

SSP

Rotary Lobe Pumps



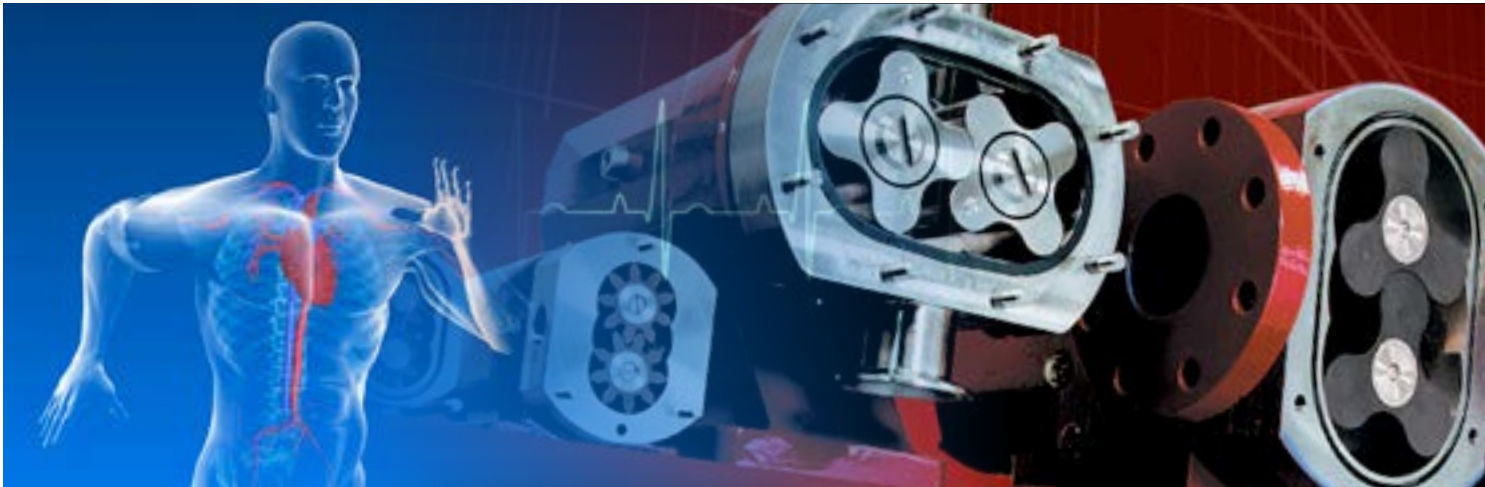


Rotary Lobe Pumps for Tough Applications

VERDER SSP

Rotary Lobe Pumps

Whatever application you have, whatever you are pumping, how large or small the flow may be, and any other process applications you require, SSP rotary lobe pumps are the solution for your pumping process. Verder will offer you your best solution, whether a standard solution or an engineered pump is required.



Rotary lobe pumps can handle solids (e.g., fruit pieces and meat cubes), slurries, pastes, and a variety of liquids. If wetted, rotary lobe pumps offer excellent self-priming performance.

A gentle pumping action minimizes product degradation. Rotary lobe pumps offer continuous and intermittent reversible flows and can operate dry for a brief period, only if flushed seals are used.

The flow is relatively independent of changes in process pressure, too, so output is constant and continuous. Special models are available for highly abrasive liquids, aggressive chemicals, or shear sensitive liquids.

Highlighted

- Superb hygienic qualities
- Highest efficiency
- Reliability
- Great corrosion resistance
- CIP and SIP facilities



50 years of experience in SSP lobe and disc pumps

SSP rotary lobe pumps' technology offers over 50 years of experience providing reliable high-end pumps that run year-after-year, with a minimum of maintenance. To meet every need and to serve the broadest application areas SSP offers 7 series of pump models, each with its own specific user benefits.

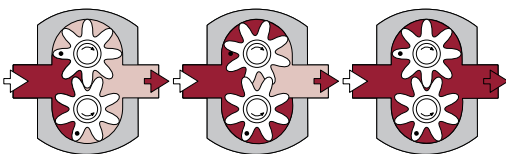


SSP Pumps features

- 316L Stainless Steel or Ductile Iron product-wetted parts
- Hygienic design
- Low-shear flow
- Explosionproof pumps available
- Several lobe rotor forms
- Hygienic front cover design
- Self-draining possibilities
- Simple to maintain
- FDA 3A approval pumps

Working Principle

The pumping action of the rotary lobe pump principle is generated by the counter rotation of two pumping elements (rotors) within a chamber (rotor case). The rotors are located on shafts, which in turn are mounted within an external gearbox and supported by bearings; the timing gears are also located on the shafts.



