

## GEA Grasso screw packages

The full range of GEA Grasso screw packages

Whether it's in the food industry, chemical industry, in offices or in shipping, they all need refrigeration. GEA Refrigeration Technologies has the optimal cooling and air conditioning solutions for your requirements. We place particular value on energy efficiency, reliability, cost effectiveness and sustainability.

## First class work based on proven developments

GEA Refrigeration Technologies, part of the global GEA Group, is synonymous with industrial refrigeration technology. We have been in the business of cooling processes and products for decades. The first class quality of our screw packages is the product of years of experience in compressor technology. Everything is focused on value and functionality from development in our research labs to the production processes and quality assurance.

Both our products and our customer service are first class. With a global sales and service network we can be on site almost anywhere in the world where you need us. Our software tools also support you in selecting the optimal compressor package as well as in the search for the right spare parts.



# Special highlights

## Advantages of GEA Grasso screw packages

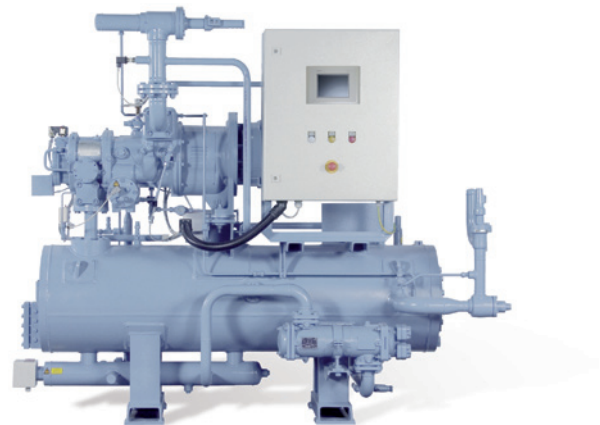
- Maximum energy efficiency
- High reliability
- Long product lifetime
- Low operating costs
- Broad range of screw packages
- Applicable for industrial cooling and air conditioning

## Scope of delivery

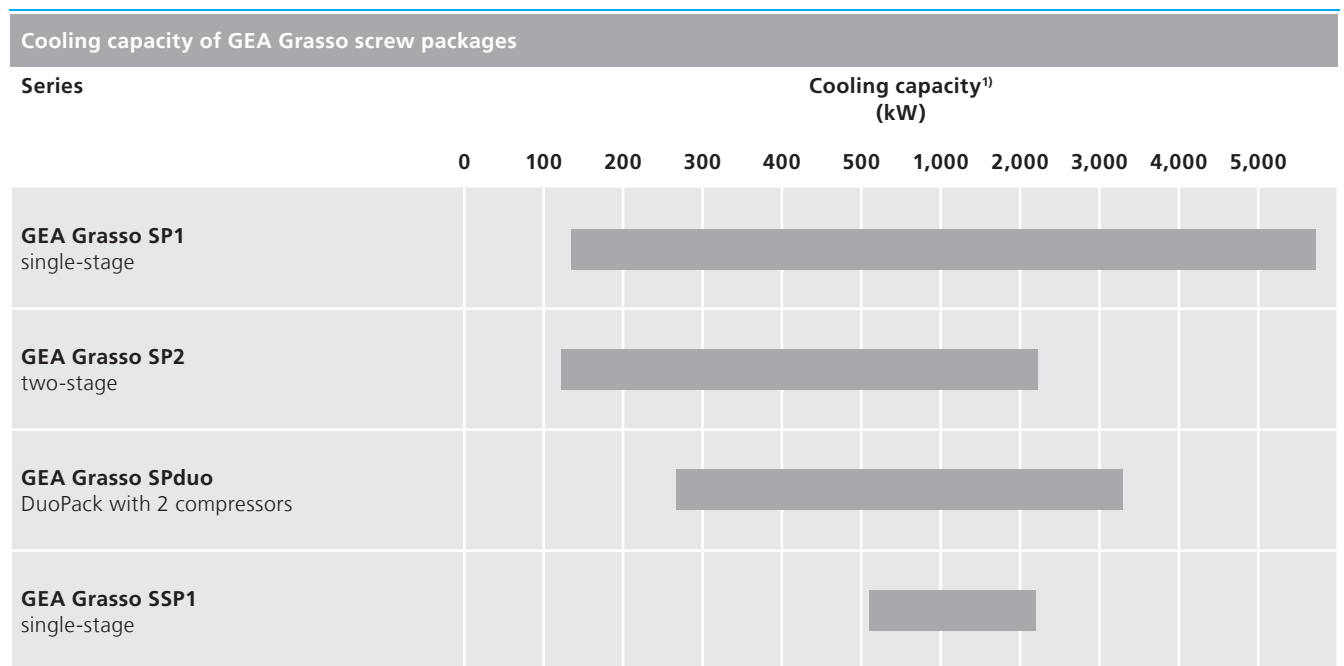
- Screw compressors with drive motor
- Oil separator with level indication, oil heater and finest separation stage
- Oil cooler
- Complete oil circuit with oil filtering and automatic oil pressure control
- GEA Grasso GSC with sensors for automatic monitoring and operation
- Safety devices for pressure relief
- Stop and check valves
- All components ready-mounted and wired on a common base frame

