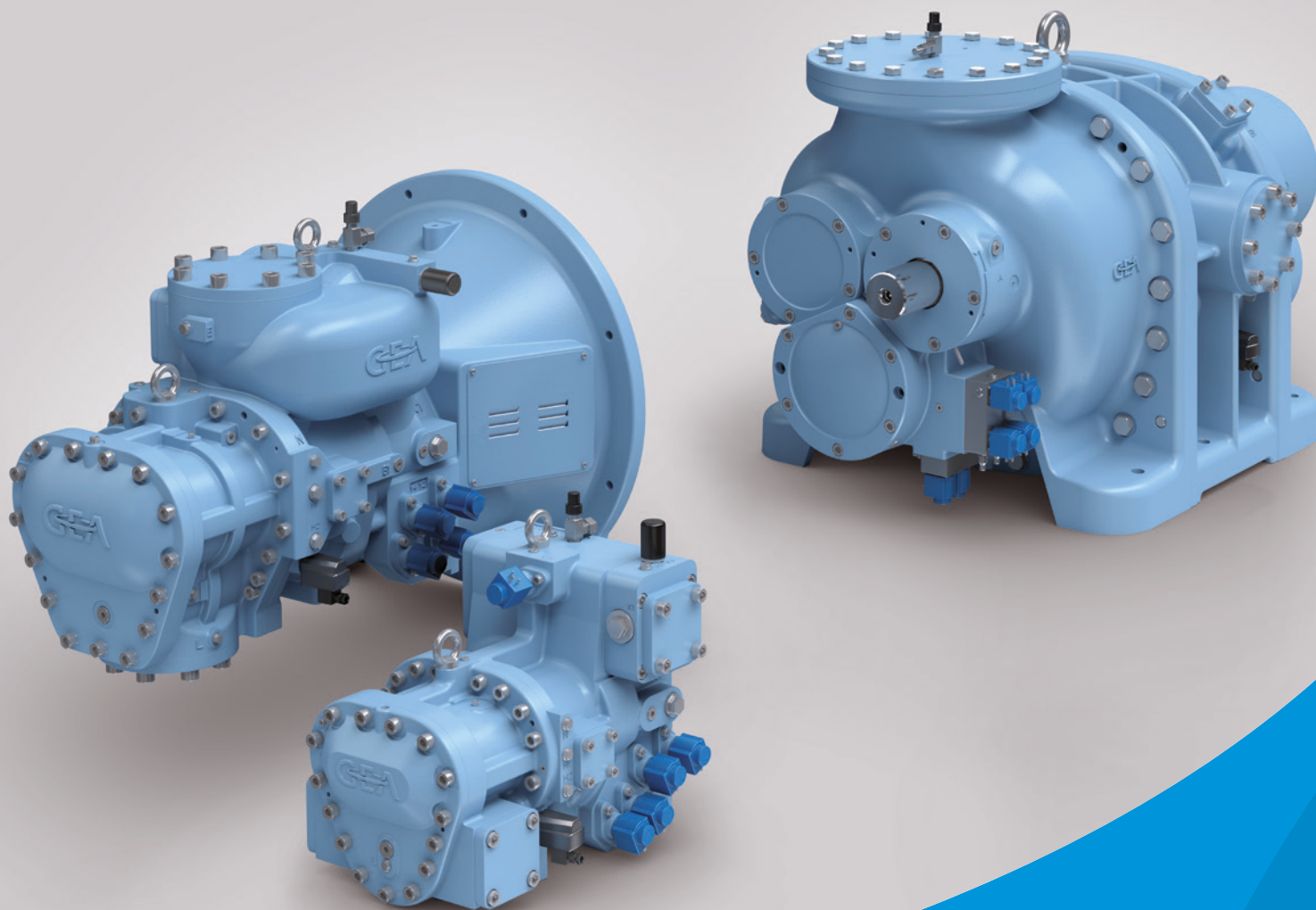




GEA Screw Compressors

Screw compressors for industrial
refrigeration and air conditioning

Top quality based on proven development

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

As an international technology leader, GEA focuses on process technology and components for sophisticated production processes. GEA is also extensively and intensively familiar with compressor technology. The top quality of our screw compressors 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.

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 as well as in the search for the right spare parts.



