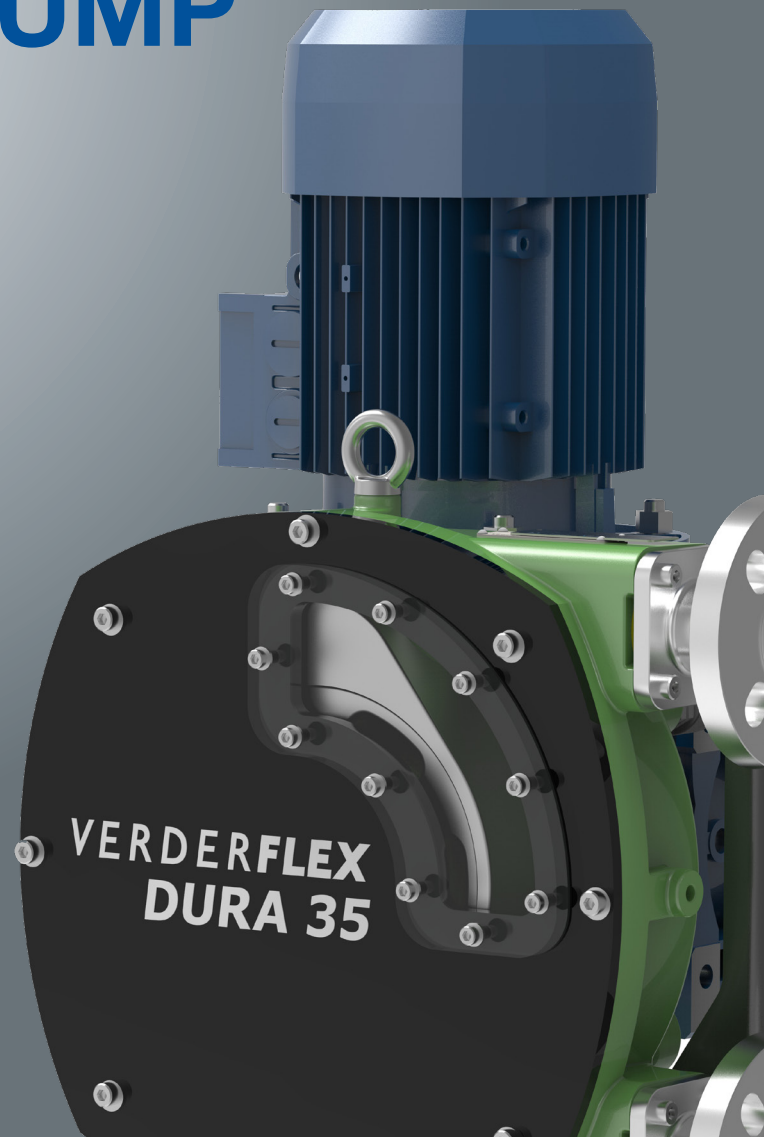


INNOVATIVE INDUSTRIAL PUMPING SOLUTIONS

INDUSTRIAL PUMP PROGRAM

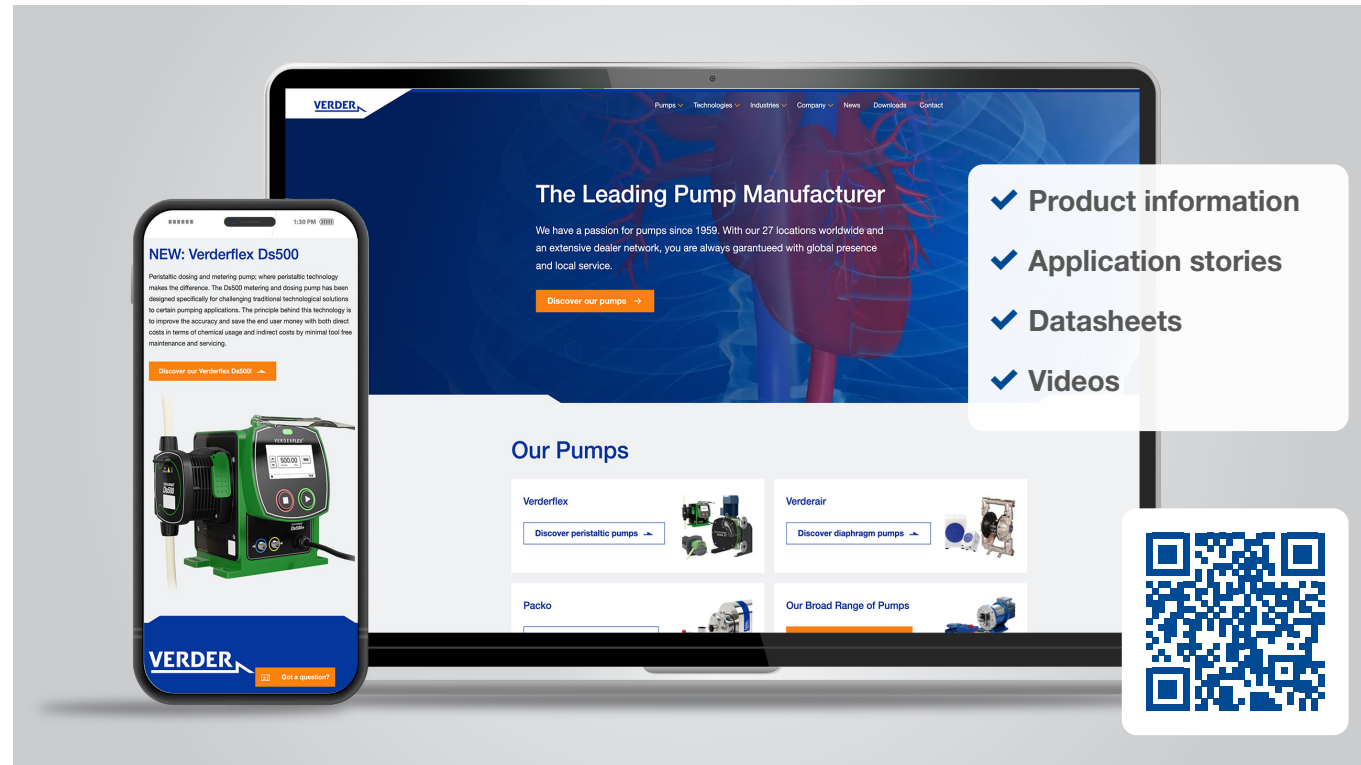
Peristaltic pumps
Double diaphragm pumps
Centrifugal pumps
Gear pumps
Mag-drive centrifugal pumps
Screw centrifugal pumps
Dosing pumps
Static mixers



- ✓ Manufacturer with extensive process knowledge
- ✓ Certified quality
- ✓ Always the most suitable pump solution

GET IN TOUCH

With the industrial pump manufacturer



Contact VERDER

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

VERDER LIQUIDS BV

Utrechtseweg 4A
3451 GG Vleuten
The Netherlands
info@verderliquids.com

To provide you with the best possible service VERDER is 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.

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 distribution companies. Group companies are involved in the development and distribution of industrial pumps, pumping systems, high-tech equipment for quality control, research and development into solid material (solids sample preparation and analytical technologies). The VERDER group employs over 2.000 people and has an annual turnover in excess of 450 million Euros.

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

Throughout the decades, our value-adding innovations have been fueling our success and the success of our customers. We operate a network of more than 70 sales and manufacturing organizations worldwide, providing sales support and technical service, and ensuring customer proximity, which is vital for offering spot-on as well as establishing and maintaining long-term trustful partnerships.

