

HGX66e/1340-4 S

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

Refrigerant: R404A, R507

Subject:

Performance data

Application: Refrigeration & AC

Refrigerant	R404A, R507	Compressor refrigeration capacity	60.70 kW
Reference temperature	Dew point	Evaporator refrigeration capacity	60.70 kW
Power supply	50 Hz, 400 V	Power consumption	25.60 kW
Supply frequency	50 Hz	Current draw (400 V)	48.30 A
Evaporating temperature	-10.0 °C	Coefficient of performance (COP/EER)	2.37
<i>Evaporating pressure (abs.)</i>	<i>4.34 bar</i>	Condensing capacity	86.40 kW
Condensing temperature	45.0 °C	Mass flow	0.505 kg/s
<i>Condensing pressure (abs.)</i>	<i>20.47 bar</i>	Discharge end temperature	89.9 °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.

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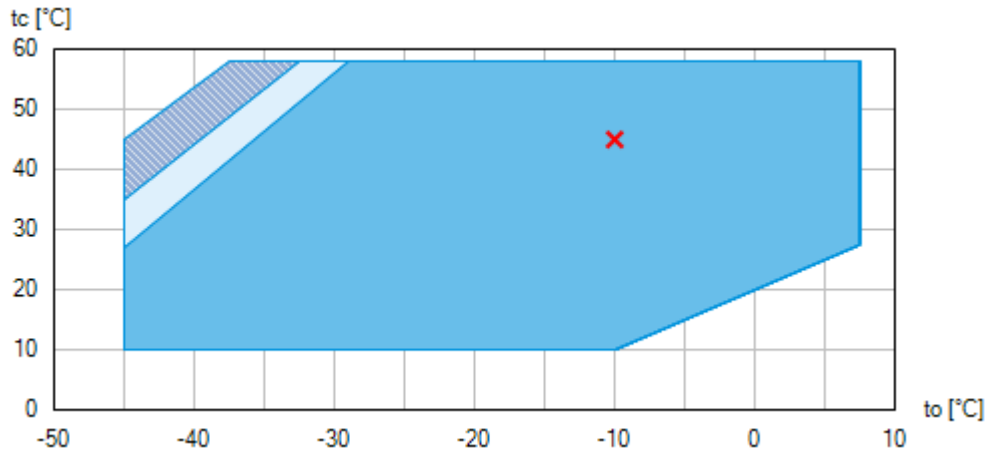
HGX66e/1340-4 S




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

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Subject:

Operating limits



-  Unlimited application range
-  Supplementary cooling or reduced suction gas temperature ($\Delta t_{oh} < 20K$)
-  Supplementary cooling and 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: R404A, R507

Subject:

Technical data

Number of cylinders / Bore / Stroke	6 / 70 mm / 58 mm
Displacement 50/60 Hz (1450/1740 ¹ /min)	116,5 / 139,8 m ³ /h
Voltage ¹⁾	380-420V Y/YY -3- 50Hz PW
	440-480V Y/YY -3- 60Hz PW
Winding divided into	50% / 50%
Max. working current ²⁾	65.3 A
Max. power consumption ²⁾	38.1 kW
Starting current (rotor blocked) ²⁾	196.0 / 335.0 A
Motor protection	INT69 G
Protection terminal box	IP 66
Weight	287 kg
Frequency range ³⁾	25 - 60 Hz
Max. permissible overpressure (g) (LP/HP) ⁴⁾	19 / 28 bar
Connection suction line SV	54 mm - 2 1/8 "
Connection discharge line DV	42 mm - 1 5/8 "
Lubrication	Oil pump
Oil type R134a, R404A, R407A/C/F, R448A, R449A, R450A, R513A	BOCKlub E55
Oil type R22	BOCKlub A46
Oil charge	4,4 Ltr.
Oil sump heater	230 V - 1 - 50/60 Hz, 160 W
Dimensions Length / Width / Height	810 / 557 / 467 mm
Sound power level L _{WA} ⁵⁾	88 db(A) @ -35/+40 °C
	82 db(A) @ -10/+45 °C
	81 db(A) @ +5/+50 °C
Sound pressure level L _{pA} ⁵⁾	74 db(A) @ -35/+40 °C
	69 db(A) @ -10/+45 °C
	67 db(A) @ +5/+50 °C

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Subject:

- 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) 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) 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 with the refrigerant R404A at the standard rating points according to EN 12900.
 - 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 to the reference box.

