



## Compressor Selection: Semi-hermetic Reciprocating Compressors

### Input Values

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

### Result

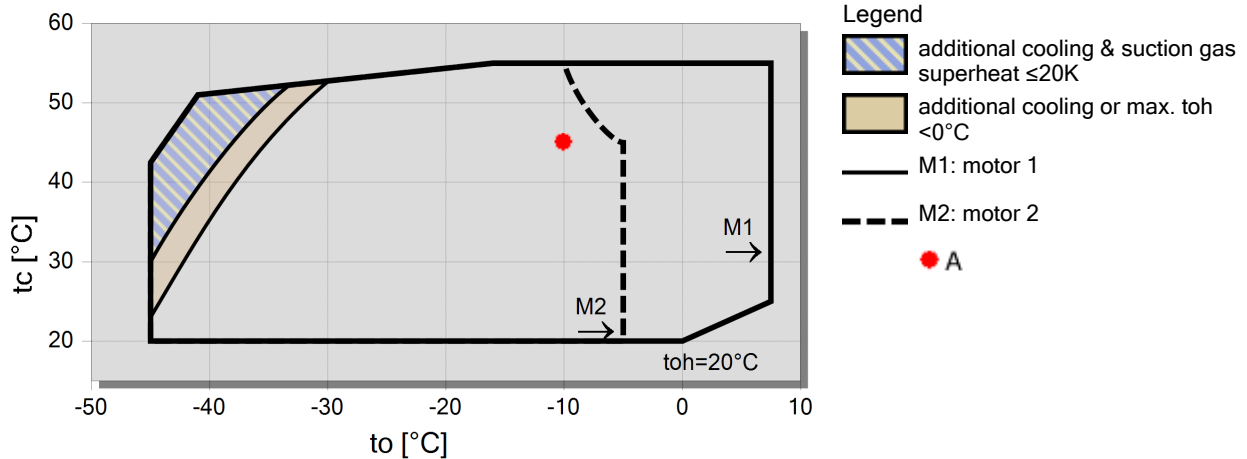
|   |   |   |   |
|---|---|---|---|
| Q [W]<br>Qu* [W]<br>P [kW]<br>I [A]<br>Qc [W] | Cooling capacity<br>Evaporator capacity<br>Power input<br>Current<br>Condenser Capacity | COP [ - ]<br>m [kg/h]<br>Op.<br>th [°C] | COP/EER<br>Mass flow<br>Operating mode<br>Discharge gas temp. w/o cooling |
|---|---|---|---|

| tc        | to        | -5°C     | -10°C    | -15°C    | -20°C    | -25°C    | -30°C    | -35°C    | -40°C    |
|-----------|-----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 30°C      | Q [W]     | 10155    | 8378     | 6840     | 5512     | 4368     | 3387     | 2545     | 1826     |
|           | Qu* [W]   | 10155    | 8378     | 6840     | 5512     | 4368     | 3387     | 2545     | 1826     |
|           | P [kW]    | 3,03     | 2,84     | 2,63     | 2,40     | 2,16     | 1,89     | 1,61     | 1,31     |
|           | I [A]     | 5,49     | 5,23     | 4,96     | 4,67     | 4,37     | 4,07     | 3,77     | 3,50     |
|           | Qc [W]    | 13184    | 11218    | 9472     | 7916     | 6526     | 5280     | 4154     | 3135     |
|           | COP [ - ] | 3,35     | 2,95     | 2,60     | 2,29     | 2,02     | 1,79     | 1,58     | 1,39     |
|           | m [kg/h]  | 257      | 211      | 170,8    | 136,8    | 107,9    | 83,4     | 62,4     | 44,7     |
|           | Op.       | Standard | Standard | Standard | Standard | Standard | Standard | Standard | Standard |
|           | th [°C]   | 75,3     | 82,2     | 89,6     | 97,7     | 106,4    | 116,0    | 126,6    | 138,4    |
|           | 40°C      | Q [W]    | 8705     | 7150     | 5801     | 4632     | 3623     | 2753     | 2004     |
| Qu* [W]   |           | 8705     | 7150     | 5801     | 4632     | 3623     | 2753     | 2004     | 1361     |
| P [kW]    |           | 3,47     | 3,17     | 2,87     | 2,56     | 2,25     | 1,92     | 1,58     | 1,22     |
| I [A]     |           | 6,11     | 5,68     | 5,27     | 4,87     | 4,48     | 4,10     | 3,75     | 3,43     |
| Qc [W]    |           | 12180    | 10320    | 8668     | 7194     | 5871     | 4677     | 3586     | 2580     |
| COP [ - ] |           | 2,51     | 2,26     | 2,02     | 1,81     | 1,61     | 1,43     | 1,27     | 1,12     |
| m [kg/h]  |           | 252      | 205      | 165,0    | 130,9    | 101,8    | 77,0     | 55,9     | 37,8     |
| Op.       |           | Standard | Standard | Standard | Standard | Standard | Standard | Standard | Standard |
| th [°C]   |           | 86,5     | 92,9     | 100,0    | 107,9    | 116,7    | 126,5    | 137,7    | 0        |
| 50°C      |           | Q [W]    | 7129     | 5821     | 4680     | 3686     | 2824     | 2077     | 1430     |
|           | Qu* [W]   | 7129     | 5821     | 4680     | 3686     | 2824     | 2077     | 1430     | 871      |
|           | P [kW]    | 3,87     | 3,48     | 3,09     | 2,70     | 2,31     | 1,92     | 1,51     | 1,09     |
|           | I [A]     | 6,68     | 6,11     | 5,57     | 5,05     | 4,56     | 4,10     | 3,68     | 3,33     |
|           | Qc [W]    | 11002    | 9299     | 7769     | 6388     | 5136     | 3994     | 2941     | 1962     |
|           | COP [ - ] | 1,84     | 1,67     | 1,51     | 1,36     | 1,22     | 1,08     | 0,95     | 0,80     |
|           | m [kg/h]  | 244      | 197,5    | 157,3    | 123,0    | 93,6     | 68,5     | 46,9     | 28,5     |
|           | Op.       | Standard | Standard | Standard | Standard | Standard | Standard | Standard | Standard |
|           | th [°C]   | 97,9     | 104,4    | 111,6    | 119,6    | 128,8    | 139,5    | 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%



