



Model: D8SH-500 X

Data

Type: Semi-hermetic piston compressors

Producer: Copeland

Series: S

Model: D8SH-500 X

Technical data

| | |
|-----------------------------------|-------------|
| Cylinder count: | 8 |
| Displacement [m ³ /h]: | 151 |
| Weight [kg]: | 347 |
| Oil charge [dm ³]: | 7,7 |
| Max. operating current [A]: | 91,6 |
| Locked rotor current [A]: | 444 |
| Power supply [V/~/Hz]: | 400V/3/50Hz |

Connections

| | <u>milimeters</u> | <u>inches</u> |
|-----------------|-------------------|---------------|
| Suction line: | | 2 5/8" |
| Discharge line: | | 1 5/8" |

R404A/R507

Cooling capacity [kW]

| t_c \ t_e | -35 | -30 | -25 | -20 | -15 | -10 | -5 | 0 | 5 |
|--------------------------------------|------------|------------|------------|------------|------------|------------|-----------|----------|----------|
| 30 | 28.23 | 37.37 | 48.25 | 61.13 | 76.28 | 93.98 | 114.49 | 138.08 | 165.02 |
| 35 | 25.01 | 33.78 | 44.06 | 56.14 | 70.28 | 86.74 | 105.81 | 127.75 | 152.83 |
| 40 | - | 30.28 | 39.93 | 51.16 | 64.24 | 79.43 | 97.02 | 117.26 | 140.43 |
| 45 | - | 26.86 | 35.83 | 46.17 | 58.15 | 72.03 | 88.09 | 106.59 | 127.82 |
| 50 | - | 23.50 | 31.75 | 41.15 | 51.98 | 64.51 | 79.00 | 95.72 | 114.95 |
| 55 | - | 20.17 | 27.66 | 36.09 | 45.73 | 56.86 | 69.73 | 84.63 | 101.83 |

Power input [kW]

| t_c \ t_e | -35 | -30 | -25 | -20 | -15 | -10 | -5 | 0 | 5 |
|--------------------------------------|------------|------------|------------|------------|------------|------------|-----------|----------|----------|
| 30 | 16.50 | 19.34 | 22.20 | 25.01 | 27.70 | 30.19 | 32.41 | 34.31 | 35.80 |
| 35 | 16.65 | 19.72 | 22.84 | 25.94 | 28.96 | 31.82 | 34.45 | 36.78 | 38.75 |
| 40 | - | 20.01 | 23.37 | 26.75 | 30.08 | 33.29 | 36.31 | 39.07 | 41.50 |
| 45 | - | 20.22 | 23.81 | 27.45 | 31.09 | 34.63 | 38.03 | 41.19 | 44.07 |
| 50 | - | 20.36 | 24.16 | 28.05 | 31.97 | 35.84 | 39.59 | 43.15 | 46.46 |
| 55 | - | 20.44 | 24.44 | 28.57 | 32.75 | 36.93 | 41.02 | 44.96 | 48.68 |

Current [A]

| t_c \ t_e | -35 | -30 | -25 | -20 | -15 | -10 | -5 | 0 | 5 |
|--------------------------------------|------------|------------|------------|------------|------------|------------|-----------|----------|----------|
| 30 | 44.75 | 48.11 | 51.64 | 55.22 | 58.73 | 62.05 | 65.06 | 67.64 | 69.67 |
| 35 | 44.93 | 48.57 | 52.44 | 56.42 | 60.39 | 64.23 | 67.82 | 71.04 | 73.76 |
| 40 | - | 48.92 | 53.12 | 57.49 | 61.90 | 66.24 | 70.38 | 74.22 | 77.62 |
| 45 | - | 49.18 | 53.68 | 58.41 | 63.25 | 68.07 | 72.75 | 77.18 | 81.24 |
| 50 | - | 49.35 | 54.14 | 59.21 | 64.45 | 69.73 | 74.93 | 79.94 | 84.63 |
| 55 | - | 49.44 | 54.49 | 59.89 | 65.51 | 71.23 | 76.93 | 82.50 | 87.81 |

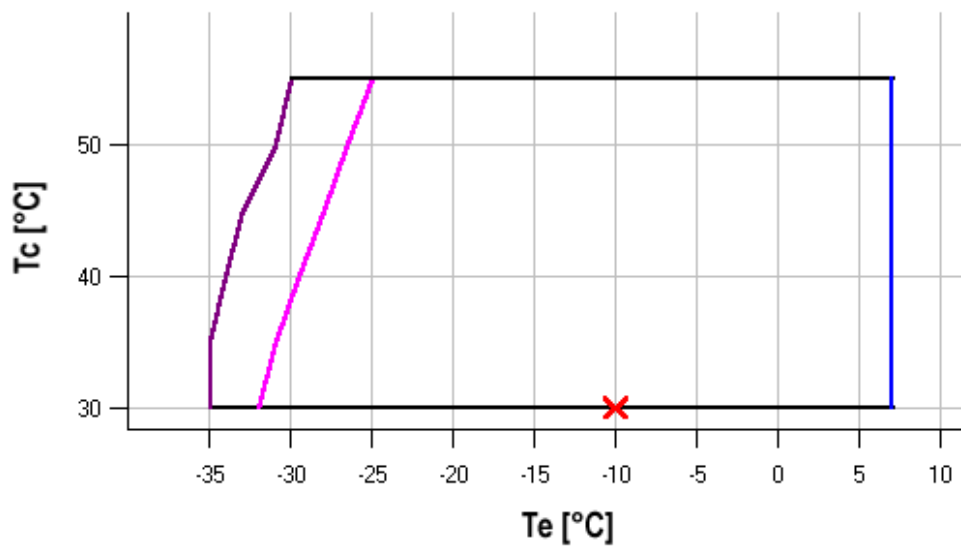
Mass flow [kg/s]



