



**Uncompromisingly  
powerful**

**Tough and highly  
efficient**



# **FLEXIBILITY TO TAKE YOU FURTHER**

**Innovative pumps and advanced technology  
for groundbreaking efficiency and economy**

**VOGELSANG – LEADING IN TECHNOLOGY**

**VOGELSANG**





# Inspired by industry

**Looking to the future with technical curiosity, extensive experience, and in-depth knowledge of the relevant industries**

**Oil and gas, chemicals and paint – as a globally respected technology leader, Vogelsang has long proven itself with its highly efficient and resilient pumps in these industries.**

Nevertheless, the more complex and automated the processing is, the higher the demands on the machines. In addition, external factors such as the environment and energy, the raw materials market, and global interconnections are exerting an ever greater influence on developments inside companies.

New requirements demand new answers. Greater flexibility and better adaptability of machines are called for. For our forward-thinking engineers, this comes as little surprise. Which is why we're introducing a generation of pumps and options to help you move your business into the future.

# Tough units, powerful performance

## More compact, tougher, and more efficient: the rotary lobe pumps from Vogelsang

Efficient, compact, easy to maintain, and built to meet customers’ needs, Vogelsang rotary lobe pumps are highly appreciated worldwide. Now these machines, which could already handle high viscosities, can be used in even more areas of industry, which were previously reserved for much bulkier and more energy-intensive pumps.

This is because the EP and VY series pumps feature a flow-optimized, one-piece housing, making them even more powerful. An extended range of standard-compliant seals enables further applications for demanding media, such as in the oil and chemical industries. In addition, the EP series boasts a new and extremely tough high-performance gearbox for continuous duty under high pressures. Equipped in this way, users benefit from the superior economy of our rotary lobe pumps over screw, gear, or progressive cavity pumps. To top it all off, we are supplementing our pumps with a pioneering concept for seal support that is both space saving and cost-effective.

## Vogelsang innovations for industry at a glance

### Powerful rotary lobe pumps, demand-optimized for every area



#### EP series

- One-piece, flow-optimized housing
- Resilient and easy to maintain
- Tough, high-performance gearbox
- Smooth running and low noise
- For pressures up to 18 bar and temperatures up to 200° C
- AirGap gearbox protection against leakage



#### VY series

- One-piece, flow-optimized housing
- Resilient and easy to maintain
- Variety of models for different pressures and flow rates
- For temperatures up to 200° C

#### Plating concept

- Radial wear plates for abrasive media
- Innovative fastening system for greater ease of maintenance
- Replacement possible without dismantling the pistons

### Expanded range of seals



#### Quality-Cartridge, CoX-Cartridge and API-Cartridge

- Mechanical seals designed to meet industry needs
- Durable, pressure-stable, heat-resistant, and compliant with API standard
- Easy to maintain and reliable
- Huge range of features and options (with the same basic design)

