

SHGX22e/190-4 L

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

Refrigerant: R134a

Subject:

Performance data

Application: Refrigeration & AC

Refrigerant	R134a	Compressor refrigeration capacity	6.90 kW
Reference temperature	Dew point	Evaporator refrigeration capacity	6.90 kW
Power supply	50 Hz, 400 V	Power consumption	2.64 kW ¹⁾
Supply frequency	50 Hz	Current draw (400 V)	4.33 A
Evaporating temperature	-5.0 °C	Coefficient of performance (COP/EER)	2.62
Evaporating pressure (abs.)	2.43 bar	Condensing capacity	9.05 kW
Condensing temperature	39.1 °C	Mass flow	0.043 kg/s
Condensing pressure (abs.)	9.91 bar	Discharge end temperature	83.9 °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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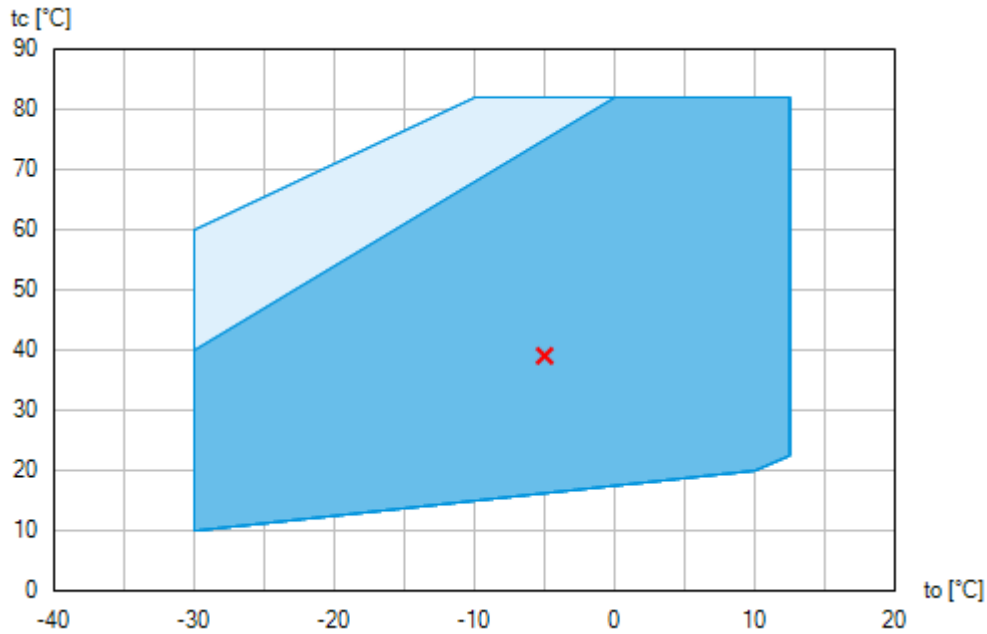
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Subject:

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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Refrigerant: R134a

Subject:

Technical data

Number of cylinders / Bore / Stroke	2 / 55 mm / 40 mm
Displacement 50/60 Hz (1450/1740 1/min)	16,50 / 19,80 m³/h
Voltage 1)	220-240V Δ / 380-420V Y -3- 50Hz
	265-290V Δ / 440-480V Y -3- 60Hz
Max. working current 2)	13.8 / 8.0 A
Max. power consumption 2)	4.8 kW
Starting current (rotor blocked) 2)	69.0 / 40.0 A
Motor protection	INT69 G
Protection terminal box	IP 66
Weight	149 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	16 mm - 5/8 "
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	1086 / 650 / 746 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	5900 / 7000 m³/h
Receiver content	8.0 Ltr.
Max. refrigerant charge R134a 5)	8,8 kg
R404A / R507 5)	7,7 kg
R407C / R407F 5)	8,3 / 8,2 kg
R22 5)	8,7 kg
Volume condenser	6,3 Ltr.

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Subject:

Sound power level L_{WA} ⁶⁾	77 dB(A)
Sound pressure level L_{pA} ⁶⁾	62 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

