

### **GEA Screw Packages**

Plug & play compressor units for industrial cooling and heating





# Future-proof design for your refrigeration system

Whether in the food, beverage or chemical industry, in offices or laboratories, in logistics or in leisure facilities: Refrigeration is always in demand. GEA offers high-quality screw compressor systems for your individual requirements.

### Industry-leading screw compressor systems

As one of the largest suppliers of process technology GEA offers state-of-the-art equipment for a wide range of industries. Years of experience in compressor technology have made GEA a leading manufacturer. with a broad portfolio characterized by intelligent design and premium components for maximum quality, efficiency and reliability.

While our screw compressors are suitable for all common refrigerants, GEA focuses on the natural refrigerants ammonia (NH<sub>3</sub>) and CO<sub>2</sub>. Due to its high volumetric efficiency and zero global warming potential, NH<sub>3</sub> is a particularly future-proof choice in line with the F-gas regulation.

Our processes also focus on value, functionality and sustainability – from R & D, design, engineering and quality control to sales, after sales and service. GEA's worldwide network supports you almost everywhere. Use our powerful software tool to configure and compare screw compressor packages and select the ideal solution for you.

### **GEA** screw packages key characteristics

- Broad portfolio: Choose your solution to fit your needs, for high- or low-temperature applications, with single-stage, two-stage or dual-stage packages.
- Sustainable and future-proof equipment:
   Our experience and focus on natural refrigerants
   help you to build a cost-effective and sustainable
   facility for years of excellent operation.
- Energy efficiency: State-of-the-art components ensure industry-leading efficiency and drastically reduce energy costs.
- Reliability and longevity: A sophisticated safety concept, project-specific configurations of bearings and oil supply and minimized weld seams make GEA packages safe, reliable and durable.
- Economical service: Reduce your total cost of ownership with low- maintenance and easy-to-service machines.

# Optimum solutions for every application

GEA screw compressors have been established in many industries around the world for decades, serving all applications requiring cooling and heating.



### Food and beverages

A strict temperature control is crucial in the food, dairy and beverage industry to ensure top quality and maintain official standards. GEA's screw compressor packages are designed to offer compact solutions to safely and efficiently maintain the cold chain.

- Every third chicken nugget is made with GEA: The food industry relies on GEA screw packages for poultry, pork, beef or fish, but also for fruit and vegetables as well as ready meals both in the production process and in cold storage.
- Around every third process line for instant coffee has been installed by GEA:
   Freeze-drying or spray-drying is an important step in the production of premium instant coffee, familiar even to consumers.
- Approx. every second liter of beer is brewed with the aid of GEA solutions:
   Lager beers and many other popular beer styles require cold storage and other cooled facilities for successful production.



### Cooling buildings and facilities

Almost every type of modern facility needs systems to ensure a comfortable air temperature and healthy working and living conditions. GEA packages not only offer reliable and precise cooling, they also include sophisticated safety devices practically excluding the risk of gas emissions.



### Leisure activity installations

From ice rinks to indoor skiing halls GEA screw compressor technology is found in many leisure facilities around the world. 24/7 availability and operation at a very specific and precise temperature level are key requirements. GEA has established itself as a trusted technology provider for efficient and reliable refrigeration solutions for projects of that kind and is constantly expanding its customer base.



### Marine applications

The growing competition, especially in the cruise industry, and the increasing environmental protection urgently require innovative, efficient, economical and sustainable solutions. The GEA screw connections for maritime applications fulfill the specific demands.

Every second container ship in the world sails with GEA equipment on board:

A long-term partner to the marine sector, GEA provides cooling and refrigeration equipment for merchant and leisure operations as well as for the fishing industry.



### Chemical and pharmaceutical industry

Both the pharmaceutical and chemical industries place high demands on refrigeration appliances, where availability, redundancy and reliability are the main criteria. Our screw compressor packages meet these standards with a wide range of options, flexible configurations and highly specialized components that provide solutions to the most demanding customer requirements.