- With our pumping equipment we help to enable progress by for example,
- Ensuring safe food for everyone
 - Keeping healthcare agile and responsive
 - Making airports and travel safe

Our DNA

Our DNA is the foundation upon which our business principles are built. It forms the basis for our approach to our clients and all actions that result from this. It is as vital for us as the passionate search for technological and organizational improvements. With these core principles in mind, we help enabling progress. With continuous improvement techniques, in production processes and in the quality of life in the world.

We act as one family and know our responsibility for the society as a whole. With passion, responsibility, always aiming to improve, and an open eye for details.

ENABLING PROGRESS.

APPLICATIONS IN INDUSTRIAL ENVIRONMENTS

Paint & Lacquer

Reception | Storage | Raw material preparation
Dosing | Transfer | Filtration | Dispersing | Blending
Filling | CIP/SIP | (Waste)water treatment



Chemical

Reception | Storage | Raw material preparation
Dosing | Transfer | Filtration | Spin | Blending
Filling | CIP / SIP | (Waste)water treatment



Manufacturing

Dosing | Measurement & control | Mixing | Filling



(Waste) water treatment

Reception | Quality control | Measurement & control | Dosing | Disinfection | Sludge transfer | Filtration | Dirt removal | Clean and dirty water transfer | Odor reduction



