

HGX12P/90-4 S

Engine: 220-240V Δ / 380-420V Y -3- 50Hz

Refrigerant: R404A, R507

GEA Commercial Compressors



Subject:

Performance data

Application: Refrigeration & AC

Refrigerant	R404A, R507	Compressor refrigeration capacity	3.88 kW
Reference temperature	Dew point	Evaporator refrigeration capacity	3.88 kW
Power supply	50 Hz, 400 V	Power consumption	2.02 kW
Supply frequency	50 Hz	Current draw (400 V)	3.98 A
Evaporating temperature	-10.0 °C	Coefficient of performance (COP/EER)	1.91
<i>Evaporating pressure (abs.)</i>	<i>4.34 bar</i>	Condensing capacity	5.91 kW
Condensing temperature	45.0 °C	Mass flow	0.032 kg/s
<i>Condensing pressure (abs.)</i>	<i>20.47 bar</i>	Discharge end temperature	100.3 °C ¹⁾
Suction gas temperature	20 °C		
Subcooling (outside cond.)	0 K		
Usable superheat	100%		

Certifications



ASERCOM certified performance data

The performance data of compressors bearing this label has been certified to the strict requirements of ASERCOM.

ASERCOM is the Association of European Refrigeration Compressors and Controls Manufacturers. Information about the Association and the constantly updated overview of certified GEA compressors can be found at www.asercom.org.

This certification is based on EN 12900. This signifies: 20 °C suction gas temperature without liquid subcooling at 50 Hz power supply frequency.

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- 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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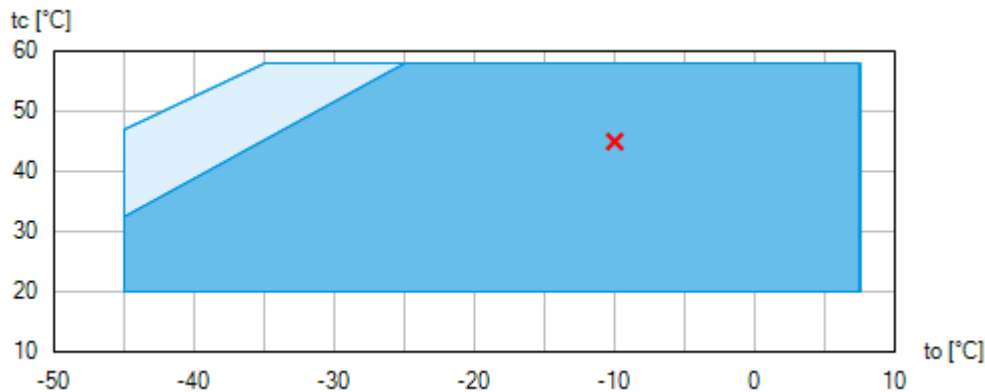
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Subject:

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	2 / 41,5 mm / 34 mm
Displacement 50/60 Hz (1450/1740 ¹ /min)	8,00 / 9,60 m ³ /h
Voltage ¹⁾	220-240V Δ / 380-420V Y -3- 50Hz
	265-290V Δ / 440-480V Y -3- 60Hz
Max. working current ²⁾	9.1 / 5.3 A
Max. power consumption ²⁾	3.0 kW
Starting current (rotor blocked) ²⁾	45.0 / 26.0 A
Motor protection	INT69 G
Protection terminal box	IP 66
Weight	49 kg
Max. permissible pressure (LP/HP) ³⁾	19 / 28 bar
Connection suction line SV	16 mm - 5/8 "
Connection discharge line DV	12 mm - 1/2 "
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	0,8 Ltr.
Dimensions Length / Width / Height	412 / 223 / 280 mm

1) Tolerance ($\pm 10\%$) relates to the mean value of the voltage range. Other voltages and current types on request

All data are based on voltage rms values

2) - The stated value for the max. power consumption is valid for the adjusted power supply.

- Starting current (rotor blocked):

- Part winding (PW) motors: Winding 1 / Winding 1+2
- Delta/Star (Δ/Y) motors: Δ / Y

- Take account of the max. operating current / max. power consumption for designing fuses, supply lines and safety devices. Fuse: Consumption category AC3.

3) LP = Low pressure
HP = High pressure

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Subject:

Performance data table

Application: Refrigeration & AC
Reference temperature: Dew point
Supply frequency: 50 Hz
Voltage: 400 V
Suction gas temperature: 20 °C
Subcooling (outside cond.): 0 K

