

ROTARY LOBE PUMPS

PACKO

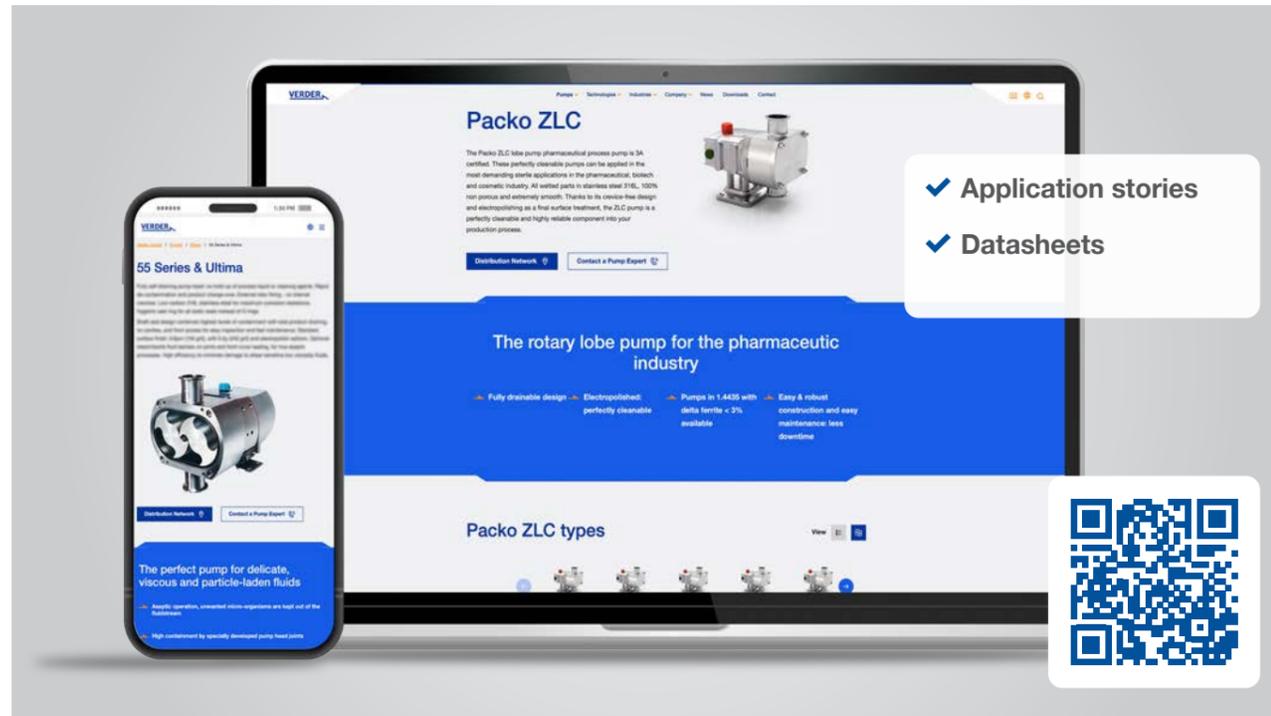
The hygienic pump specialist



- ✓ Large selection
- ✓ Best quality
- ✓ Highest standards

GET IN TOUCH

With the hygienic pump manufacturer



Contact VERDER or PACKO

If you would like to know more about PACKO pumps then please visit our website www.packopumps.com where you will find the full breakdown of our pump range as well as application stories, latest news and technical datasheets and more.

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To provide you with the best possible service PACKO are supported by a distribution network that covers all five continents and is continuing to expand. Our group of distributors includes members of the VERDER GROUP and experienced independent companies. Our worldwide distribution network also help to provide our customers local support and spares availability.

PACKO® is a registered trademark of the VERDER GROUP.

THE VERDER GROUP

Enabling progress



The VERDER group is a family-owned business formed over 60 years ago in the Netherlands; the group consists of a worldwide network of production and sales offices. Group companies are involved in the development and distribution of industrial and hygienic pump solutions, high-tech equipment for quality control and Research & Development into solid material (solids sample preparation and analytical technologies).

- 1 Company
- 27 Countries
- > 60 Years of expertise
- > 20 Manufacturing companies
- Global network
- Local distributors
- In-house service & maintenance
- A solution for every application
- In-depth knowledge of processes and applications

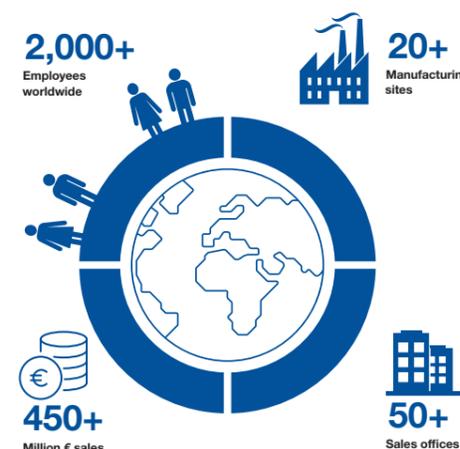
For years, Verder has led in innovation, driving our and our customers' success. Our global network of over 70 sales and manufacturing sites offers personalized sales and technical services, ensuring close customer relationships crucial for providing specific support and building lasting, trusting partnerships.

