

**GEA Bock 6 and 8 Cylinder Compressors HG76e and HG88e**  
Semi-hermetic Piston Compressors for large Refrigerating Capacities

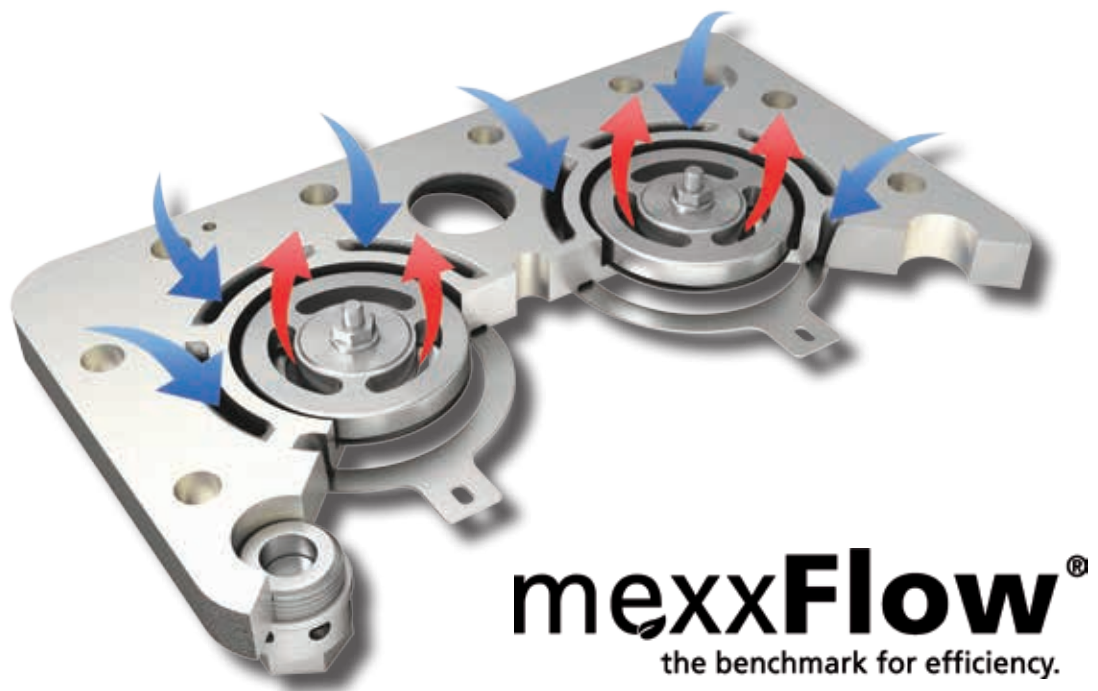
### GEA Bock compressors HG76e and HG88e

*The GEA Bock mexxFlow® valve plate system – the flow-optimized combination of double ring fin valve plate and mexxFlow® cylinder head ensures a maximum of efficiency.*

Based on our current semi-hermetic product range, with its outstanding advantages and features, GEA Bock now presents you a new generation of the largest semi-hermetic compressors. The new GEA Bock compressor models HG76e and HG88e offer maximum efficiency and easy handling for chillers and performance-intensive refrigeration applications. The revised versions of the GEA Bock 6-cylinder and 8-cylinder compressors, have already established ten years ago, achieve new records in terms of efficiency due to the use of the GEA Bock mexxFlow® valve plate system.

#### Special features

GEA Bock achieves an advance in efficiency of the models HG76e and HG88e in comparison to its predecessors due to the use of the mexxFlow® valve system. With the mexxFlow® system pressure losses can be minimized thanks to a flow-optimized double ring fin construction of the valve plate in combination with a cylinder head, which is specially adapted to the valve plate. Thus, the efficiency of the compressors can be increased considerably.



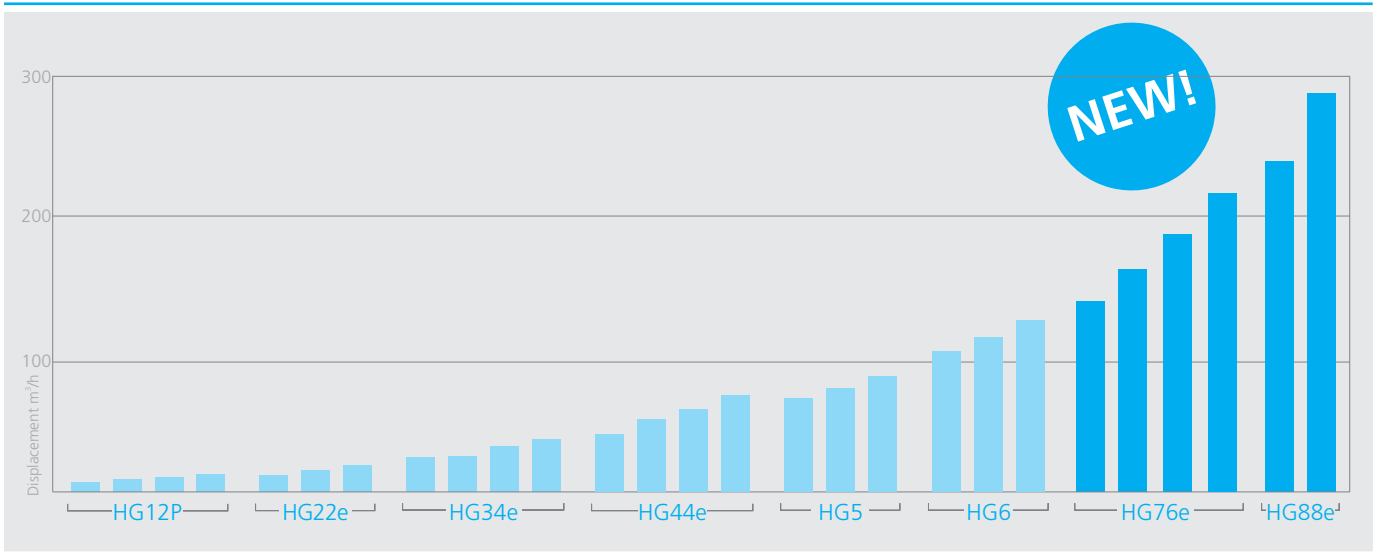
#### Disclaimer

This brochure has been produced for you with the greatest of care. Nevertheless it is not possible to rule out mistakes completely. In such cases we cannot assume any liability. The contents correspond to the status on going to print. Illustrations may include optional equipment. Deviations cannot be ruled out because of the ongoing development process of our products.

The details are provided as unbinding general information and cannot substitute detailed, individual consultation. Reprints even only of excerpts only allowed with the explicit approval of GEA Bock GmbH.

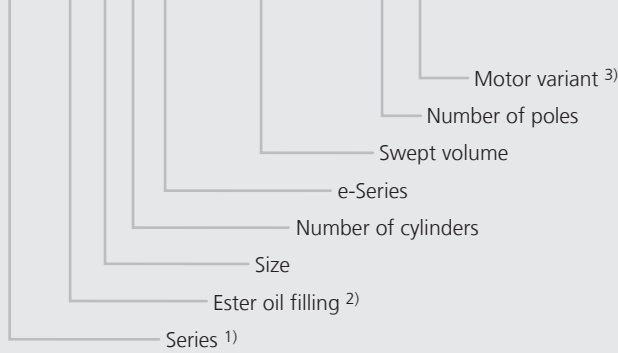
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The current GEA Bock HG program