OEM

Dosing | Measurement & control | Mixing | Filling



Oil & Gas

Reception | Storage | Raw material preparation
Dosing | Transfer | Filtration | Centrifuge | Blending | Filling | CIP/SIP | (Waste)water treatment



Storage and transshipment

Storage and transshipment | Reception | Storage
Dosing | Measurement and control | Transfer | Filling



THE INDUSTRIAL PROGRAM

Offering a wide range of industrial solutions



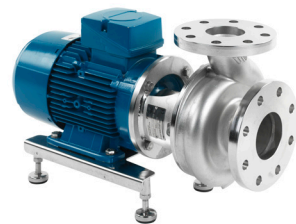
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VERDERFLEX peristaltic pumps



12

VERDERAIR double diaphragm pumps



14

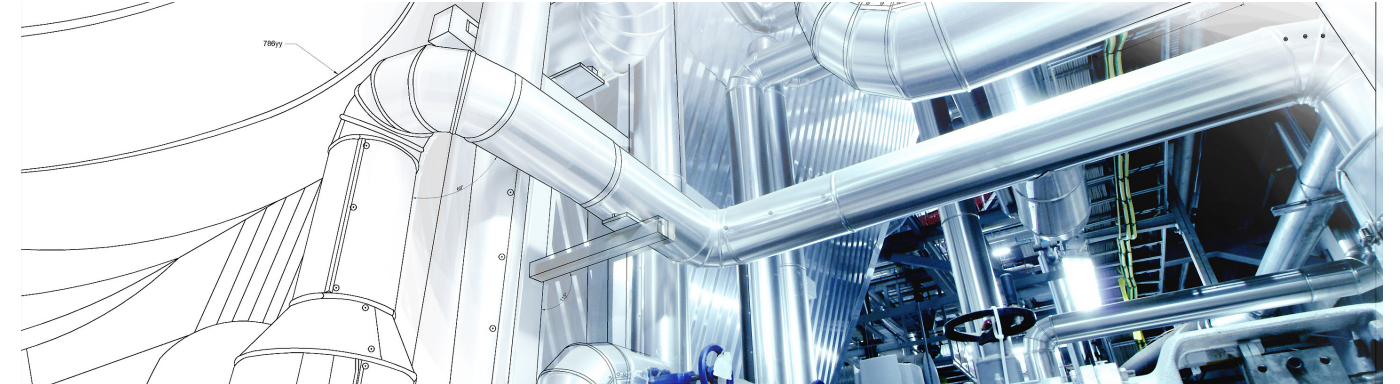
PACKO industrial centrifugal pumps



16

Other pumping systems

BENEFITS AND CERTIFICATIONS



- ✓ Own design
- ✓ Highest material quality
- ✓ Excellent durability
- ✓ Optimal safety
- ✓ Continuous development
- ✓ Optimal productivity
- ✓ Continuously improving technologies
- ✓ Lowest Total Cost of Ownership
- ✓ Multiple pump working principles for the best possible process solution
- ✓ Electropolishing or other surface treatment
- ✓ Extended process knowledge
- ✓ ATEX options



ATEX is a European Directive (2014/34/EC) for explosion-proof electrical and mechanical equipment, components and protective systems. It concerns the manufacture of products which are used in potentially explosive atmospheres.



Minimum Efficiency Index, guideline for efficiency of pumps. This index gives a percentage from the sold pumps in the market on a certain moment with a low hydraulic efficiency on BEP. From 01/2015 MEI \geq 0.4. 95% of our centrifugal pumps complies to MEI.



VERDER also has FDA approved pumps available.

OUR PRODUCTION COMPANIES

We are rightly proud of our production companies, with VERDER brands being produced in 6 locations in Germany, United Kingdom, Belgium, Poland, South Korea and Italy. In-house pump production allows us to be more responsive to customer demands, assures the shortest lead times and maintains greater control over quality and costs.