tle [°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]										
	P [kW] ¹⁾										
	I [A]										
	tc [°C]										
10.0	Q [W]	15000	12800	10800	8900	7240	5760	4470	3380	2500	
	P [kW] ¹⁾	2.23	2.19	2.15	2.09	2.02	1.94	1.83	1.71	1.56	
	I [A]	3.89	3.85	3.81	3.76	3.69	3.61	3.52	3.42	3.31	
	tc [°C]	23.94	21.97	20.12	18.42	16.85	15.44	14.19	13.10	12.18	
15.0	Q [W]	14300	12200	10300	8460	6860	5440	4210	3170	2330	
	P [kW] ¹⁾	2.47	2.40	2.31	2.22	2.12	2.00	1.87	1.72	1.56	
	I [A]	4.14	4.06	3.97	3.88	3.78	3.67	3.55	3.43	3.31	
	tc [°C]	28.53	26.60	24.80	23.13	21.60	20.22	19.00	17.93	17.03	
20.0	Q [W]	13600	11600	9690	8010	6480	5130	3950	2960	2160	
	P [kW] ¹⁾	2.70	2.59	2.47	2.35	2.21	2.07	1.91	1.75	1.57	
	I [A]	4.41	4.28	4.14	4.01	3.87	3.73	3.59	3.45	3.32	
	tc [°C]	33.10	31.22	29.47	27.84	26.35	25.00	23.80	22.76	21.88	
25.0	Q [W]	12800	10900	9150	7550	6100	4810	3690	2750	1990	
	P [kW] ¹⁾	2.93	2.78	2.63	2.47	2.31	2.14	1.96	1.77	1.58	
	I [A]	4.68	4.50	4.32	4.14	3.97	3.80	3.63	3.47	3.32	
	tc [°C]	37.65	35.83	34.12	32.53	31.08	29.77	28.60	27.58	26.73	
30.0	Q [W]	12100	10300	8610	7080	5710	4480	3420	2530	1820	
	P [kW] ¹⁾	3.15	2.96	2.78	2.59	2.40	2.20	2.00	1.80	1.59	
	I [A]	4.96	4.72	4.49	4.27	4.06	3.86	3.67	3.49	3.33	
	tc [°C]	42.19	40.41	38.75	37.21	35.80	34.52	33.39	32.41	31.57	
35.0	Q [W]	11400	9640	8060	6620	5310	4160	3160	2320	1650	
	P [kW] ¹⁾	3.36	3.14	2.92	2.70	2.48	2.26	2.04	1.82	1.60	
	I [A]	5.23	4.94	4.67	4.40	4.16	3.92	3.71	3.51	3.34	
	tc [°C]	46.71	44.98	43.37	41.88	40.51	39.27	38.18	37.23	36.42	
40.0	Q [W]	10700	9000	7510	6150	4920	3830	2900	2110	1490	
	P [kW] ¹⁾	3.55	3.30	3.05	2.81	2.56	2.32	2.08	1.84	1.60	
	I [A]	5.50	5.16	4.83	4.53	4.24	3.98	3.74	3.53	3.34	
	tc [°C]	51.20	49.54	47.98	46.53	45.21	44.02	42.96	42.04	41.27	

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

to Evaporating temperature
tle Air inlet temperature
tc 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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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 liquide 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 controll for the ventilator ¹⁾

Special voltage and/or frequency (on request)

1) Enclosure

2) Mounted

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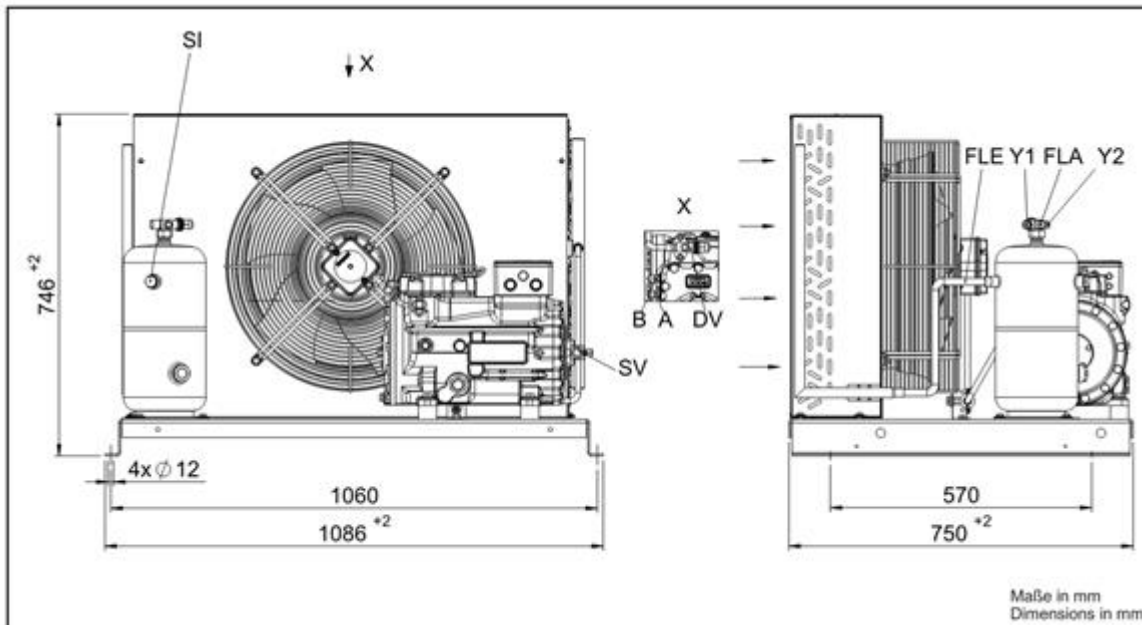
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Subject:

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⁾	16 mm - 5/8 "
FLE	Liquid inlet, tube \varnothing ¹⁾	12 mm - 1/2 "
SI	Connection safety valve	1/2" NPTF
Y1	Connection liquid side, lockable	7/16" UNF
Y2	Connection liquid side, not lockable	7/16" UNF

1) Brazing connection

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Product photo

Picture similar and/or with accessories.



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