The timing gears transfer the energy from the drive shaft to the driven shaft, synchronizing the rotors such that they rotate without contact with each other. As the rotors pass the suction port, the cavity generated increases creating a pressure decrease, which induces the pumped medium to flow into the rotor case.

SSP can provide several rotor designs & material choices to meet your needs, whether you are pumping large "non-compressible" solids such as sewage sludge, aggressive chemicals, abrasive paints, or shear sensitive shampoos.



Applications

Chemical Industries

- Acids
- Adhesives
- Detergents
- Horticultural products
- Paints
- Petrochemicals
- Resins
- Printing inks
- Solvents

Pharmaceutical industries

- Soap & detergent
- Blending (tallow)
- Recovery (lye)
- Separation
(neat soap and nigre)
- Drying (fatty acid)
- Mixing (perfume,
colour and other additives)

Application areas SSP series

- Paper
- Coatings
- Chemicals
- China clay slurry
- Starch
- Size
- Latex
- Chemicals
- Calcium carbonate
- Potassium silicate
- TiO₂

Sugar industry

- Glucose
- High / low green syrup
- Liquid sugar
- Magma
- Masecuite
- Molasses
- Sugar syrup
- Thick juice
- Treacle





OVERVIEW PUMPLINES

SERIES L

General applications within dairy, food and beverages industries

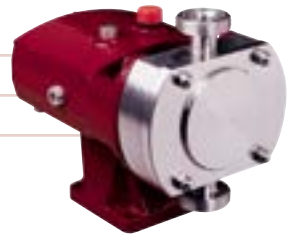
Flow	215 gpm
Pressures	115 psi
Ø	1.50 – 3.00 inch



SERIES S

Applications in chemical, process and pharmaceutical industries

Flow	465 gpm
Pressures	290 psi
Ø	1.00 – 6.00 inch



SERIES X

Industrial applications including clean & food processes. Series X is EHEDG certified.

Flow	500 gpm
Pressures	215 psi
Ø	1.00 – 6.00 inch



SERIES N

Industrial applications including clean & food processes. Series X is EHEDG certified.

Flow	10 gpm
Pressures	100 psi
Ø	¼ - 1.00 inch connections



SERIES M

Filling machines, dosing and sampling, low volume transfer flows.

Flow	6 gpm
Pressures	75 psi
Ø	1.00 inch

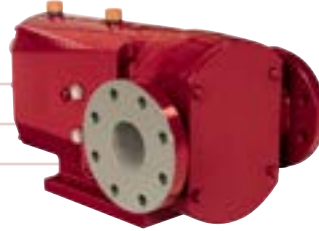


OVERVIEW PUMPLINES

SERIES D

Applications in chemical, petrochemical, paper, paints, pet food, chocolate and sugar.

Flow	790 gpm
Pressures	215 psi
Ø	3.00 – 6.00 inch



SERIES A&G

Flow	3,000 gpm
Pressures	145 psi
Ø	6.00 – 12.00 inch



SSP	L	S	X	N	M	D	A&G
High efficient	x	x	x	x	x	x	x
Low energy	x	x	x	x	x	x	x
Compact	x	x	x	x	x	x	x
Reversible	x	x	x	x	x	x	x
Hygienic	x	x			x		
Robust		x	x			x	x
Smooth flow		x	x		x	x	x
Low shear	x	x	x	x	x	x	x
No agitation		x	x			x	
Easy maintenance	x	x	x	x	x	x	x
EHEDG	x		x				
Abrasive products						x	x
Large solids						x	x
Flow	215 gpm	465 gpm	500 gpm	10 gpm	6 gpm	790 gpm	3000 gpm
Pressure	115 psi	290 psi	215 psi	100 psi	100 psi	215 psi	145 psi
Ø	1.50 – 3.00 inch	1.00 – 6.00 inch	1.00 – 6.00 inch	¼ – 1.00 inch	1.00 inch	3.00 – 6.00 inch	6.00 – 12.00 inch
Material	SS316	SS316	SS316	SS316	SS316	Ductile iron	SS316 & Ductile iron



Series L

The L series has been developed for industrial applications. The pump features the "EasyFit" front loading seal, which allows quick and easy inspection or replacement without the need for pipe work disassembly. Pumps are fitted with tri-lobe rotors rated to 266°F facilitating use with CIP processes. The pumps can be mounted vertically or horizontally.