- Every fourth liter of human blood is handled by GEA equipment:
   Refrigeration is a fundamental requirement in many processes in the pharma industry.
- More than a third of all polymer producers are using GEA technology:
   Leading chemical companies rely on our screw compressor technologies.

### SCOPE OF SUPPLY

GEA screw packages come as plug & play units – pre-mounted and wired on a common base frame, including all the following components:

- Screw compressor with complete driveline (electric motor, coupling)
- Oil separator with three sophisticated separation stages, completed with level indication, heater and draining valve
- · Oil cooler or refrigerant injection connection
- Complete oil circuit with oil filtering, oil pump if necessary, automatic oil pressure and temperature control and draining and ventilation valves
- Stop, check and service valves at all relevant spots
- · Set of pressure and temperature sensors
- Safety devices including a sophisticated 5-step safety chain against excess pressure
- GEA Omni<sup>TM</sup> control panel

### **OPTIONS**

We value flexibility to provide you with an optimum solution for your individual requirements. Choose from a wide array of options, including particularly:

- Motor customization: Choose a specific voltage, efficiency and protection class – or provide a motor of your own choice.
- Economizer port: Improve the efficiency through intercooling and implement an economizer.
- Variable speed drive: Increase peak-load capacities and improve (part-load) efficiency through a frequency controlled variable speed drive operation.
- Oil cooling: Choose liquid or refrigeration cooled coolers or a refrigerant injection system – whatever works best for your conditions on site.
- Dual oil filters and dual safety valves: Increase the availability of the plant without downtime when servicing filters and safety valves.
- Power panel: Complement your control with a complete starter panel.
- ATEX design: Chose explosion-proof components for installations in chemical applications or in other hazardous environments.
- · Certifications: All common approvals available.



### PRODUCT OVERVIEW

Series	Motor speed Cooling / heating capacity (kW)																
	1	0	100	200	300	400	500	600	700	800	900	1,000	2,000	4,000	6,000	8,000	10,00
GEA Grasso M 1) single-stage	at 4,500 rpm 219–879 kW																
GEA Grasso SP1 <sup>1)</sup> single-stage	at 3,600 rpm 638–9,311 kW																
GEA Grasso SP1 <sup>1)</sup> horizontal single-stage	at 3,600 rpm 638–2,667 kW																
GEA Grasso SP1 HP <sup>2)</sup> single-stage, heating	at 3,600 rpm 648->10,000 kW																
GEA Grasso SP1 HP <sup>3)</sup> single-stage R744	at 3,600 rpm 273–4,188 kW																
GEA Grasso SP2 4) two-stage	at 3,600 rpm 118–2,100 kW																
GEA Grasso SPduo <sup>1)</sup> parallel-stage	at 3,600 rpm 344-3,882 kW																

 $<sup>^{1)}~</sup>R717,~-10/+35~^{\circ}C \quad ^{2)}~R717,~+30/+75~^{\circ}C \quad ^{3)}~R744,~-50/-5~^{\circ}C \quad ^{4)}~R717,~-40/+35~^{\circ}C$ 



# **GEA Grasso M series**packages – Total Cost of Ownership redefined

In the small to medium capacity range the new state-of-the-art series GEA Grasso M is your top choice. Remarkably compact and economical, the GEA screw compressor package is engineered according to our principle of maximum energy efficiency and reliability. A new component design and high-end package configuration has enabled us to reduce the footprint to a minimum while significantly improving reliability and product life.

The series comprehends 8 different models and ranges from 140 to 569 kW (R717 | -10/+35 °C | 2,950 rpm). New high-speed motors and the optional frequency converter with a speed range of 1,000–4,500 rpm not only improve the part-load efficiency significantly but also increase the capacity up to 879 kW.

All this adds up to lower investment, energy and maintenance costs – along with a lower TCO than conventional screw packages in the same capacity range!

