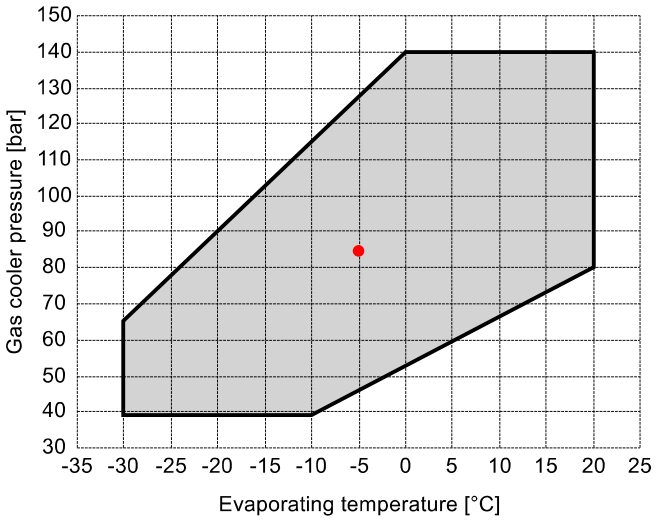
## Input data

| | | |
|---|---|---|
| Refrigerant | | R744 |
| Reference temperature | | Dew point temperature |
| Calculation mode | | Refrigeration / Air Cond. |
| Operating mode | | Transcritical |
| Power supply | | 400/3/50 |
| | | |
| Gas cooler outlet temperature | °C | 34 |
| Gas cooler pressure | bar | 85 |
| Evaporating temperature | °C | -5 |
| Evaporating pressure | bar | 30.46 |
| Suction gas temperature | °C | 20 |
| Evaporator superheating | K | 5 |




## Output data

| **Compressor :** | | **S40-26TK** |
|---|---|---|
| Number of compressors : | | FSx1 |
| Refrigerating capacity | kW | 64.818 |
| | kW | - |
| Evaporator capacity | kW | 54.502 |
| Power input | W | 29737 |
| Gas cooler capacity | kW | 94.555 |
| Current | A | 52.96 |
| COP/EER | W/W | 1.83 |
| Mass flow | kg/h | 1398 |
| Operating frequency | Hz | 50 |
| Connection | - | PWS |
| Operating mode(Trans.) | - | 100% |
| Discharge temperature | °C | 121.49 |
| Ratio (%) | % | 100.0% |
| Note | - | |
| | | |
| Oil flow | l/min | - |
| Heat Exchanged (oil Cooler) | kW | - |
| Oil Temp. at Oil Cooler Outlet | °C | - |
| Certified by | - | Frascold |

## Note:

- Oil temperature too high (> 70 °C)! Decrease superheating.

