

Subject:

Performance data

Application: Refrigeration & AC

| | | | |
|------------------------------------|------------------|--------------------------------------|-----------------------|
| Refrigerant | R22 | Compressor refrigeration capacity | 60.60 kW |
| Reference temperature | Dew point | Evaporator refrigeration capacity | 60.60 kW |
| Speed | 1450 1/min | Drive power | 17.70 kW |
| Evaporating temperature | 5.0 °C | Torque | 117.00 Nm |
| <i>Evaporating pressure (abs.)</i> | <i>5.84 bar</i> | Coefficient of performance (COP/EER) | 3.42 |
| Condensing temperature | 50.0 °C | Condensing capacity | 78.40 kW |
| <i>Condensing pressure (abs.)</i> | <i>19.42 bar</i> | Mass flow | 0.390 kg/s |
| Suction gas temperature | 20 °C | Discharge end temperature | 98.5 °C ¹⁾ |
| Subcooling (outside cond.) | 0 K | | |
| Usable superheat | 100% | | |

1) The stated value of the discharge end temperature is a mere calculated value. Additional cooling and heat dissipation are not considered. Deviations (particularly in deep freezing applications) from the real measured discharge temperature during operation are possible.

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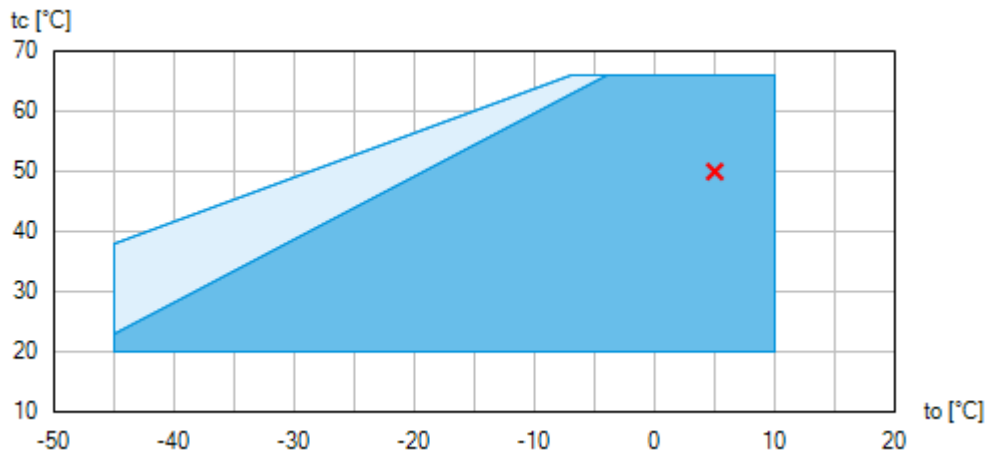
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Subject:

Operating limits



-  Unlimited application range
-  Supplementary cooling or reduced suction gas temperature ($\Delta t_{oh} < 20K$)

Compressor operation is possible within the limits shown on the diagrams of application. Please note the coloured areas. Compressor application limits should not be chosen for design purposes or continuous operation. Axis values refer to dew point (saturated vapour line).

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Subject:

Technical data

| | |
|--|---------------------------------|
| Number of cylinders / Bore / Stroke | 4 / 70 mm / 55 mm |
| Displacement (1450/1740 1/min) | 73,70 / 88,40 m ³ /h |
| Mass moment of inertia | 0,0087 kgm ² |
| Weight | 85 kg |
| Permissible range of rotation speeds | 500 - 1800 1/min |
| Max. permissible pressure (LP/HP) ¹⁾ | 19 / 28 bar |
| Connection suction line SV | 35 (2x) mm - 1 3/8 " (2x) |
| Connection discharge line DV | 35 mm - 1 3/8 " |
| Lubrication | Oil pump |
| Oil type R134a, R404A, R407A/C/F, R448A, R449A, R450A, R513A | FUCHS Reniso Triton SE 55 |
| Oil type R22 | FUCHS Reniso SP 46 |
| Oil charge | 3,8 Ltr. |
| Oil sump heater | 230 V - 1 - 50/60 Hz, 80 W |
| Dimensions Length / Width / Height | 470 / 355 / 465 mm |