- · Reduced Total Cost of Ownership (TCO)
- · Maximized efficiency
- · Minimized footprint



### 1. GEA Omni™ control panel

- High-definition 15.6" display (1,366 × 768 pixel)
- Remote access via GEA OmniLink<sup>™</sup>
- Full data history via GEA OmniHistorian™
- · Configurable Modbus TCP Ethernet communication

### 2. New screw compressor design

- · Highly efficient, compact design
- Significantly improved rotor profile for industry-leading EER (Energy Efficiency Ratio)
- Extended and variable Vi (internal volume ratio) for better part load efficiency
- · Variable speed from 1,000 to 4,500 rpm
- Integrated suction filter with gas-operated non-return valve for excellent part load efficiency with every flow rate

### 3. Capacity and Vi control

- Infinite capacity and Vi control for efficient operation in full and part load
- · Capacity control via frequency inverter and/or capacity slide
- Optimized economizer operation for larger pressure differences

### 4. High-performance motors

- Optional high-speed motor for increased capacity and part load efficiency
- Flanged motor for more reliability with minimum vibration and noise emission

### 5. 3-stage oil separator

- · Maximum 5 ppm oil carry-over
- Reduced operating costs
- · Low oil charge

### 6. Oil Management Center (OMC)

- Reduced leakage risk
- · Closable filter for easy service

### Easy servicing

- · Easy access to service parts
- · Service-friendly working height

### **GEA Grasso SP1 – Efficienct,** reliable, versatile

The single-stage series GEA Grasso SP1 is designed for medium to the largest capacity requirements and, thanks to the flexible set-up, for highly individual needs. Available are 16 models from 638 kW to 9,311 kW refrigeration capacity (R717  $\mid$  –10  $\mid$  +35 °C  $\mid$  3,600 rpm).

With components fitted on a stable base frame, the packages operate at low noise and vibration levels and allow easy and comfortable access and service – a crucial advantage particularly for large capacities and large-sized components. The design also allows a multitude of options so that clients can customize the package to their individual needs, making the GEA Grasso SP1 series particularly attractive for its versatility.

The 16 models normally are all fitted with a vertical oil separator. Out of this range the first 9 models (638 to 2,667 kW) are also available in a more compact horizontal oil separator design (driveline mounted on top). This version, GEA Grasso SP1 horizontal, is more standardized but offers 15 to 20% footprint reduction compared with its vertical counterpart – ideal for R717 standard applications where machine room space is limited.

### High pressure version GEA Grasso SP1 HP

The SP1 HP (=high pressure) line is specifically designed for:

- R717 heat pump applications providing heating temperatures up to +85°C.
- R744 freezing applications, with evaporation temperatures as low as -54°C

Thanks to the robust high-pressure screw compressor design (52 bar), high differential pressures and temperatures are possible for combined cooling and heating applications or for running a CO<sub>2</sub> package at plus-condensing-temperatures in a defrosting mode.

- · Widest temperature and application range
- · Refrigeration capacities over 9 MW
- Versatile design from standards to high customization degrees

### 1. Effcient screw compressor

- · Highly efficient, compact design
- GEA-specified rotor profile for industry-leading COP
- · Sleeve bearings: infinite lifetime and inherently quiet
- · Axial bearings: easy to replace, easy access from non-drive end

### 2. Suction Filter Combination (SFC)

- · Gas-operated check valve for better COP
- · No chatter at low flow rate
- · Low pressure loss, reduced leakage risk

### 3. GEA Omni™ control panel

- · High definition 15.6" display (1,366 × 768 pixel)
- Remote access via GEA OmniLink<sup>™</sup>
- Full data history via GEA OmniHistorian™
- · Configurable Modbus TCP Ethernet communication

### 4. Capacity and Vi control

- · Capacity control via frequency inverter and/or capacity slide
- · Infinite capacity and Vi (internal volume ratio) control for efficient operation in full and part load

### 5. 3-stage oil separator

- · Low oil charge
- · Maximum 5 ppm oil carry-over
- · Reduced operating costs

### 6. Oil Management Center (OMC)

- · Centralized working area
- · Reduced leakage risk
- · Closable filter for easy service

