

# HGX22e/190-4 S

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

Refrigerant: R404A, R507

GEA Commercial Compressors



## Subject:

## Performance data

### Application: Refrigeration & AC

Refrigerant	R404A, R507	Compressor refrigeration capacity	13.50 kW
Power supply	50 Hz, 400 V	Evaporator refrigeration capacity	13.50 kW
Supply frequency	50 Hz	Power consumption	4.92 kW
Evaporating temperature	5.0 °C	Current draw (400 V)	8.27 A
<i>Evaporating pressure (abs.)</i>	<i>7.06 bar</i>	Coefficient of performance (COP/EER)	2.74
Condensing temperature	50.0 °C	Condensing capacity	18.50 kW
<i>Condensing pressure (abs.)</i>	<i>22.98 bar</i>	Mass flow	0.127 kg/s
Suction gas temperature	20 °C	Discharge end temperature	78.4 °C <sup>1)</sup>
Subcooling (outside cond.)	0 K		
Usable superheat	100%		

*Evaporation and condensing temperatures are based on the dew point values (saturated vapour conditions).*

## Certifications <sup>2)</sup>



### 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 GEA compressors can be found at [www.asercom.org](http://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.

## Notes

- 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.
- 2) valid for 400V, 50Hz & application Refrigeration & AC

Subject to change without notice

To:

From:

04.02.2016  
Page 1 of 8

VAP 11.3.0 (online)

# HGX22e/190-4 S

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

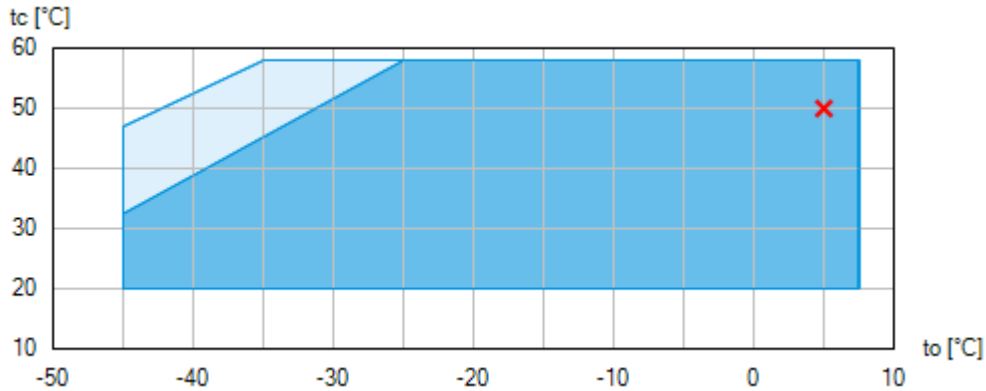
Refrigerant: R404A, R507

GEA Commercial Compressors



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.

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

Subject to change without notice

To:

From:

04.02.2016  
Page 2 of 8

VAP 11.3.0 (online)

# HGX22e/190-4 S

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

Refrigerant: R404A, R507

GEA Commercial Compressors



## Subject:

## Technical data

Number of cylinders / Bore / Stroke	2 / 55 mm / 40 mm
Displacement 50/60 Hz (1450/1740 <sup>1</sup> /min)	16,50 / 19,80 m <sup>3</sup> /h
Voltage <sup>1)</sup>	220-240V Δ / 380-420V Y -3- 50Hz
	265-290V Δ / 440-480V Y -3- 60Hz
Max. working current <sup>2)</sup>	16.2 / 9.4 A
Max. power consumption <sup>2)</sup>	5.6 kW
Starting current (rotor blocked) <sup>2)</sup>	87.0 / 50.0 A
Motor protection	INT69 G
Protection terminal box	IP 66
Weight	75 kg
Max. permissible pressure (LP/HP) <sup>3)</sup>	19 / 28 bar
Connection suction line SV	22 mm - 7/8 "
Connection discharge line DV	16 mm - 5/8 "
Lubrication	Oil pump
Oil type R134a, R404A, R407C/F, R507	FUCHS Reniso Triton SE 55
Oil type R22	FUCHS Reniso SP 46
Oil charge	1,0 Ltr.
Dimensions Length / Width / Height	470 / 240 / 310 mm

## Notes

- 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.  
- Take account of the max. operating current / max. power consumption for designing fuses, supply lines and safety devices. Fuse: Consumption category AC3.  
- Operation with EFC (available only for certain compressor types) may result into higher max. operating current / max. power consumption values.
- 3) LP = Low pressure  
HP = High pressure

Subject to change without notice

To:

