

SHGX22e/125-4 L

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

Refrigerant: R134a

Subject:

Performance data

Application: Refrigeration & AC

Refrigerant	R134a	Compressor refrigeration capacity	4.31 kW
Reference temperature	Dew point	Evaporator refrigeration capacity	4.31 kW
Power supply	50 Hz, 400 V	Power consumption	1.96 kW ¹⁾
Supply frequency	50 Hz	Current draw (400 V)	3.64 A
Evaporating temperature	-5.0 °C	Coefficient of performance (COP/EER)	2.20
Evaporating pressure (abs.)	2.43 bar	Condensing capacity	5.80 kW
Condensing temperature	39.8 °C	Mass flow	0.027 kg/s
Condensing pressure (abs.)	10.11 bar	Discharge end temperature	88.8 °C ²⁾
Air inlet temperature	32.0 °C		
Suction gas temperature	20 °C		
Subcooling (outside cond.)	0 K		
Usable superheat	100%		

Certifications



ASERCOM Condensing Unit Certification at -10 °C (MT)

For Condensing units bearing this label the performance data at an evaporation temperature of -10 °C (MT) 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 Bock compressors can be found at www.asercom.org.

This certification is based on EN 13215. This signifies: 20 °C suction gas temperature without liquid subcooling at 50 Hz power supply frequency.



Directive (EU) 2015/1095 (EcoDesign)

Condensing unit (with design key as of 076) complies with directive (EU) 2015/1095 for stated refrigerant.

- 1) Power consumption of condenser fans included.
- 2) 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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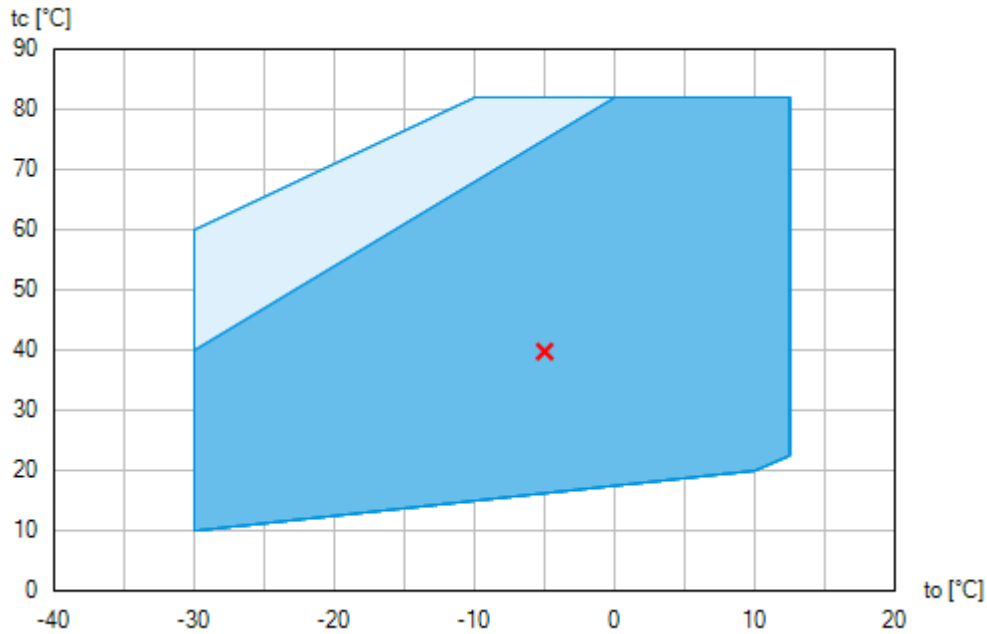
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Subject:

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 / 45 mm / 40 mm
Displacement 50/60 Hz (1450/1740 1/min)	11,10 / 13,30 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⁾	9.3 / 5.4 A
Max. power consumption ²⁾	3.0 kW
Starting current (rotor blocked) ²⁾	69.0 / 40.0 A
Motor protection	INT69 G
Protection terminal box	IP 66
Weight	140 kg
Frequency range ³⁾	30 -70 Hz
Max. permissible overpressure (g) (LP/HP) ⁴⁾	19 / 28 bar
Connection suction line SV	22 mm - 7/8 "
Connection discharge line DV	12 mm - 1/2 "
Connection liquid outlet line FLA	12 mm - 1/2 "
Connection liquid outlet line FLE	12 mm - 1/2 "
Lubrication	Oil pump
Oil type R134a, R404A, R407A/C/F, R448A, R449A, R450A, R513A	BOCKlub E55
Oil type R22	BOCKlub A46
Oil charge	1,0 Ltr.
Dimensions Length / Width / Height	886 / 650 / 628 mm
Number fan motors	1
Voltage	230 V - 1 - 50/60
Max. working current 50/60 Hz	1 x 2,60 / 3,50 A
Max. power consumption 50/60 Hz	1 x 550 / 800 W
Air flow 50/60 Hz	6300 / 7300 m ³ /h
Receiver content	6.0 Ltr.
Max. refrigerant charge R134a ⁵⁾	6,6 kg
R404A / R507 ⁵⁾	5,8 kg
R407C / R407F ⁵⁾	6,3 / 6,2 kg
R22 ⁵⁾	6,5 kg
Volume condenser	3,21 Ltr.