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Refrigerant: R404A, R507

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]									
		0.0	-5.0	-10.0	-15.0	-20.0	-25.0	-30.0	-35.0	-40.0	-45.0
10.0	Q [W]			102000	83400	67400	53800	42300	32700	24900	18700
	P [kW]			15.10	14.90	14.40	13.50	12.50	11.30	10.00	8.70
	I [A]			37.20	37.00	36.50	35.90	35.10	34.20	33.30	32.40
15.0	Q [W]		117000	96500	78900	63700	50600	39500	30300	22700	16600
	P [kW]		17.20	17.00	16.40	15.60	14.50	13.20	11.70	10.20	8.73
	I [A]		39.10	38.90	38.40	37.60	36.60	35.60	34.50	33.40	32.40
20.0	Q [W]	132000	111000	91000	74300	59800	47400	36800	27900	20600	14600
	P [kW]	19.60	19.40	18.80	17.90	16.70	15.30	13.70	12.10	10.40	8.72
	I [A]	41.40	41.20	40.60	39.70	38.60	37.30	36.00	34.70	33.50	32.40
25.0	Q [W]	124000	104000	85300	69500	55800	44000	34000	25500	18500	12700
	P [kW]	22.00	21.40	20.40	19.20	17.70	16.00	14.20	12.30	10.40	8.66
	I [A]	44.00	43.40	42.30	41.00	39.60	38.00	36.40	34.90	33.60	32.40
30.0	Q [W]	116000	96500	79500	64600	51700	40600	31200	23200	16500	11000
	P [kW]	24.20	23.30	21.90	20.40	18.60	16.60	14.60	12.50	10.50	8.53
	I [A]	46.60	45.50	44.00	42.30	40.40	38.60	36.70	35.10	33.60	32.30
35.0	Q [W]	108000	89300	73400	59500	47500	37100	28300	20900	14600	9280
	P [kW]	26.40	25.00	23.30	21.40	19.30	17.10	14.90	12.60	10.40	8.34
	I [A]	49.20	47.50	45.60	43.40	41.20	39.00	37.00	35.10	33.50	32.20
40.0	Q [W]	98800	81900	67100	54300	43100	33600	25500	18600	12800	7760
	P [kW]	28.30	26.60	24.60	22.40	20.00	17.60	15.10	12.60	10.30	8.08
	I [A]	51.70	49.50	47.00	44.50	41.90	39.40	37.20	35.10	33.40	32.00
45.0	Q [W]	89900	74300	60700	48900	38800	30100	22700	16400	11000	6400
	P [kW]	30.10	28.00	25.60	23.10	20.50	17.80	15.20	12.50	10.00	7.75
	I [A]	54.00	51.30	48.30	45.40	42.50	39.70	37.20	35.10	33.30	31.80
50.0	Q [W]	80700	66500	54200	43500	34300	26500	19900	14200	9370	
	P [kW]	31.70	29.20	26.60	23.80	20.90	18.00	15.10	12.40	9.77	
	I [A]	56.20	52.90	49.50	46.10	42.90	39.90	37.20	34.90	33.10	
55.0	Q [W]	71400	58500	47500	38000	29800	23000	17100	12200		
	P [kW]	33.10	30.30	27.40	24.30	21.20	18.10	15.00	12.10		
	I [A]	58.20	54.30	50.50	46.70	43.20	39.90	37.10	34.70		



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



Supplementary cooling and 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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Subject:

Scope of supply

Semi-hermetic six-cylinder reciprocating compressor with drive motor for part winding start
Single-section compressor housing with hermetically integrated electric motor

Rear bearing flange prepared for oil differential pressure sensor DELTA-P II

Winding protection with PTC resistor sensors and electronic trigger unit INT69 G
115-230 V AC, 50/60 Hz, IP00

Oil pump

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

Possibility of connection of oil level controllers Traxoil ¹⁾

Oil charge:

HG: **BOCK**lub A46

HGX: **BOCK**lub E55

Sight glass

Internal safety valve

Suction and discharge line valve

Inert gas charge

Accessories

Capacity regulator 110 V - 1 - 50/60 Hz, IP65
1-2 capacity regulator = 66/33% residual capacity ²⁾

Capacity regulator 230 V - 1 - 50/60 Hz, IP65
1-2 capacity regulator = 66/33% residual capacity ²⁾

