

GEA VARIPUMP



GEA Hilge NOVALOBE

Rotary Lobe Pumps for
Advanced Applications

Revolutionary Design for Viscous Media

The GEA Hilge NOVALOBE range in the GEA VARIPUMP line is specifically designed for viscous media – and for applications where gentle pumping or dosing is required.

The GEA Hilge NOVALOBE pump range meets the highest hygienic requirements and is EHEDG certified.

Robust construction

Through the pump's robust construction the shaft overhang and clearance in the pump have been optimized. The pump's compact design and the rigid shaft geometry reduce the risk of galling to an absolute minimum. The GEA Hilge NOVALOBE range has therefore been designed for a differential pressure of up to 230 psi (16 bar).

Unique rotor mounting design

Precision-ground cylinders for the location and accurate connection of rotors and shafts minimize play and reduce vibrations as well as noise.

Flexible rotor profiles

The rotor housing can be equipped with various rotor profiles. This makes it possible to adapt the GEA Hilge NOVALOBE pump to specific applications for optimum performance in different conditions.

A variety of applications

The GEA Hilge NOVALOBE pumps offer extremely reliable operation and gentle product handling. The hygienic design and use of pore-free materials make the pumps suitable for a variety of applications, such as:

Food & beverage

- Food processing plants
- Soft drink applications
- Confectionary and sugar
- Breweries

Pharmaceutical, biotechnology and personal care

- Fermentation processes
- Vaccine
- Blood products
- Enzyme production
- Cosmetics
- Personal care