### 7. Sturdy base frame

- · Low noise and vibration level for extended component lifetime
- · Service-friendly working height
- · Low center of gravity



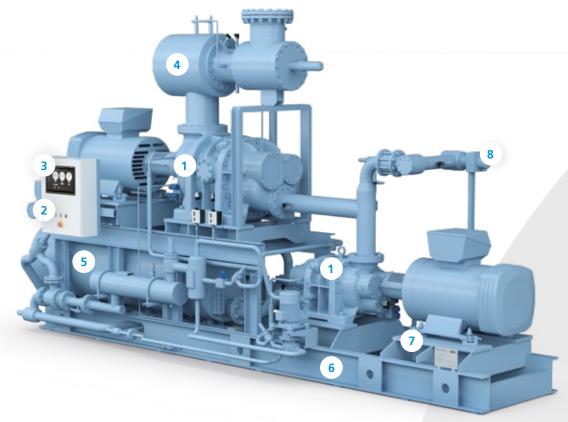
# **GEA Grasso SP2 – The high** performer

Designed for low evaporation temperatures and high temperature increases/high differential pressures, the two-stage screw compressor packages in the GEA Grasso SP2 series each include two serially mounted compressors for a low- and a high-pressure stage. Combined with intermediate load connection the package ensures most flexible and individual operation.

The series contains 18 package sizes (18 different low-stage screw compressors in combination with various high-stage compressors) and ranges from 95 to 1,770 kW refrigeration capacity (R717  $\mid$  -40/+35 °C  $\mid$  2950 rpm).

A GEA Grasso SP2 package is the most efficient and flexible solution for high differential pressure operation. At the same time the package, based on a common base frame, oil circuit and common control, is easier to operate and requires less space than two separate single-stage packages.

- Optimized for low temperatures and high differential pressure operations
- Flexible and individual operation of low-stage and high-stage compressors as well as intermediate load connection
- Common base frame, oil circuit and control for easy operation and minimized footprint



### 1. Effcient screw compressors

- · Highly efficient, compact design
- Proprietary rotor profile for industry-leading COP
- · Sleeve bearings: infinite lifetime and inherently quiet
- · Axial bearings: easy to replace, easy access from non-drive end

### 2. Capacity and Vi control

 Infinite capacity and Vi (internal volume ratio) control for efficient operation in full and part load

### 3. GEA Omni™ control panel

- High-definition 15.6" display (1,366 × 768 pixel)
- Remote access via GEA OmniLink<sup>™</sup>
- Full data history via GEA OmniHistorian™
- · Configurable Modbus TCP Ethernet communication

### 4. Suction Filter Combination (SFC)

- Gas-operated check valve for better COP
- · No chatter at low flow rate
- Low pressure loss

### 5. 3-stage oil separator

- · Low oil charge
- Maximum 5 ppm oil carry-over
- Reduced operating costs

### 6. Common base frame

- · Low noise and vibration level
- · Service-friendly working height
- · Low center of gravity
- Reduced package footprint and operating costs in comparison with single-stage packages

### 7. Shimless motor mounts

· Easy and accurate motor alignment

### 8. Intercooler connection

- · Increased efficiency
- Additional intermediate load possible

### **GEA Grasso SPduo – Best efficiency with all loads**

The packages in the GEA Grasso SPduo series feature two parallel-mounted screw compressors each. This solution is especially suited for part-load efficiency, flexible (part-load) operation and all applications where demands for machine availability and redundancy are most important.

Both screw compressors in the unit can be operated independently or at the same time in parallel to achieve top-level loads. You can equip one screw compressor with a variable speed drive motor and frequency converter to achieve part-loads down to 12% without significant efficiency losses!

Compared to two separate single-stage packages, the GEA Grasso SPduo package requires less space, thanks to the common base frame, oil circuit and control, and it is also easier to operate. The SPduo series consist of 15 models with a capacity range from 262 to 3,170 kW (R717  $\mid$  -40/+35 °C  $\mid$  2950 rpm).