## Options

- Economizer port
- Capacity control via frequency inverter
- Dual oil filter
- Oil cooler (refrigerant cooled, water cooled)
- Refrigerant injection
- Power supply panel
- Explosion proof design
- Certification according to customer's demands



# Product overview



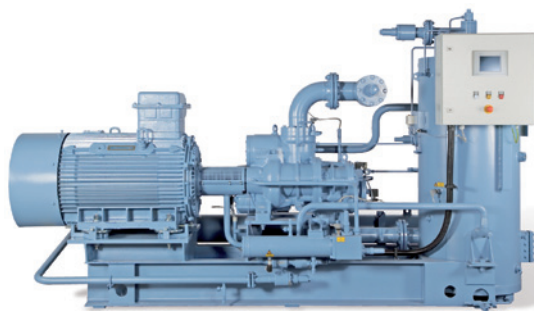
1) at 2,940 min<sup>-1</sup> and NH<sub>3</sub> -10/+35 °C



# GEA Grasso SP1

The single-stage screw packages of the GEA Grasso SP1 series include 22 package sizes with a capacity range of 140 to 5,700 kW. The smaller size models feature a larger integration level of components and thus a smaller amount of connecting elements.

The packages in the bigger capacity area are fitted onto a separate base frame, which ensures running with less noise and vibration.



GEA Grasso SP1:  
Broad performance range,  
universal application

## Technical features

- Stepless capacity control via frequency inverter or capacity slide
- Robust base frame for long motor bearing lifetime
- Low positioned gravity center for a low vibration level
- Oil separator with variable sizes and low oil charge to achieve an oil carry over of less than 5 ppm
- Efficient oil cooler with optional waste heat recovery
- System control GEA Grasso GSC for a reliable operation

## GEA Grasso SP1 series

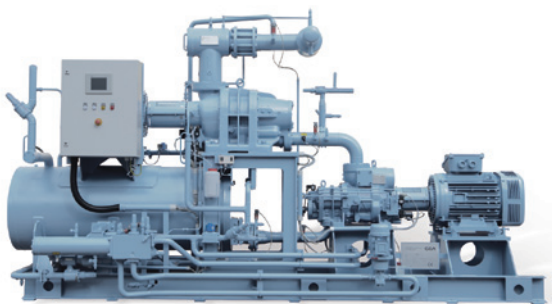
GEA Grasso SP1 with compressor type	Cooling capacity <sup>1)</sup> (kW)			Dimensions (mm)			Weight <sup>2)</sup> (kg)
	NH <sub>3</sub> -10/+35 °C	NH <sub>3</sub> 0/+45 °C	R134a -10/+35 °C	L	W	H	
C	137	191	78	2,350	1,120	1,725	870
D	160	224	91	2,350	1,120	1,725	880
E	192	269	109	2,350	1,220	1,795	935
G	227	318	130	2,350	1,220	1,795	1,000
H	290	407	166	2,870 - 3,280	1,500	1,916	1,900
L	342	480	196	2,870 - 3,280	1,500	1,916	2,000
M	433	608	245	2,870 - 3,670	1,520	2,077	2,500
N	564	791	308	2,870 - 3,670	1,520	2,077	2,650
P	524	734	285	3,050 - 3,670	1,500	2,077	2,800
R	678	948	367	3,340 - 4,320	1,620	2,175	2,750
S	839	1,176	457	3,340 - 4,320	1,620	2,175	3,050
T	962	1,328	519	3,340 - 4,320	1,620	2,175	3,350
V	1,156	1,598	625	3,820 - 5,370	1,800	2,780	3,500
W	1,289	1,791	695	3,820 - 5,370	1,800	2,780	3,800
Y	1,588	2,194	858	3,820 - 5,370	1,800	2,780	4,200
Z	1,827	2,539	984	3,960 - 5,980	1,800	2,890	4,400
XA	2,160	3,002	1,153	3,960 - 5,980	1,800	2,890	5,200
XB	2,757	3,832	1,488	5,500 - 6,770	1,820	3,000	8,100
XC	3,256	4,526	1,757	5,500 - 6,770	1,820	3,000	8,500
XD	3,854	5,357	2,030	5,500 - 6,770	1,820	3,000	8,900
XE	4,781	6,608	2,585	5,930 - 7,280	1,820	3,190	10,400
XF	5,708	7,890	3,086	5,930 - 7,280	1,820	3,190	11,400