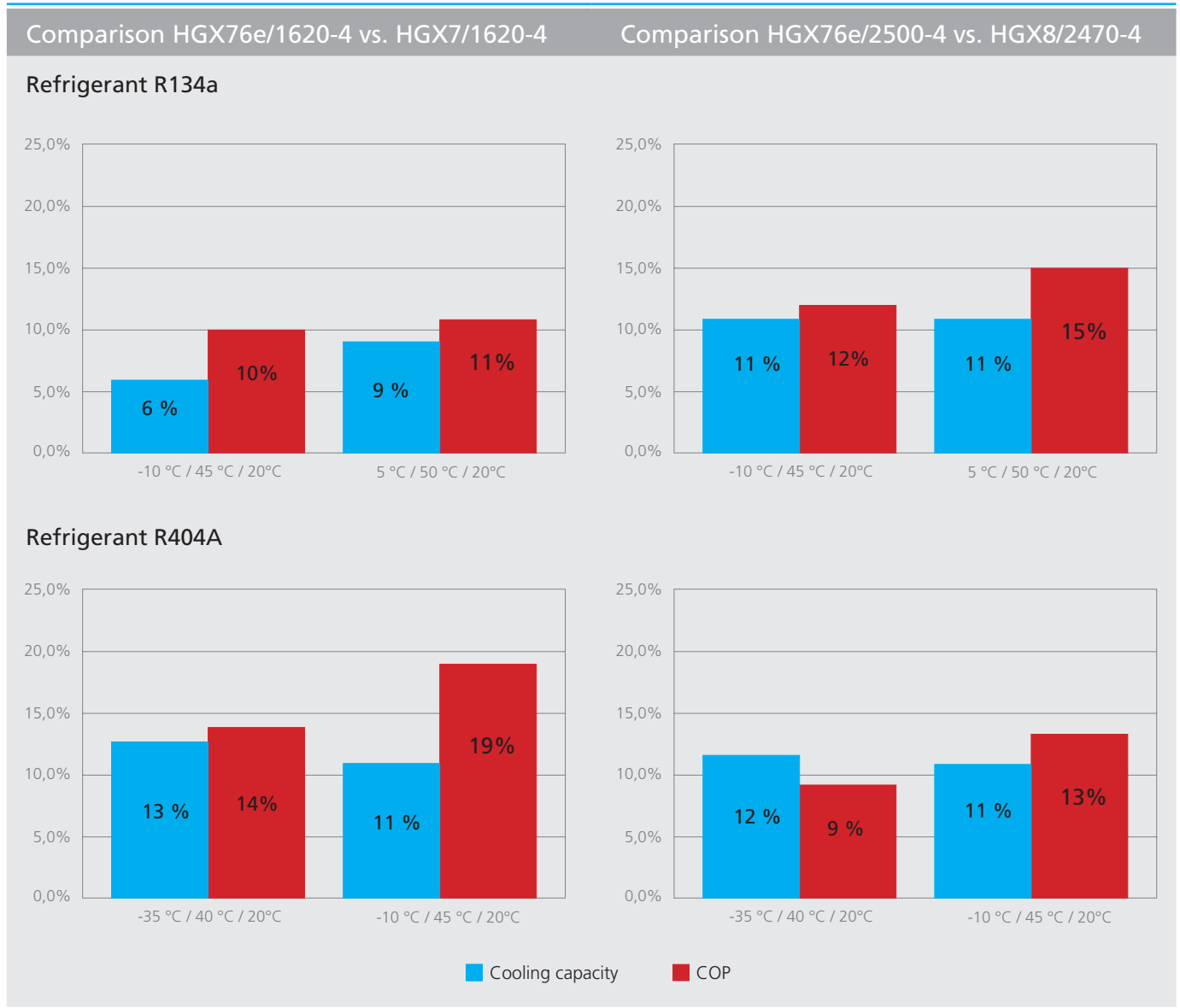


Type key

HGX88e / 3235 - 4 S



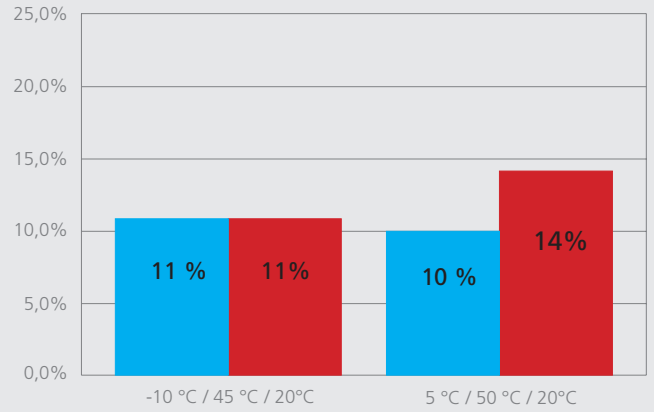
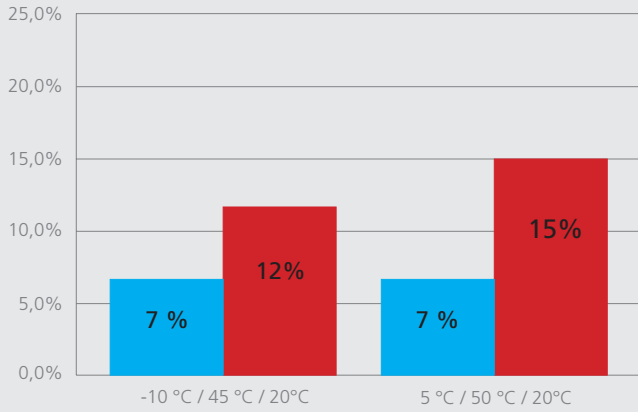
- 1) HG = Hermetic Gas-Cooled (suction gas-cooled)
- 2) X = Ester oil filling  
(HFC refrigerants e.g. R134a, R404A, R507, R407C, R407F)
- 3) S = More powerful motor e.g. air-conditioning applications



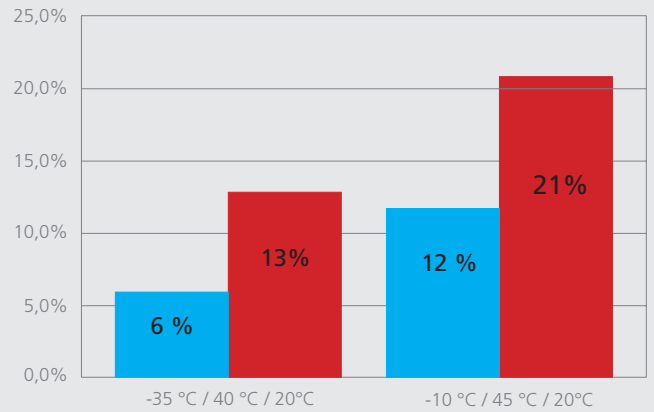
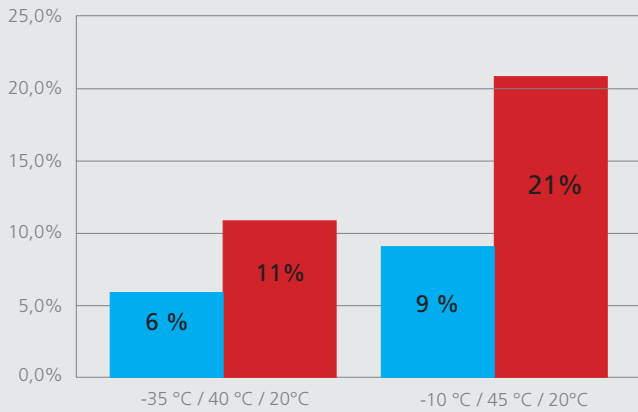
Comparison HGX88e/2735-4 vs. HGX8/2830-4

Comparison HGX88e/3235-4 vs. HGX8/3220-4

Refrigerant R134a



Refrigerant R404A



■ Cooling capacity ■ COP



# INT69 G Motor Protection

## Electronic Motor Protection GEA Bock INT69 G

PTC sensors  
Connection of up to nine  
PTC sensors possible



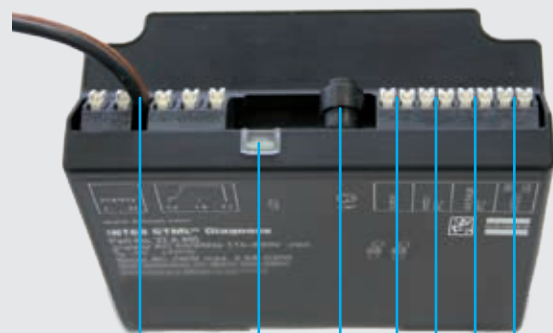
### Temperature safety drive for the drive motor

