



Compressor Selection: Semi-hermetic Reciprocating Compressors

Input Values

| | | | |
|---|--|--|-----------------------------|
| Compressor model Mode | (4DC-5.2Y) Refrigeration and Air conditioning | Suction gas temperature Operating mode | 20,00 °C Auto |
| Refrigerant Reference temperature Liq. subc. (in condenser) | R404A Dew point temp. 0 K | Power supply Capacity Control Useful superheat | 400V-3-50Hz 100% 100% |

Result

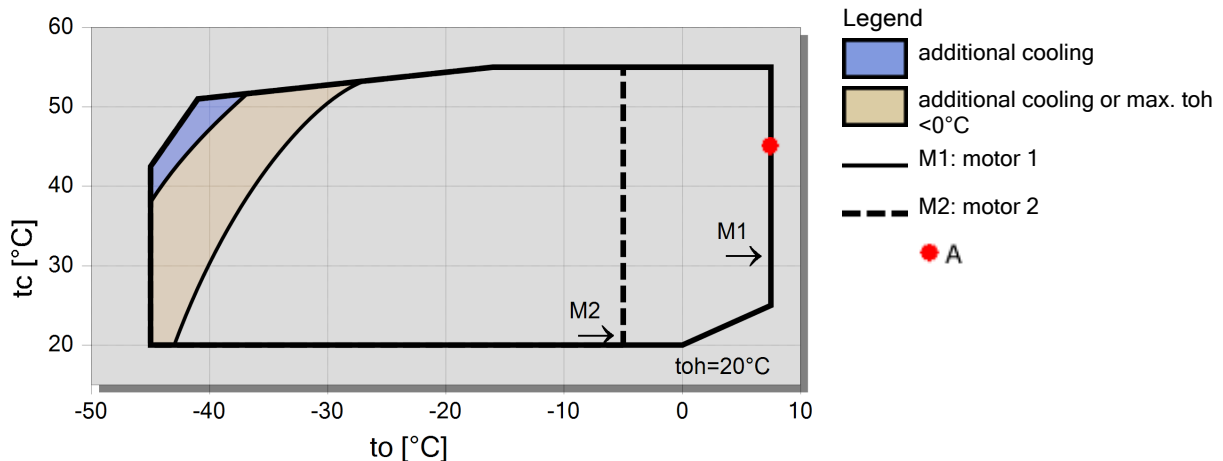
| | | | |
|--------|--------------------|------------|---------------------------------|
| Q [W] | Cooling capacity | COP [-] | COP/EER |
| Q* [W] | Cooling capacity * | COP* [-] | COP/EER * |
| P [kW] | Power input | m [kg/h] | Mass flow |
| I [A] | Current | Op. | Operating mode |
| Qc [W] | Condenser Capacity | th [°C] | Discharge gas temp. w/o cooling |

