



### Compressor Selection: Semi-hermetic Reciprocating Compressors

#### Input Values

|   |  |  |                             |
|---|--|--|-----------------------------|
| Compressor model<br>Mode  | (66H-50.2Y)<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

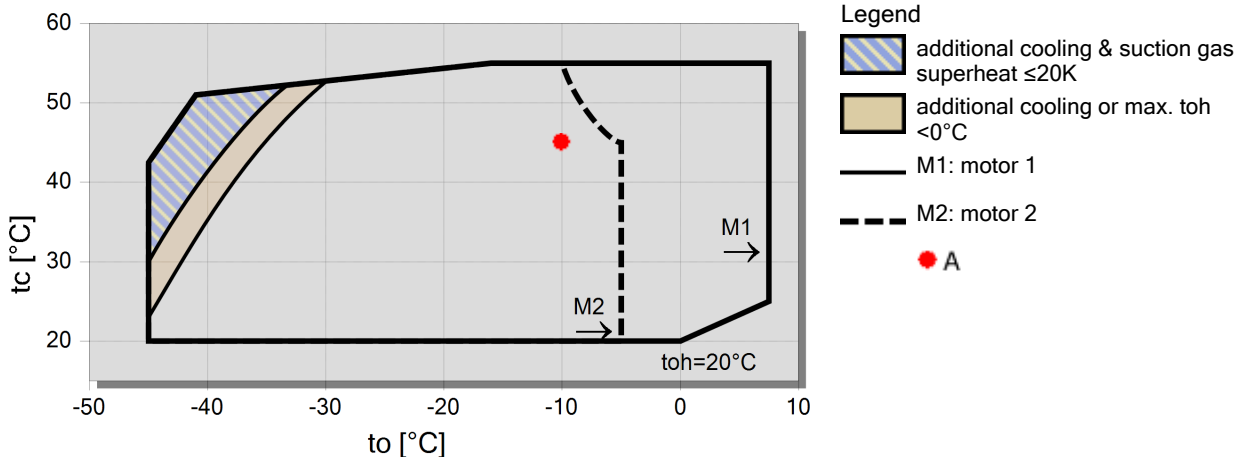
|  |  |   |  |
|--|--|---|--|
| Q [W]<br>Q* [W]<br>P [kW]<br>I [A]<br>Qc [W] | Cooling capacity<br>Cooling capacity *<br>Power input<br>Current<br>Condenser Capacity | COP [ - ]<br>COP* [ - ]<br>m [kg/h]<br>Op.<br>th [°C] | COP/EER<br>COP/EER *<br>Mass flow<br>Operating mode<br>Discharge gas temp. w/o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

| tc   | to         | -5°C     | -10°C    | -15°C    | -20°C    | -25°C    | -30°C    | -35°C    | -40°C    |
|------|------------|----------|----------|----------|----------|----------|----------|----------|----------|
| 30°C | Q [W]      | 175885   | 145106   | 118511   | 95624    | 76029    | 59356    | 45275    | 33482    |
|      | Q* [W]     | 175885   | 145106   | 118511   | 95624    | 76029    | 59356    | 45275    | 33482    |
|      | P [kW]     | 47,0     | 44,3     | 41,2     | 37,7     | 33,9     | 29,9     | 25,8     | 21,6     |
|      | I [A]      | 79,4     | 75,2     | 70,4     | 65,1     | 59,6     | 53,9     | 48,3     | 43,1     |
|      | Qc [W]     | 222885   | 189405   | 159672   | 133286   | 109911   | 89254    | 71062    | 55110    |
|      | COP [ - ]  | 3,74     | 3,28     | 2,88     | 2,54     | 2,24     | 1,99     | 1,76     | 1,55     |
|      | COP* [ - ] | 3,74     | 3,28     | 2,88     | 2,54     | 2,24     | 1,99     | 1,76     | 1,55     |
|      | m [kg/h]   | 4418     | 3609     | 2923     | 2342     | 1851     | 1438     | 1092     | 805      |
|      | Op.        | Standard | Standard | Standard | Standard | Standard | Standard | Standard | Standard |
|      | th [°C]    | 70,7     | 77,4     | 84,5     | 92,1     | 100,2    | 109,1    | 119,0    | 130,1    |
| 40°C | Q [W]      | 149329   | 123125   | 100391   | 80750    | 63865    | 49437    | 37191    | 26876    |
|      | Q* [W]     | 149329   | 123125   | 100391   | 80750    | 63865    | 49437    | 37191    | 26876    |
|      | P [kW]     | 54,4     | 50,4     | 46,0     | 41,4     | 36,6     | 31,7     | 26,7     | 21,8     |
|      | I [A]      | 91,1     | 84,7     | 77,9     | 70,7     | 63,5     | 56,4     | 49,6     | 43,3     |
|      | Qc [W]     | 203744   | 173499   | 146392   | 122120   | 100427   | 81089    | 63909    | 48713    |
|      | COP [ - ]  | 2,74     | 2,44     | 2,18     | 1,95     | 1,75     | 1,56     | 1,39     | 1,23     |
|      | COP* [ - ] | 2,74     | 2,44     | 2,18     | 1,95     | 1,75     | 1,56     | 1,39     | 1,23     |
|      | m [kg/h]   | 4227     | 3447     | 2784     | 2222     | 1746     | 1344     | 1006     | 724      |
|      | Op.        | Standard | Standard | Standard | Standard | Standard | Standard | Standard | Standard |
|      | th [°C]    | 82,4     | 89,1     | 96,3     | 103,9    | 112,2    | 121,2    | 131,4    | 0        |
| 50°C | Q [W]      | --       | 101028   | 82269    | 65984    | 51919    | 39840    | 29530    | 20790    |
|      | Q* [W]     | --       | 101028   | 82269    | 65984    | 51919    | 39840    | 29530    | 20790    |
|      | P [kW]     | --       | 55,6     | 50,0     | 44,4     | 38,6     | 32,9     | 27,2     | 21,7     |
|      | I [A]      | --       | 92,9     | 84,2     | 75,3     | 66,6     | 58,1     | 50,2     | 43,1     |
|      | Qc [W]     | --       | 156600   | 132319   | 110356   | 90536    | 72701    | 56712    | 42447    |
|      | COP [ - ]  | --       | 1,82     | 1,64     | 1,49     | 1,34     | 1,21     | 1,09     | 0,96     |
|      | COP* [ - ] | --       | 1,82     | 1,64     | 1,49     | 1,34     | 1,21     | 1,09     | 0,96     |
|      | m [kg/h]   | --       | 3271     | 2635     | 2094     | 1635     | 1247     | 919      | 644      |
|      | Op.        | --       | Standard | Standard | Standard | Standard | Standard | Standard | Standard |
|      | th [°C]    | --       | 101,1    | 108,3    | 116,0    | 124,3    | 133,5    | 0        | 0        |