- Optimized for highest efficiency in all load conditions
- Maximum machine availability, flexibility and redundancy – parallel or independent single compressor operation possible
- Common base frame, oil circuit and control for easy operation and minimized footprint

### 1. Effcient screw compressors

- · Highly efficient, compact design
- · Proprietary rotor profile for industry-leading COP
- · Sleeve bearings: infinite lifetime and inherently quiet
- · Axial bearings: easy to replace, easy access from non-drive end

### 2. GEA Omni™ control panel

- High-definition 15.6" display (1,366 × 768 pixel)
- Remote access via GEA OmniLink<sup>™</sup>
- Full data history via GEA OmniHistorian™
- Configurable Modbus TCP Ethernet communication

### 3. Capacity and Vi control

- Infinite capacity and Vi (internal volume ratio) control for efficient operation in full and part load
- · Capacity control via frequency inverter and/or capacity slide

### 4. 3-stage oil separator

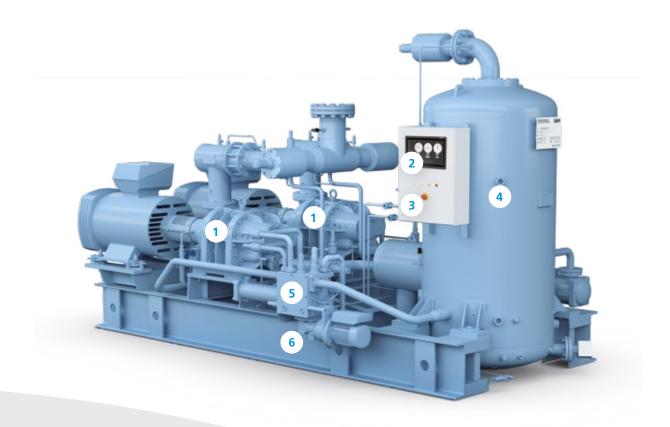
- · Low oil charge
- · Maximum 5 ppm oil carry-over
- · Reduced operating costs

### 5. Oil Management Center (OMC)

- · Centralized working area
- · Reduced leakage risk
- · Closable filter for easy service

### 6. Common base frame

- · Reduced package footprint
- · Low noise and vibration level
- · Service-friendly working height
- · Low center of gravity



### **Technical data**

GEA Grasso M	Motor speed	Cool	ling capacity	Dim	Weight* (kg)			
model	(rpm)	R717 -10/+35 °C	R717 -40/-10 °C	R507 -10/+35 °C	L	W	Н	without motor
GEA Grasso M-C	3,600 4,500	172 219	54 68	169 214	2,200	1,225	1,950	1,350
GEA Grasso M-D	3,600 4,500	206 262	64 81	202 256	2,200	1,225	1,950	1,450
GEA Grasso M-E	3,600 4,500	247 313	76 96	242 306	2,200	1,225	1,975	1,550
GEA Grasso M-G	3,600 4,500	293 372	88 111	287 364	2,300	1,225	1,975	1,650
GEA Grasso M-H	3,600 4,500	374 471	116 147	364 459	2,550	1,225	1,950	1,725
GEA Grasso M-L	3,600 4,500	432 544	134 169	421 530	2,550	1,225	1,950	1,800
GEA Grasso M-M	3,600 4,500	577 715	176 222	553 696	2,600	1,225	2,025	1,875
GEA Grasso M-N	3,600 4,500	698 879	217 274	680 857	2,600 2,950	1,225 1,325	2,075 2,175	2,025 2,125

 $<sup>^*</sup>Dimensions\ and\ weights\ are\ based\ on\ standard\ exemplary\ applications.\ \ Values\ can\ differ\ depending\ on\ the\ specific\ operating\ conditions!$ 