Verder is dedicated to making a positive impact by aligning with the UN's Sustainable Development Goals (SDGs) through our Environmental, Social, and Governance (ESG) program. Our goal is to lessen our environmental footprint, enhance employee well-being, and uphold ethical practices.

Inventing to make the world a better place

We leverage our expertise in sample preparation, analytical equipment, and professional pumping to empower our customers. We enable progress by improving their operations, we contribute to safer, more efficient, and sustainable processes, products, and services. Our contributions are pivotal in securing safe food supplies, ensuring responsive healthcare, and safeguarding clean drinking water in millions of households.

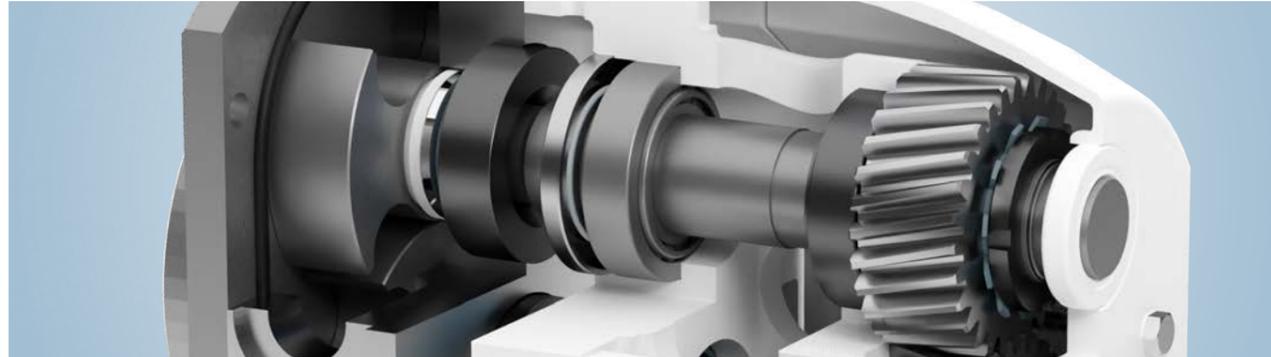
As a united family, we embrace our societal responsibilities with passion and a commitment to excellence. Our collective efforts are aimed at fostering a healthier, safer, and more sustainable world for all.



ENABLING PROGRESS.

PACKO

Rotary lobe pumps



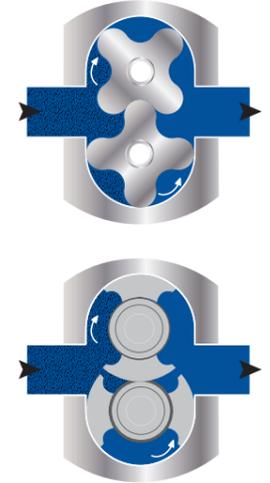
PACKO rotary lobe pumps are used in a wide range of industries for hygienic applications. Varying from the pharmaceutical industry for a.o. cell slurries and bio-products, the health care industry for cosmetics and dietary products, a very broad range of applications in the food processing industry, and in the chemical industry for strong acids, emulsions and polymers.

Each series of the PACKO rotary lobe and circumferential piston pumps is state-of-the-art. The pumps can be fitted with a variety of features and rotors to adapt to almost all hygienic pumping tasks. The pumps can be customized to meet the optimum function or performance to your process.

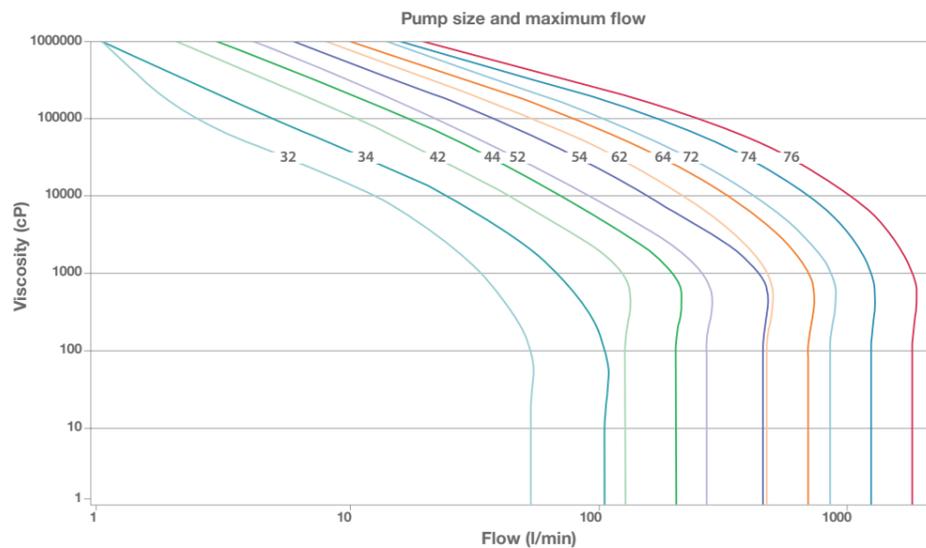
OPERATION PRINCIPLE

How does a lobe pump work?

