



## Compressor Selection: Semi-hermetic Screw Compressors HS

### Input Values

|                           |                 |                          |             |
|---------------------------|-----------------|--------------------------|-------------|
| Compressor model          | HSK7461-80      | Operating mode           | Standard    |
| Refrigerant               | R404A           | Power supply             | 400V-3-50Hz |
| Reference temperature     | Dew point temp. | Useful superheat         | 100%        |
| Liq. subc. (in condenser) | 0 K             | Additional cooling       | Automatic   |
| Suct. gas superheat       | 10,00 K         | Max. discharge gas temp. | 80,0 °C     |

### Result

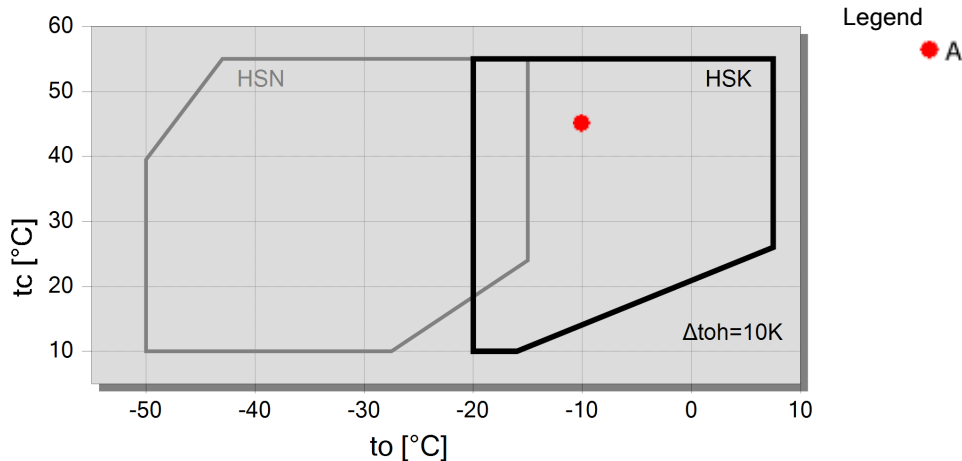
|            |                  |             |                           |
|------------|------------------|-------------|---------------------------|
| Q [W]      | Cooling capacity | mHP [kg/h]  | Mass flow HP              |
| P [kW]     | Power input      | Qac [kW]    | Additional cooling        |
| I [A]      | Current          | tcu [°C]    | Liquid temp.              |
| COP [-]    | COP/EER          | pm [bar(a)] | ECO pressure              |
| mLP [kg/h] | Mass flow LP     | Qsc [kW]    | sub cooler capacity (ECO) |

| tc   | to          | 5°C    | 0°C    | -5°C   | -10°C  | -15°C  | -20°C  | -25°C | -30°C |
|------|-------------|--------|--------|--------|--------|--------|--------|-------|-------|
| 30°C | Q [W]       | 276426 | 230444 | 190728 | 156569 | 127328 | 102436 | --    | --    |
|      | P [kW]      | 47,4   | 46,5   | 45,9   | 45,4   | 44,9   | 44,3   | --    | --    |
|      | I [A]       | 76,8   | 75,5   | 74,6   | 73,8   | 73,1   | 72,2   | --    | --    |
|      | COP [-]     | 5,83   | 4,95   | 4,15   | 3,45   | 2,84   | 2,31   | --    | --    |
|      | mLP [kg/h]  | 7392   | 6291   | 5320   | 4468   | 3720   | 3068   | --    | --    |
|      | mHP [kg/h]  | 7392   | 6291   | 5320   | 4468   | 3720   | 3068   | --    | --    |
|      | Qac [kW]    | --     | --     | --     | --     | --     | --     | --    | --    |
|      | tcu [°C]    | 29,6   | 29,6   | 29,6   | 29,6   | 29,6   | 29,6   | --    | --    |
|      | pm [bar(a)] | --     | --     | --     | --     | --     | --     | --    | --    |
|      | Qsc [kW]    | --     | --     | --     | --     | --     | --     | --    | --    |
| 40°C | Q [W]       | 236732 | 196600 | 162045 | 132431 | 107182 | 85786  | --    | --    |
|      | P [kW]      | 58,3   | 57,7   | 57,1   | 56,6   | 55,9   | 55,2   | --    | --    |
|      | I [A]       | 93,1   | 92,2   | 91,3   | 90,5   | 89,5   | 88,4   | --    | --    |
|      | COP [-]     | 4,06   | 3,41   | 2,84   | 2,34   | 1,92   | 1,55   | --    | --    |
|      | mLP [kg/h]  | 7192   | 6115   | 5166   | 4333   | 3603   | 2967   | --    | --    |
|      | mHP [kg/h]  | 7192   | 6115   | 5166   | 4333   | 3603   | 2967   | --    | --    |
|      | Qac [kW]    | --     | --     | --     | --     | --     | --     | --    | --    |
|      | tcu [°C]    | 39,6   | 39,6   | 39,6   | 39,6   | 39,6   | 39,6   | --    | --    |
|      | pm [bar(a)] | --     | --     | --     | --     | --     | --     | --    | --    |
|      | Qsc [kW]    | --     | --     | --     | --     | --     | --     | --    | --    |
| 50°C | Q [W]       | 194482 | 160443 | 131235 | 106299 | 85131  | 67279  | --    | --    |
|      | P [kW]      | 72,2   | 71,8   | 71,2   | 70,6   | 69,8   | 69,0   | --    | --    |
|      | I [A]       | 113,9  | 113,3  | 112,4  | 111,4  | 110,3  | 109,1  | --    | --    |
|      | COP [-]     | 2,69   | 2,23   | 1,84   | 1,51   | 1,22   | 0,97   | --    | --    |
|      | mLP [kg/h]  | 6926   | 5873   | 4946   | 4131   | 3417   | 2794   | --    | --    |
|      | mHP [kg/h]  | 6926   | 5873   | 4946   | 4131   | 3417   | 2794   | --    | --    |
|      | Qac [kW]    | --     | --     | --     | 8,34   | 15,55  | 22,4   | --    | --    |
|      | tcu [°C]    | 49,7   | 49,7   | 49,7   | 49,7   | 49,7   | 49,7   | --    | --    |
|      | pm [bar(a)] | --     | --     | --     | --     | --     | --     | --    | --    |
|      | Qsc [kW]    | --     | --     | --     | --     | --     | --     | --    | --    |