## Certified by:

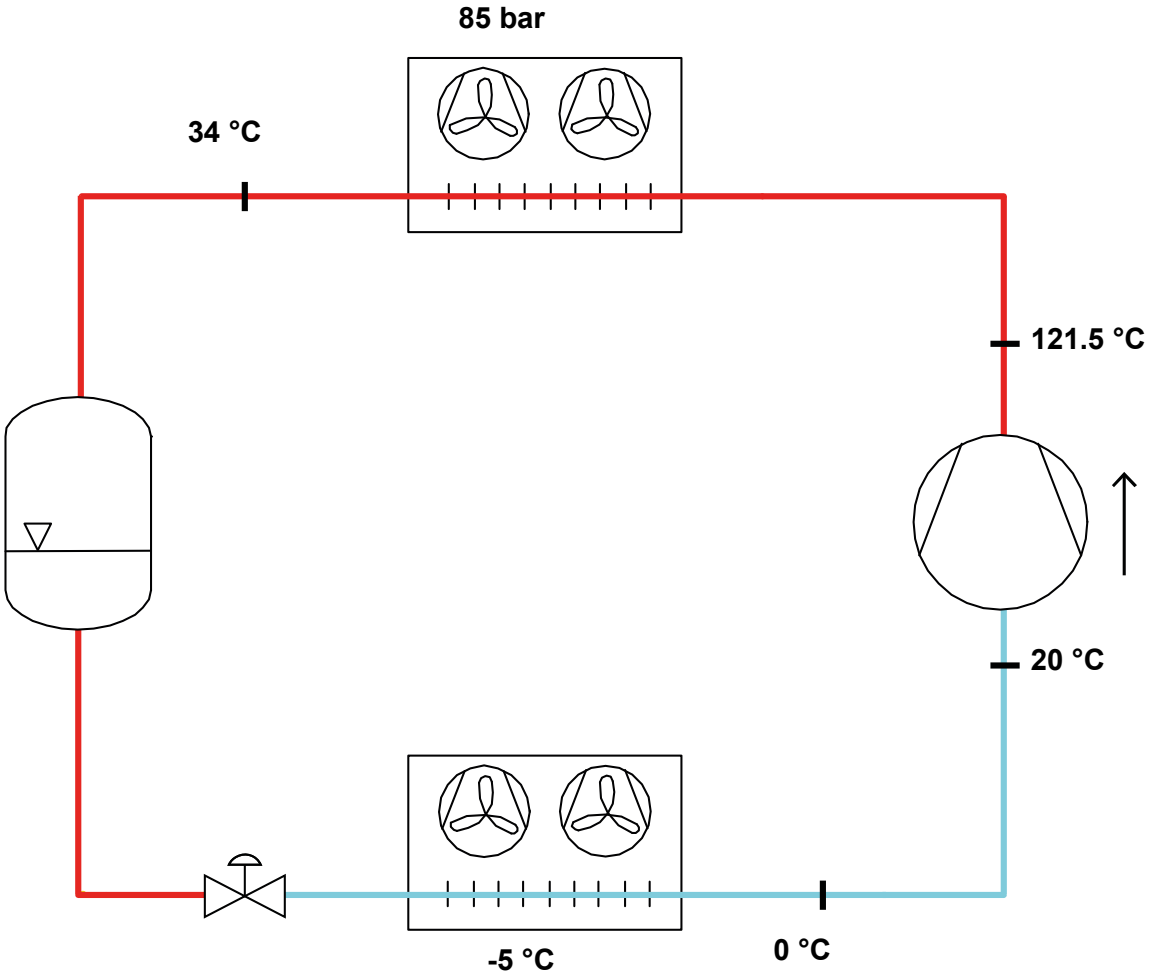
*- Frascold tentative data*

## Legend:

*ref: At conditions according to EN12900
- Suction gas superheating = 10 K
- Liquid subcooling = 0 K

*All data subject to change without notice*

## P&I Diagram:



## Model: S40-26TK

Refrigerant: R744

Power supply: 400/3/50 PWS

## Technical data:

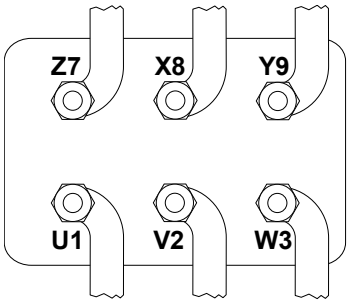
| | |
|---|---|
| Displacement | 25.28 m³/h |
| Nominal compressor speed | 1450 rpm |
| Motor voltage | 400 V |
| Nominal operating frequency | 50 Hz |
| Maximum allowed operating current (MRA) | 81.6 A |
| Locked rotor current (LRA) | 159 A |
| Locked rotor current (LRA), DOL | 273 A |
| Number of pistons | 4 |
| Net weight | 220 kg |
| Lubricant | FRASCOLD POE85 CO2 |
| Oil charge | 3.3 l |
| Maximum static pressure LP | 80 bar |
| Maximum operating pressure HP | 140 bar |

## Sound level:

| | |
|---|---|
| Sound power level 5°C/100bar R744 @50Hz | 79.5 dB(A) |
| Sound pressure (*) - Distance: 1 m | 71.5 dB(A) |