| t_c \ t_e | -35 | -30 | -25 | -20 | -15 | -10 | -5 | 0 | 5 |
|--------------------------------------|------------|------------|------------|------------|------------|------------|-----------|----------|----------|
| 30 | 675.68 | 913.65 | 1 186.75 | 1 507.70 | 1 889.22 | 2 344.02 | 2 884.81 | 3 524.31 | 4 275.22 |
| 35 | 633.85 | 871.78 | 1 143.64 | 1 462.13 | 1 839.97 | 2 289.88 | 2 824.56 | 3 456.72 | 4 199.09 |
| 40 | - | 829.44 | 1 099.00 | 1 413.98 | 1 787.10 | 2 231.06 | 2 758.57 | 3 382.36 | 4 115.13 |
| 45 | - | 786.20 | 1 052.42 | 1 362.84 | 1 730.18 | 2 167.15 | 2 686.46 | 3 300.82 | 4 022.95 |
| 50 | - | 741.67 | 1 003.50 | 1 308.32 | 1 668.83 | 2 097.76 | 2 607.81 | 3 211.69 | 3 922.13 |
| 55 | - | 695.45 | 951.84 | 1 250.00 | 1 602.64 | 2 022.48 | 2 522.22 | 3 114.58 | 3 812.28 |


C.O.P. [W/W]

| $t_c \setminus t_e$ | -35 | -30 | -25 | -20 | -15 | -10 | -5 | 0 | 5 |
|---------------------|------|------|------|------|------|------|------|------|------|
| 30 | 1.71 | 1.93 | 2.17 | 2.44 | 2.75 | 3.11 | 3.53 | 4.02 | 4.61 |
| 35 | 1.50 | 1.71 | 1.93 | 2.16 | 2.43 | 2.73 | 3.07 | 3.47 | 3.94 |
| 40 | - | 1.51 | 1.71 | 1.91 | 2.14 | 2.39 | 2.67 | 3.00 | 3.38 |
| 45 | - | 1.33 | 1.51 | 1.68 | 1.87 | 2.08 | 2.32 | 2.59 | 2.90 |
| 50 | - | 1.15 | 1.31 | 1.47 | 1.63 | 1.80 | 2.00 | 2.22 | 2.47 |
| 55 | - | 0.99 | 1.13 | 1.26 | 1.40 | 1.54 | 1.70 | 1.88 | 2.09 |

Application range



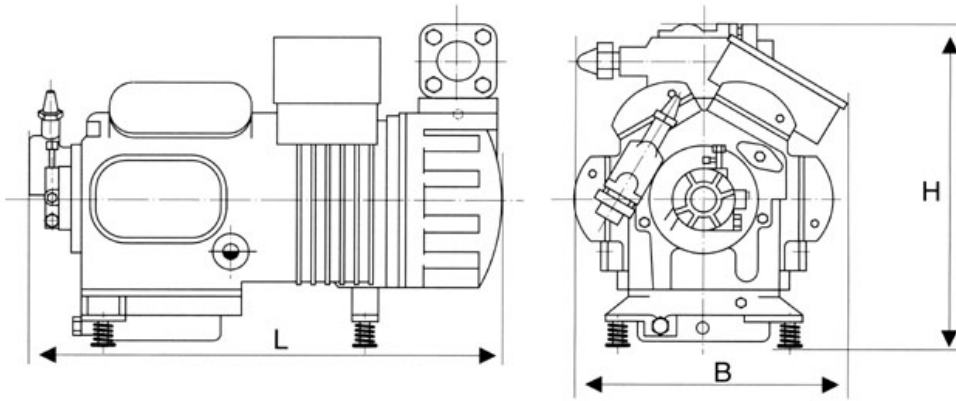
 Maximum evaporating temperature
 25°C suction gas temperature

 25°C suction gas return + additional cooling

Operating conditions: ISO; subcooling: 0 K, suction superheat: - K, return gas temperature: 20

t_c - Condensing temperature [°C]

t_e - Evaporating temperature [°C]



| | |
|---|--------|
| L | 835 mm |
| B | 590 mm |
| H | 670 mm |