In a rotary lobe pump the inlet pressure transfers the fluid into the void created by the diverging rotor lobes. As the lobes continue to rotate, liquid is trapped within the cavity between the lobes and transported to the discharge side of the pump. The converging lobes displaces fluid into the discharge port creating a pressure differential across the pump head. The fluid is carried between rotor lobe surfaces from inlet to outlet. The rotor surfaces cooperate to provide continuous sealing.



Performance Overview



*For guidance purposes only. Contact Verder for a detailed proposal, tailored to your technical specifications.

What are your benefits using a PACKO lobe pump?

Most stringent hygienic standards

Flush rotor fixing screws are sealed to prevent product ingress. Contoured rotor case internals for full drainability during SIP and shaft seals set up front where the pumping action is! Fully CIP and SIP protocols and USDA, 3A certification.

Low maintenance cost

Front loaded single shaft seals are fully accessible from the front of the pump without disturbing the process pipework. Bi-wing rotors require no timing adjustments.

High volumetric efficiency

The bi-wing rotors incorporate the low viscosity efficiency associated with circumferential piston pumps with the viscous product handling capability of tri-quad and bi-lobe rotor pumps at an affordable price.

Robust design

Hy-Line has extremely large shaft diameters mounted in high specification taper roller bearings, fitted into an extremely rigid central pillar. All enclosed in an oil filled housing made from alloy.

PACKO ROTARY LOBE PUMPS

State of the art



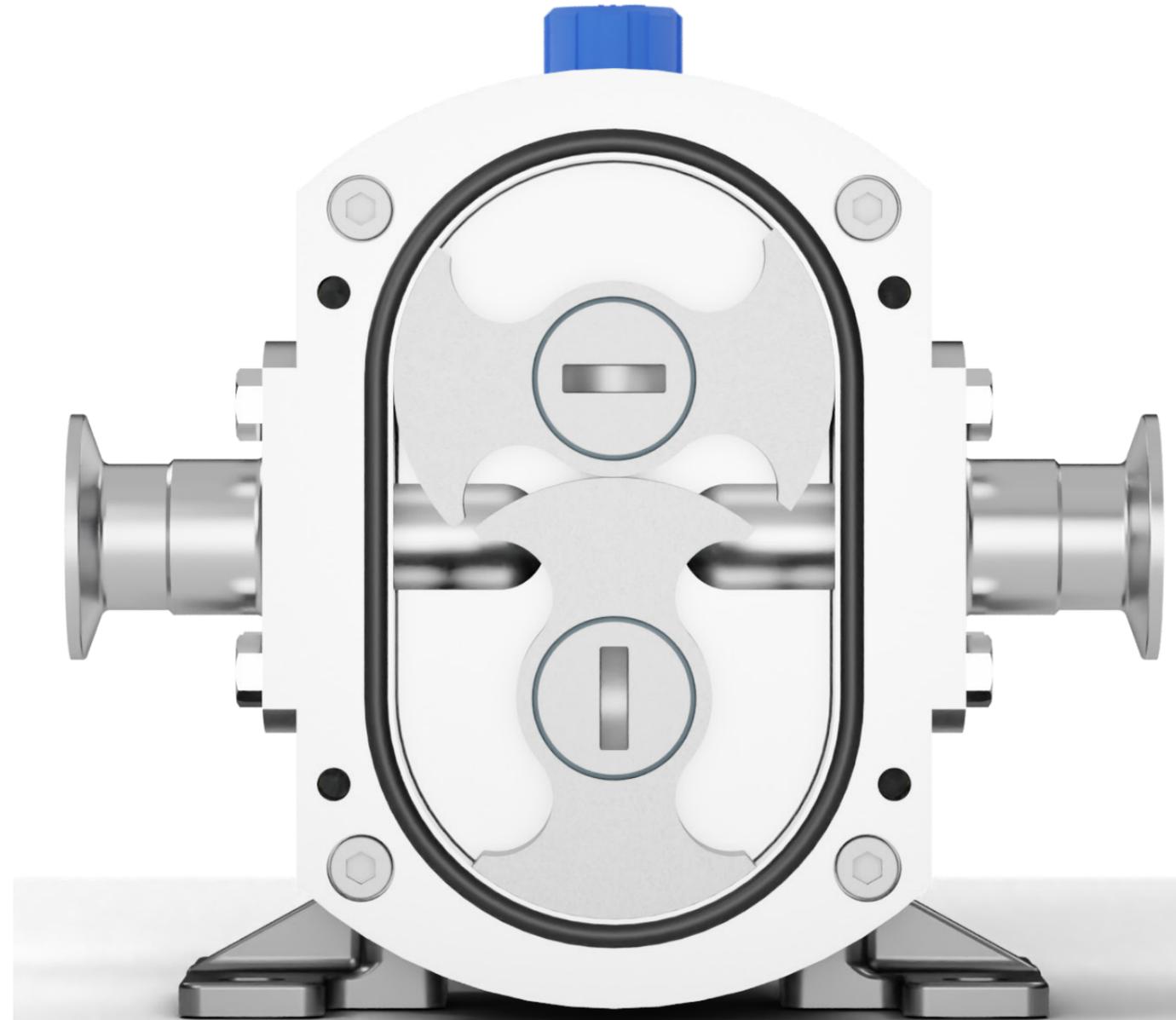
PACKO's range of rotary lobe pumps includes a variety of types and models, each representing the state of the art in its specific application.