SERIES L

General applications within dairy, food and beverages industries

Flow	215 gpm
Pressures	115 psi
Ø	1.50 – 3.00 inch



User benefits

- High efficiency
- Low energy consumption
- Compact size
- Reversible operation
- Hygienic design

Standardizations

- EHEDG
- CIP
- USA 3-A
- FDA compliant

Operation

The positive displacement of the L series of pumps is provided by non-contacting, counter rotating tri-lobe rotors within a fully swept pump chamber. All L Series pumps are capable of bi-rotational flow without modification.

Pump head construction

The L Series pump range has sanitary design full-bore inlet and outlet ports to International Standards, maximizing inlet and outlet port efficiency and NPSH characteristics.

Applications

Rotary lobe pumps are used in a variety of industries: Pulp & paper, paint & lacquer & chemical industry.



Series S

SSP rotary lobe pumps with their characteristic smooth low shear pumping action are ideal for gentle transfer of delicate and sensitive media. Hygienic construction of Series S with the non-contacting pump head design having all metallic pumped media wetted components manufactured from 316L stainless steel. Low shear pumping with minimal damage to extremely shear sensitive media, such as cell cultures.

SERIES S

For the pumping of delicate media.

Flow	465 gpm
Pressures	290 psi
Ø	1.00 to 6.00 inch



User benefits

- Efficient
- Low energy
- Compact
- Reversible
- Hygienic
- Robust
- Smooth flow
- Low shear
- No agitation
- Easy maintenance

Standardizations

- EN 10204 2.1 and 3.1 certification and material traceability
- EHEDG accredited highest level of cleanability
- ATEX Directive 94/9/EC Group II, Categories 2 and 3.
- EHEDG
- CIP
- USA 3-A
- FDA compliant

Operation

The positive displacement of the Series S pump is provided by non-contacting, counter rotating tri-lobe or bi-lobe rotors. All Series S pumps are capable of bi-rotational flow without modification.

Accessories

- Pressure relief, and many connections types available

Applications

Cell cultures and other delicate media.





Series X

SSP Series X models are accredited for the highest level of cleanability conform EHEDG. They are suitable for CIP and SIP (302 °F). Series X pumps are the best pumps to use for sensitive media, they have a gentle pumping action. Series X pumps are the high-end ultimate clean pumping solution.

SERIES X

For applications within the Process and Clean Industry, and Food & Pharmaceutical Industries

Flow	500 gpm
Pressures	215 psi
Ø	1.00 to 6.00 inch



User benefits

- High Efficiency
- Low energy consumption
- Compact
- Reversible
- Hygienic
- Robust
- Smooth flow
- Shear sensitive pumping
- No agitation
- Easy maintenance
- Self-draining

Operation

The positive displacement of the Series X pump is provided by non-contacting, counter rotating four-lobe rotors. All Series X pumps are capable of bi-rotational flow without modification.

Standardizations

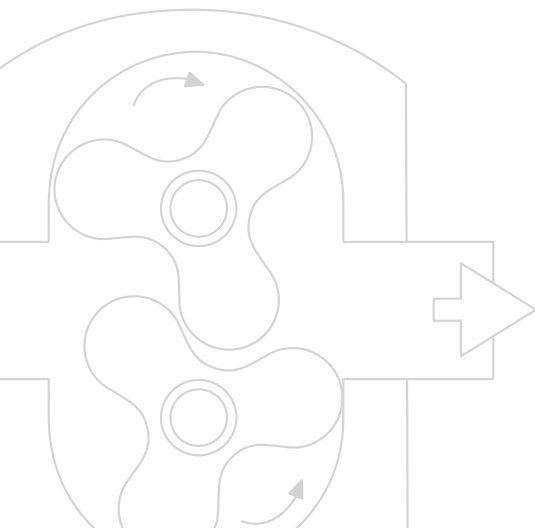
- USA 3-A
- EHEDG
- CIP / SIP
- EN 10204 2.1 and 3.1 certification and material traceability

Accessories / Options

- Heating and/or cooling jackets
- Surface finish
- Full material traceability to BSEN 10204 standards
- Great variety to seal options & connection options, including Tri-Clamp and Aseptic.
- All pumped media wetted elastomers FDA conforming

Applications

Chemical, hygienic & personal care applications.



