GEA Hilge NOVALOBE
Rotary Lobe Pumps for Advanced Applications
The Flexible Rotary Lobe Pump
For Highly 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 fulfills the highest hygienic requirements and ensures reliable production, based on the proven GEA design.

Robust Construction
The pump’s compact design and the rigid shaft geometry prevent galling and wear and allow high differential pressure.

Unique Rotor Mounting Design
Precision-ground cylinders ensure the accurate connection of rotors and shaft, minimizing play and reducing 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 an optimum performance in different conditions.

A Variety of Applications
The GEA Hilge NOVALOBE pumps offer extremely reliable operation and gentle product handling to ensure product safety and high plant availability. The hygienic design and use of pore-free materials make the pumps suitable for a variety of applications, such as:

- **Dairy**
  - Cream Cheese
  - Butter
  - Yoghurt
  - Sour Cream
  - Ice Cream

- **Food**
  - Sugar solution
  - Chocolate
  - Sauces
  - Soups
  - Mayonnaise
  - Pastes
  - Oils & Fats
  - Prepared Salads
  - Pet Food

- **Beverage**
  - Smoothies
  - Juice Concentrate
  - Pre-mixes
  - Brewing Yeast

- **Pharma & Biopharma**
  - Neutraceuticals
  - Blood Products
  - Vaccines
  - Enzymes
  - Cell cultures

- **Personal Care & Home Care**
  - Cosmetics
  - Body & Skincare
  - Fabric care
  - Household Cleaners

- **Dairy**
  - Cream Cheese
  - Butter
  - Yoghurt
  - Sour Cream
  - Ice Cream
YOUR ADVANTAGES AT A GLANCE

Hygienic Design
• All product-wetted materials are approved for food, beverage and pharmaceutical applications
• Proven cleanability ensures reliable and fast CIP, saving time and resources
• Version with vertical ports is fully drainable

Long-time Reliability
• Robust design prevents galling and wear and allows high differential pressures
• Integrated pressure relief valve (optional) ensures safe operation under extreme conditions

High Versatility
• Flexible pump configuration depending on application requirements
• Pump variants for demanding applications available (thermal jacket, rectangular inlet, aseptic front cover)
• Pump can easily be retrofitted to cover a different application

Ease of Installation and Service-friendliness
• Easy and fast alignment and installation of the pump
• Fast replacement of front-loaded mechanical seals
• Professional support throughout the whole life cycle

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 (l/rev)</td>
<td>0.06</td>
<td>0.12</td>
<td>0.33</td>
<td>0.65</td>
<td>1.29</td>
<td>2.1</td>
</tr>
<tr>
<td>Differential pressure (bar)</td>
<td>16</td>
<td>16</td>
<td>16</td>
<td>16</td>
<td>16</td>
<td>10</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 95 °C, 150 °C (SIP)</td>
<td>up to 95 °C, 150 °C (SIP)</td>
<td>up to 95 °C, 150 °C (SIP)</td>
<td>up to 95 °C, 150 °C (SIP)</td>
<td>up to 95 °C, 150 °C (SIP)</td>
<td>up to 95 °C, 150 °C (SIP)</td>
</tr>
<tr>
<td>Rotor design</td>
<td>uni-wing multitube</td>
<td>uni-wing multitube</td>
<td>uni-wing multitube</td>
<td>uni-wing multitube</td>
<td>uni-wing multitube</td>
<td>bi-wing multitube</td>
</tr>
<tr>
<td>Surface roughness Rₐ (µm)</td>
<td>≤ 0.8 / ≤ 0.4*</td>
<td>≤ 0.8 / ≤ 0.4*</td>
<td>≤ 0.8 / ≤ 0.4*</td>
<td>≤ 0.8 / ≤ 0.4*</td>
<td>≤ 0.8 / ≤ 0.4*</td>
<td>≤ 0.8</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
FEATURES AND VARIANTS

Mechanical Seals
To accommodate different applications and media, GEA Hilge NOVALOBE pumps are available with different seal types:
- Single mechanical seal
- Single-flushed mechanical seal
- Double mechanical seal
- O-ring seal

The mechanical seals are inboard seals placed in the optimum position in the pump to ensure outstanding lubrication and cooling. The front-loaded mechanical seals ensure fast and easy maintenance. They also comply with the hygienic design criteria in CIP and SIP processes up to 150 °C.

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

Connections
- Threads to DIN 11851 (standard)
- Flanges to DIN EN 1092-1 / DIN 2633 PN 16
- Sterile threads to DIN 11864-1 / DIN 11853-1
- Sterile flanges to DIN 11864-2 / DIN 11853-2
- Other connections available upon request. This includes SMS, RJT, clamp connections to DIN, ISO, Tri-Clamp etc., and special sterile threads and flanges
- Rectangular inlet for improved inlet conditions

GEA Hilge NOVALOBE Variants
- 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

Thermal Jackets
Thermal jackets make 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.

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.

Aseptic Front Cover
Combining the benefits of a circulating barrier fluid and double mechanical seals, the aseptic front cover and the double mechanical seal greatly 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.