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

\*According to EN12900 (10K suction gas superheat, 0K liquid subcooling)

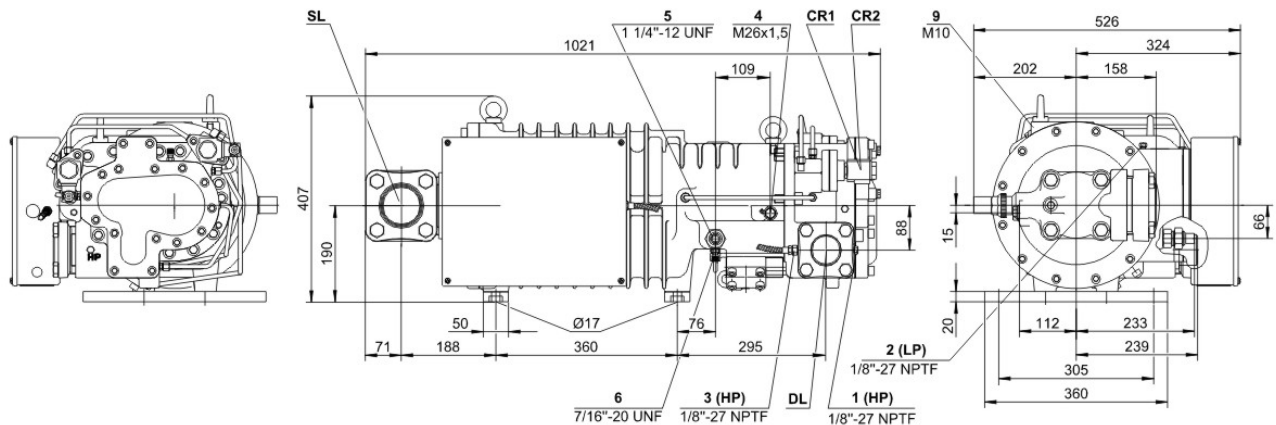
### Application Limits Standard





## Technical Data: HSK7461-80

### Dimensions and Connections



### Technical Data

#### Technical Data

|   |                       |
|---|-----------------------|
| Displacement (2900 RPM 50 Hz)             | 220 m <sup>3</sup> /h |
| Displacement (3500 RPM 60 Hz)             | 266 m <sup>3</sup> /h |
| Weight                                    | 314 kg                |
| Max. pressure (LP/HP)                     | 19 / 28 bar           |
| Connection suction line                   | 76 mm - 3 1/8"        |
| Connection discharge line                 | 54 mm - 2 1/8"        |
| Adapter/shut-off valve for ECO            | 22 mm - 7/8" (Option) |
| Adapter for liquid injection              | 16 mm - 5/8" (Option) |
| Oil type R22                              | B150SH, B100 (Option) |
| Oil type                                  | BSE170 (Option)       |
| R134a/R404A/R507A/R407A/R407F/R448A/R449A |                       |

#### Motor data

|                                 |                        |
|---------------------------------|------------------------|
| Motor voltage (more on request) | 380-415V PW-3-50Hz     |
| Max operating current           | 144.0 A                |
| Starting current (Rotor locked) | 350.0 A D / 585.0 A DD |
| Max. Power input                | 85,0 kW                |

#### Extent of delivery (Standard)

|                                  |   |
|----------------------------------|---|
| Discharge gas temperature sensor | Standard  |
| Start unloading                  | Standard  |
| Oil flow control                 | SE-B2 (Standard)                                |
| Motor protection                 | SE-E1 (Standard), SE-E3 (Standard for 660-690V) |
| Suction shut-off valve           | Standard  |
| Capacity control                 | 100-75-50% (Standard)                           |
| Enclosure class                  | IP54  |

#### Available Options

|                                    |                |
|------------------------------------|----------------|
| Discharge shut-off valve           | Option         |
| ECO connection with shut-off valve | Option         |
| Motor protection                   | SE-C1 (Option) |

#### Sound measurement

|  |            |
|--|------------|
| Sound power level (-10°C / 45°C)         | 86,5 dB(A) |
| Sound pressure level @ 1m (-10°C / 45°C) | 78,5 dB(A) |