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Subject:

Sound power level L_{WA} ⁶⁾	77 dB(A)
Sound pressure level L_{pA} ⁶⁾	63 dB(A) @ 1 m
	46 dB(A) @ 10 m

- 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 motor contractors, feed lines, fuses and motor protection switches. Motor contractors: Consumption category AC3.
- 3) The maximum permissible working current of the compressor (I_{max}) must not be exceeded. Take account of the guidelines for use of frequency inverter (see compressor assembly instruction or selection software).
- 4) LP = Low pressure
HP = High pressure
- 5) With liquid temperature at 20°C and 90 % capacity
- 6) Declared dual-number noise emission values are in accordance with ISO 4871. The corresponding uncertainty to the sound power level is $K_{WA} = 2,5$ dB and to the sound pressure level is $K_{pA} = 2,5$ dB. The values are valid for 50 Hz.
 - A-weighted sound power level L_{WA} (re 1 pW), in decibel. To determine the values, measurement methods of the ISO 3740 standard with accuracy class 2 or higher were used.
 - A-weighted sound pressure level L_{pA} (re 20 μ Pa), in decibel. The values are calculated from the sound power level in accordance with ISO 11203: $L_{pA} = L_{WA} - Q_2$ at a distance of $d = 1$ m or $d = 10$ m to the reference box.

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Refrigerant: R134a

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

t/e [°C]		to [°C]									
		10.0	5.0	0.0	-5.0	-10.0	-15.0	-20.0	-25.0	-30.0	
5.0	Q [W]	10200									
	P [kW] ¹⁾	1.43									
	I [A]	3.23									
	tc [°C]	20.64									
10.0	Q [W]	9740	8260	6880	5620	4500	3520	2690	2010	1500	
	P [kW] ¹⁾	1.63	1.65	1.64	1.60	1.55	1.48	1.40	1.31	1.21	
	I [A]	3.38	3.39	3.38	3.35	3.32	3.27	3.21	3.16	3.11	
	tc [°C]	25.29	23.11	21.07	19.18	17.45	15.90	14.55	13.42	12.52	
15.0	Q [W]	9280	7860	6540	5340	4270	3330	2530	1880	1390	
	P [kW] ¹⁾	1.82	1.80	1.76	1.70	1.63	1.54	1.44	1.33	1.22	
	I [A]	3.52	3.51	3.48	3.43	3.37	3.30	3.24	3.17	3.11	
	tc [°C]	29.88	27.76	25.77	23.92	22.23	20.71	19.39	18.28	17.39	
20.0	Q [W]	8800	7440	6190	5050	4020	3130	2360	1750	1280	
	P [kW] ¹⁾	1.99	1.94	1.87	1.79	1.69	1.58	1.46	1.35	1.23	
	I [A]	3.67	3.63	3.57	3.50	3.42	3.34	3.26	3.18	3.11	
	tc [°C]	34.43	32.37	30.43	28.62	26.97	25.49	24.20	23.11	22.25	
25.0	Q [W]	8320	7030	5830	4740	3770	2920	2190	1610	1160	
	P [kW] ¹⁾	2.14	2.06	1.97	1.87	1.75	1.62	1.49	1.36	1.23	
	I [A]	3.81	3.74	3.66	3.56	3.46	3.36	3.27	3.19	3.12	
	tc [°C]	38.95	36.94	35.05	33.29	31.68	30.24	28.99	27.93	27.09	
30.0	Q [W]	7820	6600	5470	4440	3510	2700	2020	1470	1050	
	P [kW] ¹⁾	2.28	2.18	2.06	1.93	1.79	1.65	1.51	1.37	1.24	
	I [A]	3.95	3.85	3.74	3.62	3.50	3.39	3.28	3.19	3.12	
	tc [°C]	43.42	41.48	39.64	37.94	36.38	34.98	33.76	32.74	31.93	
35.0	Q [W]	7330	6170	5100	4120	3250	2490	1850	1330	932	
	P [kW] ¹⁾	2.40	2.28	2.14	1.99	1.83	1.67	1.52	1.37	1.24	
	I [A]	4.08	3.95	3.81	3.67	3.53	3.41	3.29	3.20	3.12	
	tc [°C]	47.87	45.99	44.21	42.56	41.05	39.70	38.52	37.54	36.77	
40.0	Q [W]	6830	5740	4730	3810	2990	2280	1670	1190	825	
	P [kW] ¹⁾	2.51	2.37	2.21	2.04	1.87	1.69	1.53	1.38	1.24	
	I [A]	4.20	4.04	3.88	3.72	3.56	3.42	3.30	3.20	3.12	
	tc [°C]	52.29	50.47	48.76	47.16	45.70	44.40	43.27	42.34	41.61	

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

t_o Evaporating temperature
t_e Air inlet temperature
t_c Condensing temperature
Q Compressor refrigeration capacity
P Power consumption
I Current draw

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Subject:

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1) Power consumption of condenser fans included.