SPECIAL HIGHLIGHTS

Energy-efficient

- Infinitely variable capacity and V_i (internal volume ratio) control
- GEA-designed 5/6 rotor profile

Reliable and safe

- Patented vibration protection system, preventing pulsations in part load at high pressure ratios
- High-performance bearings and hydraulic axial force compensation for long product lifetime
- Standardized and hermetically sealed slide position indicator

Easy to maintain

- Easy replacement of thrust bearings and shaft seal, with no dismantling of compressor or motor required

OPTIONS

- Explosion-proof design upon request
- Approvals according API 619 or ISO 10440, further approvals upon request
- Pressure ratings: 28 bar and 52 bar, other design pressure upon request
- Particular design for high-pressure compressors: Housing material (e.g. nodular cast iron), customized rotor geometry, reinforced thrust bearing (TRIAX design), high-performance shaft seal, stronger driving shaft end, etc.

PRODUCT OVERVIEW

Series		Swept volume (m³/h)
		0 100 200 300 400 500 600 700 800 900 1000 2000 4000 6000 8000 10,000 12,000 14,000
GEA Grasso M	at 2940 rpm 231–870 m³/h	
	at 4500 rpm 354–1332 m³/h	
GEA Grasso LT	at 2940 rpm 805–11,467 m³/h	
	at 3550 rpm 972–13,846 m³/h	

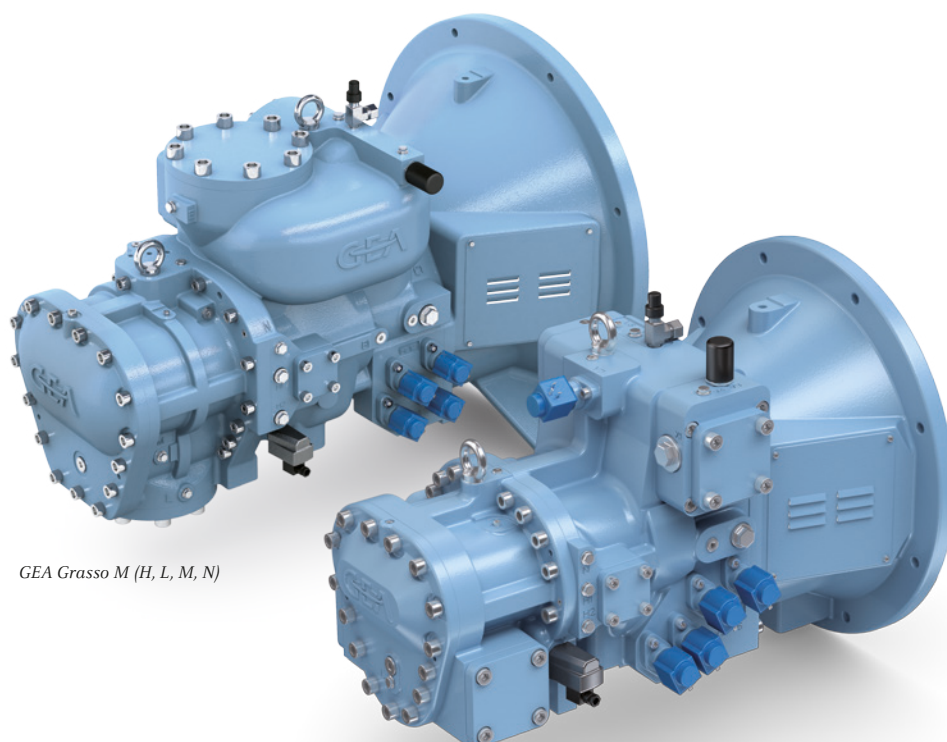
GEA Grasso M – Boosting efficiency

GEA Grasso M compressors are the first screw compressors with an integrated pressure-activated check valve ensuring low pressure drop. The integration of the suction filter and coupling housing greatly simplify assembly of the package. The outstanding energy-efficiency of these compressors is based on the infinitely adjustable capacity combined with the extended variable Vi-range. The variable speed from 1000 to 4500 rpm (6000 rpm for C, D, E, G) ensures a wide operation range and maximum efficiency in full and part load.