Other industrial applications

- Paper
- Textile
- Chemical



AVAILABLE ROTOR PROFILES



Uni-wing: For gentle handling of media with large solids and dough-like products



Bi-wing: Robust standard variant for most applications

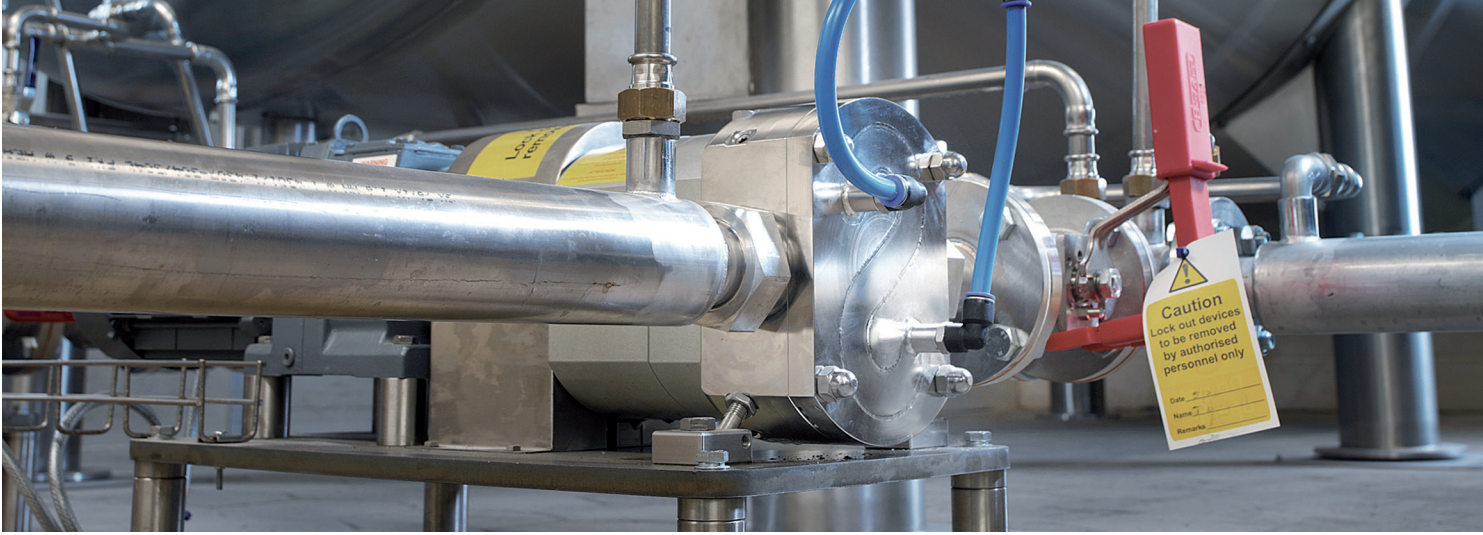


Multilobe: For low shear, low pulsation and gentle product handling

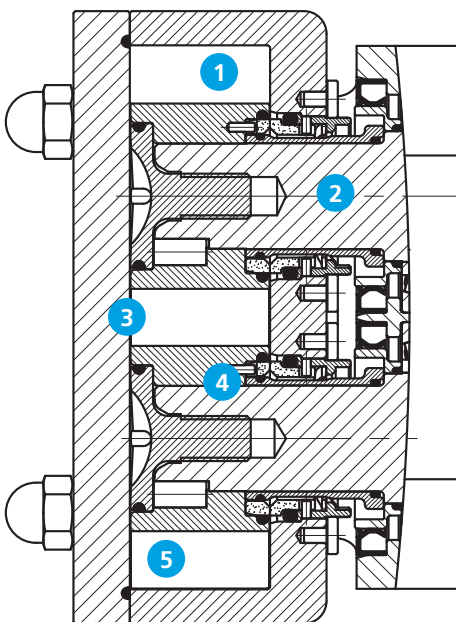
PROGRAM OVERVIEW

Pump model	NOVALOBE 10/0.06	NOVALOBE 20/0.12	NOVALOBE 30/0.33	NOVALOBE 40/0.65	NOVALOBE 50/1.29	NOVALOBE 60/2.1
Displacement gal/rev (l/rec)	0.01 (0.06)	0.03 (0.12)	0.08 (0.33)	0.17 (0.65)	0.34 (1.29)	0.5 (2.1)
Differential pressure (psi)	230	230	230	230	230	230 psi (16 bar)
Max. speed (rpm)	1,500	1,500	1,250	1,000	800	650
Max. liquid temperature	up to 203 °F, 302 °F (SIP)	up to 203 °F, 302 °F (SIP)	up to 203 °F, 302 °F (SIP)	up to 203 °F, 302 °F (SIP)	up to 203 °F, 302 °F (SIP)	up to 203 °F (95 °C), 302 °F (150 °C) (SIP)
Rotor design	uni-wing bi-wing multilobe	uni-wing bi-wing multilobe	uni-wing bi-wing multilobe	uni-wing bi-wing multilobe	uni-wing bi-wing multilobe	uni-wing bi-wing multilobe
Surface roughness R _a (µin)	≤ 31.5 / ≤ 16*	≤ 31.5 / ≤ 16*	≤ 31.5 / ≤ 16*	≤ 31.5 / ≤ 16*	≤ 31.5 / ≤ 16*	≤ 31.5 / ≤ 16* (≤ 0.8 / ≤ 0.4* µm)
Connection size (mm)	25	40	50	65	80	100
Max. particle size (mm) (non-abrasive)	12	16	23	29	35	41
Max. viscosity (mPas)	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000

* optional



FEATURES AND BENEFITS



1 Flexibility

Interchangeable rotor and shaft seal designs.
Various connection types

2 Robust and reliable

Large shaft diameter and compact design for high differential pressure

3 Smooth surfaces

Standard surface finish of $R_a \leq 16 \mu\text{m}$ for easy cleanability

4 Service-friendly

Front-loaded seals and a unique rotor fixation

5 Hygienic design

EHDG-certified cleanability with full drainability in vertical installation

Shaft seals

To accommodate different applications and media, GE A Hygiene NOVALOBE pumps are available with different seal types:

- Single mechanical seal
- Single-flush mechanical seal
- Double mechanical seal
- O-ring seal

The mechanical seals are single inboard seals placed in the optimum position in the pump to ensure outstanding lubrication and cooling. They also comply with the hygienic design criteria in CIP and SIP processes.

