

Subject:

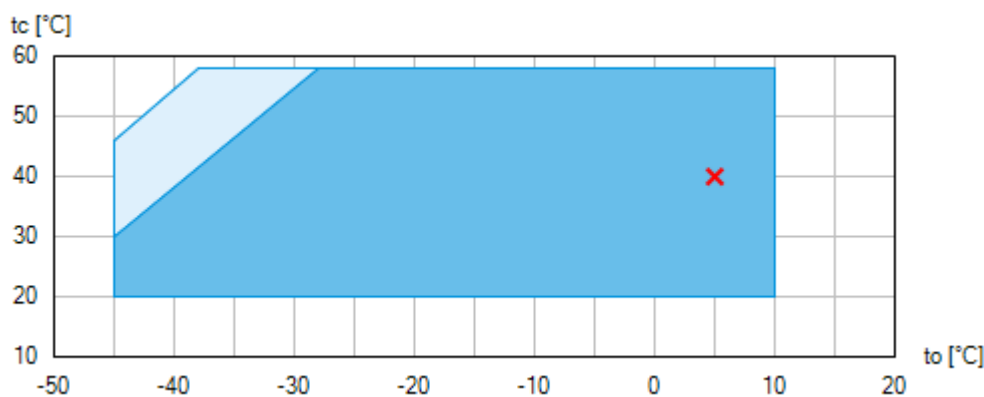
Performance data

Application: Refrigeration & AC

Refrigerant	R404A, R507	Compressor refrigeration capacity	172.00 kW
Reference temperature	Dew point	Evaporator refrigeration capacity	172.00 kW
Speed	1450 1/min	Drive power	40.20 kW
Evaporating temperature	5.0 °C	Torque	265.00 Nm
Evaporating pressure (abs.)	7.06 bar	Coefficient of performance (COP/EER)	4.26
Condensing temperature	40.0 °C	Condensing capacity	212.00 kW
Condensing pressure (abs.)	18.17 bar	Mass flow	1.385 kg/s
Suction gas temperature	20 °C	Discharge end temperature	64.4 °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.

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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Technical data

Number of cylinders / Bore / Stroke	6 / 80 mm / 68 mm
Displacement (1450/1740 1/min)	178,40 / 214,10 m ³ /h
Mass moment of inertia	0,0390 kgm ²
Weight	175 kg
Permissible range of rotation speeds	700 - 1800 1/min
Max. permissible pressure (LP/HP) ¹⁾	19 / 28 bar
Connection suction line SV	54 mm - 2 1/8 "
Connection discharge line DV	42 mm - 1 5/8 "
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	5,0 Ltr.
Oil sump heater	230 V - 1 - 50/60 Hz, 140 W
Oil service valve	7/16" UNF
Dimensions Length / Width / Height	580 / 515 / 535 mm

1) LP = Low pressure
HP = High pressure

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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]		232000	198000	168000	140000	116000	93100	73800	57100	43000
	P [kW]		31.30	32.50	32.70	31.90	30.50	28.40	25.80	22.90	19.80
35.0	Q [W]		217000	185000	156000	130000	106000	85200	67100	51500	38300
	P [kW]		36.20	36.50	35.80	34.40	32.30	29.60	26.60	23.30	19.90
40.0	Q [W]		202000	172000	144000	119000	96700	77300	60300	45900	33800
	P [kW]		40.70	40.20	38.70	36.60	33.80	30.70	27.20	23.60	20.00
45.0	Q [W]		186000	158000	132000	109000	87400	69300	53600	40400	29500
	P [kW]		44.90	43.50	41.40	38.50	35.20	31.60	27.70	23.80	20.00
50.0	Q [W]		171000	144000	119000	97200	78000	61300	47000	35000	25400
	P [kW]		48.80	46.60	43.70	40.30	36.50	32.40	28.10	23.90	19.90
55.0	Q [W]		155000	129000	107000	86200	68500	53300	40400	29800	21400
	P [kW]		52.40	49.40	45.90	41.90	37.50	33.00	28.50	24.00	19.80



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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Scope of supply

Open piston compressor
with suction and pressure shutoff valves

Oil pump

Six cylinder, cylinder arrangement in W

Seat front bearing flange

Shaft seal with piece of tube for controlled oil collection

Oil pump cover with screw-in option for oil differential pressure sensor DELTA-P II

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

Capacity regulator 230 V - 1 - 50/60 Hz, IP65
1-2 capacity regulator = 66/33% residual capacity

Flywheel:

Outer diameter: 322,5 [mm]

