



Semi-hermetic Bock Compressors

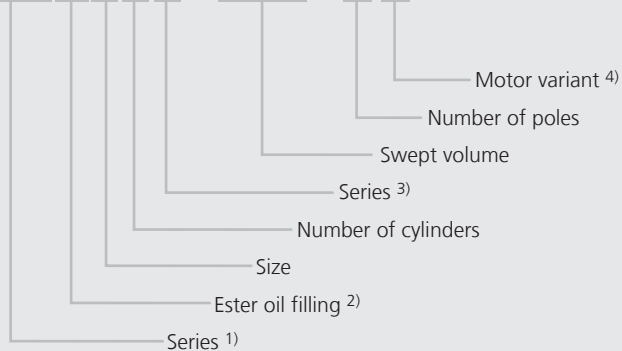
Single-stage and Two-stage Reciprocating Compressors HG (HA)



- 1
- 2
- 3
- 4

Type key

HGX34e / 215 - 4S

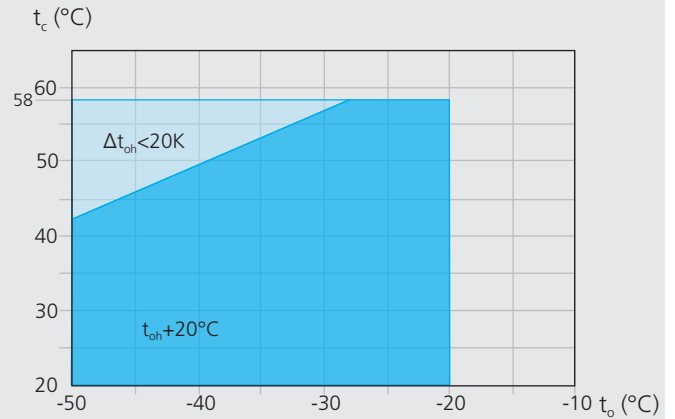
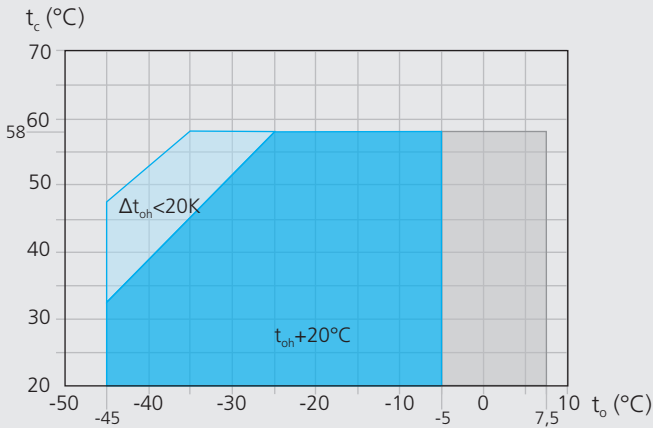


- 1) HG = Hermetic Gas-Cooled (suction gas-cooled)
HA = Hermetic Air-Cooled (for deep-freezing)
- 2) X = Ester oil filling
(HFC refrigerants e.g. R134a, R404A, R507, R407C)
- 3) e = Additional declaration for e-series compressors
P = Additional declaration for Pluscom compressors
- 4) S = More powerful motor e.g. air-conditioning applications