Seal face materials are carefully selected to suit the specific media. Standard materials are carbon/silicon carbide with EPDM elastomers (FDA-compliant).

Connections

- Triclamps (standard)
- Other connections available upon request. This includes SMS, RJT, clamp connections to ISO, Tri-Clamp, etc., and special sterile threads and flanges
- Rectangular inlet for improved inlet conditions



GEA Hilge NOVALOBE configurations

- With bare shafts
- With geared motor and coupling mounted on stainless steel base frame
- With stainless steel motor shroud
- Mounted on trolley
- With horizontal or vertical ports

ADDITIONAL OPTIONS

Pressure relief valve

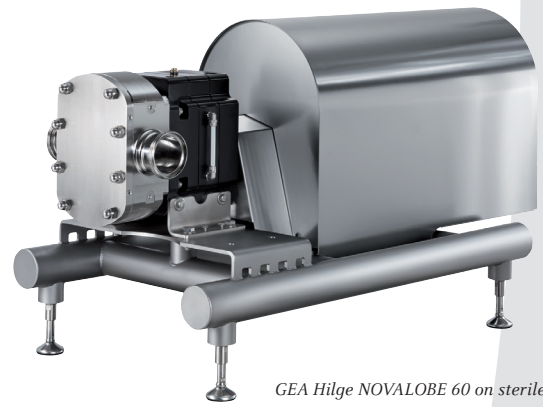
Positive displacement rotary lobe pumps will continue to build up pressure when operating against a closed valve. With this in mind, it is very important to add in a safety device to prevent accidental over-pressurization and subsequent damage to the pump or system. GEA Hilge NOVALOBE pumps can be equipped with an integrated pressure relief valve to avoid these damages.

Thermal jackets

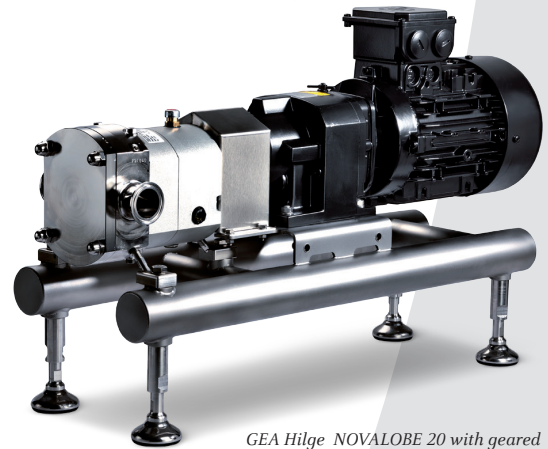
Thermal jackets are available for all pump sizes. This option makes it possible to heat the pump chamber and to ensure that products which solidify at ambient temperature are kept liquid. Alternatively, the thermal jackets can be used to cool the pumped media where necessary. Thermal jackets for GEA Hilge NOVALOBE are available for the rotor case and the front cover. Due to the integrated design in the pump, it is a highly efficient system without any compromise in the hygienic design and cleanability.

Aseptic front cover

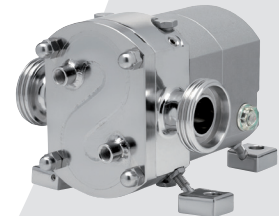
Combining the benefits of a circulating barrier fluid and double mechanical seals, the aseptic front cover and seals significantly increase safety – ideal where high containment requirements apply.



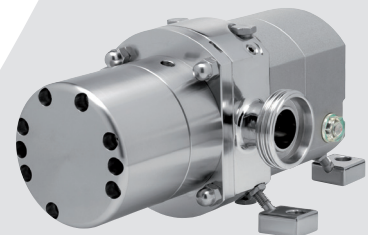
GEA Hilge NOVALOBE 60 on sterile base frame with stainless steel shroud



GEA Hilge NOVALOBE 20 with geared motor on sterile base frame



GEA Hilge NOVALOBE with thermal jacket



GEA Hilge NOVALOBE with pressure relief valve



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.

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