HGX4/650-4 R134a

Engine: 380-420V Y/YY -3- 50Hz PW

Refrigerant: R134a

Subject: HGX4/650-4 R134a

Performance data

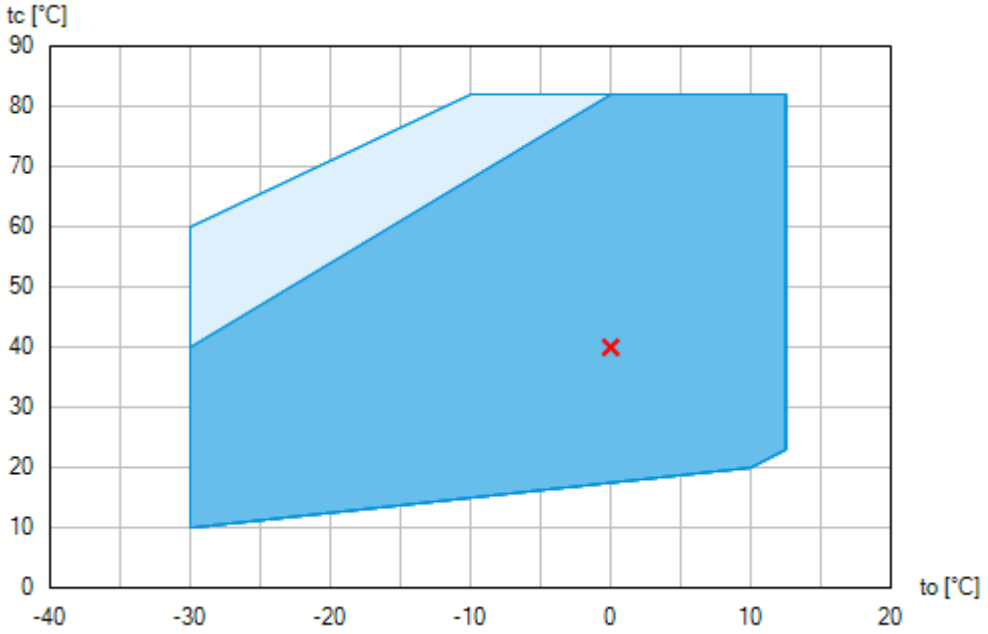
Application: Refrigeration & AC

Refrigerant	R134a		Compressor refrigeration capacity	27.40 kW
Reference temperature	Punkt rosy		Evaporator refrigeration capacity	26.90 kW
Power supply	50 Hz, 400 V		Power consumption	7.65 kW
Supply frequency	50 Hz		Current draw (400 V)	14.40 A
Evaporating temperature	0.0 °C		Coefficient of performance (COP/EER)	3.58
Evaporating pressure (abs.)	*2.93 bar*		Condensing capacity	35.10 kW
Condensing temperature	40.0 °C		Mass flow	0.182 kg/s
Condensing pressure (abs.)	*10.16 bar*		Discharge end temperature	66.9 °C [1)]
Suction gas superheat	10 K			
Subcooling (outside cond.)	0 K			
Usable superheat	7 K			

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.

Subject to change without notice

Operating limits



Unlimited application range

Supplementary cooling or reduced suction gas temperature (Δtoh<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.

Restrictions to the operating limits may occur when using the Bock EFC (Electronic-Frequency-Control).

Technical data

Number of cylinders / Bore / Stroke	4 / 65 mm / 49 mm
Displacement 50/60 Hz (1450/1740 ¹/min)	56,60 / 67,90 m³/h
Voltage [1)]	380-420V Y/YY -3- 50Hz PW
	440-480V Y/YY -3- 60Hz PW
Winding divided into	66% / 33%
Max. working current [2)]	22.0 A
Max. power consumption [2)]	13.1 kW
Starting current (rotor blocked) [2)]	82.0 / 107.0 A
Motor protection	MP10
Protection terminal box	IP 65
Weight	152 kg
Max. permissible overpressure (g) (LP/HP) [3)]	19 / 28 bar
Connection suction line SV	42 mm - 1 5/8 "
Connection discharge line DV	28 mm - 1 1/8 "
Lubrication	Oil pump
Oil type R134a	BOCKlub E55
Oil charge	2,7 Ltr.
Oil sump heater	230 V - 1 - 50/60 Hz, 80 W
Dimensions Length / Width / Height	725 / 370 / 405 mm

1) Tolerance (± 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

PW = part winding, motors for part winding starting
(no start unloaders required)
Designs for Y/D on request

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) LP = Low pressure
HP = High pressure

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HGX4/650-4 R134a

Engine: 380-420V Y/YY -3- 50Hz PW
Refrigerant: R134a
Subject: HGX4/650-4 R134a

BOCK colour the world of tomorrow

Performance data table

Application: Refrigeration & AC
Reference temperature: Punkt rosy
Supply frequency: 50 Hz
Voltage: 400 V
Suction gas superheat: 10 K
Subcooling (outside cond.): 0 K