The INT69 G is replacing in all future new developments the MP10 compressors used as standard at GEA Bock

The INT69 G also provides the usual functions, as:

- motor temperature monitoring
- hot gas temperature monitoring
- a reconnection preventing device
- a reset

## INT69 GTML Diagnosis



Operating recognition

Bicolour LED  
Flash code for recognition of  
the current status

Interface for USB /  
DP-Modbus Gateway

Reset

Connection  
INT250 oil  
differential  
pressure sensor

Connection  
hot gas sensor

Connection  
PTC sensors

## Technical data

Unit designation	INT69 G	INT69 GTML Diagnosis
Connection voltage	AC 115-230 V - 1 - 50/60 Hz ± 10% 3 VA	AC 115-230 V - 1 - 50/60 Hz ± 10% 3 VA
Relay	AC 240 V, 2,5A, C300	AC 240 V, 2,5A, C300
Dimensions L/W/H	53 x 33 x 68 mm	87 x 40 x 81,5 mm

## INT69 G Diagnose Unit Motor Protection

### Read facility via INTElligence diagnosis software

With the INTElligence software, valuable information can be obtained on the status of the compressor and the system. The diagnosis function includes the plausibility checks of the logic sequences, all important operation and error values of the compressor and provides for its clear visualization.

Crucial evaluation parameters can be configured individually. This allows for a quick analysis and an efficient system management.

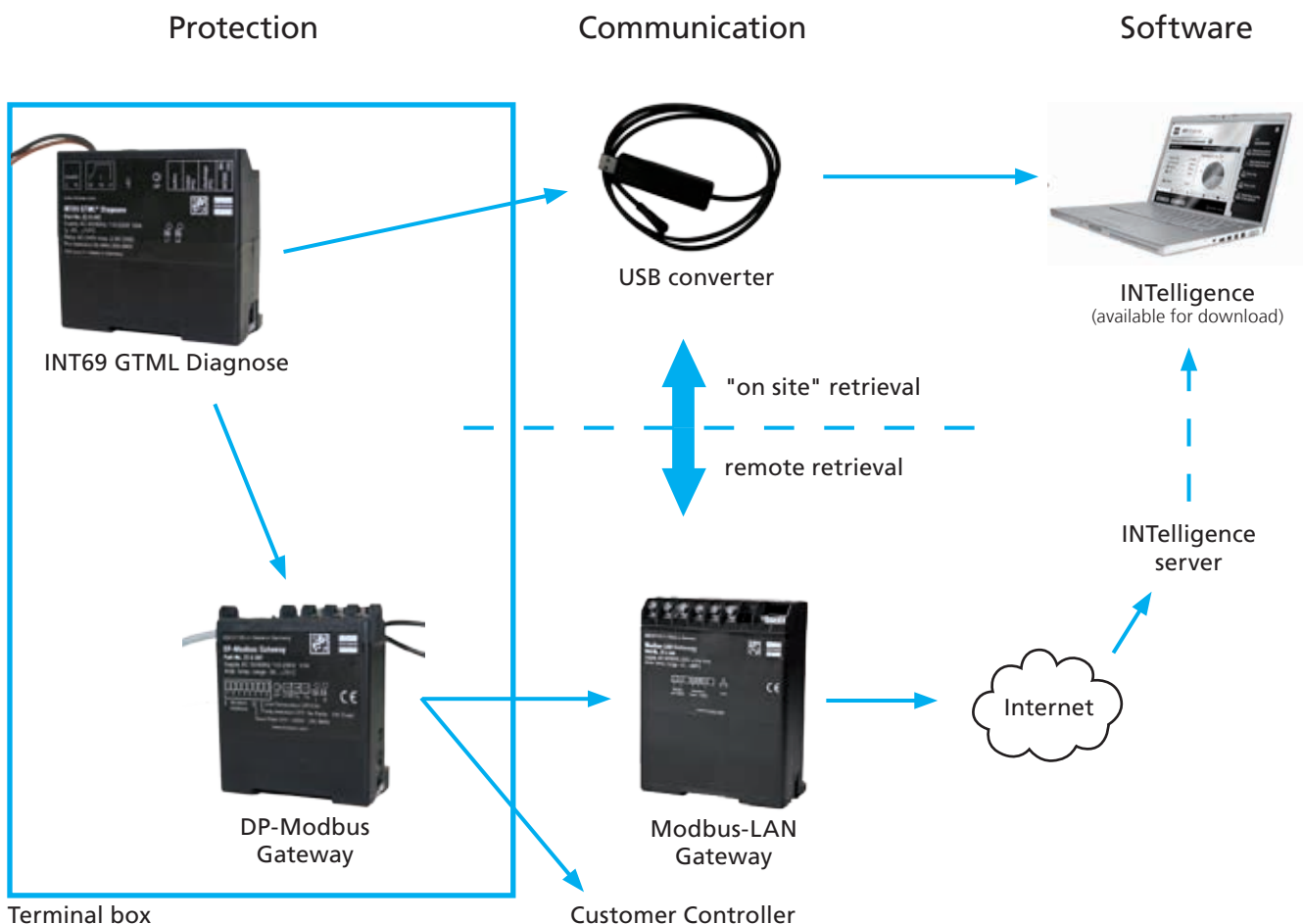
Advantages:

- Simple operation
- Immediate diagnosis and precise problem solving
- Specially adaptable to the user's needs

If required, data can be retrieved directly at each compressor via USB port. A Modbus interface is available for integration in a network.

The data are sent periodically via the DP-Modbus gateway and the Modbus-LAN gateway to a server and can be retrieved remotely by the INTElligence diagnosis software.

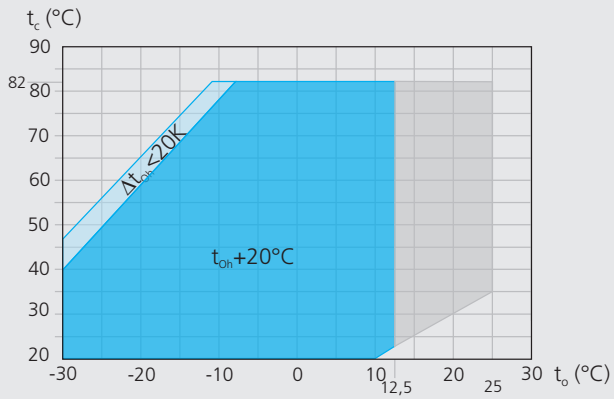
The INTElligence diagnosis software can be downloaded for free at [www.kriwan.com](http://www.kriwan.com).



Further explanation can be found at [www.kriwan.com](http://www.kriwan.com).

In the event of inquiries please contact our Department for Application Technology, phone +49 7022 9454-0.

## R134a Operating limits



- Unlimited application range
- Supplementary cooling or reduced suction gas temperature
- Motor version -S- (more powerful motor)

- $t_o$  Evaporation temperature (°C)
- $t_c$  Condensing temperature (°C)
- $\Delta t_{oh}$  Suction gas superheat (K)
- $t_{oh}$  Suction gas temperature (°C)

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

<sup>1)</sup> LP = low pressure · HP = high pressure

## R134a 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 a frequency converter.

### Performance data

The performance data for R134a are based on EN 12900 with a **50 Hz power supply frequency**.

