | 980.21 | 1 178.14 | 1 404.61 | 1 662.14 |
| 40 | 527.32 | 654.57 | 802.90 | 974.83 | 1 172.88 | 1 399.56 | 1 657.39 |
| 45 | 521.52 | 648.36 | 796.38 | 968.08 | 1 165.98 | 1 392.60 | 1 650.46 |
| 50 | 515.22 | 641.39 | 788.81 | 960.01 | 1 157.51 | 1 383.81 | 1 641.43 |
| 55 | - | 633.72 | 780.30 | 950.73 | 1 147.55 | 1 373.26 | 1 630.38 |
| 60 | - | - | 770.91 | 940.31 | 1 136.19 | 1 361.04 | 1 617.39 |
| 65 | - | - | - | 928.84 | 1 123.50 | 1 347.24 | 1 602.55 |
| 70 | - | - | - | - | 1 109.58 | 1 331.93 | 1 585.94 |

C.O.P. [W/W]

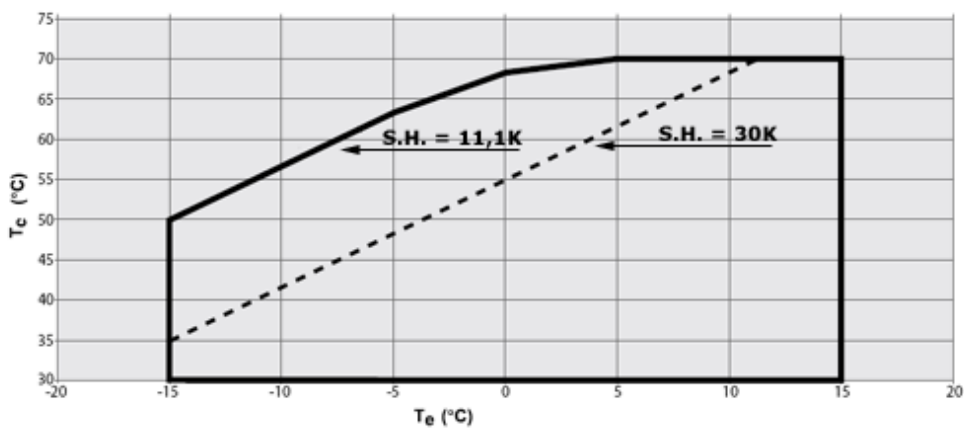
| $t_c \setminus t_e$ | -15 | -10 | -5 | 0 | 5 | 10 | 15 |
|---------------------|------|------|------|------|------|------|------|
| 30 | 2.51 | 3.12 | 3.86 | 4.73 | 5.75 | 6.92 | 8.26 |
| 35 | 2.14 | 2.67 | 3.30 | 4.05 | 4.92 | 5.92 | 7.05 |
| 40 | 1.83 | 2.29 | 2.83 | 3.47 | 4.21 | 5.07 | 6.04 |
| 45 | 1.56 | 1.95 | 2.42 | 2.97 | 3.61 | 4.34 | 5.17 |
| 50 | 1.32 | 1.66 | 2.06 | 2.53 | 3.08 | 3.71 | 4.42 |
| 55 | - | 1.40 | 1.74 | 2.15 | 2.61 | 3.15 | 3.76 |
| 60 | - | - | 1.46 | 1.81 | 2.20 | 2.66 | 3.19 |
| 65 | - | - | - | 1.51 | 1.84 | 2.23 | 2.68 |
| 70 | - | - | - | - | 1.53 | 1.86 | 2.24 |

Operating conditions: suction superheat: 10 K, subcooling: 0 K

t_c - Condensing temperature [°C]

t_e - Evaporating temperature [°C]

Application range



Model: SZ300

Capacity

R407C

Cooling capacity [W]

| $t_c \setminus t_e$ | -20 | -15 | -10 | -5 | 0 | 5 | 10 | 15 |
|---------------------|--------|--------|--------|--------|--------|--------|---------|---------|
| 30 | 29 974 | 37 621 | 46 676 | 57 336 | 69 801 | 84 267 | 100 933 | 119 997 |
| 35 | 28 636 | 36 132 | 44 973 | 55 359 | 67 487 | 81 555 | 97 761 | 116 304 |
| 40 | 27 141 | 34 421 | 42 986 | 53 033 | 64 761 | 78 367 | 94 050 | 112 007 |
| 45 | 25 528 | 32 530 | 40 755 | 50 400 | 61 665 | 74 746 | 89 842 | 107 150 |
| 50 | 23 841 | 30 501 | 38 323 | 47 503 | 58 240 | 70 733 | 85 178 | 101 775 |
| 55 | - | 28 376 | 35 731 | 44 382 | 54 529 | 66 370 | 80 101 | 95 923 |
| 60 | - | - | 33 021 | 41 081 | 50 574 | 61 699 | 74 653 | 89 636 |
| 65 | - | - | - | - | 46 416 | 56 762 | 68 876 | 82 956 |