GEA Grasso M comes in eight model sizes and covers a swept volume range from 231 to 870 m³/h at 2940 rpm (354 to 1332 m³/h at 4500 rpm).

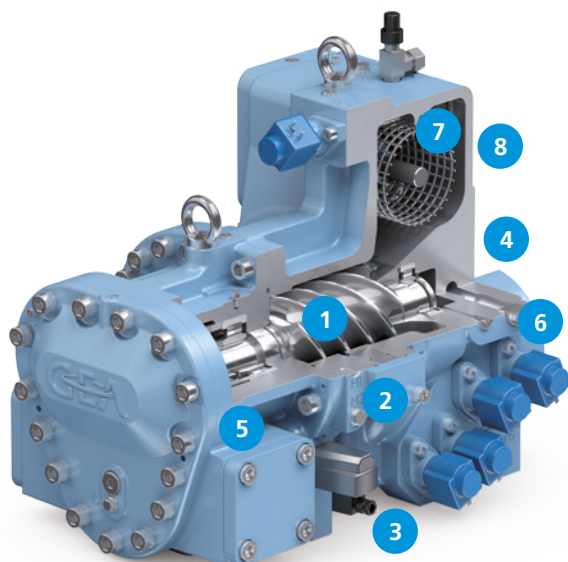
At a glance

- Outstanding energy-efficiency
- Easy package assembly

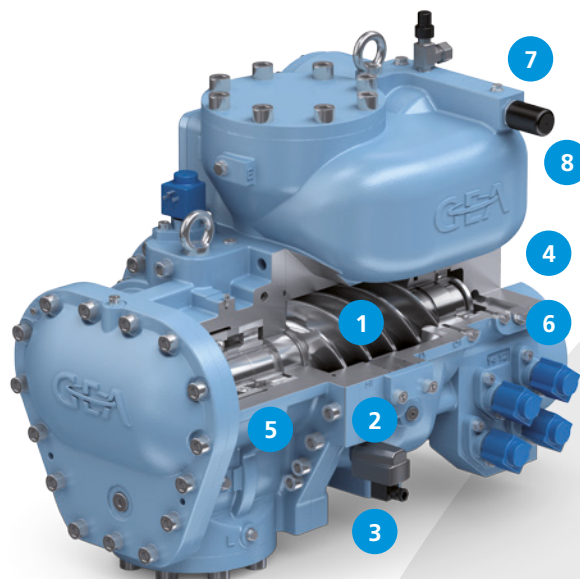


GEA Grasso M (H, L, M, N)

GEA Grasso M (C, D, E, G)



GEA Grasso M (C, D, E, G)



GEA Grasso M (H, L, M, N)

UNIQUE FEATURES AND ADVANTAGES:

1. High-efficiency rotors

- GEA-designed 5/6 rotor profile
- Compact and stiff design

2. Capacity-/Vi-control

- Compact and integrated system
- Stepless capacity control (10–100 %)
- Best COP at full and part load

3. Slide position indicator

- Hermetically sealed
- Suitable for hazardous areas

4. Mechanical shaft seal

- High-performance design and materials
- Easy access for servicing
- Suction-end mounted for extended service lifetime

5. Axial bearings

- Easy and quick access from non-drive end
- Field-replaceable
- Unloaded by balance piston, for long lifetime

6. One central oil connection

- Optional connection at male or female rotor side
- No oil pump required in most cases
- Adjustable oil injection

7. Integrated suction strainer

- Compact design for easy packaging

8. Pressure-activated suction check valve

- Minimized pressure drop
- No spring, no valve chattering
- Mirrored design enables reciprocal installation of suction side (only for C, D, E, G)

Gas pulsation protection

- Reduced gas pulsation and vibration at low part loads

Flanged coupling casing

- Less expensive packaging
- No alignment on the package required
- Service-friendly coupling

Integrated oil filter

- Optionally available (only for C, D, E, G)

UNIQUE FEATURES AND ADVANTAGES:

1. Vibration monitoring

- Connections for vibration monitoring system

2. Radial bearings

- Journal bearings for high load
- Contact-free operation, no wear

3. Axial bearings

- Easy and quick access from non-drive end
- Field-replaceable
- Unloaded by balance piston, for long lifetime