Cylinder cover prepared for capacity regulator ³⁾

Oil sump heater 230 V - 1 - 50/60 Hz, 160 W ³⁾

Oil temperature sensor (Pt1000, for external evaluation) ³⁾

USB converter for INT69 G Diagnose ⁴⁾

Oil differential pressure sensor DELTA-P II 220-240 V - 1 - 50/60 Hz ⁴⁾

Connection piece suction and discharge valve in welding design

Oil service valve

Thermal protection thermostat per cylinder cover ³⁾

Oil pressure safety switch MP54 230 V - 1 - 50/60 Hz, IP20 ⁴⁾

INT69 G Diagnose 115-230 V AC, 50/60 Hz, IP00 (INT69 G not applicable) ³⁾

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Subject:

DP-Modbus Gateway 115-230 V AC, 50/60 Hz, IP00 including adapter cable ⁴⁾

Modbus-LAN Gateway 230 V AC, 50/60 Hz, IP00 ⁴⁾

Additional fan

230 V AC - 1 - 50 Hz, 97 W, IP44

230 V AC - 1 - 60 Hz, 128 W ⁴⁾

Step protection ⁴⁾

Injection nozzle for liquid injection ⁴⁾

4 anti-vibration pads enclosed

Special voltage and/or frequency (on request)

-
- 1) Only with additional adapter possible
 - 2) Capacity regulator premounted, control unit enclosed
 - 3) Mounted
 - 4) Enclosure

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HGX66e/1340-4 S

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

Refrigerant: R404A, R507

Subject:

Dimensions and connections

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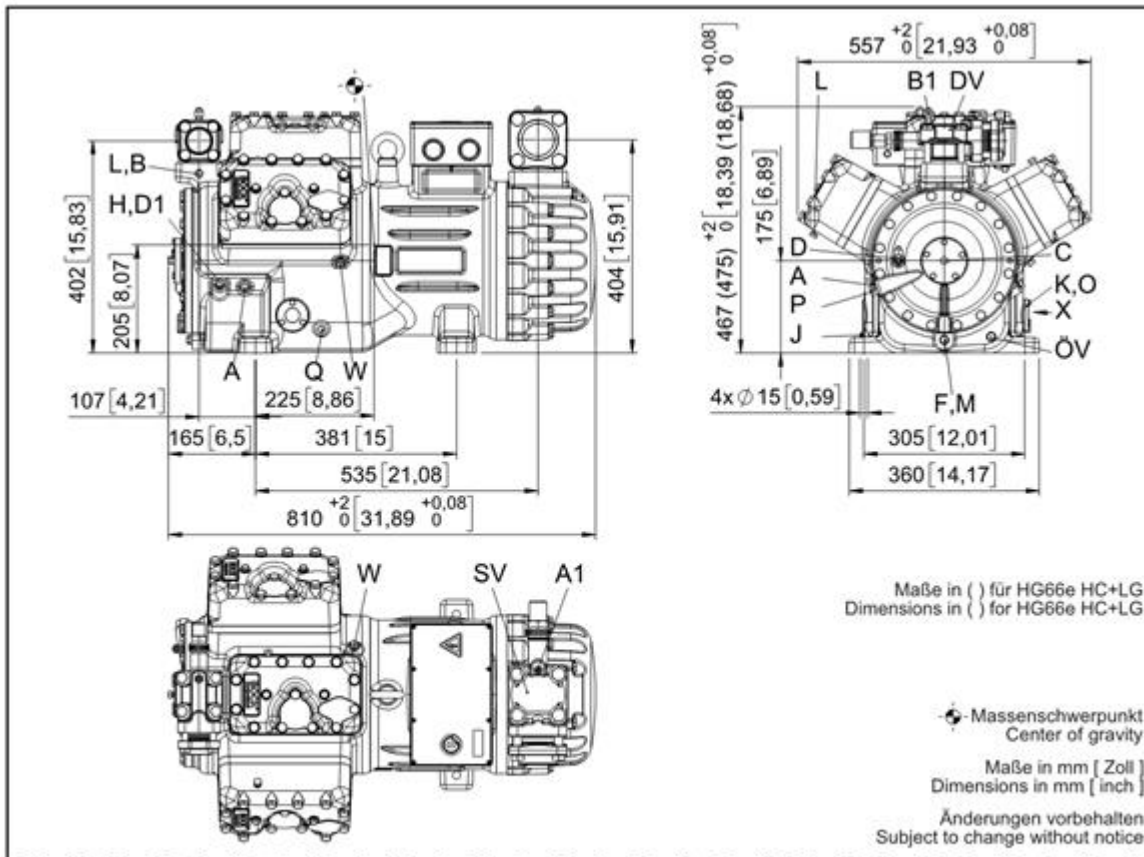
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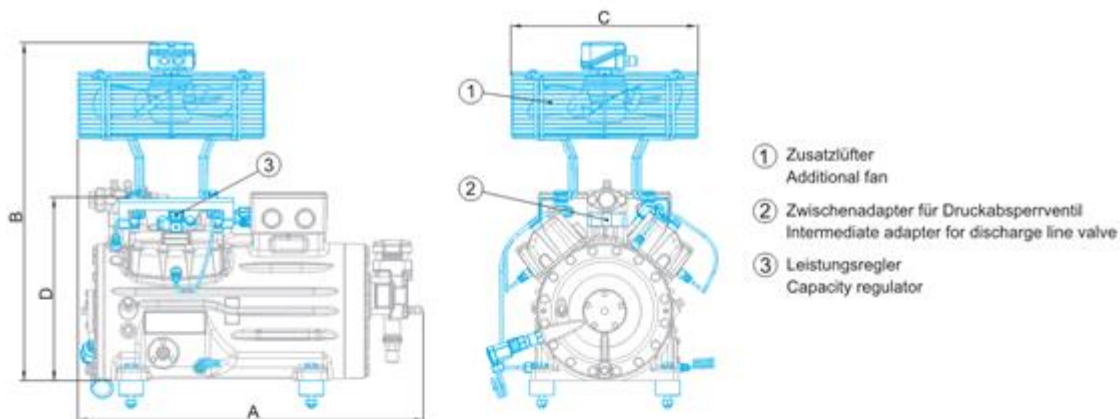
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Refrigerant: R404A, R507