Our industrial pumps are manufactured at:

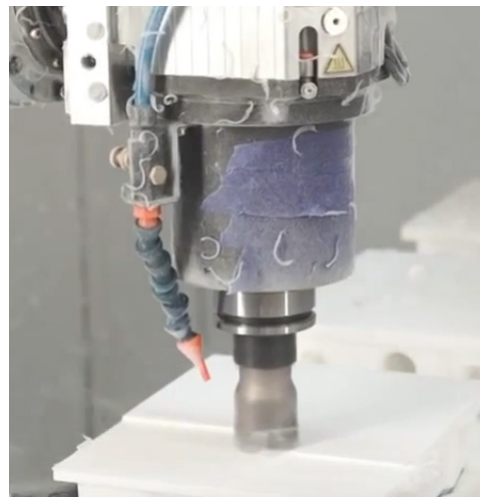
VERDERFLEX/VERDERMAG/VERDERHUS – United Kingdom

VERDER's British manufacturing facility comprises the development and production of the VERDER house brand VERDERFLEX (peristaltic pumps), Verdermag (mag drive centrifugal pumps) and Verderhus (screw centrifugal pumps). These pump series seek excellence from every aspect of the product and its journey to the customer. Continuous improvements provide the best possible product. After four decades of development and production, it is still the goal to further improve the performance and build of every pump we make.



Metplast – Poland

Our VERDERAIR Pure machined double diaphragm pump is manufactured at the Metplast production location, according to the very highest production standards. In this modern production location everything is focused towards maintaining the highest standard of quality with a stringent protocol of testing.



PACKO – Belgium / South Korea

Our manufacturing company PACKO specializes in industrial stainless steel centrifugal pumps and hygienic rotary lobe pumps and twin-screw pumps. PACKO creates the highest quality centrifugal pumps for industrial, food and pharmaceutical applications. The centrifugal pumps are manufactured in Belgium. All centrifugal pumps are electropolished according to an in-house developed process method for surface treatment of stainless steel. The method is finished with hand polishing techniques to achieve the highest quality pump specification for applications where compromise is not an option. This plant produces not only pumps but also static and dynamic mixers. The rotary lobe pumps and twin-screw pumps are manufactured in South Korea.



Microdos – Italy

Microdos is a manufacturer of small dosing pumps and systems. They produce Microdos solenoid and peristaltic pumps including related professional control instruments and complete dosing systems. Microdos has developed a strong position in southern European countries for applications in swimming pools, detergent dosing and water treatment applications. Microdos also provides private labelling pumps for third party companies.



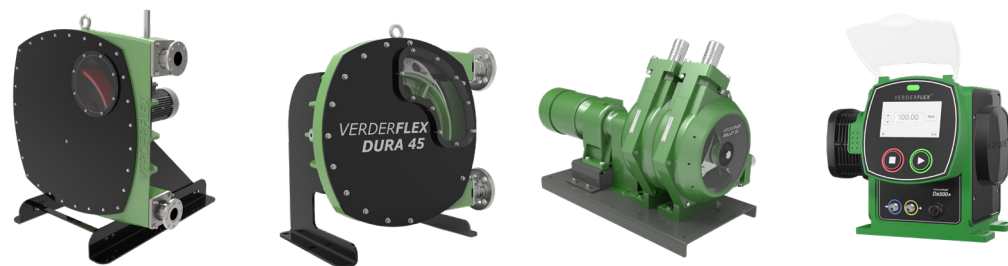
VERDERFLEX INDUSTRIAL HOSE & TUBE PUMPS

VERDERFLEX industrial hose and tube pumps are the ideal solution for pumping and dosing liquids that are difficult to pump such as highly viscous and/or abrasive liquids. The line of high pressure hose pumps are ideal for pumping concentrated thickened slurries containing many solids. The smaller line of tube pumps vary from OEM pumps for vending machines to pumps for precision metering.

Applications can be found in water treatment, mineral processing, biotechnology, food, beverage, chemical, paper, ink, pharmaceutical and shipping industry.



- ✓ Very long service life due to reinforced hoses
- ✓ Easy to maintain: no valves, only one consumable part
- ✓ No damage: smooth transfer of almost all liquids with little shear
- ✓ Various accessories available