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Subject:

Scope of supply

HG P or HG e semi-hermetic motor compressor (Extent of delivery see compressor) installed on the unit with anti-vibration pads. The liquid receivers with sight glass and Rotalock shut-off valve with brazing connection. Tank is provided (appropriate pressure appliance guideline)

Oil pump

Air-cooled finned tube condenser with 1 ventilator:

- Ventilator 230 V - 1 - 50/60 Hz, with bimetal winding protection, phase control for speed adjustment (speed regulator not included in scope of supplies)
- With piping on discharge and liquid side. Service charge

4 rubber plates enclosed for installation of the condensing unit

Accessories

Oil sump heater

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

PTC heater self-regulating

Thermal protection thermostat

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

High pressure safety limiter + controller/ +low pressure controller ²⁾

Oil separator incl. mounting

Waterproof housing ¹⁾

Speed control for the ventilator ¹⁾

Special voltage and/or frequency (on request)

1) Enclosure

2) Mounted

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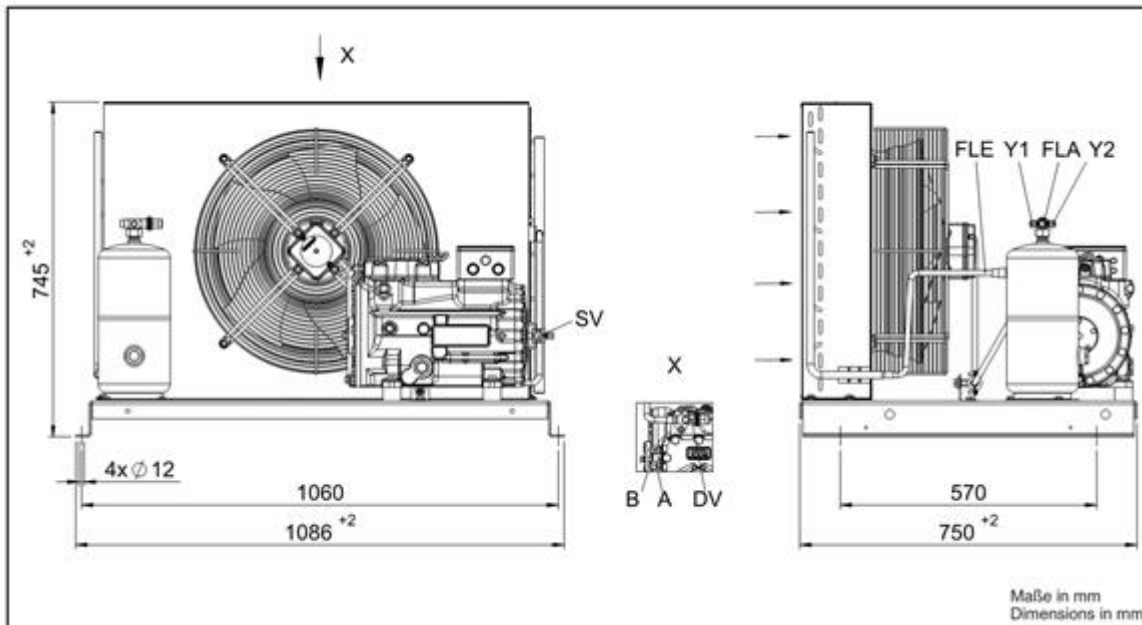
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Refrigerant: R134a

Subject:

Dimensions and connections



SV	Suction line valve, tube \varnothing ¹⁾	22 mm - 7/8 "
DV	Discharge line valve, tube \varnothing ¹⁾	12 mm - 1/2 "
A	Connection suction side, not lockable	7/16" UNF
B	Connection discharge side, not lockable	7/16" UNF
FLA	Liquid outlet, tube \varnothing ¹⁾	12 mm - 1/2 "
FLE	Liquid inlet, tube \varnothing ¹⁾	12 mm - 1/2 "
Y1	Connection liquid side, lockable	7/16" UNF
Y2	Connection liquid side, not lockable	7/16" UNF

1) Brazing connection

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Subject:

Product photo

Picture similar and/or with accessories.



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