Power input [W]

| $t_c \setminus t_e$ | -20 | -15 | -10 | -5 | 0 | 5 | 10 | 15 |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|
| 30 | 12 224 | 12 358 | 12 495 | 12 642 | 12 803 | 12 986 | 13 197 | 13 442 |
| 35 | 13 685 | 13 885 | 14 081 | 14 278 | 14 483 | 14 702 | 14 942 | 15 208 |
| 40 | 15 233 | 15 501 | 15 757 | 16 008 | 16 259 | 16 517 | 16 789 | 17 079 |
| 45 | 16 896 | 17 235 | 17 555 | 17 862 | 18 162 | 18 461 | 18 766 | 19 083 |
| 50 | 18 706 | 19 118 | 19 504 | 19 869 | 20 220 | 20 564 | 20 905 | 21 251 |
| 55 | - | 21 179 | 21 633 | 22 059 | 22 464 | 22 854 | 23 235 | 23 612 |
| 60 | - | - | 23 972 | 24 462 | 24 924 | 25 362 | 25 784 | 26 196 |
| 65 | - | - | - | - | 27 628 | 28 118 | 28 584 | 29 032 |

Current [A]

| $t_c \setminus t_e$ | -20 | -15 | -10 | -5 | 0 | 5 | 10 | 15 |
|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| 30 | 24.79 | 25.11 | 25.32 | 25.46 | 25.57 | 25.68 | 25.84 | 26.09 |
| 35 | 26.98 | 27.37 | 27.64 | 27.85 | 28.03 | 28.22 | 28.46 | 28.78 |
| 40 | 29.04 | 29.49 | 29.83 | 30.10 | 30.35 | 30.62 | 30.93 | 31.33 |
| 45 | 31.12 | 31.62 | 32.03 | 32.37 | 32.69 | 33.02 | 33.41 | 33.89 |
| 50 | 33.37 | 33.93 | 34.39 | 34.80 | 35.18 | 35.58 | 36.04 | 36.60 |
| 55 | - | 36.55 | 37.07 | 37.54 | 37.99 | 38.46 | 38.99 | 39.62 |
| 60 | - | - | 40.23 | 40.75 | 41.26 | 41.80 | 42.40 | 43.10 |
| 65 | - | - | - | - | 45.16 | 45.76 | 46.42 | 47.19 |

Model: SZ300

Capacity

Mass flow [kg/s]

| $t_c \setminus t_e$ | -20 | -15 | -10 | -5 | 0 | 5 | 10 | 15 |
|---------------------|--------|--------|--------|----------|----------|----------|----------|----------|
| 30 | 584.69 | 723.71 | 884.67 | 1 070.62 | 1 284.60 | 1 529.66 | 1 808.84 | 2 125.19 |
| 35 | 583.33 | 724.55 | 887.83 | 1 076.21 | 1 292.75 | 1 540.48 | 1 822.45 | 2 141.71 |
| 40 | 579.51 | 722.01 | 886.69 | 1 076.59 | 1 294.76 | 1 544.24 | 1 828.08 | 2 149.33 |
| 45 | 573.37 | 716.23 | 881.39 | 1 071.89 | 1 290.78 | 1 541.10 | 1 825.90 | 2 148.22 |
| 50 | 565.06 | 707.37 | 872.09 | 1 062.28 | 1 280.97 | 1 531.21 | 1 816.05 | 2 138.53 |
| 55 | - | 695.58 | 858.95 | 1 047.90 | 1 265.47 | 1 514.71 | 1 798.68 | 2 120.40 |
| 60 | - | - | 842.10 | 1 028.90 | 1 244.44 | 1 491.77 | 1 773.94 | 2 093.98 |
| 65 | - | - | - | - | 1 218.03 | 1 462.53 | 1 741.99 | 2 059.44 |

C.O.P. [W/W]

| $t_c \setminus t_e$ | -20 | -15 | -10 | -5 | 0 | 5 | 10 | 15 |
|---------------------|------|------|------|------|------|------|------|------|
| 30 | 2.45 | 3.04 | 3.74 | 4.54 | 5.45 | 6.49 | 7.65 | 8.93 |
| 35 | 2.09 | 2.60 | 3.19 | 3.88 | 4.66 | 5.55 | 6.54 | 7.65 |
| 40 | 1.78 | 2.22 | 2.73 | 3.31 | 3.98 | 4.74 | 5.60 | 6.56 |
| 45 | 1.51 | 1.89 | 2.32 | 2.82 | 3.40 | 4.05 | 4.79 | 5.61 |
| 50 | 1.27 | 1.60 | 1.96 | 2.39 | 2.88 | 3.44 | 4.07 | 4.79 |
| 55 | - | 1.34 | 1.65 | 2.01 | 2.43 | 2.90 | 3.45 | 4.06 |
| 60 | - | - | 1.38 | 1.68 | 2.03 | 2.43 | 2.90 | 3.42 |
| 65 | - | - | - | - | 1.68 | 2.02 | 2.41 | 2.86 |

Operating conditions: suction superheat: 11.1 K, subcooling: 8.3 K

t_c - Condensing temperature [°C]

t_e - Evaporating temperature [°C]

Application range