Series N

SSP Series N stainless steel rotary lobe pumps have been designed for low volume fluid transfer duties within application areas such as laboratories, pilot plants, chemical processing, food processing, electroplating and film processing.

SERIES N

For applications within the Chemical and Food Processing Industries.

Flow	10 gpm
Pressures	100 psi
Ø	¼ to 1.00 inch connections



User benefits

- Low energy consumption
- Compact
- Reversible
- Low shear operation
- Easy maintenance

Standardizations

- EN 10204 2.1 and 3.1 certification and material traceability

Operation

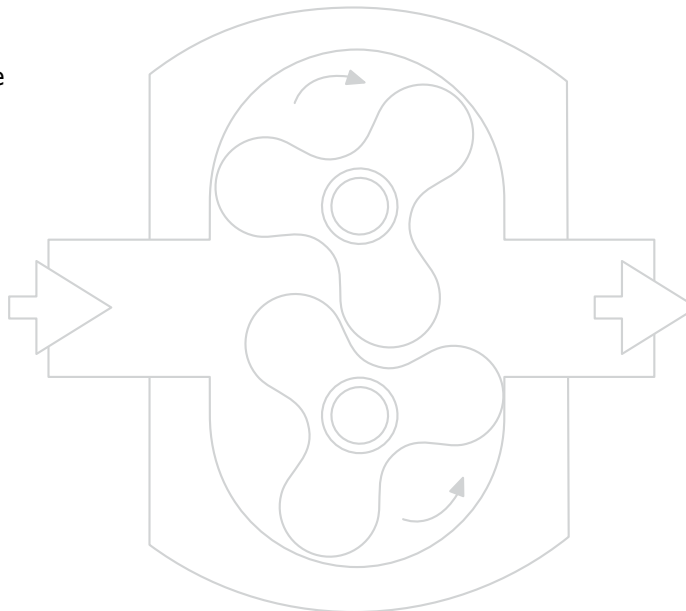
The positive displacement of the Series N pump is provided by non-contacting, counter rotating gear rotors. Series N pumps are capable of bi-rotational flow without modification.

Accessories

- Pump overload protection
- Heating / Cooling device
- Connections BSPT or NPT (options available)
- Multiple sealing options

Applications

Applications can be found in the area of food processing, electroplating, laboratories, pilot plants.





Series M

All parts are fully machined internally and externally to a high standard of finish. By releasing two hand nuts the three piece housing construction and all other parts will be easily dismantled. Shaft assembly including mechanical seals can be withdrawn through the front of the pump. Standard pump build is suitable for temperatures up to 140 °F with option of modified pump build for temperatures up to 212 °F.

SERIES M

The SSP series M gear pumps are low volume filling pumps all over industry. Its stainless steel and PTFE components offer easy maintenance & cleaning.

Flow	6 gpm
Pressures	100 psi
Ø	1.00 inch



User benefits

- High efficiency
- Low energy consumption
- Compact
- Reversible operation
- Hygienic design

Operation

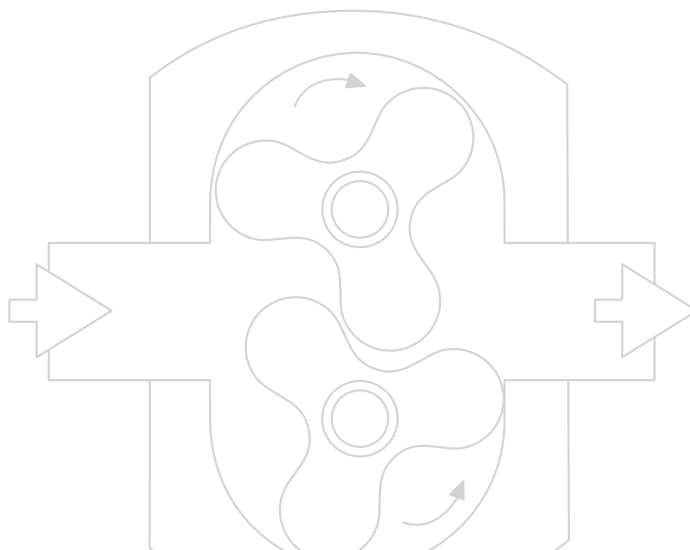
The positive displacement of the Series M pump is provided by contacting, counter rotating gears. Series M pumps are capable of bi-rotational flow without modification.

