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.

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

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

*optional
Shaft seals
To accommodate different applications and media, GEA Hilge 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

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 $R_a \leq 16 \, \mu\text{in}$ for easy cleanability

4 Service-friendly
Front-loaded seals and a unique rotor fixation

5 Hygienic design
EHEDG-certified cleanability with full drainability in vertical installation
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.
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.