V-belt profile: SPB DIN 7753

Number of grooves: 5

Weight: 20,0 [kg] ²⁾

Shaft coupling for direct drive (enclosure) ³⁾

Oil sump heater 230 V - 1 - 50/60 Hz, 140 W

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

Oil differential pressure sensor DELTA-P II 220-240 V - 1 - 50/60 Hz ²⁾

Oil service valve

Thermal protection thermostat (bimetal tracer)

Two additional sight glasses (both sides)

Elevated base plate: additional 2.5 Ltr. oil charge and 8 kg additional weight

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- 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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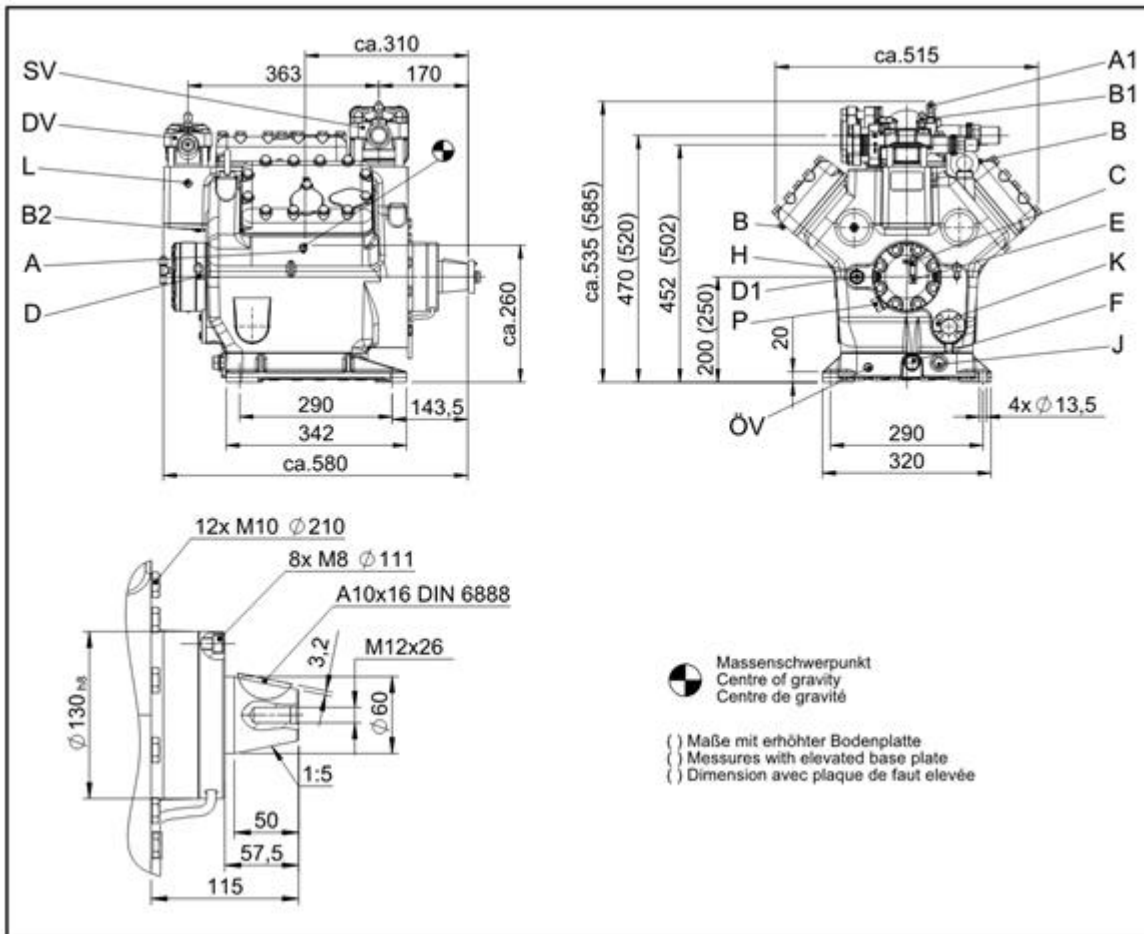
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Dimensions and connections



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SV	Suction line valve, tube \varnothing ¹⁾	54 mm - 2 1/8 "
DV	Discharge line valve, tube \varnothing ¹⁾	42 mm - 1 5/8 "
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
B2	Connection discharge side, not 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	5/8 " UNF
E	Connection oil pressure gauge	7/16 " UNF
F	Oil drain plug	M 26 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
ÖV	Connection oil service valve	7/16 " UNF
P	Connection oil differential pressure sensor	M 20 x 1.5

1) Brazing connection

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Product photo



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