| tc | to | -5°C | -10°C | -15°C | -20°C | -25°C | -30°C | -35°C | -40°C |
|------|------------|----------|----------|----------|----------|----------|----------|----------|----------|
| 30°C | Q [W] | 21119 | 17422 | 14223 | 11466 | 9100 | 7081 | 5369 | 3930 |
| | Q* [W] | 21119 | 17422 | 14223 | 11466 | 9100 | 7081 | 5369 | 3930 |
| | P [kW] | 5,52 | 5,29 | 4,99 | 4,62 | 4,18 | 3,70 | 3,19 | 2,66 |
| | I [A] | 9,64 | 9,32 | 8,89 | 8,37 | 7,78 | 7,17 | 6,56 | 5,99 |
| | Qc [W] | 26635 | 22717 | 19214 | 16081 | 13282 | 10784 | 8560 | 6586 |
| | COP [-] | 3,83 | 3,29 | 2,85 | 2,48 | 2,18 | 1,91 | 1,68 | 1,48 |
| | COP* [-] | 3,83 | 3,29 | 2,85 | 2,48 | 2,18 | 1,91 | 1,68 | 1,48 |
| | m [kg/h] | 531 | 433 | 351 | 281 | 222 | 171,5 | 129,5 | 94,5 |
| | Op. | Standard | Standard | Standard | Standard | Standard | Standard | Standard | Standard |
| | th [°C] | 69,9 | 77,2 | 85,0 | 93,2 | 102,1 | 111,8 | 122,3 | 134,2 |
| 40°C | Q [W] | 17654 | 14523 | 11807 | 9460 | 7441 | 5715 | 4250 | 3014 |
| | Q* [W] | 17654 | 14523 | 11807 | 9460 | 7441 | 5715 | 4250 | 3014 |
| | P [kW] | 6,34 | 5,95 | 5,50 | 4,99 | 4,43 | 3,83 | 3,22 | 2,60 |
| | I [A] | 10,84 | 10,28 | 9,61 | 8,88 | 8,11 | 7,33 | 6,60 | 5,93 |
| | Qc [W] | 23992 | 20478 | 17307 | 14446 | 11868 | 9549 | 7470 | 5612 |
| | COP [-] | 2,79 | 2,44 | 2,15 | 1,90 | 1,68 | 1,49 | 1,32 | 1,16 |
| | COP* [-] | 2,79 | 2,44 | 2,15 | 1,90 | 1,68 | 1,49 | 1,32 | 1,16 |
| | m [kg/h] | 500 | 407 | 327 | 260 | 203 | 155,3 | 115,0 | 81,2 |
| | Op. | Standard | Standard | Standard | Standard | Standard | Standard | Standard | Standard |
| | th [°C] | 81,8 | 89,2 | 97,2 | 105,7 | 114,8 | 124,8 | 136,0 | 0 |
| 50°C | Q [W] | 14301 | 11733 | 9494 | 7553 | 5879 | 4444 | 3222 | 2188 |
| | Q* [W] | 14301 | 11733 | 9494 | 7553 | 5879 | 4444 | 3222 | 2188 |
| | P [kW] | 7,07 | 6,53 | 5,93 | 5,29 | 4,62 | 3,92 | 3,22 | 2,52 |
| | I [A] | 11,92 | 11,12 | 10,24 | 9,32 | 8,37 | 7,45 | 6,59 | 5,86 |
| | Qc [W] | 21367 | 18261 | 15428 | 12846 | 10497 | 8366 | 6441 | 4709 |
| | COP [-] | 2,02 | 1,80 | 1,60 | 1,43 | 1,27 | 1,13 | 1,00 | 0,87 |
| | COP* [-] | 2,02 | 1,80 | 1,60 | 1,43 | 1,27 | 1,13 | 1,00 | 0,87 |
| | m [kg/h] | 469 | 380 | 304 | 240 | 185,2 | 139,0 | 100,3 | 67,8 |
| | Op. | Standard | Standard | Standard | Standard | Standard | Standard | Standard | Standard |
| | th [°C] | 94,1 | 101,7 | 109,9 | 118,7 | 128,4 | 139,2 | 0 | 0 |

-- No calculation possible (see message in single point selection)

*According to EN12900 (20°C suction gas temp., 0K liquid subcooling)

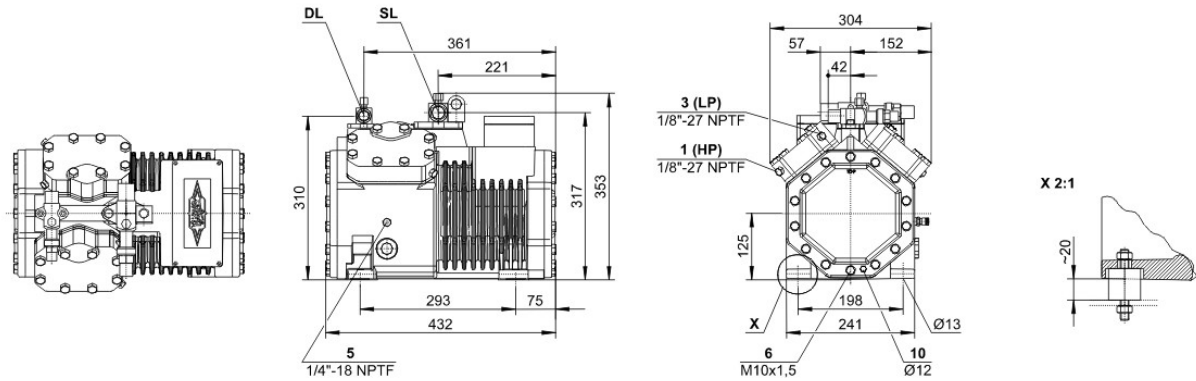
Application Limits 100% Octagon





Technical Data: (4DC-5.2Y)