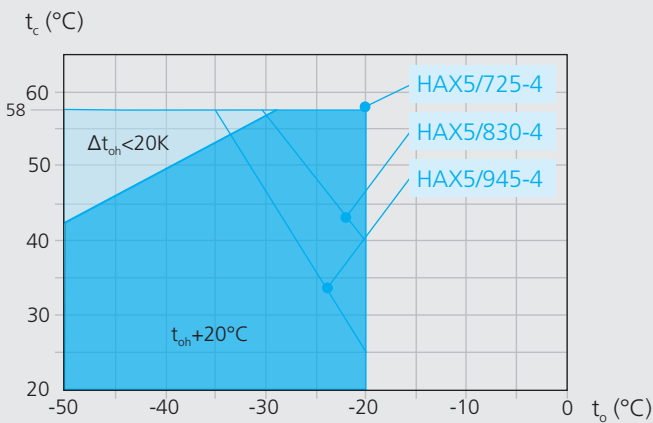
R404A/R507 Operating limits

HGX12P / HGX22e / HGX34e /
HGX4 / HGX5 / HGX6^① / HGX7 / HGX8^②

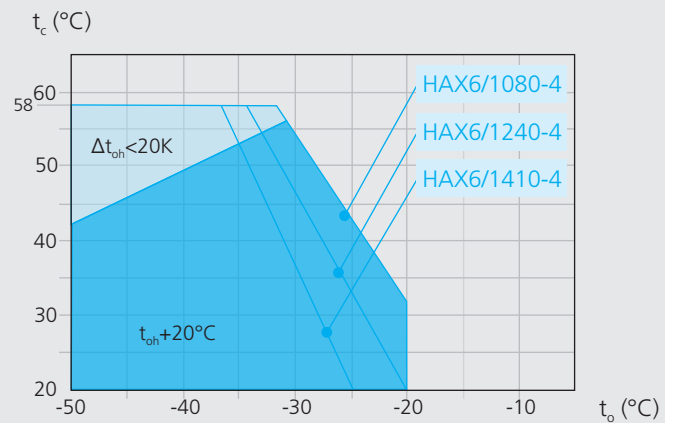
HAX12P / HAX22P / HAX34P / HAX4



HAX5



HAX6



Max. permissible operating pressure (LP/HP)¹⁾: 19/28 bar

¹⁾ LP = low pressure HP = high pressure

- ① **HGX6/1410-4S**
Max. evaporating temperature
 $t_o = 2\text{ °C}$
HGX6/1410-4
Max. evaporating temperature
 $t_o = -7\text{ °C}$
- ② **HGX8/2830-4**
Max. evaporating temperature
 $t_o = 0\text{ °C}$

- Unlimited application range
- HG Supplementary cooling or reduced suction gas temperature
- HA reduced suction gas temperature
- Motor version -S- (more powerful motor)
- t_o Evaporating temperature (°C)
- t_c Condensing temperature (°C)
- Δt_{oh} Suction gas superheat (K)
- t_{oh} Suction gas temperature (°C)

R404A/R507 Notes

Operating limits

Compressor operation is possible within the limits shown on the application diagrams. 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).

Further explanation see separate brochure "Bock semi-hermetic compressors - Electronic Controls".

Performance data

The performance data for R404A/R507 are based on European Standard EN 12900 with a 50 Hz power supply frequency.

This signifies: **20 °C suction gas temperature without liquid sub-cooling.**

This leads to significant differences compared to systems with liquid subcooling and/or other suction gas temperatures.

Performance data were compiled for R404A and R507.

The base values are the data for R404A.

Conversion factor for 60 Hz = 1,2

Performance data for other operating points, see GEA Bock software.

ASERCOM certified performance data

For compressors with this label, the performance data are certified according 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 and www.bock.de.