From:

04.02.2016  
Page 3 of 8

VAP 11.3.0 (online)

# HGX22e/190-4 S

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

Refrigerant: R404A, R507

GEA Commercial Compressors



**Subject:**

## Performance data table

Application: Refrigeration & AC

Supply frequency: 50 Hz

Voltage: 400 V

Suction gas temperature: 20 °C

Subcooling (outside cond.): 0 K

tc [°C]		to [°C]									
		0	-5	-10	-15	-20	-25	-30	-35	-40	-45
30	Q [W]	16100	13500	11100	8980	7180	5640	4340	3250	2350	1630
	P [kW]	3.47	3.38	3.23	3.04	2.80	2.54	2.26	1.97	1.67	1.39
	I [A]	6.23	6.11	5.92	5.67	5.39	5.07	4.75	4.44	4.14	3.87
35	Q [W]	14900	12400	10200	8230	6560	5140	3930	2930	2100	1430
	P [kW]	3.78	3.64	3.44	3.20	2.93	2.63	2.32	2.00	1.69	1.39
	I [A]	6.65	6.46	6.19	5.88	5.54	5.18	4.82	4.47	4.15	3.87
40	Q [W]	13700	11400	9270	7490	5950	4640	3540	2620	1860	1250
	P [kW]	4.09	3.89	3.64	3.35	3.04	2.70	2.36	2.02	1.69	1.38
	I [A]	7.08	6.80	6.46	6.08	5.67	5.27	4.87	4.49	4.16	3.86
45	Q [W]	12500	10300	8390	6750	5350	4150	3150	2310	1620	1070
	P [kW]	4.38	4.12	3.82	3.49	3.13	2.76	2.39	2.03	1.68	1.36
	I [A]	7.49	7.12	6.70	6.26	5.80	5.34	4.90	4.50	4.14	3.84
50	Q [W]	11300	9240	7510	6020	4740	3660	2750	2000	1380	
	P [kW]	4.65	4.34	3.98	3.60	3.21	2.80	2.40	2.01	1.65	
	I [A]	7.88	7.42	6.93	6.41	5.89	5.39	4.92	4.49	4.11	

to Evaporating temperature

tc Condensing temperature

Q Compressor refrigeration capacity

P Power consumption

I Current draw

Subject to change without notice

To:

From:

04.02.2016

Page 4 of 8

VAP 11.3.0 (online)

## HGX22e/190-4 S

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

Refrigerant: R404A, R507

GEA Commercial Compressors



### Subject:

---

### Scope of supply

Semi-hermetic reciprocating compressor  
Single-section compressor housing with hermetically integrated electric motor

Oil pump

Winding protection with PTC resistor sensors and electronic trigger unit INT69 G

Possibility of connection of oil level controllers ESK, Traxoil, AC+R or CARLY <sup>1)</sup>

Possibility for connection of oil pressure safety switch MP55

Oil charge:

HG: FUCHS Reniso SP 46

HGX: FUCHS Reniso Triton SE 55

Sight glass

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 <sup>2)</sup>

Oil sump heater

110-240 V - 1 - 50/60 Hz, 50-120 W, IP66

PTC heater self-regulating

Oil pressure safety switch MP55 230 V - 1 - 50/60 Hz, IP20 <sup>2)</sup>

Thermal protection thermostat per cylinder cover <sup>3)</sup>

Additional fan

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

230 V AC - 1 - 60 Hz, 128 W <sup>2)</sup>

Special voltage and/or frequency (on request)

### Notes

- 1) Only with additional adapter possible
- 2) Enclosure
- 3) Mounted

Subject to change without notice

---

To:

From:

04.02.2016  
Page 5 of 8

VAP 11.3.0 (online)