GEA Grasso SP1	Motor speed	Cool	Dim	Weight* (kg)				
model	(rpm)	R717 -10/+35 °C	R717 -40/-10 °C	R507 -10/+35 °C	L	W	Н	without motor
GEA Grasso SP1-P	3,600	638	194	591	3,200	1,400	2,050	2,500
GEA Grasso SP1-R	3,600	825	251	764	3,500	1,400	2,050	2,750
GEA Grasso SP1-S	3,600	1,043	317	966	3,500	1,400	2,050	2,750
GEA Grasso SP1-T	3,600	1,169	356	1,083	3,550	1,450	2,100	2,900
GEA Grasso SP1-V	3,600	1,399	430	1,299	4,050	1,800	2,100	3,400
GEA Grasso SP1-W	3,600	1,600	492	1,485	4,050	1,800	2,100	3,400
GEA Grasso SP1-Y	3,600	1,941	597	1,801	4,100	1,800	2,150	3,500
GEA Grasso SP1-Z	3,600	2,255	694	2,093	4,450	1,800	2,190	4,000
GEA Grasso SP1-XA	3,600	2,667	820	2,475	4,450	1,800	2,190	4,100
GEA Grasso SP1-XB	3,600	3,374	1.067	3,131	5,550	1,820	2,775	7,500
GEA Grasso SP1-XC	3,600	3,981	1.225	3,694	5,650	1,820	2,975	7,900
GEA Grasso SP1-XD	3,600	4,711	1.449	4,372	6,050	1,820	2,975	8,900
GEA Grasso SP1-XE	3,600	5,821	1.791	5,402	7,700	1,820	3,150	10,400
GEA Grasso SP1-XF	3,600	6,950	2.138	6,450	7,700	1,820	3,150	11,400
GEA Grasso SP1-XG	3,600	7,962	2.468	7,389	8,100	1,820	3,250	12,750
GEA Grasso SP1-XH	3,600	9,311	2.886	8,641	9,100	2,020	3,450	14,750

<sup>&</sup>lt;sup>II</sup> The variant GEA Grasso SPI horizontal provides identical performance data but slightly reduced length and width.
\*Dimensions and weights are based on standard exemplary applications. Values can differ depending on the specific operating conditions!

GEA Grasso SP1 HP	Motor speed	Heating ca	pacity (kW)	Dir	Weight* (kg)		
model (R717)	(rpm)	R717 +30/+75 °C	R717 -10/+60 °C	L	W	Н	without motor
GEA Grasso SP1 HP - C	3,600	648	235	3,050	1,400	2,000	2,075
GEA Grasso SP1 HP - D	3,600	768	270	3,050	1,400	2,000	2,075
GEA Grasso SP1 HP - E	3,600	919	341	3,050	1,400	2,000	2,075
GEA Grasso SP1 HP - G	3,600	1,088	389	3,250	1,400	2,000	2,100
GEA Grasso SP1 HP - H	3,600	1,417	474	3,650	1,400	2,000	2,300
GEA Grasso SP1 HP - L	3,600	1,636	545	3,750	1,450	2,010	2,500
GEA Grasso SP1 HP - M	3,600	2,233	714	3,900	1,450	2,010	2,750
GEA Grasso SP1 HP - N	3,600	2,740	878	3,900	1,450	2,090	2,800
GEA Grasso SP1 HP - P	3,600	2,551	837	3,200	1,400	2,050	2,500
GEA Grasso SP1 HP - R	3,600	3,258	1,081	3,500	1,400	2,050	2,750
GEA Grasso SP1 HP - S	3,600	4,047	1,356	3,500	1,400	2,050	2,750
GEA Grasso SP1 HP - T	3,600	4,552	1,512	3,550	1,450	2,100	2,900
GEA Grasso SP1 HP - V	3,600	5,450	1,776	4,050	1,800	2,100	3,400
GEA Grasso SP1 HP - W	3,600	6,209	2,030	4,050	1,800	2,100	3,400
GEA Grasso SP1 HP - Y	3,600	7,440	2,448	4,100	1,800	2,150	3,500
GEA Grasso SP1 HP - Z	3,600	8,567	2,839	4,450	1,800	2,190	4,000
GEA Grasso SP1 HP - XA	3,600	10,162	3,351	4,450	1,800	2,190	4,100
GEA Grasso SP1 HP - XB	3,600	_	4,292	5,550	1,820	2,775	7,500
GEA Grasso SP1 HP - XC	3,600	-	5,040	5,650	1,820	2,975	7,900
GEA Grasso SP1 HP - XD	3,600	-	5,934	6,050	1,820	2,975	8,900

