

HGX6/1410-4 R134a

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

Refrigerant: R134a

Subject:

Performance data

Application: Refrigeration & AC

Refrigerant	R134a	Compressor refrigeration capacity	35.70 kW
Reference temperature	Dew point	Evaporator refrigeration capacity	35.70 kW
Power supply	50 Hz, 400 V	Power consumption	15.30 kW
Supply frequency	50 Hz	Current draw (400 V)	29.60 A
Evaporating temperature	-10.0 °C	Coefficient of performance (COP/EER)	2.32
<i>Evaporating pressure (abs.)</i>	<i>2.01 bar</i>	Condensing capacity	51.10 kW
Condensing temperature	45.0 °C	Mass flow	0.232 kg/s
<i>Condensing pressure (abs.)</i>	<i>11.60 bar</i>	Discharge end temperature	101.3 °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 Bock 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.

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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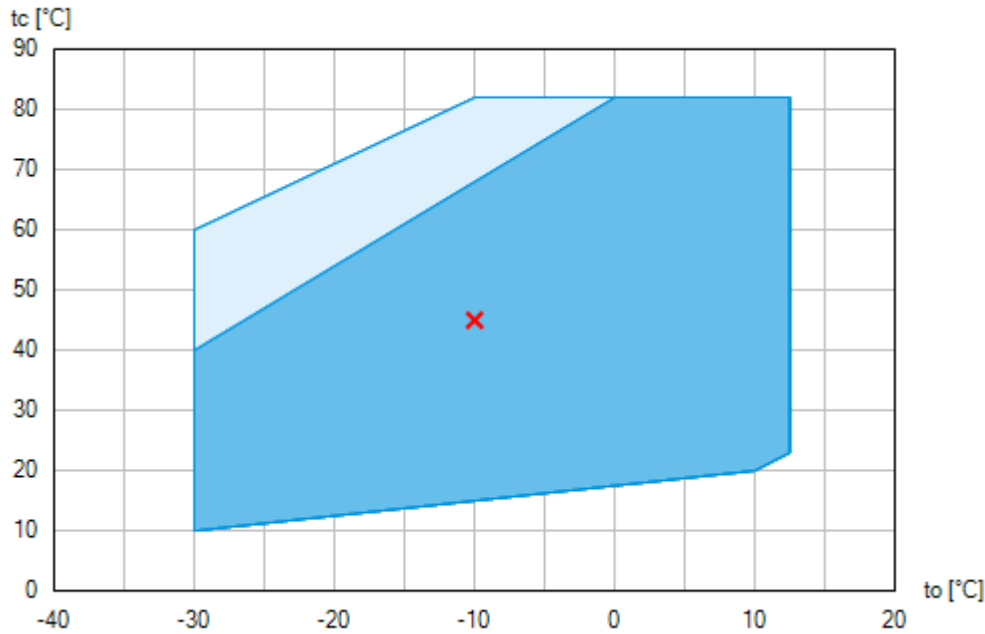
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Operating limits



-  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.

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

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Subject:

Technical data

Number of cylinders / Bore / Stroke	4 / 80 mm / 70 mm
Displacement 50/60 Hz (1450/1740 1/min)	122,40 / 146,90 m ³ /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⁾	55.0 A
Max. power consumption ²⁾	32.2 kW
Starting current (rotor blocked) ²⁾	156.0 / 193.0 A
Motor protection	MP10
Protection terminal box	IP 65
Weight	220 kg
Max. permissible overpressure (g) (LP/HP) ³⁾	19 / 28 bar
Connection suction line SV	54 mm - 2 1/8 "
Connection discharge line DV	35 mm - 1 3/8 "
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	850 / 455 / 405 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