The pumps are available in a wide variety to suit your specific application.

PACKO rotary lobe pumps are a valuable addition to the existing PACKO pump program because of their balanced seal assembly and the strong shaft construction. They are the preferred solution for applications with pressures over 12 bar.

Features and benefits

1. Flush fitting, sealed rotor retaining screws avoid buildup of stagnant product as no end cover recesses are required and no product can get into the rotor drive.
2. Front mounted shaft seals for easy replacement and full accessibility of CIP liquids.
3. Rugged, high grade alloy bearing pedestal and housing for low weight and high strength, completely encased in epoxy coating.
4. Detachable ports for maximum flexibility in connection type and size (except for 3 and 7 size).
5. Removable feet allow quick change for pump mounting in the ideal orientation.
6. High specification taper roller bearings give over one million hours life on a typical duty.
7. Precision cut helical gears for high load capability and ease of maintenance.
8. Fully interchangeable bi-wing rotors can be fitted without the need to re-time thus reducing downtime and allows pump to cope with a higher level of abuse.
9. Heavy duty shafts for high pressure capability.



HY~LINE PLUS SERIES

Rotary lobe pump



✓ **Easy maintenance because of the construction of the end covers**

✓ **Excellent rotor case drainage**

✓ **Bearing housing and gearbox assembly**

The Hy~Line Plus series consists of the HP models. Perfect cleanability with a pump chamber design that promotes self-drainage. The Hy~Line Plus series provides specific variants for special applications.

The features and benefits

- Good product handling, high efficiency, gentle pumping action, low to high viscous products, interchangeable, easy 'set-up', bi-directional operation
- Easy maintenance because of the construction of the end covers (FDA Nitrile, FDA EPDM & Viton and PTFE): internally flat, which minimises product entrapment, improves CIP
- Excellent rotor case drainage: Bolt-on feet allow vertical ports, vertical ports and profiled rotor case promote self-drainage of thin liquids, encourages product recovery and promotes full CIP drainage
- Large diameter shafts and rugged construction for long life, easy to service, bi-directional and easy external cleaning

Options

- End cover pressure relieve valve can be used with pump head jacket
- Pump head and end cover thermal jackets, ideal for temperature sensitive liquids
- Rectangular 'Hopper' ports improve suction characteristics

Seal options

- Front loaded single mechanical face type seals of hygienic design (carbon, stainless steel and silicon carbide).
- Low pressure flushed seals utilize the same single mechanical seal with an additional housing. A low pressure flush liquid washes away crystallizing products or liquids which 'skin over'.
- Double mechanical seals utilizing all the components from single seals (for hazardous, toxic, highly abrasive or sterile products).