Dimensions and Connections



Technical Data

Technical Data

| | |
|--|--|
| Displacement (1450 RPM 50Hz) | 26,84 m3/h |
| Displacement (1750 RPM 60Hz) | 32,39 m3/h |
| No. of cylinder x bore x stroke | 4 x 50 mm x 39,3 mm |
| Weight | 85,5 kg |
| Max. pressure (LP/HP) | 19 / 28 bar |
| Connection suction line | 28 mm - 1 1/8" |
| Connection discharge line | 22 mm - 7/8" |
| Oil type R134a/R407C/R404A/R507A/R407A/R407F | tc<55°C: BSE32 / tc>55°C: BSE55 (Option) |
| Oil type R22 (R12/R502) | B5.2 (Standard) |
| Oil type R290/R1270 | SHC226E (Standard) |

Motor data

| | |
|---------------------------------|-------------------|
| Motor voltage (more on request) | 380-420V Y-3-50Hz |
| Max operating current | 13.5 A |
| Starting current (Rotor locked) | 62.2 A |
| Max. Power input | 8,0 kW |

Extent of delivery (Standard)

| | |
|-------------------|----------------------|
| Motor protection | SE-B1 |
| Enclosure class | IP65 |
| Vibration dampers | Standard |
| Oil charge | 2,00 dm ³ |

Available Options

| | |
|----------------------------------|-------------------------------------|
| Discharge gas temperature sensor | Option |
| Start unloading | Option |
| Capacity control | 100-50% (Option) |
| Additional fan | Option |
| Crankcase heater | 0..120 W PTC (Option) |
| Oil level monitoring | OLC-K1 (Option, not for R290/R1270) |

Sound measurement

| | |
|--|-------------------|
| Sound power level (-10°C / 45°C) | 72,0 dB(A) @ 50Hz |
| Sound power level (-35°C / 40°C) | 74,0 dB(A) @ 50Hz |
| Sound pressure level @ 1m (-10°C / 45°C) | 64,0 dB(A) @ 50Hz |
| Sound pressure level @ 1m (-35°C / 40°C) | 66,0 dB(A) @ 50Hz |



Compressor Selection: Semi-hermetic Reciprocating Compressors

Input Values

| | | | |
|---------------------------|--|---|------------------|
| Compressor model Mode | (2DC-2.2Y) Refrigeration and Air conditioning | Suction gas temperature Operating mode | 20,00 °C Auto |
| Refrigerant | R404A | Power supply | 400V-3-50Hz |
| Reference temperature | Dew point temp. | Capacity Control | 100% |
| Liq. subc. (in condenser) | 0 K | Useful superheat | 100% |

Result

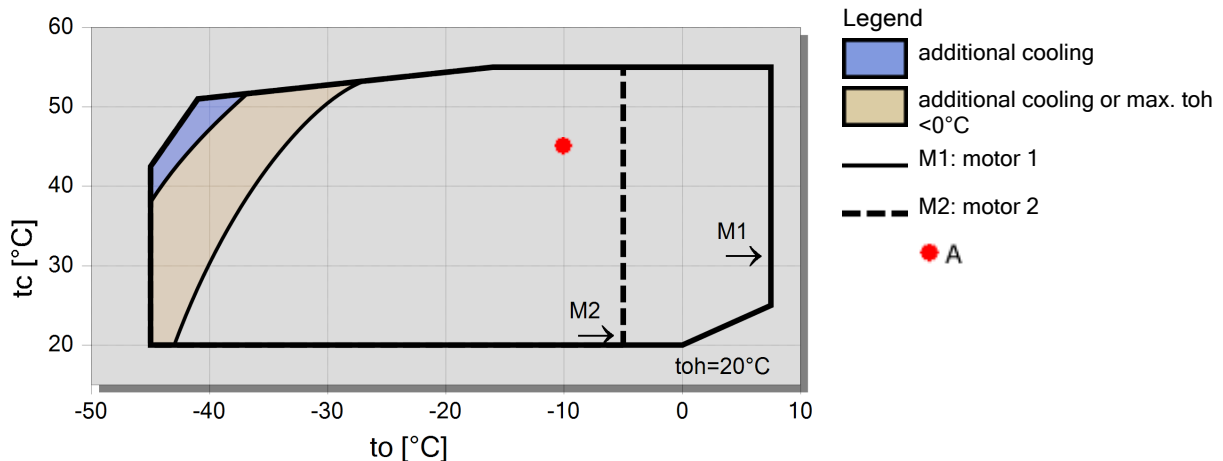
| | | | |
|--------|--------------------|------------|---------------------------------|
| Q [W] | Cooling capacity | COP [-] | COP/EER |
| Q* [W] | Cooling capacity * | COP* [-] | COP/EER * |
| P [kW] | Power input | m [kg/h] | Mass flow |
| I [A] | Current | Op. | Operating mode |
| Qc [W] | Condenser Capacity | th [°C] | Discharge gas temp. w/o cooling |