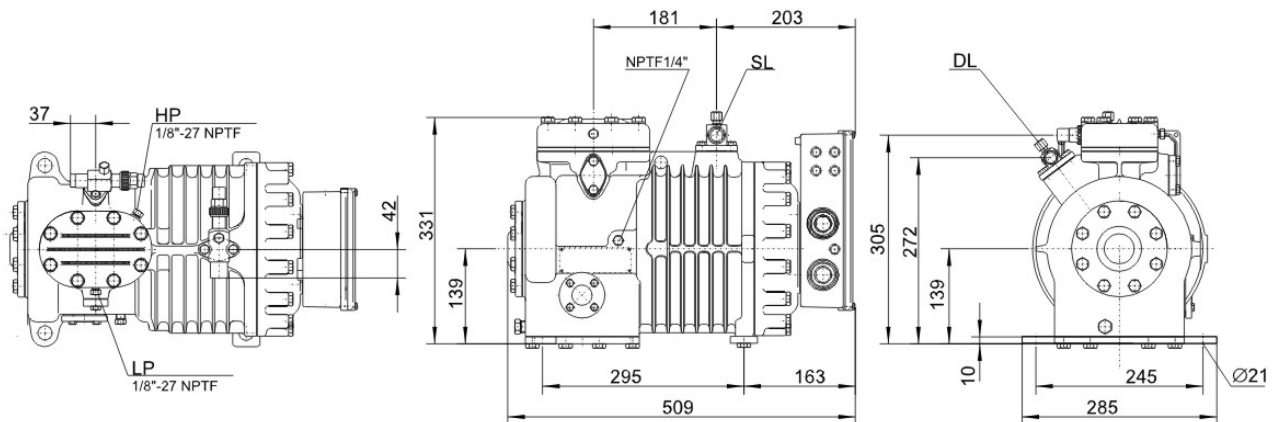
#### Legend

- additional cooling & suction gas superheat ≤ 20K
- additional cooling or max. toh < 0°C
- M1: motor 1
- M2: motor 2
- A



## Technical Data: (2DL-2.2Y)

### Dimensions and Connections



### Technical Data

#### Technical Data

|  |  |
|--|--|
| Displacement (1450 RPM 50Hz)                 | 13,30 m <sup>3</sup> /h                  |
| Displacement (1750 RPM 60Hz)                 | 16,05 m <sup>3</sup> /h                  |
| No. of cylinder x bore x stroke              | 2 x 52 mm x 36 mm                        |
| Weight                                       | 69 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) | 27.0 A            |
| Max. Power input                | 4,1 kW            |

#### Extent of delivery (Standard)

|                   |                                     |
|-------------------|-------------------------------------|
| Motor protection  | INT69VS (Standard), INT389 (Option) |
| Enclosure class   | IP54 (Standard), IP66 (Option)      |
| Vibration dampers | Standard                            |
| Oil charge        | 2,30 dm <sup>3</sup>                |

#### Available Options

|                  |               |
|------------------|---------------|
| Additional fan   | Option        |
| Crankcase heater | 70 W (Option) |

#### Sound measurement

|  |                   |
|--|-------------------|
| Sound power level (-10°C / 45°C)         | 69,0 dB(A) @ 50Hz |
| Sound power level (-35°C / 40°C)         | 74,0 dB(A) @ 50Hz |
| Sound pressure level @ 1m (-10°C / 45°C) | 61,0 dB(A) @ 50Hz |
| Sound pressure level @ 1m (-35°C / 40°C) | 66,0 dB(A) @ 50Hz |