# HGX22e/190-4 S

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

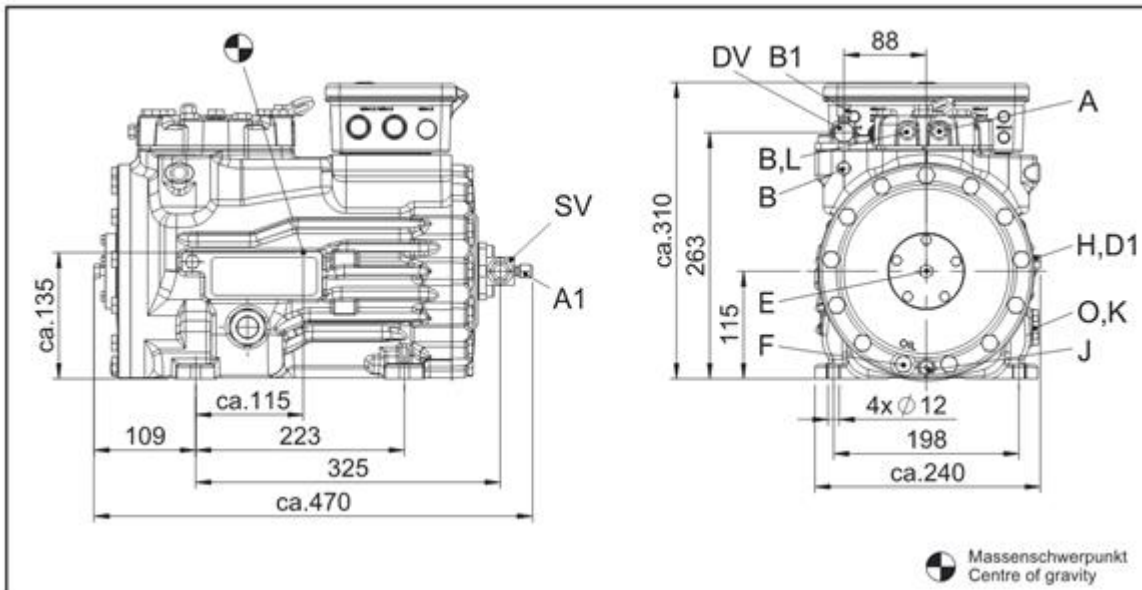
Refrigerant: R404A, R507

GEA Commercial Compressors



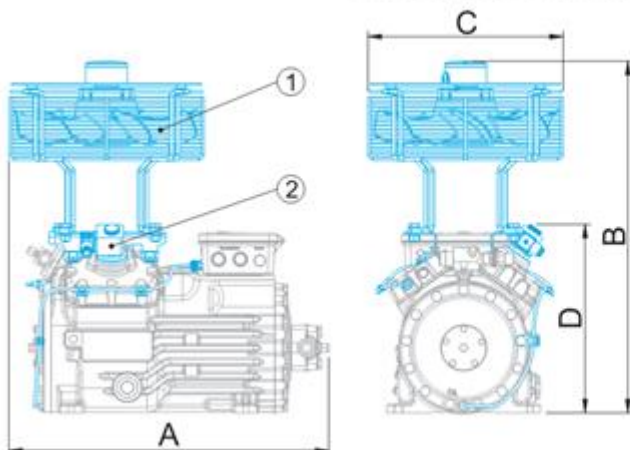
Subject:

## Dimensions and connections



Massenschwerpunkt  
Centre of gravity

### Maße Zubehör / Dimensions Accessories



	A mm / inch	B mm / inch	C mm / inch	D mm / inch
HG12P	ca. 460	ca. 500	ca. 315	-
HA12P	-	-	-	-
HG22e	ca. 515	ca. 595	ca. 350	-
HA22P	-	-	-	-
HG34e	ca. 570	ca. 620	ca. 350	ca. 340
HA34P	-	-	-	ca. 370

- ① Zusatzlüfter / Additional fan
- ② Leistungsregler / Capacity regulator

Subject to change without notice

To:

From:

04.02.2016  
Page 6 of 8

VAP 11.3.0 (online)

# HGX22e/190-4 S

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

Refrigerant: R404A, R507

GEA Commercial Compressors



## Subject:

SV	Suction line valve, tube $\varnothing$ <sup>1)</sup>	22 mm - 7/8 "
DV	Discharge line valve, tube $\varnothing$ <sup>1)</sup>	16 mm - 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
D1	Connection oil return from oil separator	1/4 " NPTF
E	Connection oil pressure gauge	1/8 " NPTF
F	Oil drain	M 10
H	Oil charge plug	1/4 " NPTF
J	Connection oil sump heater	3/8 " NPTF
K	Sight glass	1 1/8 " - 18 UNEF
L	Connection thermal protection thermostat	1/8 " NPTF
O	Connection oil level regulator	1 1/8 " - 18 UNEF

## Notes

- 1) Brazing connection

Subject to change without notice

To:

From:

04.02.2016  
Page 7 of 8

VAP 11.3.0 (online)

## HGX22e/190-4 S

Engine: 220-240V  $\Delta$  / 380-420V Y -3- 50Hz

Refrigerant: R404A, R507

GEA Commercial Compressors



**Subject:**

---

### Product photo



Subject to change without notice

---

To:

From:

04.02.2016  
Page 8 of 8

VAP 11.3.0 (online)