Hygienic Lobe Rotor Pump

I Application

The HLR pump is a lobe rotor pump designed in compliance with the EHEDG specifications for plants and processes that comply with the strictest hygienic requirements. Due to the low working speed, the pump is characterised by a gentle pumping and low shear of the product causing less damage possible. It is an ideal pump for the transfer of all types of liquids (from 1 to 1.000.000 cP) and liquids with solid particles (curd, biologic cultivations, etc.). The pump is adequate for the food-processing, cosmetic and pharmaceutical industries.

I Operating principle

The HLR pump basically consists of two lobe rotors which rotate inside the casing without touching each other. As the rotors rotate, the space between the lobes and the casing is successively filled with the product which is driven to the discharge nozzle displacing a fixed amount of product. The pumped product forms a continuous stream due to the adjusted tolerances of the lobes and the pump casing thus ensuring an efficient pumping.

I Design and features

Vertical support.
Bare-shaft construction.
Self-drainable pump.
Tri-lobe rotors.
Hygienic design of the attachment of the lobes.
Sanitary mechanical seal, internal assembly.
The seal is disassembled from the frontal part without disassembling the casing of the pump.
Gaskets with deformation limiters prevent any dead leg.
Easy cleaning and maintenance.
Standard connection: clamp.
Pump certified according to the EHEDG standards.

I Materials

Investment casting casing and lobes  AISI 316L
ball bearing support  GG-25
Gaskets  EPDM according to FDA 177.2600
Mechanisal seal  SiC/C/EPDM
Internal surface finish  Ra ≤ 0,8μm
External surface finish  bright polish

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I Options

- Mechanical seal: SiC/SiC, TuC/SiC.
- Flushed or balanced mechanical seal.
- Gaskets: FPM or FFPM.
- Bi-wing lobes.
- Relief valve or external by-pass.
- Heating jacket.
- Ra ≤ 0.5 μm surface finish for pharmaceutical applications.
- Horizontal assembly (no EHEDG certificate).
- Various types of drives and protections (gear motor with frequency converter, etc.).
- Assembly on a 304 stainless steel baseplate on silent-blocks, sanitary design.
- Trolley and control panel.
- Connections: Clamp DIN32676, DIN 11864-1, DIN 11864-2, etc.
- Material certificates (3.1), roughness certificate.
- The pump can be ATEX certified.

I Technical specifications

- Max. flow: 115 m³/h, 507 US GPM
- Max. differential head: 12 bar, 174 PSI
- Max. working pressure: 16 bar, 232 PSI
- Max. working temperature: -10 ºC to +120 ºC (EPDM), 14 ºF to 248 ºF
- +140 ºC (SIP, max. 30 min), 284 ºF
- Mx. speed: 950 rpm

I General dimensions

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