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

Conversion factor for 60 Hz = 1,2

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




R134a		Performance data						50 Hz		
Type	Displacement m <sup>3</sup> /h (50 Hz)	Cooling capacity $\dot{Q}_o$ [W]						Drive power $P_e$ [kW]		
		Normal cooling			Air-conditioning					
		Evaporation temp. -10°C / Cond. temp. +45°C						Evaporation temp. +5°C / Cond. temp. +50°C		
		$\dot{Q}_o$	$P_e$	COP	$\dot{Q}_o$	$P_e$	COP			
HGX76e/1620-4	140,6	42500	16,7	2,53	77500	23,1	3,35			
HGX76e/1860-4	161,4	48500	19,4	2,50	89000	26,9	3,30			
HGX76e/2110-4	183,6	55000	22,2	2,47	102000	31,0	3,28			
HGX76e/2500-4	217,2	65000	26,2	2,48	119000	36,6	3,25			

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

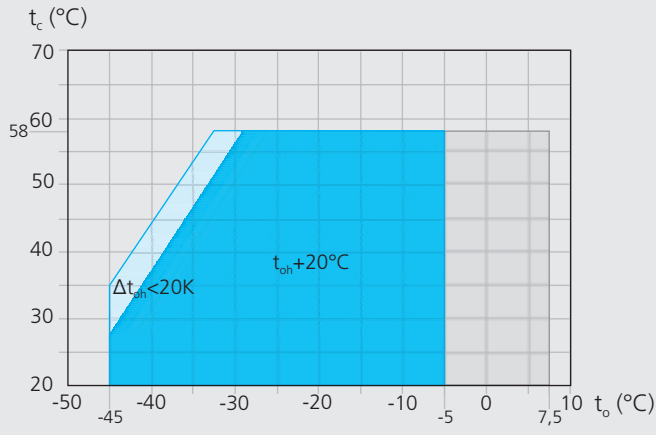
This performance data is preliminary data!

R134a		Performance data											50 Hz			
Type	Cond. temp. °C	Q P	Cooling capacity $\dot{Q}_o$ [W]										Power consumption $P_e$ [kW]			
			Evaporating temperature °C													
			12,5	10	7,5	5	0	-5	-10	-15	-20	-25	-30			
HGX88e/2735-4	30	Q	232000	211000	192000	174000	141000	113000	88900	69000	52500	39100	28500			
		P	30,10	30,10	29,90	29,50	28,30	26,70	24,70	22,50	20,10	17,70	15,40			
	40	Q	205000	186000	169000	153000	123000	98000	76800	59000	44300	32400	22800			
		P	37,10	36,50	35,60	34,70	32,50	29,90	27,10	24,10	21,20	18,40	15,80			
	50	Q	178000	161000	146000	131000	106000	83500	65000	49600	36900	26400				
		P	43,30	42,00	40,60	39,10	35,90	32,50	29,00	25,40	22,00	18,90				
HGX88e/3235-4	60	Q	150000	136000	123000	110000	88000	69400	53800	40800	30000					
		P	48,50	46,70	44,80	42,80	38,70	34,50	30,40	26,30	22,60					
	70	Q	123000	111000	99500	89200	71000	55700	43000	32500						
		P	52,80	50,50	48,10	45,70	40,80	36,00	31,30	26,80						
	30	Q	275000	250000	227000	205000	166000	133000	105000	81300	62100	46600	34500			
		P	37,80	37,20	36,40	35,60	33,70	31,40	28,90	26,20	23,40	20,70	18,00			
HGX88e/3235-4	40	Q	242000	219000	199000	180000	145000	116000	90600	69900	52800	39000	27900			
		P	45,10	43,90	42,60	41,30	38,30	35,10	31,80	28,40	25,00	21,70	18,60			
	50	Q	209000	189000	171000	154000	124000	98200	76700	58700	43800	31500				
		P	51,90	50,20	48,30	46,40	42,50	38,40	34,20	30,10	26,00	22,20				
	60	Q	176000	159000	143000	129000	103000	81200	62900	47600	34800					
		P	57,90	55,50	53,10	50,70	45,70	40,70	35,70	30,90	26,20					
HGX88e/3235-4	70	Q	143000	129000	116000	104000	82200	64300	49200	36600						
		P	62,60	59,70	56,70	53,80	47,80	41,90	36,10	30,50						

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

 Supplementary cooling or reduced suction gas temp.

## R404A/R507 Operating limits



- Unlimited application range
- Supplementary cooling or reduced suction gas temperature
- Motor version -S- (more powerful motor)

- $t_o$  Evaporation temperature (°C)
- $t_c$  Condensing temperature (°C)
- $\Delta t_{oh}$  Suction gas superheat (K)
- $t_{oh}$  Suction gas temperature (°C)

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

<sup>1)</sup> LP = low pressure HP = high pressure

## R404A/R507 Notes

### Operating limits

Compressor operation is possible within the limit shown on the application diagram. 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 a frequency converter.

### 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 subcooling**.

Performance data were compiled for R404A and R507. The base values are the data for R404A.

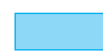
Conversion factor for 60 Hz = 1,2

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

# Operating limits and performance data


R404A/R507		Performance data									50 Hz
Type	Displacement m <sup>3</sup> /h (50 Hz)	Cooling capacity $\dot{Q}_o$ [W]						Drive power $P_e$ [kW]			
		Deep freezing			Normal cooling			Air-conditioning			
		Evaporation temp. -35°C / Condensing temp. +40°C			Evaporation temp. -10°C / Condensing temp. +45°C			Evaporation temp. +5°C / Condensing temp. +50°C			
		$\dot{Q}_o$	$P_e$	COP	$\dot{Q}_o$	$P_e$	COP	$\dot{Q}_o$	$P_e$	COP	
HGX76e/1620-4 (S)	140,6	23000	15,9	1,44	74500	30,9	2,41	120000	40,9	2,93	
HGX76e/1860-4 (S)	161,4	26500	18,6	1,42	85500	35,9	2,38	138000	47,7	2,89	
HGX76e/2110-4 (S)	183,6	30000	21,2	1,41	97000	41,4	2,34	157000	54,7	2,87	
HGX76e/2500-4 (S)	217,2	35000	24,8	1,41	113000	49,3	2,29	181000	64,8	2,79	

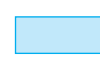
Relating to 20 °C suction gas temperature without liquid subcooling.  
This performance data is preliminary data!

 Motor version -S-  
(more powerful motor)

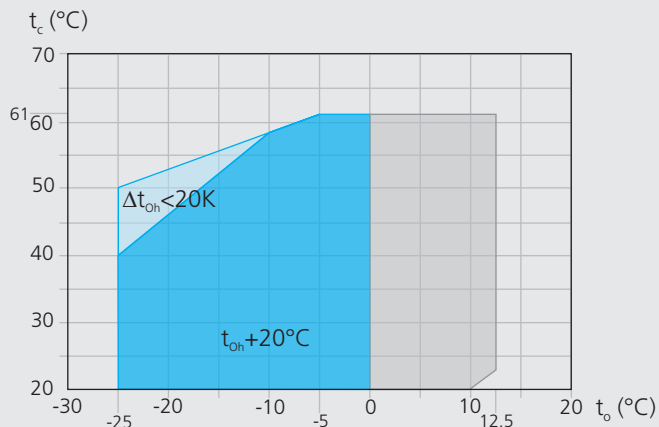
R404A/R507		Performance data												50 Hz
Type	Cond. temp. °C	Q P	Cooling capacity $\dot{Q}_o$ [W]										Power consumption $P_e$ [kW]	
			Evaporating temperature °C											
			7,5	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45
HGX88e/2735-4	30	Q	315000	289000	243000	202000	165000	134000	106000	82700	63200	47300	34600	25000
	P	52,70	52,10	50,40	48,50	45,40	42,00	38,20	34,30	30,20	26,30	22,40	18,90	
HGX88e/2735-4 S	40	Q	268000	246000	206000	170000	139000	112000	88300	68700	52300	38900	28200	
	P	62,60	61,20	57,90	54,70	50,40	45,80	41,10	36,30	31,60	27,10	22,90		
HGX88e/3235-4	50	Q	222000	203000	169000	139000	113000	90300	71200	55100	41800	31000		
	P	71,30	69,10	64,50	60,00	54,60	49,00	43,40	37,90	32,60	27,70			
HGX88e/3235-4 S	30	Q	362000	334000	281000	234000	192000	156000	124000	97000	74300	55700	40700	29100
	P	62,00	61,50	59,80	57,60	54,10	50,00	45,40	40,60	35,70	30,80	26,20	22,00	
HGX88e/3235-4 S	40	Q	310000	285000	239000	198000	162000	131000	104000	80100	60900	45200	32600	
	P	74,40	72,80	69,10	65,20	60,00	54,50	48,70	42,80	37,00	31,50	26,40		
	50	Q	255000	234000	195000	161000	131000	105000	82000	63400	48000	35500		
	P	84,50	82,00	76,50	71,10	64,50	57,70	50,90	44,20	37,80	31,80			

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

 Motor version -S-  
(more powerful motor)

 Supplementary cooling or reduced suction gas temp.