tc [°C]		to [°C]									
		0.0	-5.0	-10.0	-15.0	-20.0	-25.0	-30.0	-35.0	-40.0	-45.0
30.0	Q [W]	7510	6230	5100	4130	3290	2580	1980	1480	1080	763
	P [kW]	1.85	1.81	1.73	1.63	1.51	1.37	1.23	1.08	0.93	0.79
	I [A]	3.78	3.73	3.65	3.55	3.43	3.30	3.18	3.06	2.95	2.86
35.0	Q [W]	6920	5730	4690	3780	3010	2350	1800	1340	969	674
	P [kW]	2.01	1.94	1.83	1.71	1.57	1.41	1.25	1.09	0.93	0.79
	I [A]	3.97	3.88	3.76	3.63	3.48	3.34	3.20	3.07	2.95	2.86
40.0	Q [W]	6350	5240	4280	3450	2730	2130	1630	1210	864	591
	P [kW]	2.17	2.06	1.93	1.78	1.62	1.45	1.27	1.10	0.94	0.78
	I [A]	4.15	4.02	3.87	3.71	3.54	3.37	3.21	3.07	2.96	2.86
45.0	Q [W]	5780	4760	3880	3120	2470	1920	1460	1080	765	514
	P [kW]	2.32	2.18	2.02	1.85	1.67	1.48	1.29	1.11	0.94	0.78
	I [A]	4.33	4.17	3.98	3.78	3.59	3.40	3.23	3.08	2.96	2.86
50.0	Q [W]	5220	4290	3480	2790	2200	1710	1300	949	670	
	P [kW]	2.46	2.29	2.11	1.92	1.71	1.51	1.31	1.11	0.94	
	I [A]	4.52	4.31	4.08	3.86	3.64	3.43	3.25	3.09	2.96	



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

to Evaporating temperature
tc Condensing temperature
Q Compressor refrigeration capacity
P Power consumption
I Current draw

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Scope of supply

Semi-hermetic reciprocating compressor
Single-section compressor housing with hermetically integrated electric motor

Oil pump

Winding protection with PTC resistor sensors and electronic trigger unit INT69 G

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

Possibility for connection of oil pressure safety switch MP55

Oil charge:

HG: FUCHS Reniso SP 46

HGX: FUCHS Reniso Triton SE 55

Sight glass

Suction and discharge line valve

Inert gas charge

4 anti-vibration pads enclosed

Accessories

Oil sump heater

110-240 V - 1 - 50/60 Hz, 50-120 W, IP66

PTC heater self-regulating

Oil pressure safety switch MP55 230 V - 1 - 50/60 Hz, IP20 ²⁾

Thermal protection thermostat per cylinder cover ³⁾

Additional fan 220-240 V - 1 - 50/60 Hz, 72/68 W, IP44 ²⁾

Special voltage and/or frequency (on request)

-
- 1) Only with additional adapter possible
 - 2) Enclosure
 - 3) Mounted

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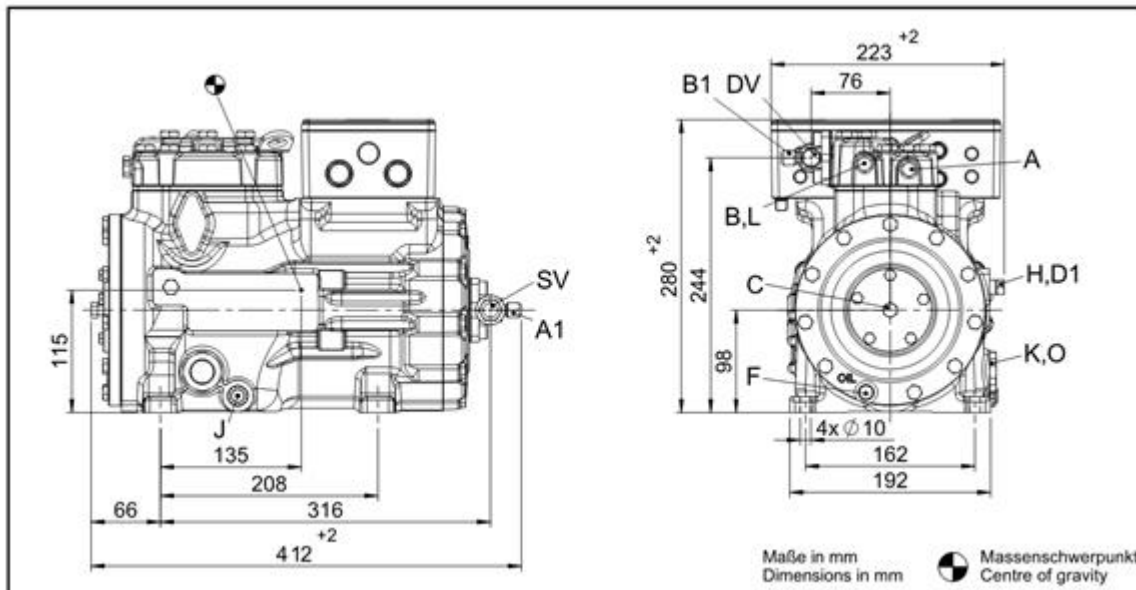
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Subject:

Dimensions and connections



SV	Suction line valve, tube \varnothing ¹⁾	16 mm - 5/8 "
DV	Discharge line valve, tube \varnothing ¹⁾	12 mm - 1/2 "
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	1/8 " NPTF
D1	Connection oil return from oil separator	1/4 " NPTF
F	Oil drain	M 8
H	Oil charge plug	1/4 " NPTF
J	Connection oil sump heater	3/8 " NPTF
K	Sight glass	1 1/8 " - 18 UNEF
L	Connection thermal protection thermostat	1/8 " NPTF
O	Connection oil level regulator	1 1/8 " - 18 UNEF

1) Brazing connection

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