 $<sup>^*</sup>Dimensions\ and\ weights\ are\ based\ on\ standard\ exemplary\ applications.\ \ Values\ can\ differ\ depending\ on\ the\ specific\ operating\ conditions!$ 

model (R744)  GEA Grasso SP1 HP - C  GEA Grasso SP1 HP - D  GEA Grasso SP1 HP - E  GEA Grasso SP1 HP - G  GEA Grasso SP1 HP - H  GEA Grasso SP1 HP - L	3,600 3,600 3,600	<b>R744</b> -50/-5 °C  273  324	<b>R744</b> - <b>50</b> /+ <b>10</b> ° <b>C</b> 221	<b>L</b> 3,050	W	Н	without motor
GEA Grasso SP1 HP - D  GEA Grasso SP1 HP - E  GEA Grasso SP1 HP - G  GEA Grasso SP1 HP - H	3,600		221	2.050			
GEA Grasso SP1 HP - E  GEA Grasso SP1 HP - G  GEA Grasso SP1 HP - H	·	324		3,030	1,400	2,000	2,075
GEA Grasso SP1 HP - G GEA Grasso SP1 HP - H	3,600	<u></u> .	262	3,050	1,400	2,000	2,075
GEA Grasso SP1 HP - H		390	303	3,050	1,400	2,000	2,075
	3,600	448	348	3,250	1,400	2,000	2,100
GEA Grasso SP1 HP - L	3,600	618	481	3,650	1,400	2,000	2,300
	3,600	714	555	3,750	1,450	2,010	2,500
GEA Grasso SP1 HP - M	3,600	907	742	3,900	1,450	2,010	2,750
GEA Grasso SP1 HP - N	3,600	1,129	912	3,900	1,450	2,090	2,800
GEA Grasso SP1 HP - P	3,600	1,011	817	3,200	1,400	2,050	2,500
GEA Grasso SP1 HP - R	3,600	1,306	1,076	3,500	1,400	2,050	2,750
GEA Grasso SP1 HP - S	3,600	1,652	1,334	3,500	1,400	2,050	2,750
GEA Grasso SP1 HP - T	3,600	1,869	1,510	3,550	1,450	2,100	2,900
GEA Grasso SP1 HP - V	3,600	2,220	1,811	4,050	1,800	2,100	3,400
GEA Grasso SP1 HP - W	3,600	2,538	2,071	4,050	1,800	2,100	3,400
GEA Grasso SP1 HP - Y	3,600	3,079	2,487	4,100	1,800	2,150	3,500
GEA Grasso SP1 HP - Z	3,600	3,577	2,861	4,450	1,800	2,190	4,000
GEA Grasso SP1 HP - XA							

 $<sup>^*</sup>Dimensions\ and\ weights\ are\ based\ on\ standard\ exemplary\ applications.\ \ Values\ can\ differ\ depending\ on\ the\ specific\ operating\ conditions!$ 