4. Gas pulsation protection

- Reduced gas pulsation and vibration at low part loads

5. Capacity/Vi slide

- Compact and integrated system
- Stepless capacity control (10–100 %)
- Best COP at full and part load

6. Mechanical shaft seal

- High-performance design and materials
- Easy access for servicing
- Suction-end mounted for extended lifetime

7. High-efficiency rotors

- GEA-designed 5/6 rotor profile
- Compact and stiff design

Economizer port

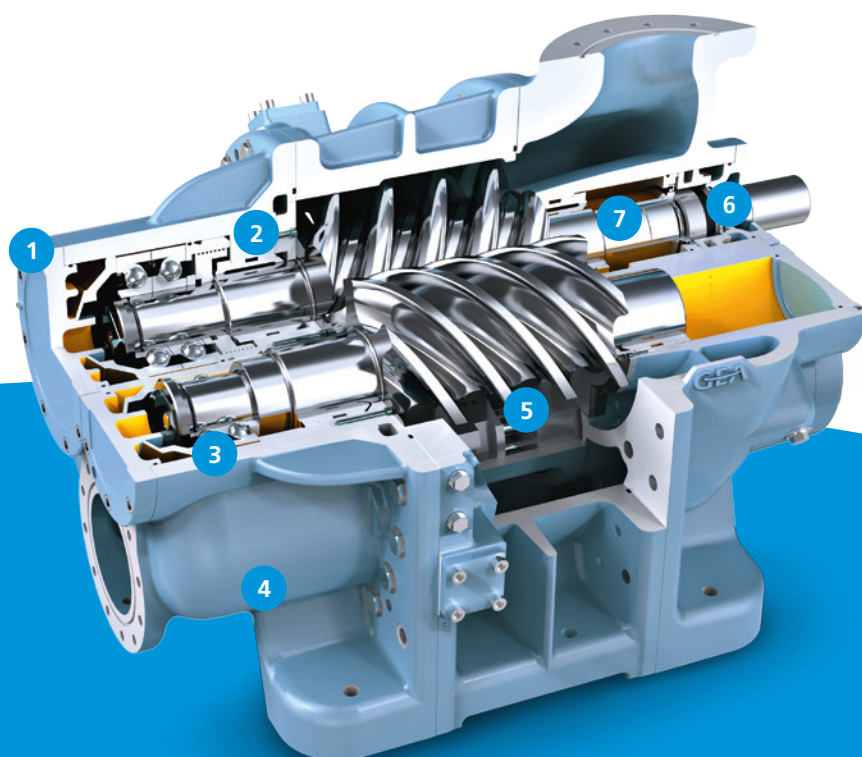
- ECO connections for maximum capacity increase and higher efficiency