| tc | to | -5°C | -10°C | -15°C | -20°C | -25°C | -30°C | -35°C | -40°C |
|------|------------|----------|----------|----------|----------|----------|----------|----------|----------|
| 30°C | Q [W] | 10113 | 8345 | 6814 | 5493 | 4360 | 3392 | 2571 | 1879 |
| | Q* [W] | 10113 | 8345 | 6814 | 5493 | 4360 | 3392 | 2571 | 1879 |
| | P [kW] | 2,72 | 2,59 | 2,43 | 2,25 | 2,05 | 1,83 | 1,59 | 1,35 |
| | I [A] | 4,86 | 4,69 | 4,48 | 4,25 | 3,99 | 3,73 | 3,46 | 3,21 |
| | Qc [W] | 12833 | 10936 | 9248 | 7746 | 6409 | 5220 | 4164 | 3227 |
| | COP [-] | 3,72 | 3,22 | 2,80 | 2,44 | 2,13 | 1,86 | 1,61 | 1,40 |
| | COP* [-] | 3,72 | 3,22 | 2,80 | 2,44 | 2,13 | 1,86 | 1,61 | 1,40 |
| | m [kg/h] | 254 | 208 | 168,1 | 134,6 | 106,2 | 82,2 | 62,0 | 45,2 |
| | Op. | Standard | Standard | Standard | Standard | Standard | Standard | Standard | Standard |
| | th [°C] | 70,9 | 78,1 | 85,8 | 94,2 | 103,6 | 114,0 | 125,8 | 139,7 |
| 40°C | Q [W] | 8488 | 6977 | 5666 | 4532 | 3557 | 2724 | 2016 | 1419 |
| | Q* [W] | 8488 | 6977 | 5666 | 4532 | 3557 | 2724 | 2016 | 1419 |
| | P [kW] | 3,15 | 2,94 | 2,70 | 2,44 | 2,17 | 1,88 | 1,58 | 1,28 |
| | I [A] | 5,46 | 5,16 | 4,84 | 4,49 | 4,14 | 3,79 | 3,45 | 3,15 |
| | Qc [W] | 11640 | 9915 | 8366 | 6974 | 5724 | 4603 | 3599 | 2700 |
| | COP [-] | 2,69 | 2,37 | 2,10 | 1,86 | 1,64 | 1,45 | 1,27 | 1,11 |
| | COP* [-] | 2,69 | 2,37 | 2,10 | 1,86 | 1,64 | 1,45 | 1,27 | 1,11 |
| | m [kg/h] | 240 | 195,3 | 157,1 | 124,7 | 97,2 | 74,0 | 54,5 | 38,2 |
| | Op. | Standard | Standard | Standard | Standard | Standard | Standard | Standard | Standard |
| | th [°C] | 83,2 | 90,5 | 98,4 | 107,0 | 116,5 | 127,1 | 139,2 | 0 |
| 50°C | Q [W] | 6900 | 5641 | 4545 | 3596 | 2779 | 2080 | 1487 | 987 |
| | Q* [W] | 6900 | 5641 | 4545 | 3596 | 2779 | 2080 | 1487 | 987 |
| | P [kW] | 3,55 | 3,25 | 2,93 | 2,59 | 2,25 | 1,90 | 1,54 | 1,19 |
| | I [A] | 6,03 | 5,60 | 5,15 | 4,70 | 4,25 | 3,81 | 3,41 | 3,06 |
| | Qc [W] | 10446 | 8888 | 7474 | 6191 | 5029 | 3978 | 3030 | 2176 |
| | COP [-] | 1,95 | 1,74 | 1,55 | 1,39 | 1,24 | 1,10 | 0,96 | 0,83 |
| | COP* [-] | 1,95 | 1,74 | 1,55 | 1,39 | 1,24 | 1,10 | 0,96 | 0,83 |
| | m [kg/h] | 226 | 182,6 | 145,6 | 114,1 | 87,5 | 65,1 | 46,3 | 30,6 |
| | Op. | Standard | Standard | Standard | Standard | Standard | Standard | Standard | Standard |
| | th [°C] | 95,9 | 103,6 | 111,8 | 120,8 | 130,8 | 0 | 0 | 0 |