Accessories

Connections: standard are screwed 1", many options available
Motors of all voltages and frequencies can be supplied to order. Bare shaft pumps are available for foot mounting
Connections: Single mechanical seal. Options are available

Applications

Chemical industry, food, pharmaceutical industry



Series D

When a 316 stainless steel pump is beyond necessity the series D from SSP rotary lobe pumps offer great pumping all over industry. D Series offer high efficiency transfer of low, medium and high viscosity pumped media. Series D pumps offer lower installation cost compared to other pump technologies. When also low running and maintenance costs are considered the D series have a reduced life cycle cost compared to other brands.

SERIES D

For industrial and sludge applications, environmental and industrial waste treatment processes.

Flow	790 gpm
Pressures	215 psi
Ø	3.00 to 6.00 inch



User benefits

- High efficiency
- Low energy consumption
- Compact size
- Robust construction
- Reversible operation
- Abrasive media pumping
- Cost effective easy maintenance

Operation

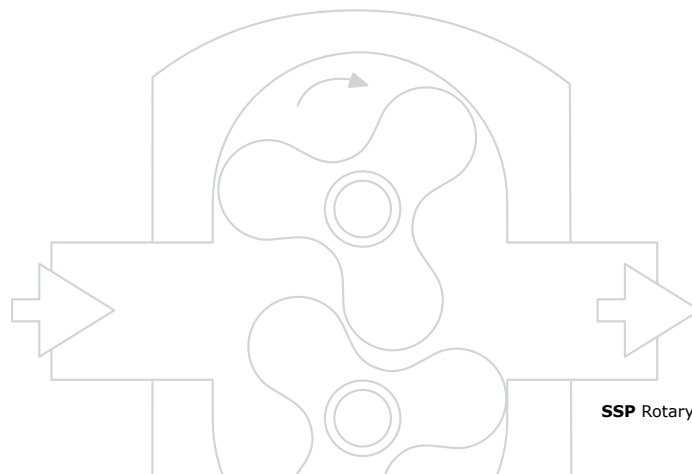
The positive displacement of the Series D pump is provided by non-contacting, counter rotating tri-lobe. All Series D pumps are capable of bi-rotational flow without modification.

Accessories / Options

- Wear plates
- Surface finish and coatings
- Bi-lobe rotors
- Wide variety of sealing options
- Connections available for all major standards

Applications

Primary, secondary and humus de-sludge, thickener, digester and filter press feed, tanker loading and sugar, chocolate and chemicals.





Series A&G

Series A pumps, (stainless steel), are suitable for low to high viscosity media. Ideal for delicate media and where organic solids in suspension, creams, froths, gels, emulsions and mixtures are to be pumped. Series G pumps, (ductile iron) are ideal pumps for general industrial and wastewater treatment applications. The pumps provide a good tolerance of suspended solids including fibrous matter. Series G pumps are able to pump a full range of sludge thickness with rag and grit included.

SERIES A&G

SSP pumps Series A & Series G are designed for large volume fluid transfer and are amongst the world's largest pumps of this type. Series A is made of 316 Stainless Steel and Series G is made of ductile iron.

Flow	3,000 gpm
Pressures	145 psi
Ø	3.00 to 6.00 inch



User benefits

- High Efficiency
- Low energy consumption
- Compact design
- Reversible operation
- Hygienic
- Smooth flow
- Low shear
- Easy maintenance

Operation

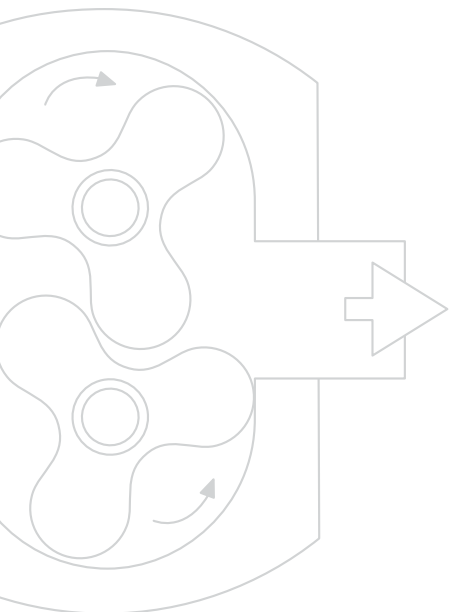
The positive displacement of both Series A and Series G pumps is provided by non-contacting, counter rotating tri-lobe rotors. All Series A and Series G pumps are capable of bi-rotational flow without modification.