GEA Grasso SP2	<b>Motor speed</b>	Cooling capacity w	ith intercooler¹(kW)	Dim	ensions* (ı	Weight* (kg)	
model	(rpm)	R717 −40/+35 °C	R507 -40/+35 °C	L	W	Н	without motor
GEA Grasso SP2-H	3,600	118	174	3,350	1,000	1,970	2,300
GEA Grasso SP2-L	3,600	135	196	3,350	1,000	1,970	2,400
GEA Grasso SP2-M	3,600	174	242	3,850	1,100	2,150	3,400
GEA Grasso SP2-N	3,600	210	285	3,850	1,100	2,150	3,400
GEA Grasso SP2-P	3,600	193	259	3,850	1,200	2,150	2,900
GEA Grasso SP2-R	3,600	248	329	3,850	1,200	2,330	3,100
GEA Grasso SP2-S	3,600	315	422	4,850	1,200	2,400	3,200
GEA Grasso SP2-T	3,600	354	474	4,850	1,200	2,400	3,350
GEA Grasso SP2-V	3,600	432	581	4,850	1,480	2,550	3,400
GEA Grasso SP2-W	3,600	467	676	4,850	1,480	2,550	4,000
GEA Grasso SP2-Y	3,600	592	786	4,850	1,480	2,550	4,200
GEA Grasso SP2-Z	3,600	691	913	4,850	1,480	2,550	4,400
GEA Grasso SP2-XA	3,600	822	1,096	5,650	1,550	2,670	5,950
GEA Grasso SP2-XB	3,600	1,055	1,383	6,250	1,700	3,350	9,150
GEA Grasso SP2-XC	3,600	1,213	1,604	6,350	1,800	3,350	11,250
GEA Grasso SP2-XD	3,600	1,431	1,883	6,350	1,800	3,350	13,200
GEA Grasso SP2-XE	3,600	1,765	2,308	7,150	1,800	3,650	14,200
GEA Grasso SP2-XF	3,600	2,100	2,628	7,150	1,800	3,650	14,600

With open flash intercooler \*Dimensions and weights are based on standard exemplary applications. Values can differ depending on the specific operating conditions!

GEA Grasso SPduo	Motor speed	Cool	Dim	Weight* (kg)				
model	(rpm)	R717 -10/+35 °C	R717 -40/-10 °C	R507 -10/+35 °C	L	W	Н	without motor
GEA Grasso SPduo-C	3,600 4,500	344 438	108 136	338 428	3,600	1,500	2,280	2,250
GEA Grasso SPduo-D	3,600 4,500	412 524	128 162	404 512	3,600	1,550	2,350	2,250
GEA Grasso SPduo-E	3,600 4,500	494 626	152 192	484 612	3,600	1,600	2,360	2,400
GEA Grasso SPduo-G	3,600 4,500	586 744	176 222	574 728	3,600	1,950	2,430	2,550
GEA Grasso SPduo-H	3,600 4,500	748 942	232 294	728 918	3,850	2,250	2,500	2,900
GEA Grasso SPduo-L	3,600 4,500	864 1,088	268 338	842 1,060	3,850	2,250	2,500	3,100
GEA Grasso SPduo-M	3,600 4,500	1,154 1,430	352 444	1,106 1,392	3,750	2,350	2,580	4,100
GEA Grasso SPduo-N	3,600 4,500	1,396 1,758	434 548	1,360 1,714	3,750	2,350	2,590	4,300
GEA Grasso SPduo-P	3,600	1,276	388	1,182	3,750	2,370	2,500	4,600
GEA Grasso SPduo-R	3,600	1,650	502	1,528	3,750	2,370	2,500	5,050
GEA Grasso SPduo-S	3,600	2,086	634	1,932	3,950	2,370	2,600	5,150
GEA Grasso SPduo-T	3,600	2,338	712	2,166	3,950	2,370	2,600	5,300
GEA Grasso SPduo-V	3,600	2,798	860	2,598	4,550	2,750	2,600	6,550
GEA Grasso SPduo-W	3,600	3,200	984	2,970	4,550	2,750	2,600	6,800
GEA Grasso SPduo-Y	3,600	3,882	1,194	3,602	4,550	2,750	2,600	7,250

 $<sup>^*</sup>Dimensions\ and\ weights\ are\ based\ on\ standard\ exemplary\ applications.\ \ Values\ can\ differ\ depending\ on\ the\ specific\ operating\ conditions!$ 



### We live our values.

Excellence • Passion • Integrity • Responsibility • GEA-versity

GEA is a global technology company with multi-billion euro sales operations in more than 50 countries. Founded in 1881 the company is one of the largest providers of innovative equipment and process technology. GEA is listed in the STOXX® Europe 600 Index. In addition, the company is included in selected MSCI Global Sustainability Indexes.