-- No calculation possible (see message in single point selection)

*According to EN12900 (20°C suction gas temp., 0K liquid subcooling)

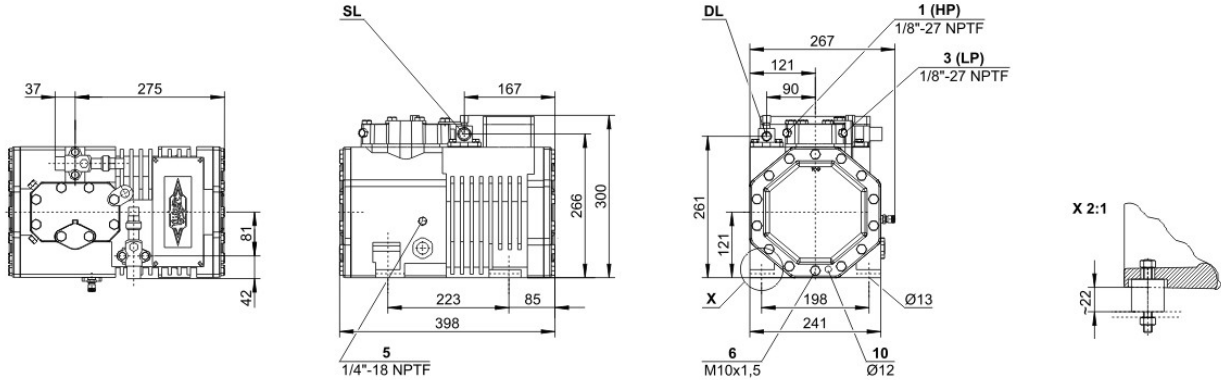
Application Limits 100% Octagon





Technical Data: (2DC-2.2Y)

Dimensions and Connections



Technical Data

Technical Data

| | |
|--|--|
| Displacement (1450 RPM 50Hz) | 13,42 m3/h |
| Displacement (1750 RPM 60Hz) | 16,20 m3/h |
| No. of cylinder x bore x stroke | 2 x 50 mm x 39,3 mm |
| Weight | 67,5 kg |
| Max. pressure (LP/HP) | 19 / 28 bar |
| Connection suction line | 22 mm - 7/8" |
| Connection discharge line | 16 mm - 5/8" |
| Oil type R134a/R407C/R404A/R507A/R407A/R407F | tc<55°C: BSE32 / tc>55°C: BSE55 (Option) |
| Oil type R22 (R12/R502) | B5.2 (Standard) |
| Oil type R290/R1270 | SHC226E (Standard) |

Motor data

| | |
|---------------------------------|-------------------|
| Motor voltage (more on request) | 380-420V Y-3-50Hz |
| Max operating current | 6.9 A |
| Starting current (Rotor locked) | 30.7 A |
| Max. Power input | 3,9 kW |

Extent of delivery (Standard)

| | |
|-------------------|----------------------|
| Motor protection | SE-B1 |
| Enclosure class | IP65 |
| Vibration dampers | Standard |
| Oil charge | 1,50 dm ³ |

Available Options

| | |
|------------------|-----------------------|
| Additional fan | Option |
| Crankcase heater | 0..120 W PTC (Option) |

Sound measurement

| | |
|--|-------------------|
| Sound power level (-10°C / 45°C) | 66,5 dB(A) @ 50Hz |
| Sound power level (-35°C / 40°C) | 69,0 dB(A) @ 50Hz |
| Sound pressure level @ 1m (-10°C / 45°C) | 58,5 dB(A) @ 50Hz |
| Sound pressure level @ 1m (-35°C / 40°C) | 61,0 dB(A) @ 50Hz |