## R407C Operating limits



- Unlimited application range
- Supplementary cooling or reduced suction gas temperature
- Motor version -S- (more powerful motor)

- $t_o$  Evaporation temperature (°C)
- $t_c$  Condensing temperature (°C)
- $\Delta t_{oh}$  Suction gas superheat (K)
- $t_{oh}$  Suction gas temperature (°C)

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

<sup>1)</sup> LP = low pressure HP = high pressure

## R407C 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 a frequency converter.

### Performance data

The performance data for R407C are based on EN 12900 with a 50 Hz power supply frequency.

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

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

Conversion factor for 60 Hz = 1,2

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

## R407C

## Performance data

50 Hz

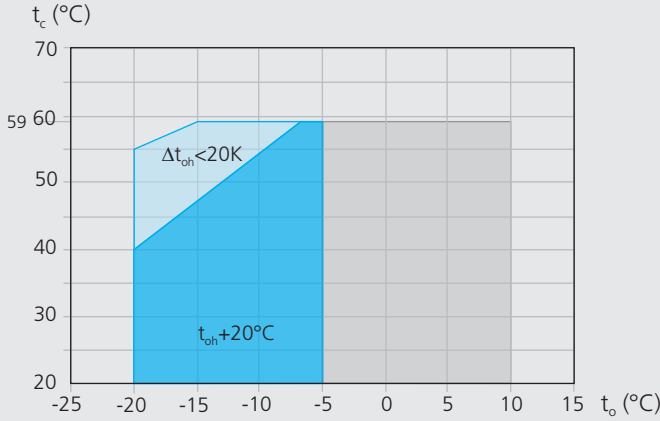
Type	Cond. temp. °C		Cooling capacity $\dot{Q}_0$ [W]								Power consumption $P_e$ [kW]	
			Evaporating temperature °C									
			12,5	10	7,5	5	0	-5	-10	-15	-20	-25
HGX88e/2735-4 HGX88e/2735-4 S	30	Q	323000	295000	269000	244000	201000	163000	130000	103000	79900	61000
		P	40,60	41,00	41,00	40,80	39,70	37,70	35,00	31,90	28,50	25,00
	40	Q	286000	260000	237000	215000	176000	142000	113000	87700	67300	50300
		P	51,80	51,20	50,30	49,20	46,40	43,00	39,10	34,90	30,60	26,40
	50	Q	248000	225000	204000	185000	150000	120000	94400	73000	55200	40400
		P	61,20	59,70	58,00	56,10	51,80	47,10	42,10	37,00	32,00	27,30
HGX88e/3235-4 HGX88e/3235-4 S	30	Q	374000	341000	311000	283000	232000	188000	151000	119000	92500	70500
		P	48,00	48,40	48,50	48,30	46,90	44,50	41,40	37,80	33,80	29,60
	40	Q	331000	302000	274000	249000	203000	164000	130000	102000	78000	58300
		P	61,30	60,50	59,50	58,20	54,90	50,80	46,20	41,30	36,20	31,20
	50	Q	287000	261000	237000	214000	174000	139000	110000	84800	64200	47000
		P	72,50	70,70	68,60	66,30	61,30	55,70	49,90	43,80	37,90	32,20

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

Motor version -S- (more powerful motor)

Supplementary cooling or reduced suction gas temp.

## R407F Operating limits



- Unlimited application range
  - Supplementary cooling or reduced suction gas temperature
  - Motor version -S- (more powerful motor)
- $t_o$  Evaporation temperature (°C)  
 $t_c$  Condensing temperature (°C)  
 $\Delta t_{oh}$  Suction gas superheat (K)  
 $t_{oh}$  Suction gas temperature (°C)

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

<sup>1)</sup> LP = low pressure HP = high pressure

## R407F 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 a frequency converter.

### Performance data

The performance data for R407F are based on EN 12900 with a **50 Hz power supply frequency**.

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

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

Conversion factor for 60 Hz = 1,2

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

## R407F Performance data 50 Hz

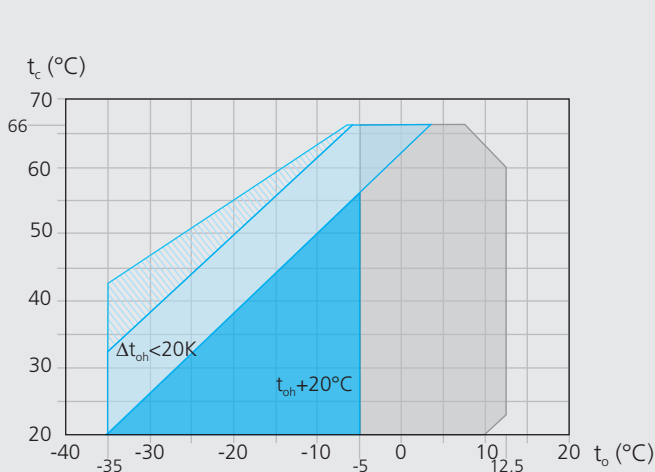
Type	Cond. temp. °C		Cooling capacity $\dot{Q}_o$ [W]							Power consumption $P_e$ [kW]		
			Evaporating temperature °C									
			10	7,5	5	0	-5	-10	-15	-20		
HGX88e/2735-4 HGX88e/2735-4 S	30	Q	346000	315000	287000	235000	191000	153000	121000	93000		
		P	50,10	49,90	49,30	47,50	45,40	41,80	38,00	34,10		
	40	Q	302000	275000	250000	205000	166000	132000	104000	79300		
		P	61,20	60,00	58,50	54,90	51,30	46,40	41,40	36,60		
	50	Q	258000	235000	213000	174000	141000	111000	86300	65800		
		P	70,70	68,50	66,00	60,80	55,80	49,70	43,70	38,10		
HGX88e/3235-4 HGX88e/3235-4 S	30	Q	398000	363000	331000	272000	221000	178000	141000	109000		
		P	58,80	58,70	58,20	56,30	54,00	49,80	45,30	40,60		
	40	Q	349000	318000	290000	238000	193000	154000	121000	92600		
		P	72,70	71,30	69,60	65,40	61,20	55,30	49,20	43,30		
	50	Q	297000	270000	245000	200000	162000	129000	99600	75800		
		P	83,70	81,10	78,30	72,10	66,10	58,70	51,50	44,70		

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

Motor version -S- (more powerful motor)

Supplementary cooling or reduced suction gas temp.

## R22 Operating limits



- Unlimited application range
  - Supplementary cooling or reduced suction gas temperature
  - Supplementary cooling and reduced suction gas temperature
  - Motor version -S- (more powerful motor)
- $t_o$  Evaporation temperature (°C)  
 $t_c$  Condensing temperature (°C)  
 $\Delta t_{oh}$  Suction gas superheat (K)  
 $t_{oh}$  Suction gas temperature (°C)

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

<sup>1)</sup> LP = low pressure HP = high pressure

## R22 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 a frequency converter.

### Performance data

The performance data for R22 are based on EN 12900 with a 50 Hz power supply frequency.

This signifies: 20 °C suction gas temperature without liquid subcooling.