KEY BENEFITS

To the Hy~Line Plus series

Certifications

3A, FDA, 1935-2004 EC



Connections

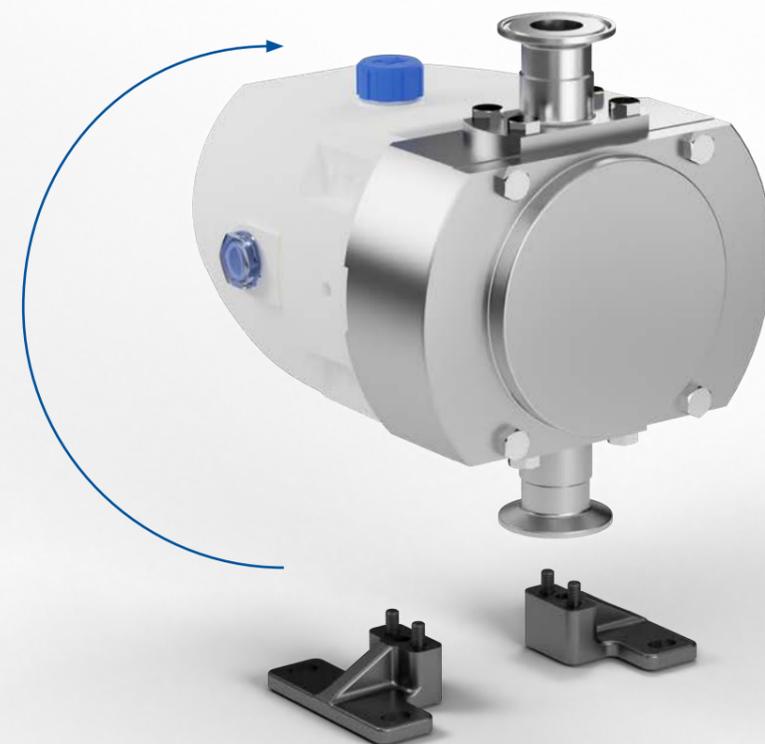
All US and European standards including DIN, SMS, RJT, IDF, Tri-Clamp & BSP. Most pumps available with 2 different sizes, all fully interchangeable (except on 3 & 7 size).

Elastomers

Nitrile, Viton, EPDM and PTFE product contact joints available in compounds conforming to 3A Sanitary Standard 18-03 and FDA title 21 section 177.2600.

Technical details

Model	HP32	HP34	HP42	HP44	HP52	HP54	HP62	HP64	LH72	LH74	LH76
Port Sizes (mm)	19	25	25	38	38	50	63	76	76	125	127
	25	38	38	50	50	76	76	100	100	152	152
Displacement (l/100 rev)	3.5	7	12.3	20.4	26.5	45.5	64	95	123	205	301.5
Max flow (l/min)	52	105	123	204	265	455	461	684	836	1230	1809
Max Pressure (bar)	15	8	15	8	15	8	15	8	15	8	5
Max Speed (RPM)	1500	1500	1000	1000	1000	1000	720	720	680	600	600
Bareshaft Weight (kg)	8	10	18	20	32	35	61	65	125	145	165
Temp (°C)	-30 to 140										
Viscosity (cP)	1 to 1 million										



LT SERIES

Rotary lobe truck pump



✓ **Lightweight aluminium bearing housing**

✓ **316 stainless steel pumphead**

The Hy-Line LT range of truck mounted pumps are used for the loading and unloading of a wide variety of products.

Technical details

Max. flow	684 l/min
Max. pressure	15 bar

The features and benefits of the LT series

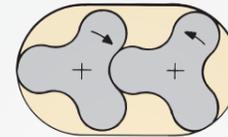
- Corrosion resistant 316 stainless steel pumphead
- Lightweight aluminium bearing housing
- Adaptable foot mounting for horizontal or vertical port orientation
- All seals accessible from the front of the pump without dismantling pipework
- Exceptionally quick and easy maintenance
- Easy change port type/size
- Flush rotor fixing and easy access seals ensure maximum cleanliness – including CIP
- Reversible flow



ROTOR TYPES

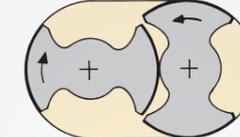
Finetune your pump to your specific needs

The PACKO lobe pumps are available in different versions. Each type has its own characteristics and field of application.



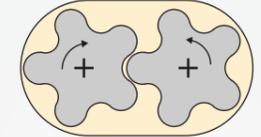
Tri lobes

With this version you can pump viscous or 'shear' sensitive products, possibly in combination with whole parts such as fruit and vegetables. The pumps are equipped with a standard pump housing or with an adapted pump housing. The 8-shaped pump housing increases the volumetric efficiency with thinner liquids.