1) LP = Low pressure
HP = High pressure

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Subject:

Performance data table

Application: Refrigeration & AC
 Reference temperature: Dew point
 Speed: 1450 1/min
 Suction gas temperature: 20 °C
 Subcooling (outside cond.): 0 K

| tc [°C] | | to [°C] | | | | | | | | | |
|---------|--------|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | | 15.0 | 10.0 | 5.0 | 0.0 | -5.0 | -10.0 | -15.0 | -20.0 | -25.0 | -30.0 |
| 30.0 | Q [W] | | 87800 | 74200 | 62100 | 51600 | 42400 | 34500 | 27700 | 22000 | 17200 |
| | P [kW] | | 10.40 | 11.10 | 11.40 | 11.40 | 11.10 | 10.60 | 9.98 | 9.22 | 8.44 |
| 35.0 | Q [W] | | 84000 | 70900 | 59300 | 49100 | 40300 | 32700 | 26200 | 20700 | 16100 |
| | P [kW] | | 12.40 | 12.80 | 12.90 | 12.60 | 12.20 | 11.50 | 10.70 | 9.87 | 9.01 |
| 40.0 | Q [W] | | 80200 | 67500 | 56300 | 46600 | 38200 | 30900 | 24700 | 19500 | 15000 |
| | P [kW] | | 14.30 | 14.50 | 14.30 | 13.90 | 13.20 | 12.30 | 11.40 | 10.50 | 9.58 |
| 45.0 | Q [W] | | 76300 | 64100 | 53400 | 44100 | 36000 | 29100 | 23200 | 18200 | 14000 |
| | P [kW] | | 16.20 | 16.10 | 15.70 | 15.00 | 14.20 | 13.20 | 12.10 | 11.10 | 10.10 |
| 50.0 | Q [W] | | 72300 | 60600 | 50400 | 41500 | 33800 | 27200 | 21600 | 16900 | |
| | P [kW] | | 18.00 | 17.70 | 17.00 | 16.10 | 15.10 | 14.00 | 12.80 | 11.70 | |
| 55.0 | Q [W] | | 68300 | 57100 | 47400 | 38900 | 31600 | 25400 | 20100 | | |
| | P [kW] | | 19.80 | 19.20 | 18.30 | 17.20 | 16.00 | 14.70 | 13.50 | | |
| 60.0 | Q [W] | | 64300 | 53600 | 44400 | 36300 | 29400 | 23600 | | | |
| | P [kW] | | 21.50 | 20.70 | 19.50 | 18.30 | 16.90 | 15.50 | | | |
| 65.0 | Q [W] | | 60200 | 50100 | 41300 | 33700 | | | | | |
| | P [kW] | | 23.20 | 22.00 | 20.70 | 19.30 | | | | | |

Supplementary cooling or reduced suction gas temperature ($\Delta t_{oh} < 20K$)

- to Evaporating temperature
- tc Condensing temperature
- Q Compressor refrigeration capacity
- P Drive power

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Subject:

Scope of supply

Open piston compressor
with suction and pressure shutoff valves

Oil pump

Four cylinder, cylinder arrangement in V

Seat front bearing flange

Possibility of connection of oil level controllers ESK, AC+R or CARLY ¹⁾

Oil charge:

F: FUCHS Reniso SP 46

FX: FUCHS Reniso Triton SE 55

Sight glass

Pressure relief valve

Inert gas charge

Accessories

Start unloader 230 V - 1 - 50/60 Hz, less check valve, including thermal protection thermostat (bimetal tracer)

Capacity regulator 230 V - 1 - 50/60 Hz, IP65

1 capacity regulator = 50% residual capacity

Flywheel:

Outer diameter: 230 [mm]