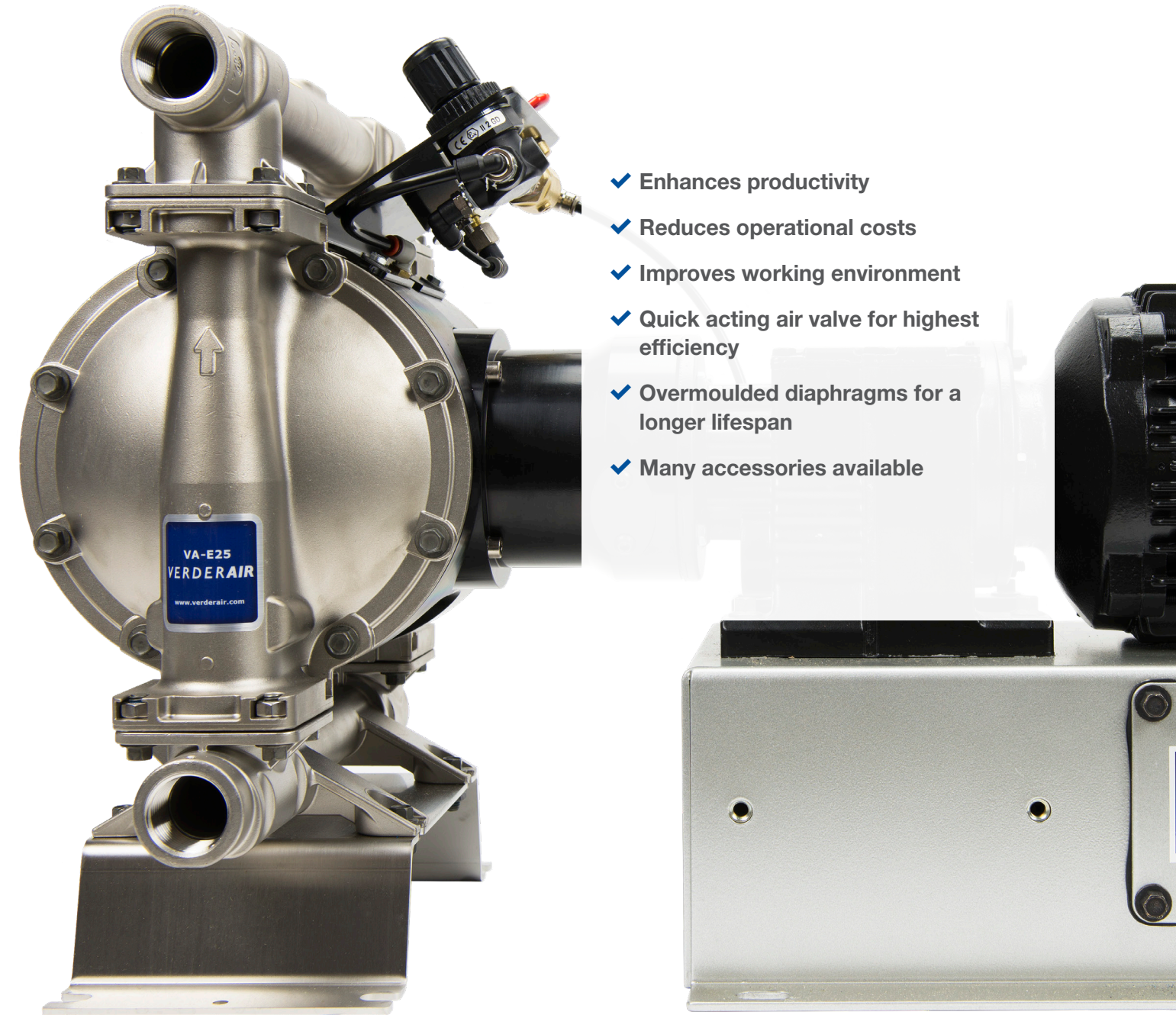
	VERDERFLEX VF	VERDERFLEX DURA	VERDERFLEX Rollit	VERDERFLEX Ds500
Concept	High flow range	Compact	Lubrication free	Dosing and metering pump
Max. flow	90 m ³ /h	42 m ³ /h	24.5 m ³ /h	0.1 - 500 ml/min
Max. operating pressure [bar]	16	16	4	7

VERDERFLEX Vantage 3000/5000	VERDERFLEX Rapide	VERDERFLEX Rapide 5000
Precise and programmable	Low pressure dosing	Robust low dosing (also 380V and dual pump head options)
6,6 l/min	14 l/min	8.8 l/min
7	2	2

VERDERAIR INDUSTRIAL DIAPHRAGM PUMPS

VERDERAIR double diaphragm pumps are used for a wide variety of applications. These pumps are the best solution for abrasive or corrosive liquids. These pumps are especially suitable for pumping very sticky and viscous liquids and liquids with solid particles. VERDERAIR diaphragm pumps are the most efficient diaphragm pumps on the market due to the quick acting air valve.

The VERDERAIR series offers various diaphragm pumps, varying in material (metallic, non-metallic, conductive), drive principle (electric, air driven). Applications can be found in the chemical, paint, paper, pharmaceutical, ceramic, solar energy industry and wastewater treatment. All models are available for ATEX applications. Special models are available for ultra-pure applications.