1) at 2,940 min<sup>-1</sup>, 2) without motor

# GEA Grasso SP2

The GEA Grasso SP2 series with 18 package sizes covers a capacity range from 120 to 2,200 kW. The two-stage screw packages are designed for the production of higher pressure conditions. They consist of two serially mounted compressors

for the low- and high-pressure side. Depending on the required cooling capacity on a medium pressure level, various high pressure compressors can be combined with the basic unit. This leads to a considerable increase in the cooling capacity.



GEA Grasso SP2:

*Less space needed in the engine room,  
less investment and energy costs*

## Technical features

- Common base frame for low and high pressure compressor reduces needed space in engine room
- Flexible combination of low- and high pressure compressors enhances the adaption to any side-loads at medium pressure level
- Optimum energetic operation with intercooling
- Relieved starting of the low- and high-pressure compressor reduces motor currents and starting torques
- Independant operation of the high-pressure compressor optimizes the low-load operation and stand-by operation

### GEA Grasso SP2 series

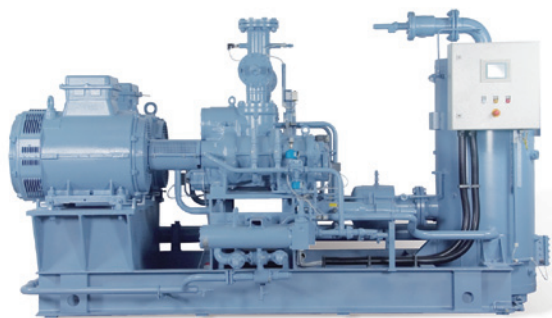
GEA Grasso SP2 with booster compressor type	Cooling capacity <sup>1),2)</sup> (kW)		Dimensions (mm)			Weight <sup>3)</sup> (kg)
	NH <sub>3</sub> -35/+35 °C	R404a -40/+35 °C	L	W	H	
H	119	116	3,415 - 3,785	1,200	2,250	2,300
L	140	137	3,415 - 3,785	1,200	2,250	2,400
M	176	170	3,755 - 4,125	1,200	2,150	3,400
N	223	211	3,755 - 4,125	1,200	2,150	3,600
P	209	237	3,755 - 4,125	1,200	2,250	2,900
R	274	265	3,755 - 4,125	1,200	2,330	3,100
S	341	330	4,629 - 5,104	1,600	2,480	3,200
T	387	371	4,629 - 5,104	1,600	2,480	3,350
V	458	427	4,629 - 5,104	1,750	2,630	3,400
W	527	499	4,629 - 5,104	1,750	2,745	4,000
Y	638	610	4,629 - 5,104	1,750	2,630	4,200
Z	737	683	4,629 - 5,104	1,800	2,670	4,400
XA	880	826	5,500 - 5,815	1,800	2,670	5,950
XB	1,094	987	5,850 - 6,591	1,960	3,350	9,150
XC	1,316	1,224	5,900 - 6,641	2,080	3,350	11,250
XD	1,493	1,340	5,900 - 6,641	2,080	3,350	13,200
XE	1,863	1,674	7,170	2,080	3,650	14,200
XF	2,184	1,995	7,170	2,080	3,650	14,600

1) at 2,940 min<sup>-1</sup>, 2) with intercooler, 3) without motor

# GEA Grasso SPduo

The GEA Grasso SPduo series with 15 models covers a capacity range from 270 to 3,200 kW. The screw packages stand out for their compact construction with two parallel mounted compres-

sors, which are built on a basic frame with the same oil circulation. They have a very good part load characteristic and are ideally suited for use in short-term top-level loads.