Accessories / options

- Quick exchange wear plates
- Many sealing options available
- Connections: standard with integral cast flanged inlet and outlet, Optional all major standards.
- Improved abrasion resistance (NBR or urethane lined rotors)
- Surface finish and coatings
- Increased pressure rating
- Optional materials available for strengthened shafts to enhance pressure ratings

Applications

Chemical industry, food & waste water.



The Verder Group

Passion for pumps

Liquids handling is the original passion of the Verder Group. Its liquids handling companies supply a wide range of first-class pumps for a variety of industrial purposes.

Verder Liquids is active in many industrial sectors: chemical and process industry, food, pharmaceutical, water treatment, and environmental industries. Within these industries pump requirements vary enormously and applications and needs change frequently.

In order to ensure we provide the best solutions. We analyze and monitor industrial trends as well as maintaining close relationships with our customers.

International presence

The Verder Group Liquids division has affiliates in: Austria, Belgium, Bulgaria, China, Czech Republic, Denmark, France, Germany, Great Britain, Hungary, The Netherlands, Poland, Romania, Slovakia, South Africa, Switzerland, Thailand, USA

Your advantages

The advantages of working with us are clear, we offer you:

- **Single-source solutions:** Verder's wide and complementary range of pumps allows you to source your entire pumping needs from one company, reducing your costs;
- **Expertise:** years of providing pumping solutions to industry have given us valuable expertise and knowledge which we are able to use to supply the most appropriate and reliable pumps;
- **International affiliated company:** our size gives you the confidence that you are dealing with a powerful international pump company and if your project involves overseas work then you can profit from our international network of companies.

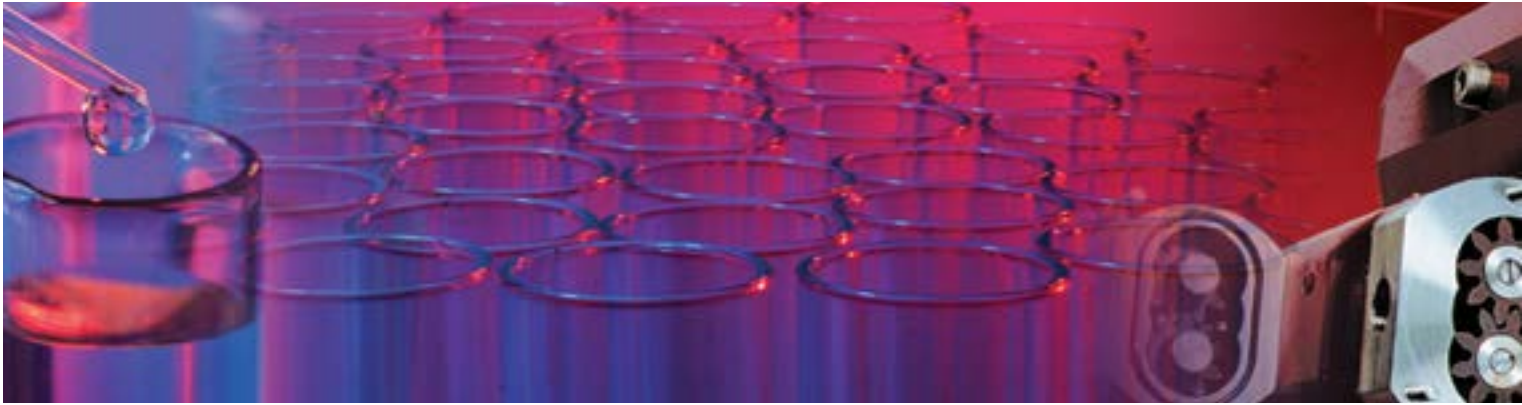
Contact Verder

If you would like to know more about our pumping solutions then please visit our website www.verder.com/liquidshandling.

You will find the full range of our pump ranges as well as application stories, latest news and the contact details of our local specialist.



**Rotary Lobe
Pumps
for Tough
Applications**



Any questions? You may still have questions and/or comments after reading this brochure. Please feel free to contact us on +1-877-7 VERDER. You can also respond via email to info@verder-us.com. For more information please visit our website www.verder-us.com.



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