R404A/R507		Performance data											50 Hz			
Type	Cond. temp. °C	Q P	Cooling capacity \dot{Q}_o [W]										Power consumption P_e [kW]			
			Evaporating temperature °C													
			7,5	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45		
HGX22e/190-4 HGX22e/190-4 S	30	Q P	20800 3,46	19200 3,48	16100 3,46	13300 3,41	11000 3,26	8920 3,07	7140 2,84	5620 2,57	4330 2,29	3240 2,00	2350 1,70	1620 1,41		
	40	Q P	17800 4,28	16400 4,23	13700 4,09	11300 3,93	9200 3,68	7450 3,39	5940 3,08	4640 2,74	3540 2,39	2620 2,03	1860 1,68	1230 1,35		
	50	Q P	14800 5,04	13600 4,93	11300 4,66	9150 4,40	7460 4,06	6000 3,68	4750 3,27	3680 2,85	2780 2,43	2020 2,01	1390 1,61			
HAX22P/190-4	30	Q P							7063 2,87	5663 2,55	4453 2,26	3422 1,97	2562 1,69	1863 1,41		
	40	Q P							5915 3,12	4718 2,75	3684 2,39	2802 2,05	2064 1,71	1460 1,37		
	50	Q P							4797 3,31	3792 2,88	2922 2,45	2177 2,04	1550 1,64	1030 1,25		
HGX34e/215-4 ¹⁾ HGX34e/215-4 S ¹⁾	30	Q P	23900 3,83	21900 3,85	18200 3,84	14600 3,70	11900 3,52	9470 3,26	7390 2,94	5610 2,58	4120 2,21	2900 1,84	1940 1,49	1220 1,18		
	40	Q P	20200 4,72	18500 4,65	15300 4,48	12200 4,26	9840 3,94	7770 3,56	5990 3,14	4480 2,70	3230 2,27	2220 1,85	1430 1,47	851 1,15		
	50	Q P	16500 5,48	15000 5,33	12200 4,99	9770 4,67	7800 4,23	6090 3,75	4630 3,25	3420 2,74	2420 2,26	1630 1,81	1040 1,42			
HAX34P/215-4	30	Q P							8042 3,26	6449 2,91	5071 2,57	3897 2,24	2918 1,92	2122 1,61		
	40	Q P							6735 3,56	5372 3,13	4194 2,73	3190 2,33	2350 1,95	1662 1,57		
	50	Q P							5462 3,77	4317 3,27	3327 2,79	2479 2,33	1765 1,87	1172 1,42		
HGX34e/255-4 ¹⁾ HGX34e/255-4 S ¹⁾	30	Q P	28000 4,57	25700 4,61	21500 4,59	17200 4,44	14200 4,23	11500 3,95	9120 3,61	7080 3,22	5350 2,81	3900 2,39	2730 1,97	1820 1,58		
	40	Q P	23800 5,64	21800 5,58	18100 5,38	14500 5,14	11800 4,76	9460 4,33	7430 3,86	5680 3,37	4210 2,87	3010 2,38	2050 1,92	1320 1,50		
	50	Q P	19500 6,55	17700 6,40	14600 6,02	11700 5,68	9410 5,15	7450 4,58	5760 4,00	4330 3,41	3150 2,84	2200 2,30	1480 1,80			
HAX34P/255-4	30	Q P							9456 3,84	7582 3,42	5962 3,02	4582 2,64	3430 2,26	2495 1,89		
	40	Q P							7919 4,18	6317 3,68	4932 3,20	3751 2,74	2763 2,29	1955 1,84		
	50	Q P							6422 4,44	5076 3,85	3911 3,28	2915 2,73	2075 2,20	1379 1,67		
HGX34e/315-4 ¹⁾ HGX34e/315-4 S ¹⁾	30	Q P	33800 5,86	31000 5,82	26000 5,67	21300 5,47	17600 5,20	14300 4,85	11400 4,43	8840 3,98	6700 3,49	4930 2,99	3490 2,49	2370 2,01		
	40	Q P	28700 7,05	26300 6,92	22000 6,59	17900 6,29	14700 5,83	11900 5,32	9350 4,76	7220 4,18	5400 3,58	3880 2,98	2650 2,40	1690 1,86		
	50	Q P	23500 8,13	21500 7,90	17800 7,39	14500 6,97	11800 6,34	9430 5,67	7370 4,96	5600 4,25	4100 3,54	2840 2,85	1820 2,20			
HAX34P/315-4	30	Q P							11674 4,74	9361 4,22	7360 3,73	5657 3,26	4235 2,79	3080 2,33		
	40	Q P							9776 5,16	7798 4,55	6088 3,96	4631 3,38	3411 2,82	2413 2,27		
	50	Q P							7929 5,48	6267 4,75	4829 4,05	3599 3,38	2562 2,71	1702 2,06		
HGX34e/380-4 ¹⁾ HGX34e/380-4 S ¹⁾	30	Q P	40900 7,20	37600 7,15	31700 6,98	25800 6,84	21200 6,45	17300 5,98	13800 5,46	10900 4,88	8300 4,28	6200 3,67	4490 3,05	3120 2,45		
	40	Q P	34600 8,75	31800 8,59	26700 8,18	21600 7,84	17700 7,25	14300 6,59	11400 5,90	8850 5,18	6730 4,45	4960 3,72	3510 3,00	2340 2,33		
	50	Q P	28400 10,10	26000 9,86	21800 9,23	17600 8,73	14300 7,92	11500 7,08	9030 6,22	6960 5,34	5210 4,47	3760 3,62	2550 2,81			
HAX34P/380-4	30	Q P							14125 5,73	11327 5,11	8906 4,51	6845 3,94	5125 3,38	3726 2,82		
	40	Q P							11829 6,25	9436 5,50	7367 4,79	5604 4,09	4128 3,42	2920 2,75		
	50	Q P							9594 6,63	7583 5,75	5843 4,91	4355 4,09	3100 3,28	2059 2,49		
HGX4/465-4 ¹⁾ HGX4/465-4 S ¹⁾	30	Q P	49311 9,55	45325 9,44	38018 9,13	31142 8,81	25587 8,32	20747 7,71	16575 7,01	13020 6,24	10035 5,45	7569 4,66	5576 3,91	4005 3,21		
	40	Q P	42248 11,33	38764 11,08	32400 10,52	26283 10,08	21490 9,31	17340 8,45	13783 7,53	10770 6,58	8253 5,64	6183 4,73	4511 3,88	3187 3,13		
	50	Q P	34849 12,97	31886 12,59	26502 11,76	21559 11,12	17526 10,09	14061 9,00	11117 7,89	8643 6,78	6592 5,71	4913 4,70	3560 3,79			
HAX4/465-4	30	Q P							18696 7,76	15000 6,86	11814 6,00	9094 5,17	6798 4,35	4884 3,56		
	40	Q P							15696 8,32	12501 7,27	9756 6,26	7420 5,29	5449 4,36	3802 3,46		
	50	Q P							12819 8,76	10124 7,56	7822 6,42	5870 5,33	4225 4,29	2845 3,30		

Relating to 20 °C suction gas temp. without liquid subcooling

¹⁾ Compressors (R404A) are ASERCOM certified



Motor version -S- (more powerful motor)

Supplementary cooling or reduced suction gas temp.



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