Subject:



Maße Zubehör / Dimensions Accessories

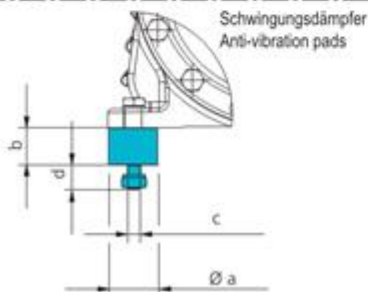


Typ / Type	A mm / inch	B mm / inch	C mm / inch	D mm / inch
HG12P	ca. 460 / 18	ca. 500 / 20	ca. 315 / 12	—
HG22e	ca. 525 / 21	ca. 610 / 24	ca. 380 / 15	—
HG34e	ca. 580 / 23	ca. 640 / 25	ca. 380 / 15	—
HG44e	ca. 710 / 28	ca. 685 / 27	ca. 380 / 15	ca. 368 / 14
HG56e	—	ca. 710 / 28	ca. 380 / 15	—
HG66e	ca. 820 / 32	ca. 800 / 31	ca. 380 / 15	—

Ansicht X: Anschlussmöglichkeit für Ölspiegelregulator
View X: Possibility of connection of oil level regulator



- Dreilochanschluss für TRAXOIL (3xM6x10)
Three-hole connection for TRAXOIL (3xM6x10)
- Dreilochanschluss für ESK, AC+R, CARLY (3xM6x10)
Three-hole connection for ESK, AC+R, CARLY (3xM6x10)



Typ / Type	Øa mm / inch	b mm / inch	c mm / inch	d mm / inch
HG12P	30 / 1.2	30 / 1.2	M8	20 / 0.8
HG22e	40 / 1.6	30 / 1.2	M10	20 / 0.8
HG34e	40 / 1.6	30 / 1.2	M10	20 / 0.8
HG44e	50 / 2.0	30 / 1.2	M12	25 / 1.0
HG56e	50 / 2.0	30 / 1.2	M12	25 / 1.0
HG66e	50 / 2.0	30 / 1.2	M12	25 / 1.0
HG88e	70 / 2.8	45 / 1.8	M12	37 / 1.5

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HGX66e/1340-4 S

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

Refrigerant: R404A, R507

Subject:

SV	Suction line valve, tube \varnothing ¹⁾	54 mm - 2 1/8 "
DV	Discharge line valve, tube \varnothing ¹⁾	42 mm - 1 5/8 "
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	1/8 " NPTF
D	Connection oil pressure safety switch LP	7/16 " UNF
D1	Connection oil return from oil separator	1/4 " NPTF
F	Oil drain	M 12 x 1.5
H	Oil charge plug	1/4 " NPTF
J	Connection oil sump heater	3/8 " NPTF
K	Sight glass	3 x M 6
L	Connection thermal protection thermostat	1/8 " NPTF
M	Oil strainer	M 12 x 1.5
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
W	Connection for refrigerant injection	2 x 1/8" NPTF

1) Brazing connection

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Refrigerant: R404A, R507

Subject:

BOCK colour the world
of tomorrow

Product photo



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