HGX5/725-4 R134a

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

Refrigerant: R134a

Subject:

Performance data

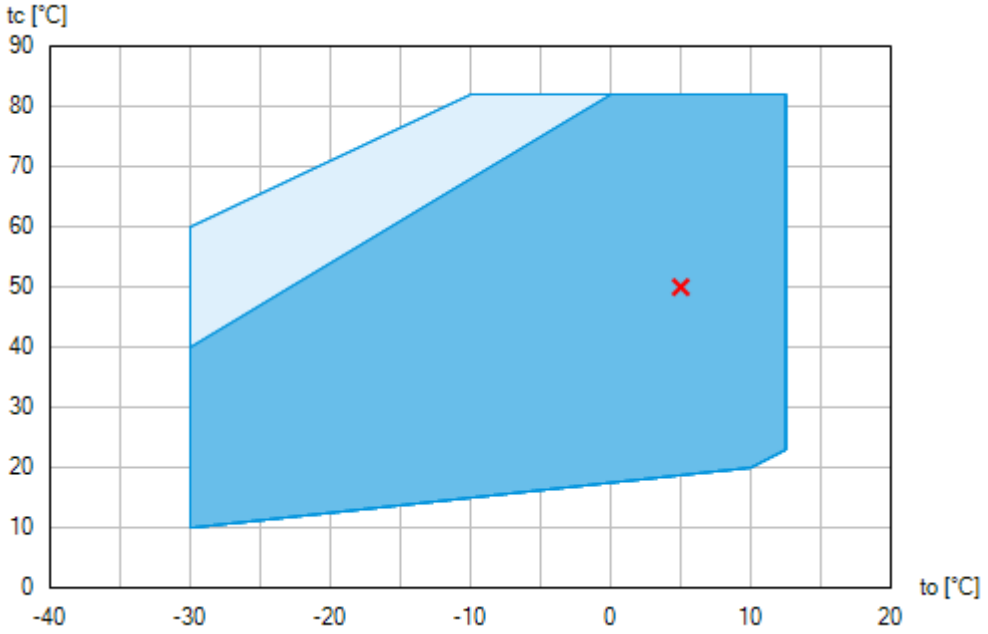
Application: Refrigeration & AC

Refrigerant	R134a		Compressor refrigeration capacity	32.60 kW
Reference temperature	Dew point		Evaporator refrigeration capacity	32.60 kW
Power supply	50 Hz, 400 V		Power consumption	10.20 kW
Supply frequency	50 Hz		Current draw (400 V)	18.00 A
Evaporating temperature	5.0 °C		Coefficient of performance (COP/EER)	3.18
Evaporating pressure (abs.)	*3.50 bar*		Condensing capacity	42.80 kW
Condensing temperature	50.0 °C		Mass flow	0.228 kg/s
Condensing pressure (abs.)	*13.17 bar*		Discharge end temperature	81.0 °C [1)]
Suction gas temperature	20 °C			
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.

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 / 70 mm / 47 mm
Displacement 50/60 Hz (1450/1740 ¹/min)	62,90 / 75,50 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)]	25.0 A
Max. power consumption [2)]	14.6 kW
Starting current (rotor blocked) [2)]	82.0 / 107.0 A
Motor protection	MP10
Protection terminal box	IP 65
Weight	198 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	3,6 Ltr.
Oil sump heater	230 V - 1 - 50/60 Hz, 140 W
Dimensions Length / Width / Height	815 / 435 / 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 fuses, supply lines and safety devices. Fuse: Consumption category AC3.