- ✓ Enhances productivity
- ✓ Reduces operational costs
- ✓ Improves working environment
- ✓ Quick acting air valve for highest efficiency
- ✓ Overmoulded diaphragms for a longer lifespan
- ✓ Many accessories available



	VERDERAIR Standard	VERDERAIR Pure	VERDERAIR EODD	VERDERAIR CONT-EX
Concept	The allrounder	High purity AODD	Electrical driven	OEM and demanding applications
Max. flow [l/min]	1,200	600	530	130
Max. pressure [bar]	8.6	7	6.5	7

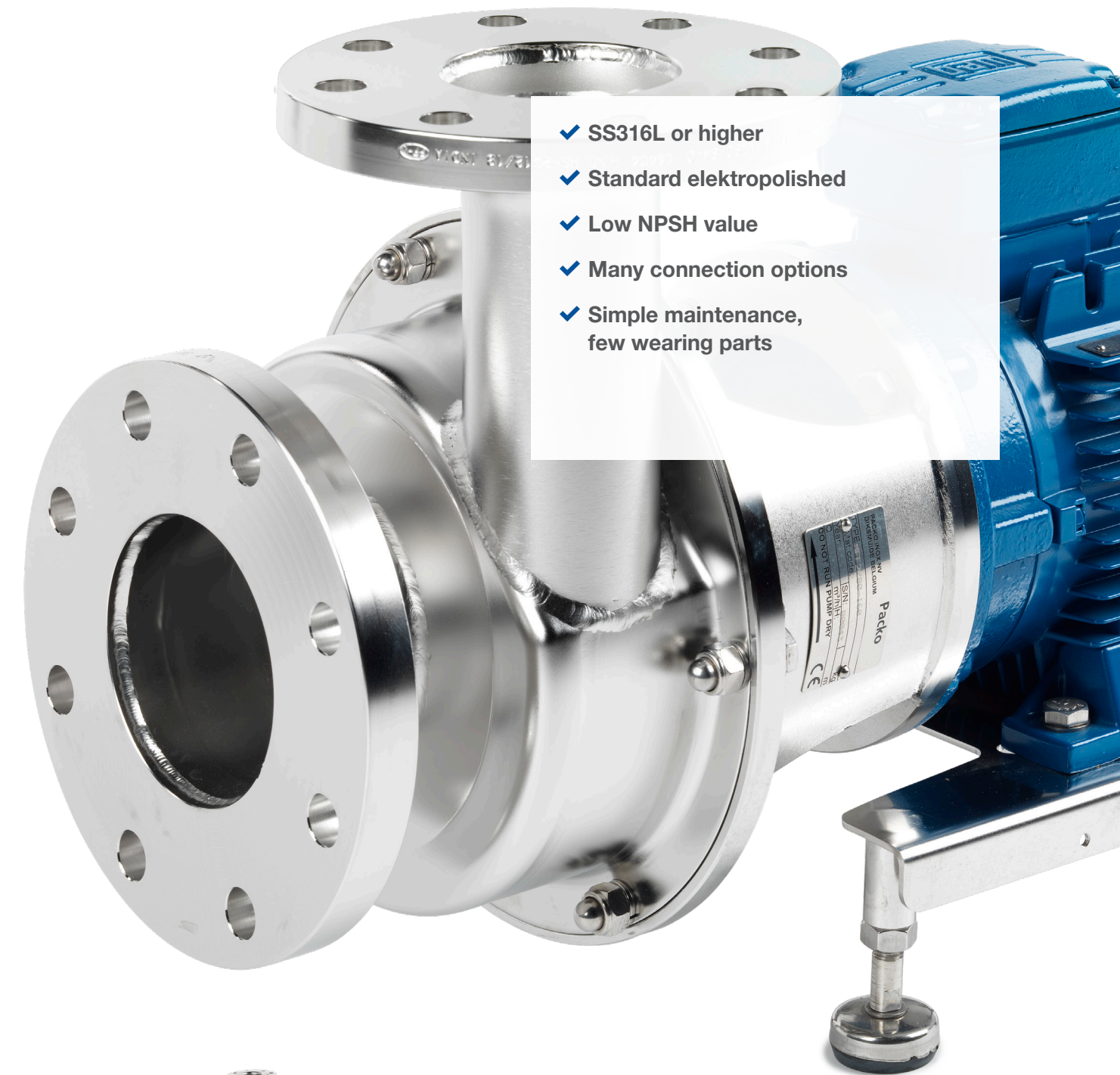


VERDERAIR e-PURE	VERDERAIR barrel pumps	VERDERAIR HP	VERDERAIR Split Manifold
	Emptying barrels, vessels & containers	High pressure	Double pumping action
100	61	565	2 x 30
5	7	17.2	7