*half sphere model

## Motor connections:



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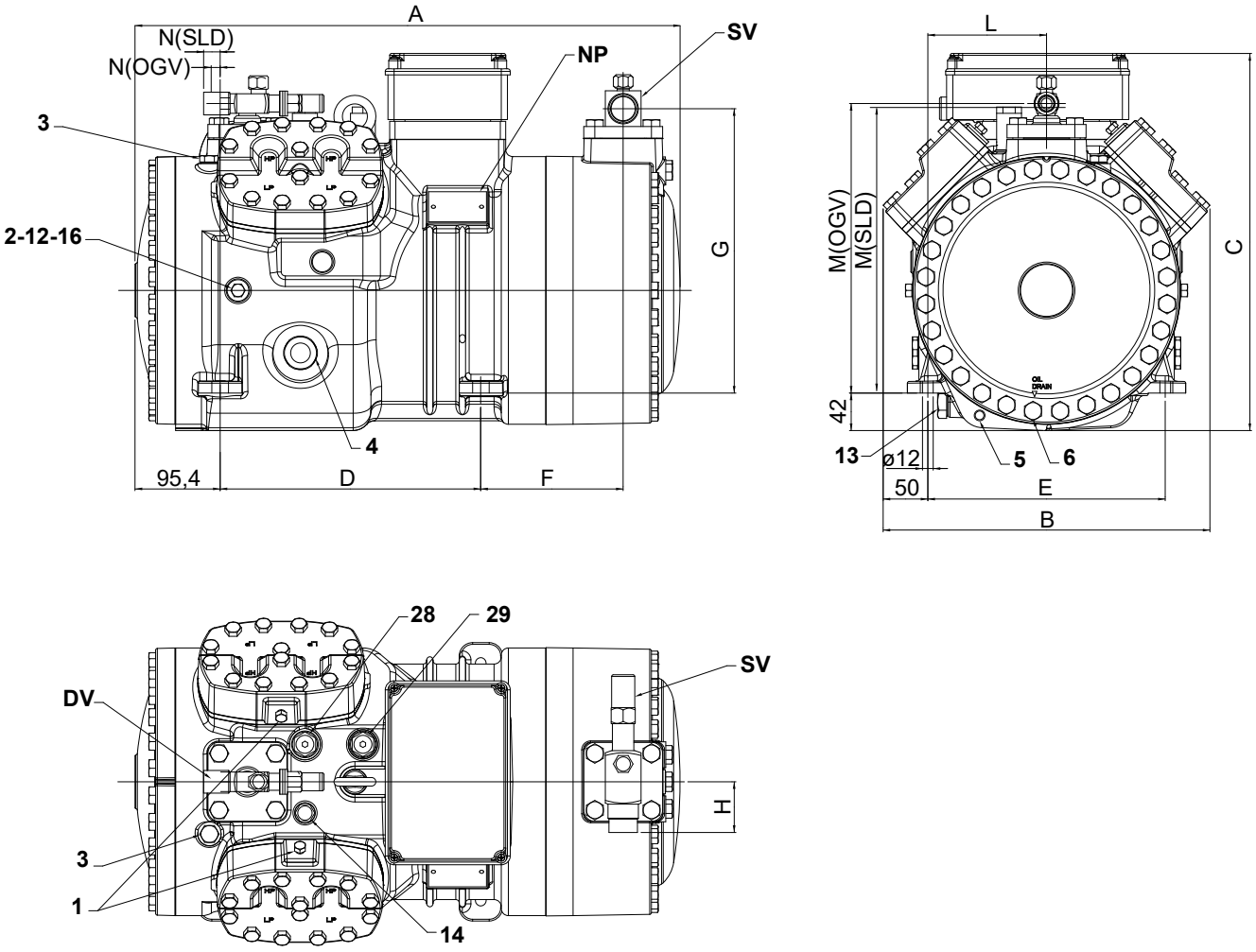
## Model: S40-26TK

Refrigerant: R744

Power supply: 400/3/50 PWS

## Dimensions:




## Legend:

| | | | |
|---|---|---|---|
| SV: Suction Valve | 1 1/8" in - 28.6 mm | N(SLD): Discharge valve | 34.5 |
| DV(SLD): Discharge valve | 3/4" in - 19 mm | 1: High pressure connection | 1/8" NPT |
| DV(OGV): Discharge valve | 5/8" in - 16 mm | 2: Low pressure connection | 1/4" NPT |
| A: Length | 651 mm | 3: Oil charge plug | 1/4" GAS |
| B: Width | 366 mm | 4: Oil level sight glass | 1 1/8" UNEF |
| C: Height | 423 mm | 5: Crankcase heater seat | - |
| D: Base mounting | 292 mm | 6: Oil drain plug | M12 |
| E: Base mounting | 266 mm | 12: Oil return plug | 1/4" NPT |
| F: Suction Valve | 200 mm | 13: Magnetic plug | 1/2" GAS |
| G: Suction Valve | 319 mm | 14: Max discharge temperature sensor connection | 1/8" NPT |
| H: Suction Valve | 55 mm | 16: Crankcase pressure plug | 1/4" NPT |
| L: Discharge valve | 133 mm | 28: High pressure side relief valve | - |
| M(OGV): Discharge valve | 324 | 29: Low pressure side relief valve | - |
| M(SLD): Discharge valve | 316 | NP: Nameplate | |
| N(OGV): Discharge valve | 10 | | |

*All data subject to change without notice*

## Model: S40-26TK

Refrigerant: R744

Power supply: 400/3/50 PWS

## Polynomial coefficients according to EN12900 for S40-26TK:

*S = Tevap ; D = pGasCool

| | |
|---|---|
| Reference conditions | |
| Refrigerant | R744 |
| Ambient temperature | 35 °C |
| Suction gas superheating | 10 K |
| Frequency | 50 Hz |

| | Mass flow [kg/s] | Power input [W] |
|---|---|---|
| **C1** | 7.032689E-001 | -1.585267E+004 |
| **C2** | 1.733557E-002 | -1.039453E+003 |
| **C3** | -2.882198E-003 | 6.971484E+002 |
| **C4** | 2.632362E-004 | -1.312888E+001 |
| **C5** | 8.590507E-005 | 1.419109E+001 |
| **C6** | 1.395703E-005 | -1.701121E+000 |
| **C7** | 3.004041E-006 | 5.773188E-005 |
| **C8** | 4.986201E-007 | 3.950278E-002 |
| **C9** | -7.767819E-007 | -3.267910E-002 |
| **C10** | -5.939930E-008 | -2.410095E-003 |

$Y = C1 + C2*S + C3*D + C4*S^2 + C5*S*D + C6*D^2 + C7*S^3 + C8*D*S^2 + C9*S*D^2 + C10*D^3$



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