## Technical features

- Parallel operation of two compressors within a common cooling circuit leads to an increased efficiency
- Independent operation of the compressor enables best efficiency in all load conditions

GEA Grasso SPduo:

*High efficiency at part load,  
higher availability of the machine*

## GEA Grasso SPduo series

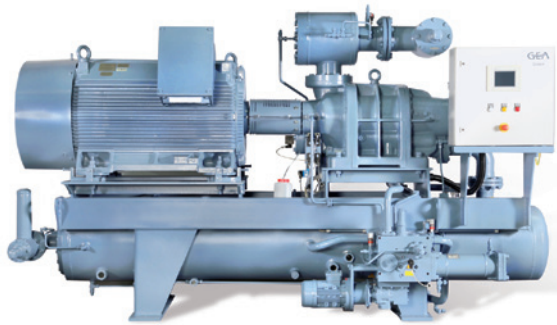
GEA Grasso SPduo with compressor type	Cooling capacity <sup>1)</sup> (kW)		Dimensions (mm)			Weight <sup>2)</sup> (kg)
	NH <sub>3</sub> -10/+35 °C	R404a -15/+40 °C	L	W	H	
C	272	196	3,600	1,790	2,070	2,660
D	322	233	3,600	1,790	2,070	2,730
E	386	279	3,600	1,790	2,250	2,880
G	458	330	3,600	1,790	2,250	3,130
H	585	423	3,600 - 4,056	2,150	2,280	3,900
L	690	498	3,600 - 4,056	2,150	2,280	4,280
M	875	632	3,565 - 4,109	2,350	2,330	5,590
N	1,137	794	3,565 - 4,109	2,350	2,330	5,850
P	1,056	725	4,282 - 4,831	2,600	2,620	7,200
R	1,364	937	4,632 - 5,181	2,600	2,680	7,700
S	1,692	1,161	4,632 - 5,181	2,600	2,680	8,300
T	1,924	1,282	4,632 - 5,181	2,600	2,680	9,100
V	2,312	1,552	5,224 - 5,789	2,900	2,890	9,350
W	2,578	1,731	5,224 - 5,789	2,900	2,890	10,900
Y	3,176	2,130	5,224 - 5,789	2,900	2,890	12,000

1) at 2,940 min<sup>-1</sup>, 2) without motor

# GEA Grasso SSP1

The GEA Grasso SSP1 is a latest screw packages series, which has been constructed to our basic principles of maximum reliability and energy efficiency. It stands out for its compact construction with horizontal oil separator. The packages of this

series covers with 9 package sizes a cooling capacity range from 520 to 2,200 kW. The screw packages operate exclusively with the natural refrigerant ammonia (NH<sub>3</sub>).



GEA Grasso SSP1

Compact construction,  
high standardization

## Technical features

- Oil separator with a reduced oil consumption
- Compact suction filter combination ensures smooth running and low pressure loss
- OMC (Oil Management Center) with a larger integration level of components for an ease of service and maintenance

### GEA Grasso SSP1 series

GEA Grasso SSP1 with compressor type	Cooling capacity <sup>1)</sup> (kW)		Dimensions (mm)			Weight <sup>2)</sup> (kg)
	R717 -10/+35 °C	R717 0/+45 °C	L	W	H	
P	524	734	3,285	1,280	2,000	3,300
R	678	948	3,565	1,280	2,000	3,400
S	839	1,176	3,565	1,280	2,000	3,550
T	962	1,328	3,565	1,380	2,100	3,700
V	1,156	1,598	3,765	1,660	2,350	4,050
W	1,289	1,791	3,765	1,660	2,350	4,200
Y	1,588	2,194	3,820	1,660	2,500	4,700
Z	1,827	2,539	3,820	1,660	2,500	4,900
XA	2,160	3,002	4,275	1,760	2,800	5,500

1) at 2,940 min<sup>-1</sup>, 2) without motor



*We live our values.*

Excellence • Passion • Integrity • Responsibility • GEA-versity

GEA Group is a global engineering company with multi-billion euro sales and operations in more than 50 countries. Founded in 1881, the company is one of the largest providers of innovative equipment and process technology. GEA Group is listed in the STOXX® Europe 600 Index.

## **GEA Refrigeration Technologies**

GEA Refrigeration Germany GmbH

Holzhauser Str. 165, 13509 Berlin, Germany  
Phone: +49 30 43592 6, Fax: +49 30 43592 777  
[gea-refrigeration.de@gea.com](mailto:gea-refrigeration.de@gea.com), [www.gea.com](http://www.gea.com)