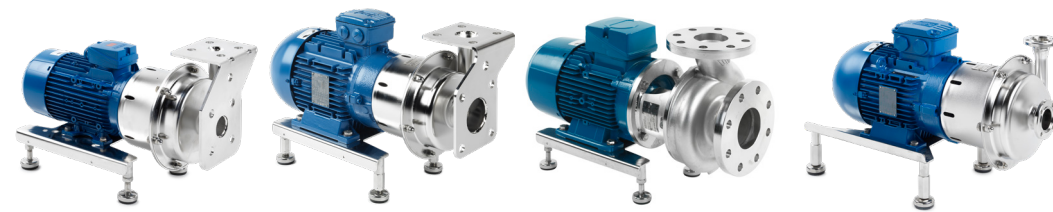
PACKO INDUSTRIAL CENTRIFUGAL PUMPS

PACKO stainless steel centrifugal pumps have a unique and solid design with the highest possible surface finish. All pumps are electropolished and therefore have a perfectly cleanable and smooth surface with increased resistance to corrosion. They are characterized by their modular design with interchangeable standard components. Also available as cantilever pumps, vortex pumps and special pumps for water/air mixtures.

PACKO pumps make the difference in surface finish, food safety, energy costs, easy maintenance and optimization of production processes. They are suitable for the most demanding industrial applications. A range of pumps for the food and pharmaceutical industries is also available.



- ✓ SS316L or higher
- ✓ Standard electropolished
- ✓ Low NPSH value
- ✓ Many connection options
- ✓ Simple maintenance, few wearing parts



	NP60	ICP1	MCP2/MCP3	ICP2/3 *)
Concept	Cost saving	Best 'value for money'	High flow	Robust design
Max. flow [m³/h]	40	55	1.800	320
Max. pressure [bar]	2,5	3,5	7	123

*) equipped with hygienic connections



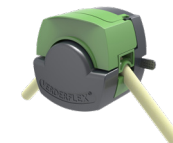
	NMS	IRP2/3 *)	IML, IMXL, IMO	VPCP
High pressure		Air handling pump for CIP return	Cantilever	Product pumping
50		120	1.000	1000
16		7	6	2

OTHER PRODUCTS TO COMPLETE YOUR PROCESS

Verder, being a full service pumping manufacturer and supplier, is focussing on peristaltic, double diaphragm and rotary lobe pumps but to complete your process line there is an extended additional program of pumps and accessories, produced almost entirely in house, to offer a complete range for all your pumping applications.



- ✓ Own research & development, produced in-house
- ✓ Highest material quality
- ✓ Excellent durability
- ✓ Optimal safety
- ✓ Multiple surface treatments
- ✓ ATEX options



	<i>Verdermag VM</i>	<i>Verderhus HSB</i>	<i>Verdergear</i>	<i>Microdos</i>
<i>Concept</i>	<i>Mag-drive centrifugal</i>	<i>Screw centrifugal</i>	<i>(Mag-drive) gear</i>	<i>Solenoid dosing</i>
<i>Max. flow</i>	<i>360 m³/h</i>	<i>360 m³/h</i>	<i>22 l/min</i>	<i>22 l/min</i>
<i>Head</i>	<i>153 mwc</i>	<i>24 mwc</i>	<i>18 bar</i>	<i>18 bar</i>

<i>Microdos</i>	<i>Verdermix</i>
<i>Peristaltic dosing</i>	<i>Static mixers</i>
<i>17 l/min</i>	
<i>3</i>	

ACCESSORIES & CONSUMABLES

To optimize the operation of your pump or to protect your product line even better, we have various accessories in the program, all specially developed for the VERDER pump brands and tailored to demands we received from the market. In addition to accessories, pumps also have consumable parts. We are also happy to assist you with this. These accessories are an excellent fit in thrid brands.



Accessories

As optionals and accessories we have adjustable base plates, mobile systems and “drop-in” skid systems, pH and Redox probes, cells to measure the concentration of chlorine, pulsation dampeners, quick connect hoses and connections, rotation counters and frequency converters for our peristaltic pumps.