3) LP = Low pressure
HP = High pressure

HGX5/725-4 R134a

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

BOCK colour the world of tomorrow

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]									
		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]	53400 7.81 14.60	44000 7.66 14.40	35700 7.35 14.10	28500 6.91 13.50	22300 6.37 12.90	17000 5.75 12.20	12700 5.07 11.50	9180 4.38 10.80	6450 3.68 10.10
35.0	Q [W] P [kW] I [A]	50200 8.75 15.90	41200 8.42 15.40	33300 7.94 14.80	26400 7.35 14.10	20600 6.68 13.20	15600 5.94 12.40	11600 5.17 11.60	8210 4.39 10.80	5630 3.63 10.10
40.0	Q [W] P [kW] I [A]	46900 9.62 17.10	38300 9.11 16.40	30900 8.47 15.50	24400 7.73 14.50	18900 6.93 13.50	14200 6.08 12.50	10400 5.21 11.60	7240 4.35 10.70	4820 3.53 9.92
45.0	Q [W] P [kW] I [A]	43500 10.40 18.20	35500 9.72 17.20	28400 8.92 16.10	22400 8.04 14.90	17200 7.11 13.80	12800 6.15 12.60	9170 5.19 11.60	6290 4.26 10.60	4030 3.39 9.80
50.0	Q [W] P [kW] I [A]	40200 11.10 19.20	32600 10.20 18.00	26000 9.30 16.60	20300 8.28 15.20	15500 7.23 13.90	11400 6.17 12.70	8040 5.13 11.50	5370 4.13 10.50	3290 3.20 9.63
55.0	Q [W] P [kW] I [A]	36800 11.70 20.20	29700 10.70 18.60	23500 9.60 17.00	18200 8.45 15.50	13800 7.29 14.00	9990 6.13 12.60	6930 5.00 11.40	4490 3.94 10.30	2600 2.96 9.43
60.0	Q [W] P [kW] I [A]	33400 12.20 21.00	26800 11.00 19.20	21100 9.83 17.40	16200 8.56 15.60	12100 7.28 14.00	8660 6.02 12.50	5880 4.82 11.20	3670 3.70 10.10	1970 2.68 9.20
65.0	Q [W] P [kW] I [A]	30000 12.70 21.70	23900 11.30 19.60	18700 9.99 17.60	14200 8.59 15.70	10500 7.20 13.90	7380 5.86 12.30	4890 4.58 11.00	2930 3.40 9.81	
70.0	Q [W] P [kW] I [A]	26600 13.10 22.30	21100 11.50 20.00	16300 10.00 17.70	12300 8.55 15.60	8910 7.06 13.70	6170 5.63 12.10	3980 4.29 10.70		

☐ 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

Subject to change without notice

To: From: 21.12.2021

VAP 11.9.0

Scope of supply

Semi-hermetic four-cylinder reciprocating compressor with drive motor
Motor unit flanged onto the compressor housing

Oil pump

Winding protection with PTC resistor sensors and electronic trigger unit MP 10

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

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

Possibility of connection of oil level controllers Traxoil [1)]

Oil charge:
BOCKlub E55

Sight glass

Pressure relief valve

Suction and discharge line valve

Inert gas charge

4 anti-vibration pads enclosed

Accessories

Start unloader by means of a ESS (Electronic Soft Start), 400 V - 3 - 50/60 Hz, IP20 (Connection clamps IP00) for installation in switch cabinet [2)]

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

Thermal protection thermostat per cylinder cover [3)]

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

Connection piece suction and discharge valve in welding design

Intermediate adapter for discharge line valve

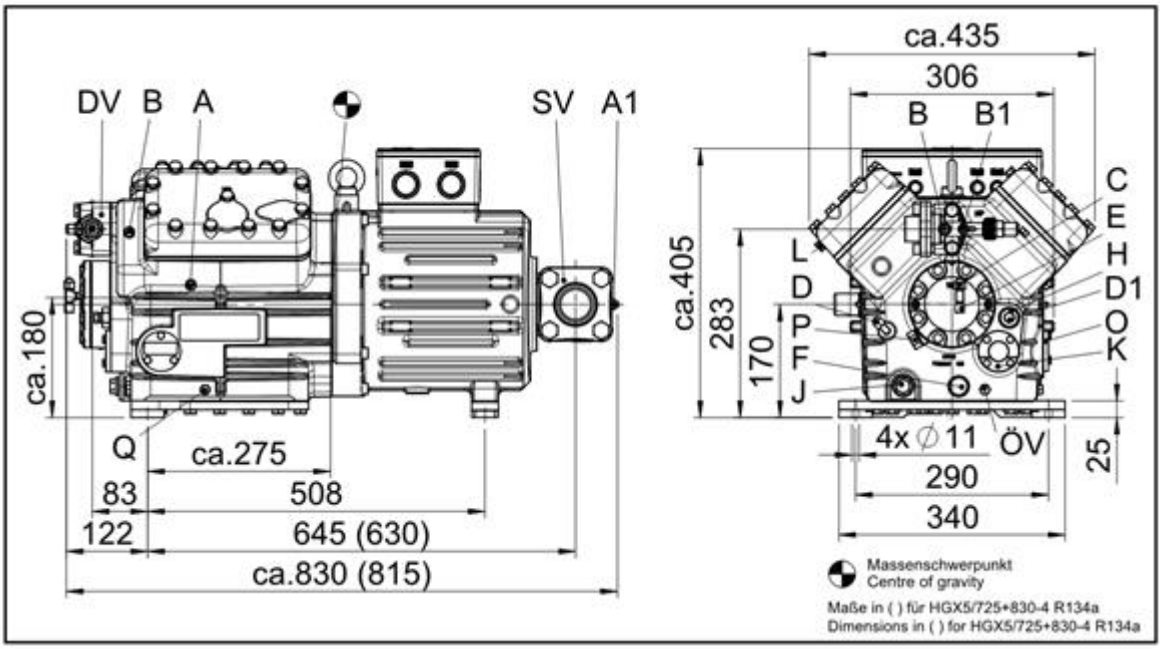
Special voltage and/or frequency (on request)

1) Only with additional adapter possible

2) Enclosure

3) Mounted

Dimensions and connections



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