Conversion factor for 60 Hz = 1,2

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

## R22 Performance data 50 Hz

Type	Cond. temp. °C		Cooling capacity $\dot{Q}_0$ [W]										Power consumption $P_e$ [kW]			
			Evaporating temperature °C													
			12,5	10	7,5	5	0	-5	-10	-15	-20	-25	-30	-35		
HG88e/2735-4 HG88e/2735-4 S	30	Q	342000	314000	288000	263000	219000	181000	148000	119000	94300	73400	55300	39500		
		P	43,70	44,30	44,70	44,70	44,10	42,50	40,30	37,40	34,10	30,50	26,70	23,00		
	40	Q	308000	282000	258000	236000	196000	161000	130000	104000	81300	61700	44400	28800		
		P	56,20	55,90	55,30	54,40	52,10	49,10	45,40	41,30	37,00	32,50	28,10	23,80		
	50	Q	274000	251000	229000	209000	172000	140000	113000	88400	67600	49100				
		P	67,00	65,80	64,30	62,60	58,80	54,30	49,40	44,20	39,00	33,70				
HG88e/3235-4 HG88e/3235-4 S	30	Q	396000	364000	334000	305000	254000	210000	171000	138000	110000	85100	64700	47300		
		P	51,70	52,40	52,80	52,90	52,10	50,30	47,60	44,10	40,20	36,00	31,70	27,60		
	40	Q	357000	328000	300000	274000	227000	186000	151000	121000	94500	72400	53400	37000		
		P	66,60	66,10	65,40	64,40	61,60	58,00	53,60	48,90	43,80	38,80	33,80	29,30		
	50	Q	318000	291000	266000	242000	199000	162000	131000	103000	79500	59300				
		P	79,40	77,90	76,10	74,10	69,50	64,20	58,50	52,60	46,60	40,90				

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

- Supplementary cooling or reduced suction gas temp.
- Motor version -S- (more powerful motor)
- Supplementary cooling and reduced suction gas temp.

Type	Number of cylinders	Displacement 50 / 60 Hz (1450/1740 rpm)  m <sup>3</sup> /h	Electrical data				Weight  kg	Connection ④		Oil charge  Ltr.
			Voltage	Max. working current	Max. power consumption	Starting current		Discharge line DV	Suction line SV	
			①	②	②	(rotor locked)		mm l inch	mm l inch	
				A	kW	A				
				PW 1 + 2		PW 1 / PW 1 + 2				
HG76e/1620-4	6	140,60 / 168,80	③	72	39,0	232 / 357	322	42 / 1 <sup>5</sup> / <sub>8</sub>	54 / 2 <sup>1</sup> / <sub>8</sub>	4,5
HG76e/1620-4 S	6	140,60 / 168,80	③	87	46,4	268 / 412	322	42 / 1 <sup>5</sup> / <sub>8</sub>	54 / 2 <sup>1</sup> / <sub>8</sub>	4,5
HG76e/1860-4	6	161,40 / 193,70	③	83	45,2	232 / 357	319	42 / 1 <sup>5</sup> / <sub>8</sub>	54 / 2 <sup>1</sup> / <sub>8</sub>	4,5
HG76e/1860-4 S	6	161,40 / 193,70	③	100	54,6	268 / 412	320	42 / 1 <sup>5</sup> / <sub>8</sub>	54 / 2 <sup>1</sup> / <sub>8</sub>	4,5
HG76e/2110-4	6	183,60 / 220,30	③	91	50,5	268 / 412	315	42 / 1 <sup>5</sup> / <sub>8</sub>	64 / 2 <sup>5</sup> / <sub>8</sub>	4,5
HG76e/2110-4 S	6	183,60 / 220,30	③	115	61,6	326 / 501	317	42 / 1 <sup>5</sup> / <sub>8</sub>	64 / 2 <sup>5</sup> / <sub>8</sub>	4,5
HG76e/2500-4	6	217,20 / 260,60	③	107	59,9	268 / 412	310	42 / 1 <sup>5</sup> / <sub>8</sub>	64 / 2 <sup>5</sup> / <sub>8</sub>	4,5
HG76e/2500-4 S	6	217,20 / 260,60	③	133	72,6	326 / 501	312	42 / 1 <sup>5</sup> / <sub>8</sub>	64 / 2 <sup>5</sup> / <sub>8</sub>	4,5
HG88e/2735-4	8	237,90 / 285,50	③	118	63,7	475 / 551	448	54 / 2 <sup>1</sup> / <sub>8</sub>	76 / 3 <sup>1</sup> / <sub>8</sub>	9,0
HG88e/2735-4 S	8	237,90 / 285,50	③	141	77,5	520 / 605	468	54 / 2 <sup>1</sup> / <sub>8</sub>	76 / 3 <sup>1</sup> / <sub>8</sub>	9,0
HG88e/3235-4	8	281,30 / 337,60	③	135	74,6	475 / 551	442	54 / 2 <sup>1</sup> / <sub>8</sub>	76 / 3 <sup>1</sup> / <sub>8</sub>	9,0
HG88e/3235-4 S	8	281,30 / 337,60	③	160	91,0	520 / 605	462	54 / 2 <sup>1</sup> / <sub>8</sub>	76 / 3 <sup>1</sup> / <sub>8</sub>	9,0

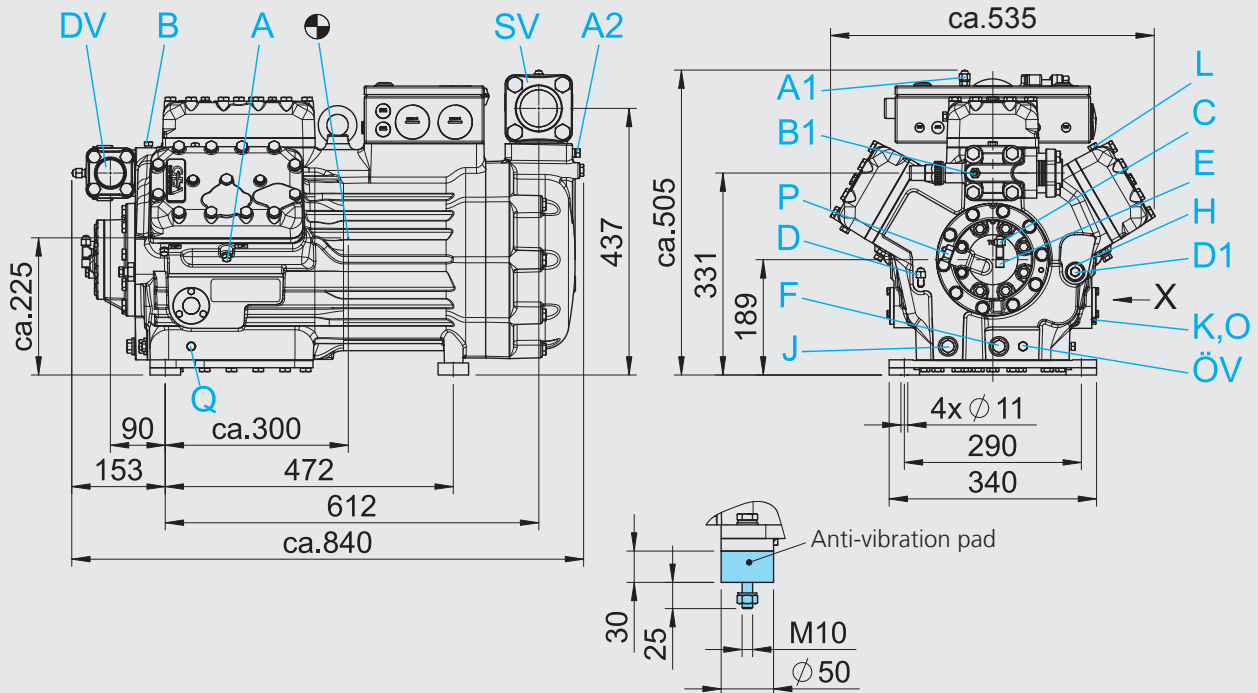
\* PW = Part Winding, motors for part winding start