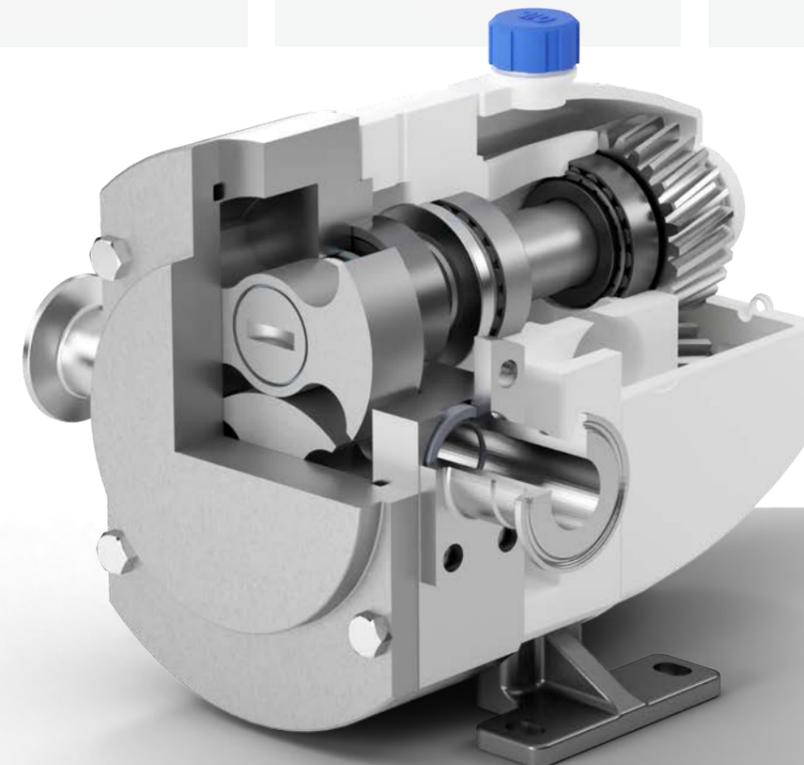
Bi-wing lobes

A lobe pump in this version gives a low pulsation and a very high volumetric efficiency. Available in the 55 series and in the Hy-Line pump series.



5 lobes

Specially developed for the ultra hygienic 55 series. The use is the same as with the 3 lobes rotors. However, this version gives a much lower pulsation and low noise.



SERIES 55 & LU

Rotary lobe pumps



- ✓ Aseptic operation
- ✓ High containment
- ✓ High Hygiene
- ✓ Low product damage
- ✓ No hold up of product

The 55 and LU series are the perfect pump series for delicate, viscous and particle-laden fluids in biotechnology, pharmaceutical manufacture, high technology food processes and all applications where the very highest hygienic standards are required. Special features such as the front mounted shaft seals, the external rotor fixing, the hygienic end cover, and the gasket type joints make this pump perfectly cleanable.

Technical details

Model	Max flow	Displacement	Pressure	Ports
	l/min	l/100 rev	bar	mm
55210	16	1.09	14	12
55320	44	2.93	20	19
55420	67	6.7	20	25
LU42	123	12.3	15	25
LU44	204	20.4	8	38
LU52	265	26.5	15	38
LU54	455	45.5	8	50
LU62	461	64	15	65
LU64	685	95	8	80

The features and benefits of the 55 & LU series

- Rapid de-contamination and product change-over
- Fully self-draining pump head: no hold-up of process liquid or cleaning agents
- External rotor fixing – no internal crevices
- Low-carbon 316L stainless-steel for maximum corrosion resistance
- Controlled-compression gasket-type joints and no O-rings in product contact
- Shaft seal design combines highest levels of containment with total product draining, no cavities, and front access for easy inspection and fast maintenance
- Standard surface finish: 0,5µm and electropolished
- Optional steam/sterile fluid barriers on joints, for true aseptic processes
- High efficiency to minimise damage to shear-sensitive low viscosity fluids



WHY CHOOSE THE 55 & LU?

Key features

Aseptic operation

All unwanted micro-organisms are kept out of the fluid stream. This prevents spoiling of sensitive products and ensures that only the intended reactions take place in the process. High specification joints are used: Once the system has been cleaned and sterilized it will remain clean and sterilized.

High containment

Escape of pathogenic or other hazardous products is prevented by the specially developed pump head joints. Optional: steam or sterile fluid barriers.

High Hygiene

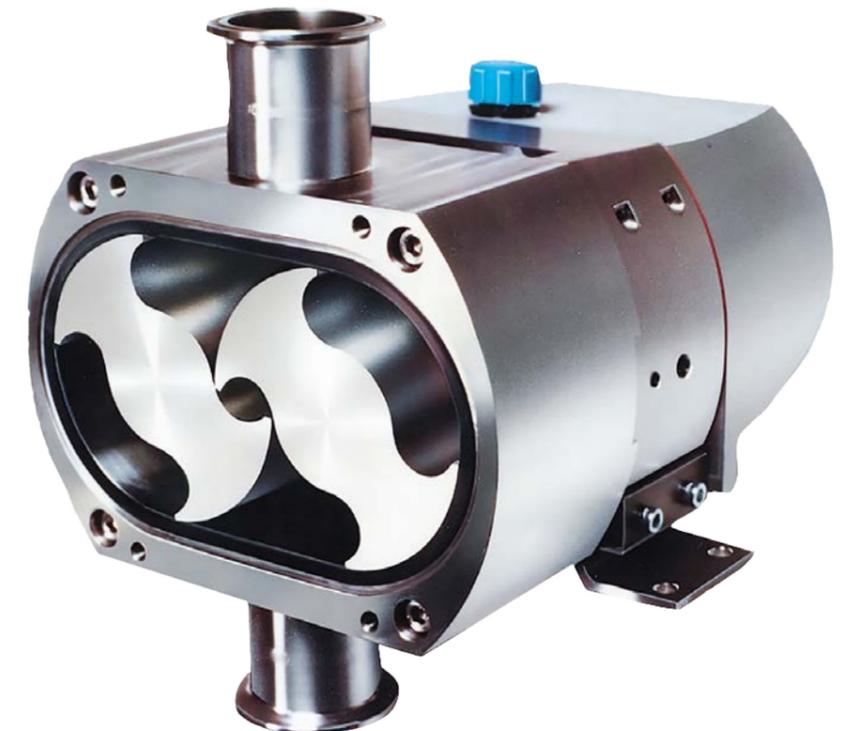
FDA listed materials maintain hygiene inside and smooth contoured externals make the outside of the pump very easy to clean.