Slide position indicator

- Hermetically sealed
- Suitable for hazardous areas

Easy service and maintenance

- Compact and service-friendly design
- Easy access to wear parts

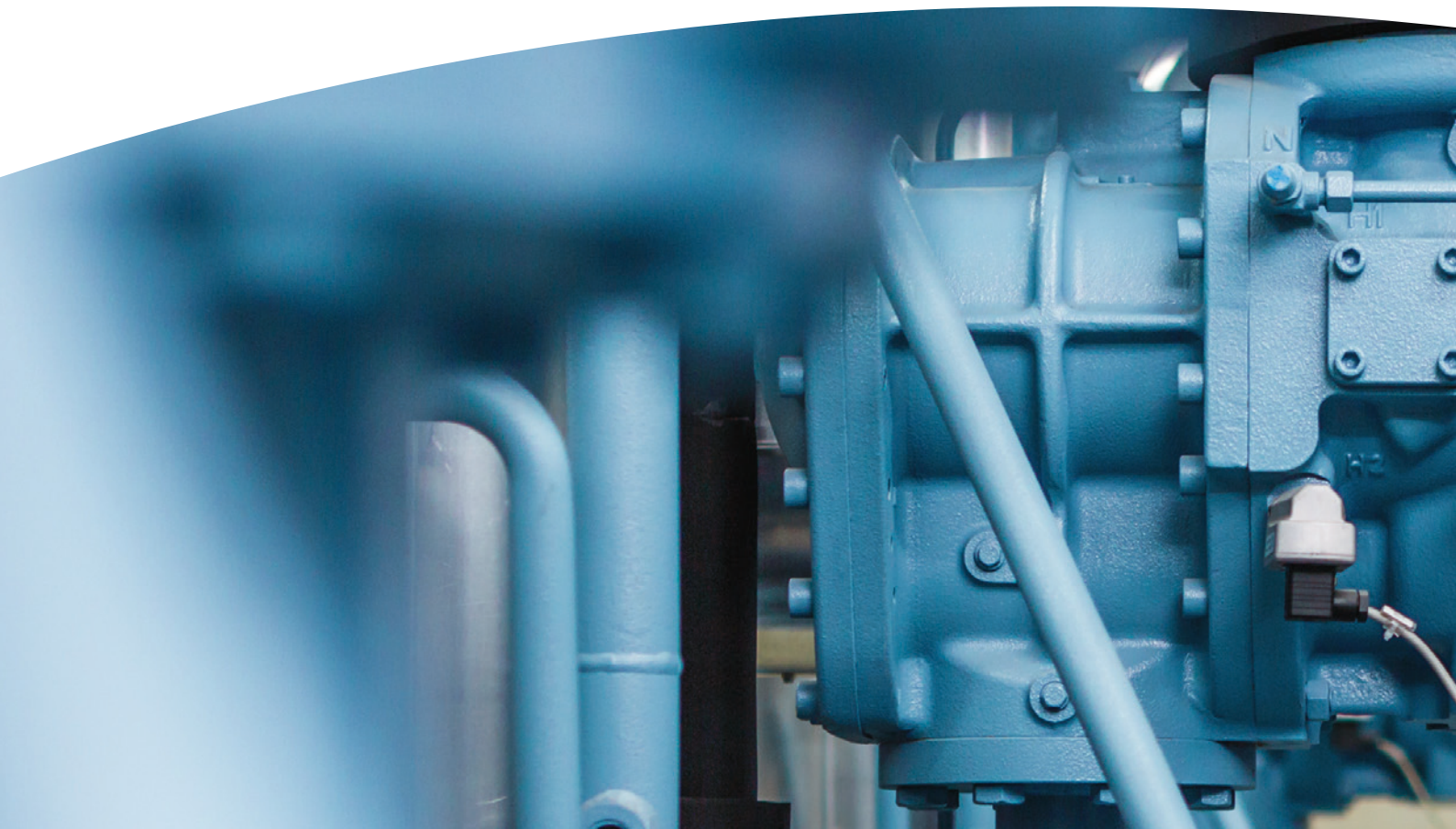


Technical Data

GEA GRASSO M

Series	Compressor type	Swept volume (m ³ /h)			Max. design pressure (bar)	Dimensions ¹⁾ (mm)			DN1 ²⁾ (mm)	DN2 ³⁾ (mm)	Weight ¹⁾ (kg)
		2940 rpm	3550 rpm	4500 rpm		L	W	H			
GEA Grasso M	C	231	279	354	28	852	660	660	80	65/80	392
	D	265	320	406	28	882	660	660	80	65/80	401
	E	321	388	491	28	898	660	667	80	80	444
	G	372	449	569	28	927	660	667	80	80	451
	H	471	569	721	28 / 52	964	800	820	125	80	581
	L	544	657	833	28 / 52	1000	800	820	125	80	605
	M	708	855	1084	28 / 52	1094	800	856	150	100	772
	N	870	1051	1332	28 / 52	1145	800	820	150	100	800

¹⁾ with coupling housing ²⁾ suction connection ³⁾ discharge connection



Performance Data

GEA GRASSO M

Series	Compressor type	28 bar compressor ¹⁾ (kW)		52 bar compressor ¹⁾ (kW)	
		Cooling capacity ²⁾ R717 -35/+35 °C	Cooling capacity R717 0/+35 °C	Cooling capacity R744 -50/-5 °C	Heating capacity R717 +35/+80 °C
GEA Grasso M	C		to be announced		
	D		to be announced		
	E		to be announced		
	G		to be announced		
	H	115	444	486	1258
	L	133	513	562	1457
	M	174	673	743	2202
	N	215	828	914	2474

¹⁾ at 2940 rpm with 5 K superheat and 0 K subcooling, stated temperature values: evaporation/condensation

²⁾ with economizer

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.

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