tc [°C]	to [°C]										
		10.0	**5.0**	**0.0**	**-5.0**	**-10.0**	**-15.0**	**-20.0**	**-25.0**	**-30.0**	
30.0	Q [W] P [kW] I [A]	48100 7.02 13.70	39400 6.90 13.50	31900 6.63 13.20	25300 6.23 12.70	19700 5.73 12.20	15000 5.17 11.60	11100 4.56 10.90	7980 3.93 10.30	5570 3.32 9.74	
35.0	Q [W] P [kW] I [A]	45200 7.88 14.70	36900 7.59 14.40	29700 7.17 13.80	23400 6.64 13.20	18100 6.02 12.50	13700 5.34 11.70	9990 4.64 11.00	7080 3.94 10.30	4820 3.27 9.70	
40.0	Q [W] P [kW] I [A]	42200 8.66 15.80	34300 8.22 15.20	27400 7.65 14.40	21500 6.98 13.60	16500 6.24 12.70	12400 5.46 11.90	8900 4.68 11.10	6180 3.91 10.30	4080 3.18 9.62	
45.0	Q [W] P [kW] I [A]	39200 9.37 16.70	31700 8.77 15.90	25200 8.05 15.00	19600 7.26 13.90	14900 6.41 12.90	11000 5.53 11.90	7830 4.66 11.00	5320 3.83 10.20	3380 3.05 9.51	
50.0	Q [W] P [kW] I [A]	36100 10.00 17.60	29000 9.25 16.60	22900 8.39 15.40	17700 7.47 14.20	13400 6.52 13.10	9710 5.55 12.00	6790 4.60 11.00	4480 3.70 10.10	2710 2.88 9.36	
55.0	Q [W] P [kW] I [A]	33100 10.50 18.40	26400 9.66 17.10	20700 8.67 15.80	15800 7.63 14.40	11800 6.56 13.10	8450 5.51 11.90	5790 4.49 10.90	3700 3.53 9.92	2100 2.66 9.19	
60.0	Q [W] P [kW] I [A]	30000 11.00 19.10	23800 9.99 17.60	18500 8.87 16.00	14000 7.72 14.50	10300 6.55 13.10	7240 5.41 11.80	4840 4.32 10.70	2970 3.31 9.73	1550 2.41 8.99	
65.0	Q [W] P [kW] I [A]	27000 11.40 19.80	21200 10.20 18.00	16300 9.01 16.20	12200 7.74 14.60	8790 6.48 13.00	6090 5.26 11.70	3960 4.11 10.50	2310 3.05 9.50		
70.0	Q [W] P [kW] I [A]	24000 11.70 20.30	18600 10.40 18.30	14100 9.08 16.30	10400 7.71 14.50	7390 6.35 12.90	5010 5.06 11.40	3150 3.84 10.20			

☐ Supplementary cooling or reduced suction gas temperature (Δtoh<20K)

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

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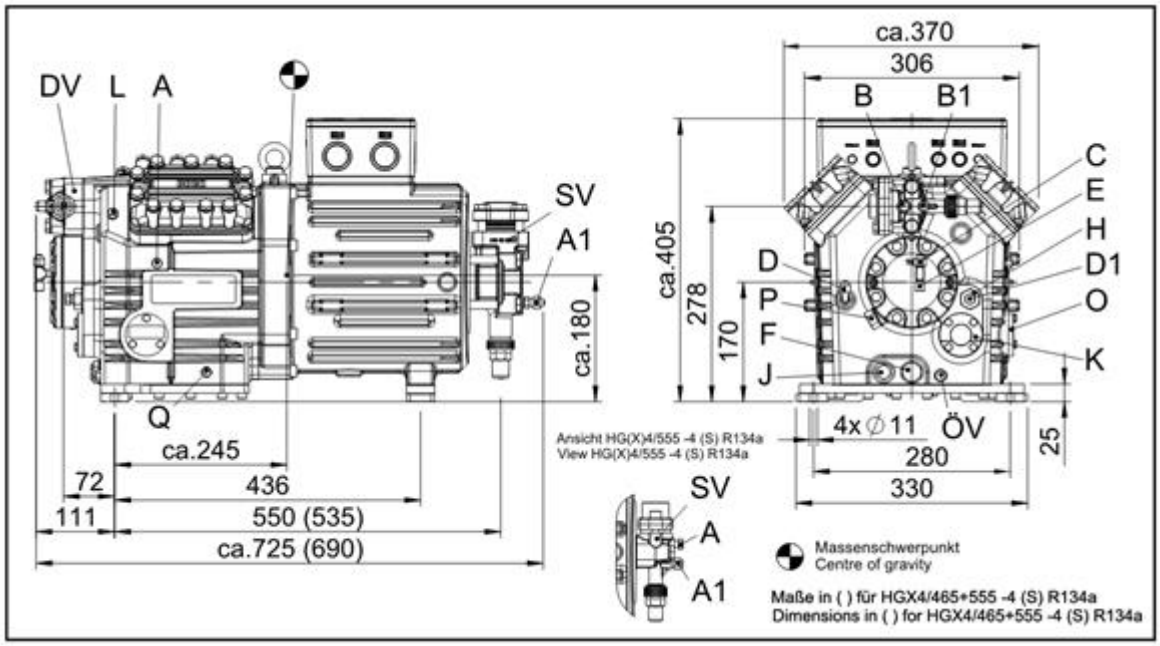
Dimensions and connections



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SV	Suction line valve, tube ø [1)]	42 mm - 1 5/8 "
DV	Discharge line valve, tube ø [1)]	28 mm - 1 1/8 "
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	1/4 " NPTF
E	Connection oil pressure gauge	7/16 " UNF
F	Oil drain	M 22 x 1.5
H	Oil charge plug	M 22 x 1.5
J	Connection oil sump heater	M 22 x 1.5
K	Sight glass	-
L	Connection thermal protection thermostat	1/8 " NPTF
O	Connection oil level regulator	3 x M 6
ÖV	Connection oil service valve	1/4" NPTF
P	Connection oil differential pressure sensor	M 20 x 1.5
Q	Connection oil temperature sensor	1/8" NPTF

1) Brazing connection

Product photo