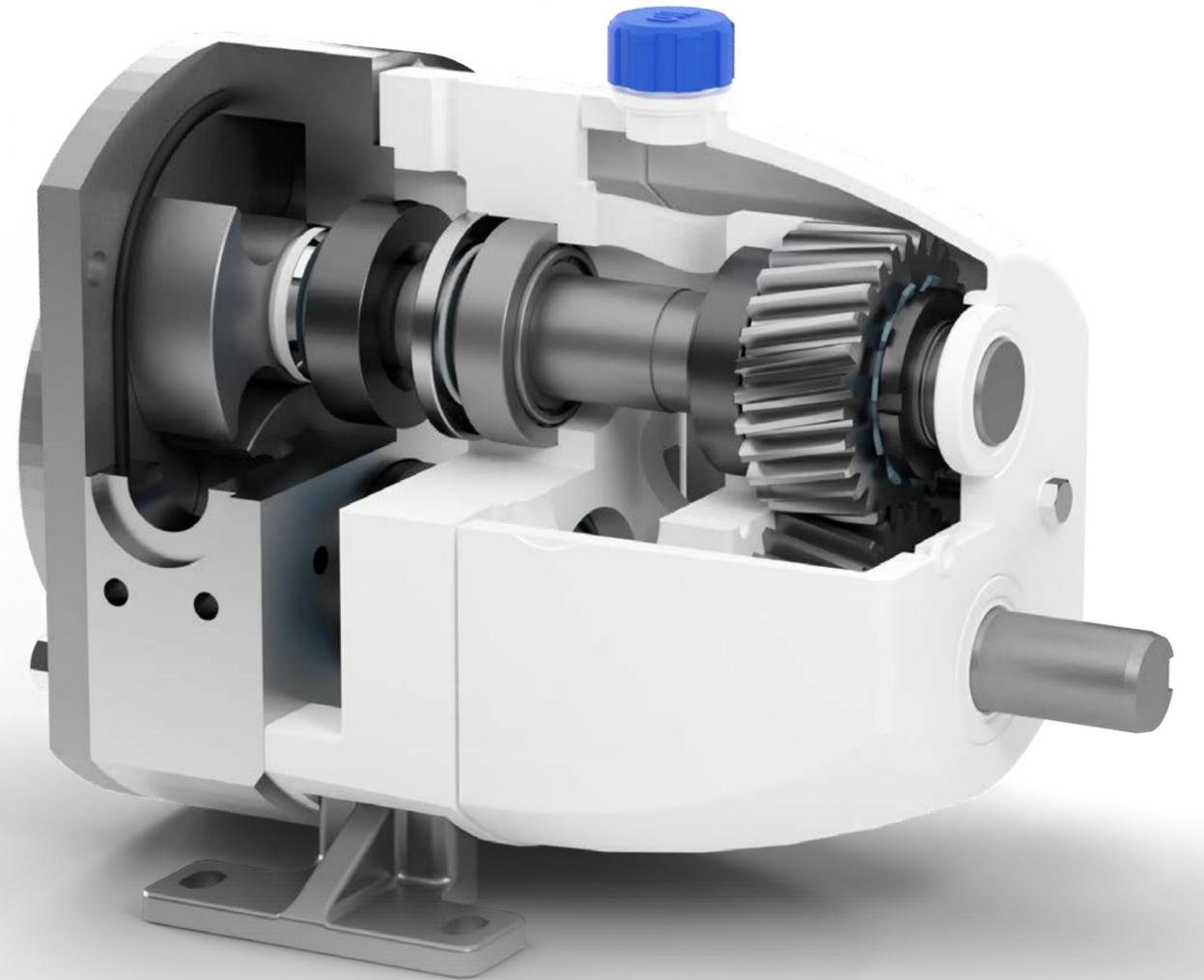
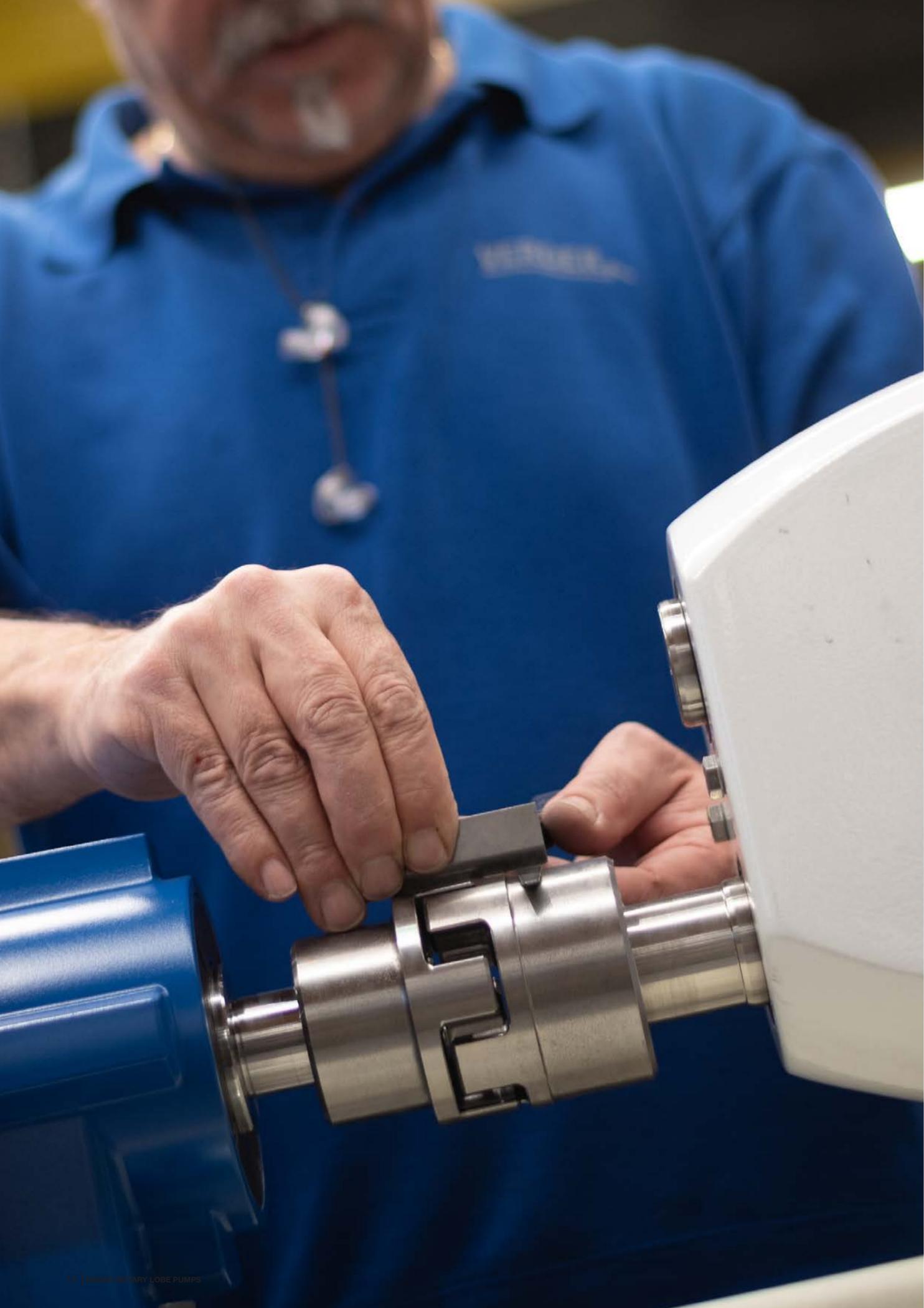
Low product damage

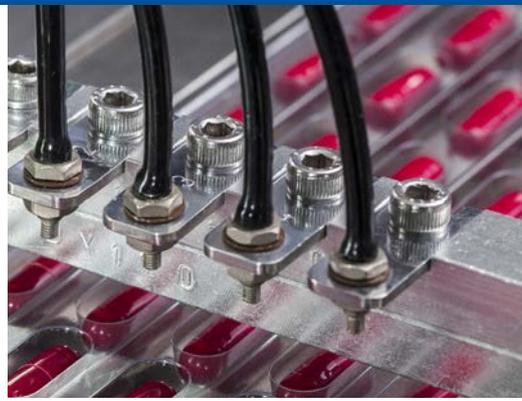
The special rotor shape of this series have been designed to ensure that the integrity of product structure, both microbial and particulate, is maintained.

No hold up of product

The modified rotor bores and vertical ports allow the pump head to completely self-drain, ensuring that expensive product is not retained in the system, that cleaning and sterilization is complete and that there is no cross-contamination between product batches.







VERDER LIQUIDS

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pump
manufacturer

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