1 = 1. part winding 2 = 2. part winding

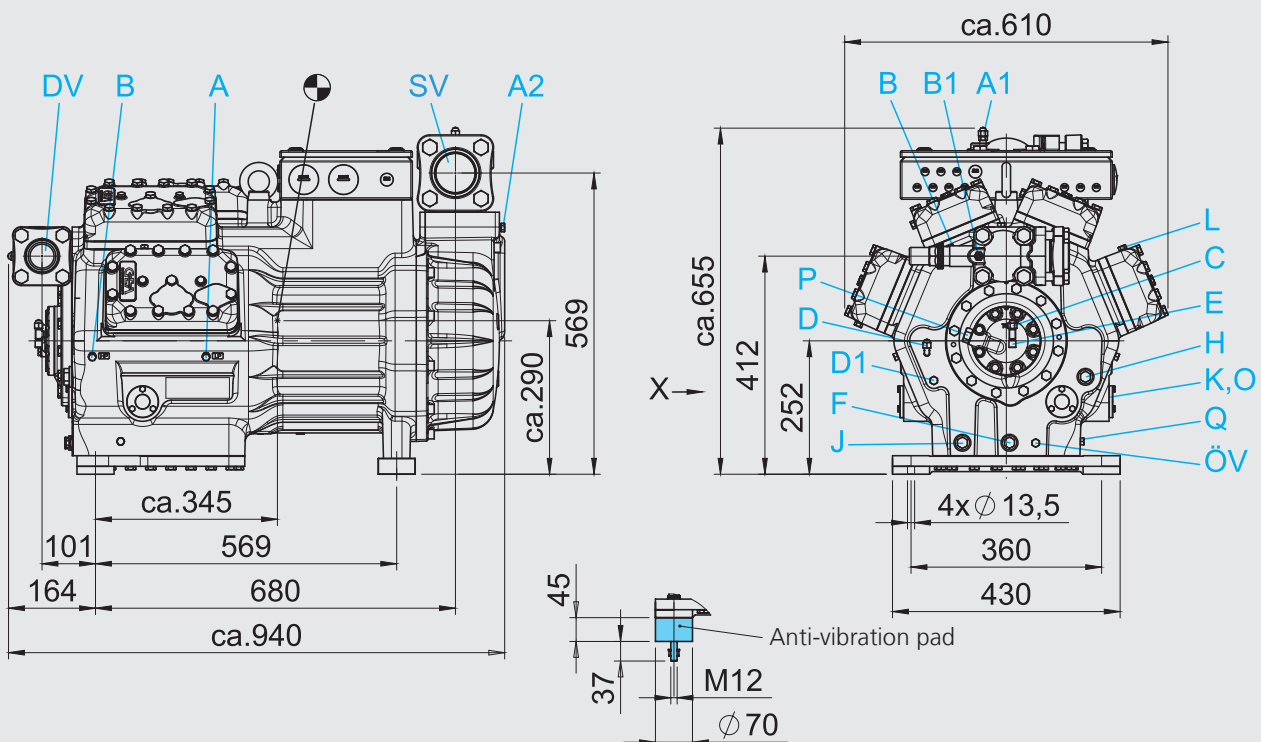
### Explanations:

- ① Tolerance ( $\pm 10\%$ ) relates to the mean value of the voltage range. Other voltages and current types on request.
- ② - The specifications for max. power consumption apply for 50Hz operation. For 60Hz operation, the specifications have to be multiplied by the factor 1.2. The max. working current remains unchanged.  
- Take account of the max. operating current / max. power consumption when designing contactors, leads and fuses. Switches: Service category AC3
- ③ 380-420 V Y/YY - 3 - 50 Hz PW  
440-480 V Y/YY - 3 - 60 Hz PW  
PW = Part Winding, motors for part winding start (no start unloaders required)  
- Winding ratios: 50% / 50%  
- Designs for Y/ $\Delta$  on request
- ④ For soldering connections

HG76e



HG88e



Dimensions in mm

<sup>1)</sup> Suction cover 90° rotatable

● Centre of gravity

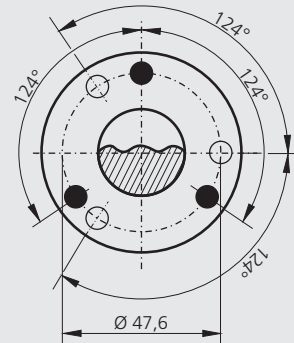
Connections see page 17



## View X

## Possibility to connect to oil level regulator

- Three-hole connection for oil level regulator make ESK, AC+R, CARLY (3x M6, 10 deep)
- Three-hole connection for oil level regulator make TRAXOIL (3 x M6 x 10 deep)

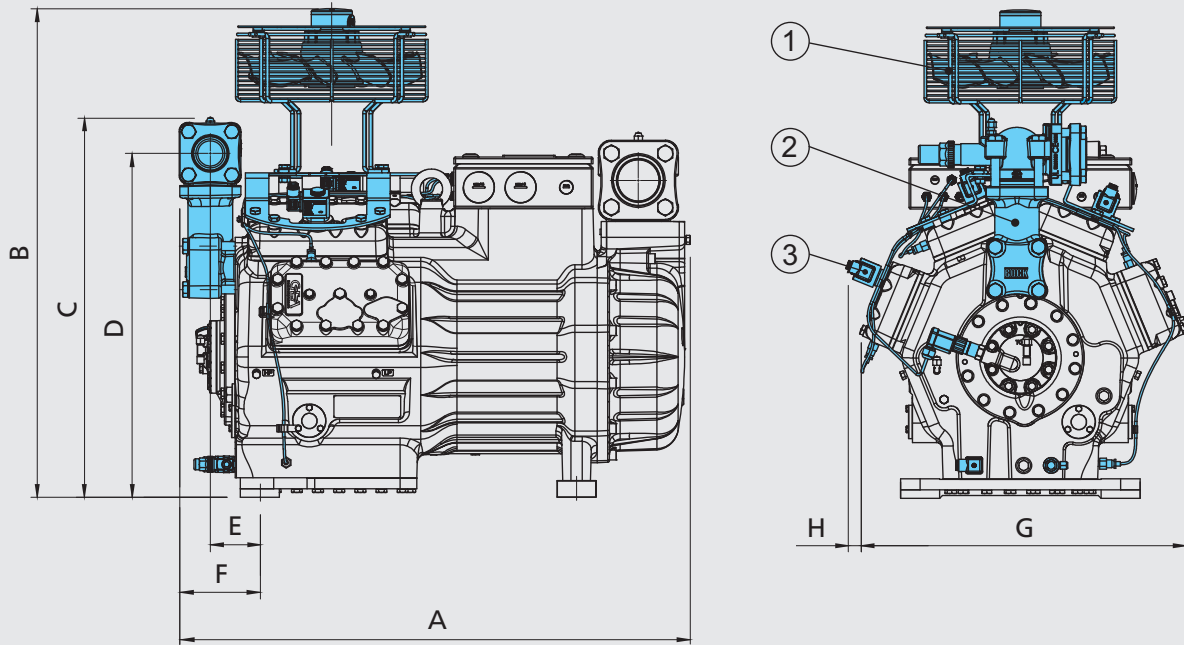


Dimension in mm

Connections		HG76e	HG88e
SV	Suction line	please refer to Technical data page 15	
DV	Discharge line	please refer to Technical data page 15	
A	Connection suction side, not lockable	1/8 " NPTF	1/8 " NPTF
A1	Connection suction side, lockable	7/16 " UNF	7/16 " UNF
A2	Connection suction side, not lockable	1/4 " NPTF	1/4 " NPTF
B	Connection discharge side, not lockable	1/8 " NPTF	1/8 " NPTF
B1	Connection discharge side, lockable	7/16 " UNF	7/16 " UNF
C	Connection oil pressure safety switch OIL	7/16 " UNF	7/16 " UNF
D	Connection oil pressure safety switch LP	7/16 " UNF	7/16 " UNF
D1	Connection oil return from oil separator	1/4 " NPTF	1/4 " NPTF
E	Connection oil pressure gauge	7/16 " UNF	7/16 " UNF
F	Oil drain	M 22 x 1,5	M 22 x 1,5
H	Oil charge plug	M 22 x 1,5	M 22 x 1,5
J	Connection oil sump heater	M 22 x 1,5	M 22 x 1,5
K	Sight glass	-	-
L	Connection thermal protection thermostat	1/8 " NPTF	1/8 " NPTF
O	Connection oil level regulator	3 x M6	3 x M6
ÖV	Connection oil service valve	1/4 " NPTF	1/4 " NPTF
P	Connection oil pressure differential sensor	M 20 x 1,5	M 20 x 1,5
Q	Connection oil temperature sensor	1/8 " NPTF	1/8 " NPTF