V-belt profile: SPA DIN 7753

Number of grooves: 4

Weight: 16.9 [kg] ²⁾

Shaft coupling for direct drive (enclosure) ³⁾

Oil sump heater 230 V - 1 - 50/60 Hz, 80 W

Oil pressure safety switch MP54 230 V - 1 - 50/60 Hz, IP20 ²⁾

Thermal protection thermostat (bimetal tracer)

Water-cooled cylinder covers

-
- 1) Only with additional adapter possible
- 2) Enclosure
- 3) Please state motor \varnothing and feather key groove dimensions when ordering shafts

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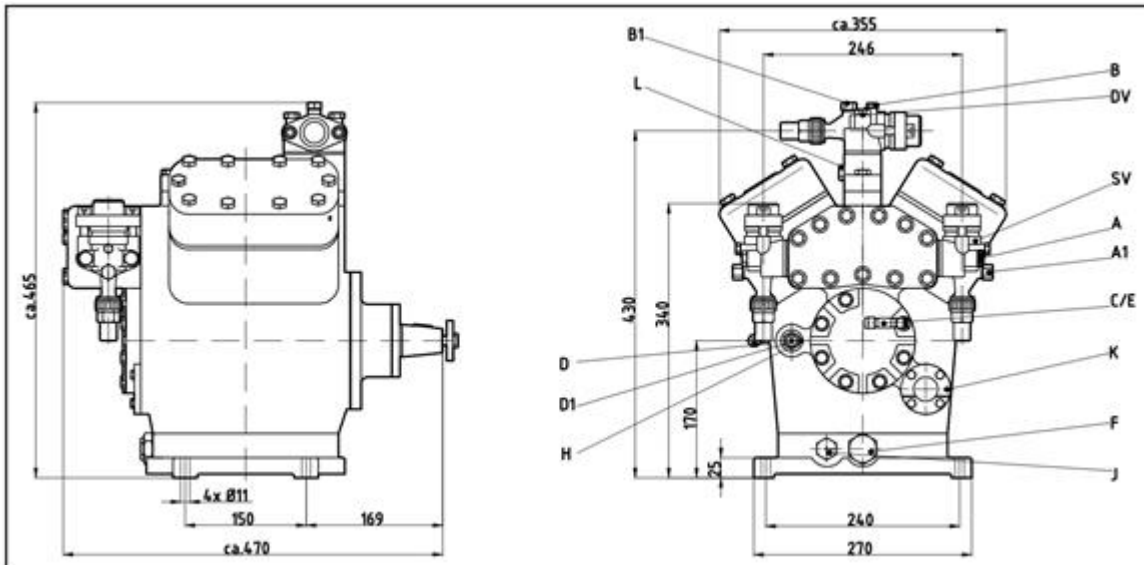
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Subject:

Dimensions and connections



| | | |
|----|--|----------------------|
| SV | Suction line valve, tube \varnothing ¹⁾ | 35 (2x) - 1 3/8 (2x) |
| DV | Discharge line valve, tube \varnothing ¹⁾ | 35 - 1 3/8 |
| A | Connection suction side, not lockable | 1/8 " NPTF |
| A1 | Connection suction side, lockable | 7/16 " UNF |
| B | Connection discharge side, not lockable | 1/8 " NPTF |
| B1 | Connection discharge side, lockable | 7/16 " UNF |
| C | Connection oil pressure safety switch OIL | 7/16 " UNF |
| D | Connection oil pressure safety switch LP | 7/16 " UNF |
| D1 | Connection oil return from oil separator | 1/8 " NPTF |
| E | Connection oil pressure gauge | 7/16 " UNF |
| F | Oil drain plug | M 22 x 1.5 |
| H | Oil charge plug | M 22 x 1.5 |
| J1 | Oil sump heater | M 22 x 1.5 |
| K | Sight glass | - |
| L | Connection thermal protection thermostat | 1/8 " NPTF |

1) Brazing connection

F5
Refrigerant: R22

GEA Commercial Compressors



Subject:

Product photo



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