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

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

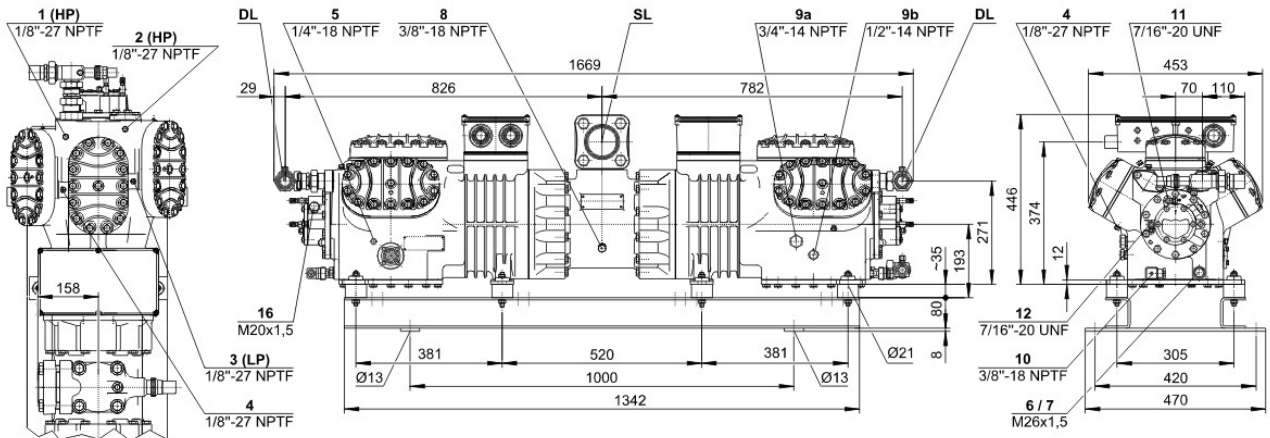
#### Application Limits 100%





## Technical Data: (66H-50.2Y)

### Dimensions and Connections



### Technical Data

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|  |  |
|--|--|
| Displacement (1450 RPM 50Hz)                 | 221,0 m <sup>3</sup> /h                  |
| Displacement (1750 RPM 60Hz)                 | 266,7 m <sup>3</sup> /h                  |
| No. of cylinder x bore x stroke              | 6+6 x 70 mm x 55 mm                      |
| Weight                                       | 483 kg                                   |
| Max. pressure (LP/HP)                        | 19 / 28 bar                              |
| Connection suction line                      | 76 mm - 3 1/8"                           |
| Connection discharge line                    | 2x35 mm - 1 3/8"                         |
| Connection cooling water                     | R 3/4"                                   |
| 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)                          |

#### Motor data

|                                 |                            |
|---------------------------------|----------------------------|
| Motor voltage (more on request) | 380-420V PW-3-50Hz         |
| Max operating current           | 2x45.0 A                   |
| Winding ratio                   | 50/50                      |
| Starting current (Rotor locked) | 2x116.0 A Y / 2x193.0 A YY |
| Max. Power input                | 2 x 28,9 kW                |

#### Extent of delivery (Standard)

|                   |                                |
|-------------------|--------------------------------|
| Motor protection  | SE-B2                          |
| Enclosure class   | IP54 (Standard), IP66 (Option) |
| Vibration dampers | Standard                       |
| Oil charge        | 9,50 dm <sup>3</sup>           |

#### Available Options

|                                  |                                   |
|----------------------------------|-----------------------------------|
| Discharge gas temperature sensor | Option                            |
| Start unloading                  | Option                            |
| Capacity control                 | 100-83-66-33-17% (Option)         |
| Additional fan                   | Option                            |
| Water-cooled cylinder heads      | Option                            |
| CIC System                       | Option                            |
| Oil service valve                | Option                            |
| Crankcase heater                 | 2 x 140 W (Option)                |
| Oil pressure monitoring          | MP54 (Option), Delta-PII (Option) |

#### Sound measurement

|  |                   |
|--|-------------------|
| Sound power level (-10°C / 45°C)         | 85,0 dB(A) @ 50Hz |
| Sound power level (-35°C / 40°C)         | 93,5 dB(A) @ 50Hz |
| Sound pressure level @ 1m (-10°C / 45°C) | 77,0 dB(A) @ 50Hz |
| Sound pressure level @ 1m (-35°C / 40°C) | 85,5 dB(A) @ 50Hz |