Dimensions with accessories

HG76e  
HG88e



- ① Additional fan
- ② Intermediate adapter for discharge line valve
- ③ Capacity regulator

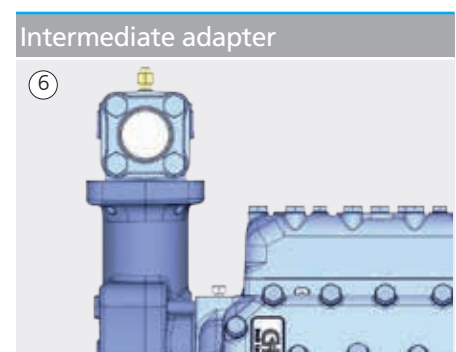
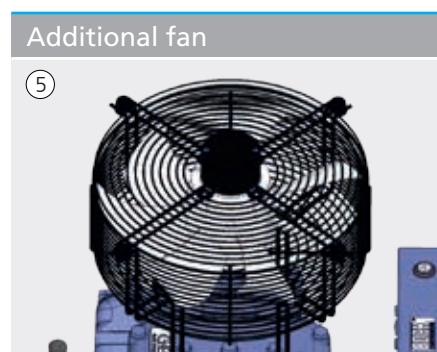
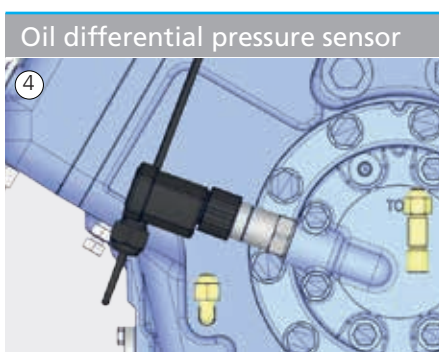
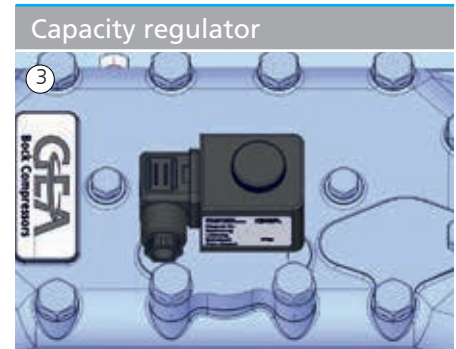
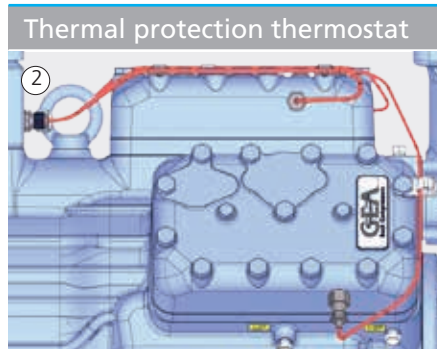
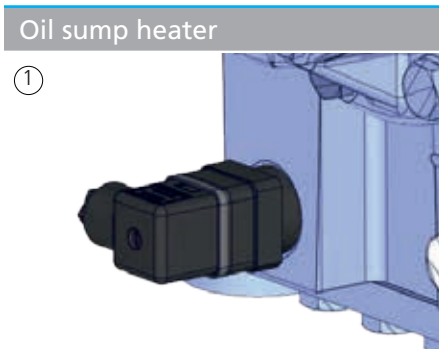
Type	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm
HG76e	ca. 835	ca. 785	ca. 585	520,5	95	150	ca. 535	ca. 40
HG88e	ca. 920	ca. 880	ca. 680	617	90	145	ca. 610	ca. 20

Scope of supply	HG76e	HG88e
Semi-hermetic six cylinder reciprocating compressor with drive motor for part winding star 380-420 V Y/YY - 3 - 50 Hz 440-480 V Y/YY - 3 - 60 Hz Single-section compressor housing with hermetically integrated electric motor	●	
Semi-hermetic eight cylinder reciprocating compressor with drive motor for part winding star 380-420 V Y/YY - 3 - 50 Hz 440-480 V Y/YY - 3 - 60 Hz Single-section compressor housing with hermetically integrated electric motor		●
Winding protection with PTC resistor sensors and electronic trigger unit INT69 G	●	●
Oil pump	●	●
Oil pump cover with screwed connection for differential oil pressure sensor ( $\Delta p$ -switch Kriwan make)	●	●
Possibility to connect to oil level controllers makes ESK, AC+R or CARLY	●	●
Possibility to connect to oil level controllers make Traxoil <sup>1)</sup>	●	●
Oil charge: HG: FUCHS Reniso SP46    HGX: FUCHS Reniso Triton SE55	●	●
Two sight glasses	●	
Three sight glasses		●
Decompression valve	●	●
Suction and discharge line valve	●	●
Inert gas charge	●	●
4 anti-vibration pads enclosed	●	●

<sup>1)</sup> Only possible with additional adapter

Accessories	HG76e	HG88e
① Oil sump heater 220-240 V - 1 - 50/60 Hz, 140 W	●	
Oil sump heater 220-240 V - 1 - 50/60 Hz, 200 W		●
② Thermal protection thermostat (PTC) per cylinder cover	●	●
③ Capacity regulator 230 V - 1 - 50/60 Hz, IP65, 1-2 Capacity regulator = 66/33% residual capacity	●	
Capacity regulator 230 V - 1 - 50/60 Hz, IP65, 1-3 Capacity regulator = 75/50/25% residual capacity		●
Oil pressure safety switch MP 54 230 V - 1 - 50/60 Hz, IP20	● <sup>1)</sup>	● <sup>1)</sup>
④ Oil differential pressure sensor DELTA-P II 220-240 V - 1 - 50/60 Hz	● <sup>1)</sup>	● <sup>1)</sup>
INT69 GTML Diagnose 115 V / 230 V AC, 50/60 Hz, IP00, incl. Oil differential pressure sensor INT250, Thermal protection thermostat (PTC) per cylinder cover, (INT69 G not applicable)	●	●
DP-Modbus Gateway 115 V / 230 V AC, 50/60 Hz, IP00 incl. adapter cable		●
Modbus-LAN Gateway 230 V AC, 50/60 Hz, IP00	● <sup>1)</sup>	● <sup>1)</sup>
USB converter for INT69 G Diagnosis and INT69 GTML Diagnosis	● <sup>1)</sup>	● <sup>1)</sup>
Oil temperature control	● <sup>2)</sup>	● <sup>2)</sup>
Oil service valve	●	●
⑤ Additional fan 230 V D / 400 V Y -3- 50 Hz, 120 W, 230-265 V Δ / 400-460 V Y - 3 - 60 Hz, 190 W, IP54	● <sup>1)</sup>	● <sup>1)</sup>
⑥ Intermediate adapter for discharge line valve	●	●
Connection piece suction and discharge valve in welded construction	● <sup>3)</sup>	● <sup>3)</sup>
Special voltage and/or frequency	● <sup>3)</sup>	● <sup>3)</sup>

<sup>1)</sup>Enclosure    <sup>2)</sup>Mounted    <sup>3)</sup>On request





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