For our double diaphragm pumps there is an extended program of accessories such as pulsation dampeners, air control equipment consisting of a filter – regulator with semi-automatic drain, several control valves (speed control, soft-start, on-off, flow-stop) and accessories such as stroke sensors, remote control, manual drains, pneumatic drains, barrier systems and leakage detections.

Consumables

Hoses

Hoses are required for both industrial hose pumps, OEM tube pumps and peristaltic dosing pumps. The VERDERFLEX hose can achieve up to 15 million compressions. The maximum fatigue strength ensures that the hose lasts a long time. VERDERFLEX hoses are in NR, NBR, NBRF, EPDM, CSM-Hypalon, Verderprene, Neoprene and Platinum-cured silicone.

Lubrication

Peristaltic pumps use a lubricating bath to ensure that the hose absorbs the energy stored in the reinforced layers. Good lubrication is therefore required for optimal operation of the pump. Verderlube (glycerine based) is the standard lubricant for VERDERFLEX pumps.

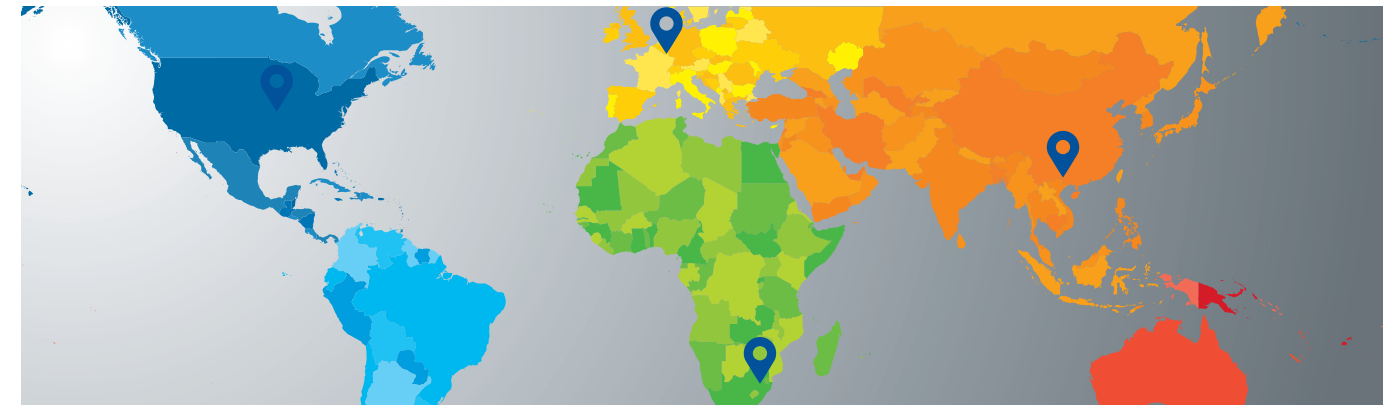
For pumping strong oxidants or nitrogen-containing chemicals, VERDER also offers Verdersil, a silicone-based lubricant that is also suitable for higher temperatures. Both lubricants have been specifically developed for use with VERDERFLEX hose pumps and also act as a coolant for efficient pumping function and longer hose life.

Mechanical seals

With high inlet peaks cluttering of common mechanical seal can occur. This can damage the seal faces by impact. While continuous higher inlet pressure at bellow mechanical seals will also create a huge wear of the seal faces. Both of these problems can be solved with a balanced/sterile mechanical seal that is independent from the inlet pressure. For our PACKO range we have the highest quality mechanical seals available.

LOCAL PRESENCE WORLDWIDE AVAILABILITY

VERDER has 27 own sales offices worldwide. There is also an extensive network of local distributors who are skilled and well-trained by VERDER. As a result, VERDER offers a worldwide coverage but is also locally on site. Logistics are centralized to ensure that many pumps and spares are available and ready to be sent.



With 27 sales offices worldwide, manufacturing plants and a very extensive centralized logistics center, VERDER strives to have a worldwide presence to be able to serve the customer base quickly, reliably and efficiently.

VERDER realized a huge logistics center in Groningen, the Netherlands. In this way the distribution of VERDER pumps in Europe is completely centralized. This ensures a fast distribution of your pump; In Europe even with "next day delivery". The other branches and the distributors are supplied with two more centralized warehouses. In this way also worldwide customers benefit of the centralization of the logistics.

At logistics there are two key values: "in time" and "in perfect condition". We strive to continuously improve production and distribution to be able to guarantee the high standards we want for our customers.

- ✓ Europe
- ✓ Asia
- ✓ Africa
- ✓ America