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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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]								
		10.0	5.0	0.0	-5.0	-10.0	-15.0	-20.0	-25.0	-30.0
30.0	Q [W]	103000	84500	68900	55400	44000	34300	26400	19900	14800
	P [kW]	18.10	17.00	15.80	14.60	13.30	12.00	10.70	9.38	8.04
	I [A]	33.60	32.00	30.30	28.50	26.80	25.10	23.40	21.70	20.20
35.0	Q [W]	96000	79200	64500	51900	41200	32100	24600	18500	13700
	P [kW]	19.40	18.10	16.80	15.40	14.00	12.60	11.10	9.66	8.19
	I [A]	35.50	33.70	31.70	29.70	27.80	25.80	23.90	22.10	20.40
40.0	Q [W]	89600	73900	60200	48500	38400	30000	22900	17200	12500
	P [kW]	20.70	19.30	17.80	16.30	14.70	13.10	11.50	9.88	8.26
	I [A]	37.50	35.40	33.20	30.90	28.70	26.50	24.40	22.30	20.40
45.0	Q [W]	83500	68800	56000	45100	35700	27800	21200	15800	11300
	P [kW]	22.00	20.40	18.80	17.10	15.30	13.50	11.80	10.00	8.22
	I [A]	39.60	37.10	34.60	32.10	29.60	27.10	24.70	22.50	20.40
50.0	Q [W]	77400	63700	51900	41700	33000	25700	19500	14300	10000
	P [kW]	23.30	21.50	19.70	17.80	15.90	13.90	12.00	10.00	8.07
	I [A]	41.60	38.90	36.00	33.20	30.40	27.60	25.00	22.50	20.20
55.0	Q [W]	71400	58700	47800	38400	30300	23500	17700	12900	8690
	P [kW]	24.60	22.60	20.60	18.50	16.40	14.20	12.10	9.95	7.80
	I [A]	43.70	40.60	37.40	34.20	31.10	28.00	25.10	22.40	19.90
60.0	Q [W]	65500	53800	43800	35100	27700	21400	16000	11400	7310
	P [kW]	25.80	23.60	21.40	19.10	16.80	14.40	12.10	9.74	7.39
	I [A]	45.70	42.20	38.70	35.10	31.70	28.30	25.10	22.20	19.50
65.0	Q [W]	59600	48900	39700	31800	25000	19200	14100	9730	
	P [kW]	27.00	24.60	22.10	19.60	17.10	14.50	11.90	9.38	
	I [A]	47.60	43.70	39.80	35.90	32.10	28.40	24.90	21.70	
70.0	Q [W]	53800	44100	35700	28500	22300	16900	12300		
	P [kW]	28.10	25.50	22.80	20.10	17.30	14.50	11.60		
	I [A]	49.40	45.20	40.90	36.60	32.40	28.40	24.60		

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 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

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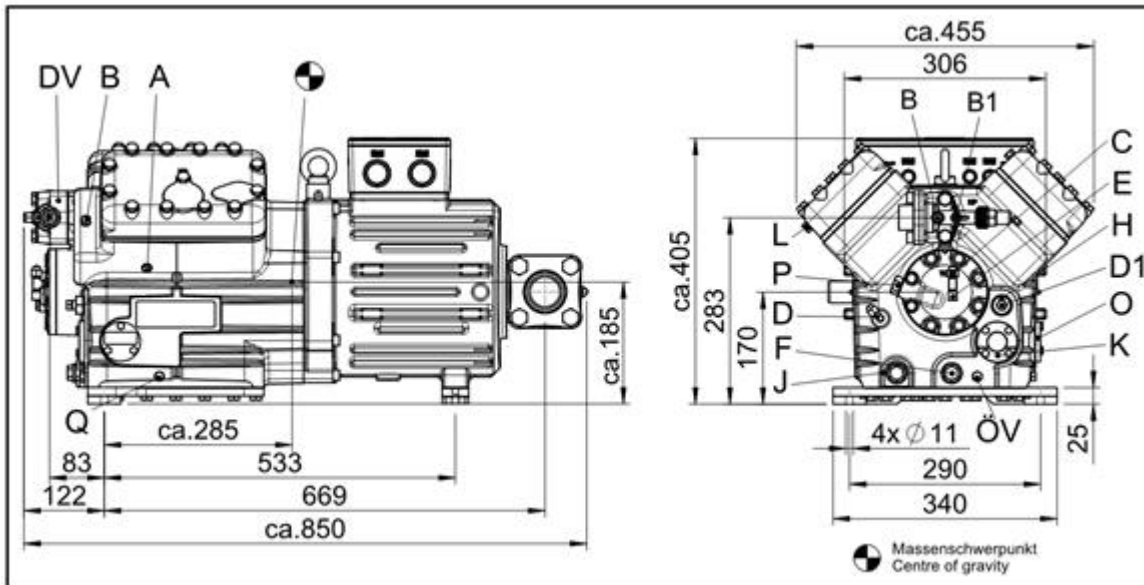
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Dimensions and connections



SV	Suction line valve, tube \varnothing ¹⁾	54 mm - 2 1/8 "
DV	Discharge line valve, tube \varnothing ¹⁾	35 mm - 1 3/8 "
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

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Subject:

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1) Brazing connection

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Product photo



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