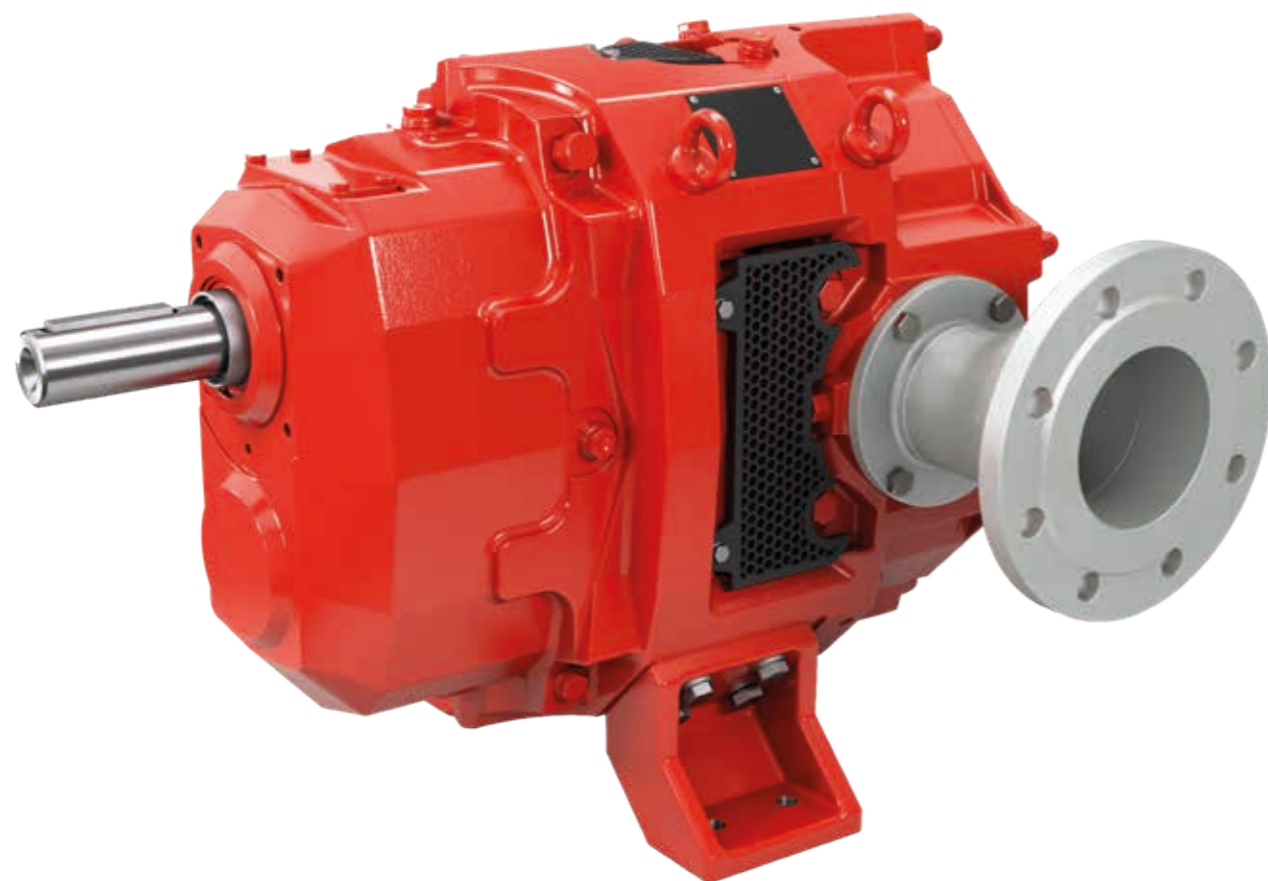


#### Automatic Supply Unit (ASU)

- Novel seal support system
- Patented functionality and reliability
- Compatible with EP and VY series rotary lobe pumps and the proven VX series
- Simple in construction, space saving, and inexpensive

# Outstanding under high pressure

For maximum performance under extreme conditions:  
the rotary lobe pumps of the EP series



Rotary lobe pumps – EP series

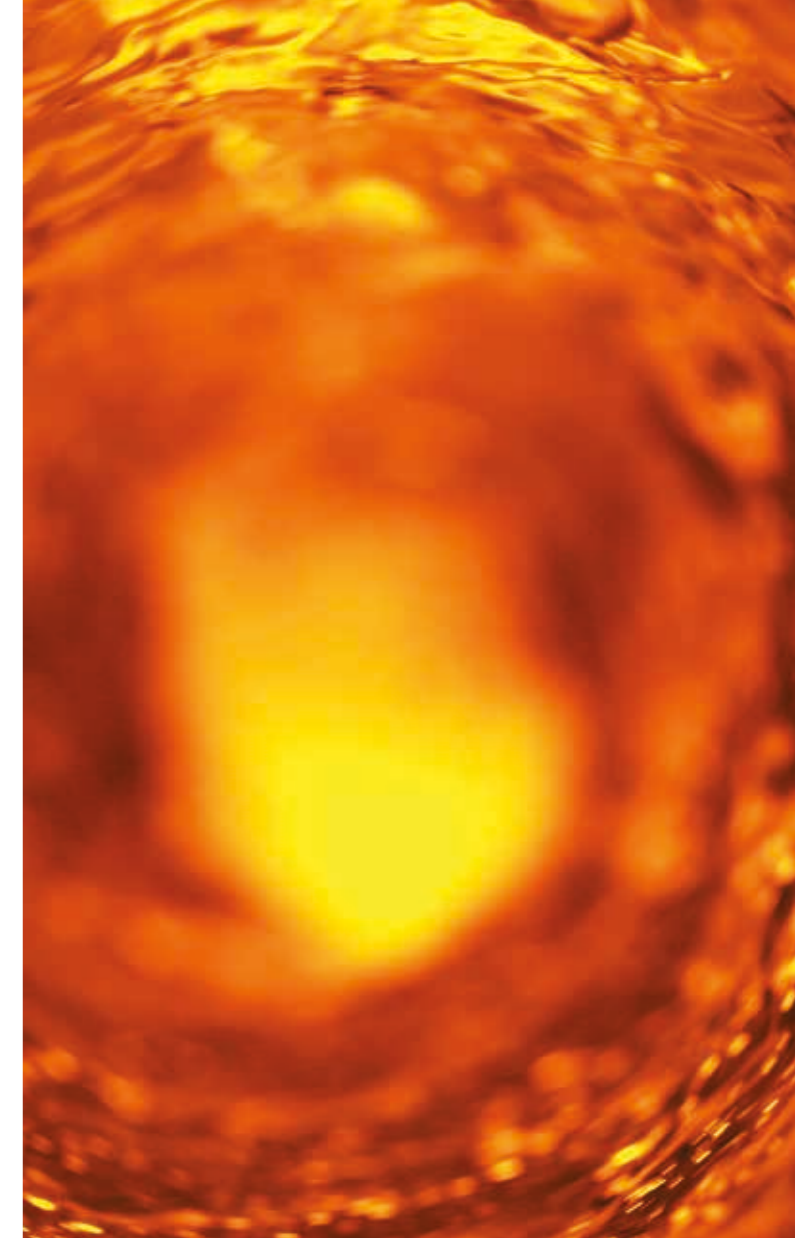
**Paints, oils, or additives, adhesive or abrasive – in the chemical and petrochemical industry, pumps have to withstand quite a lot.**

Extremely low-viscosity media pose almost as great a challenge as high-viscosity liquids, because the flow rates are generally greater and the pressure comparatively high. In addition to the pump's basic mechanical load capacity and delivery capacity, another question is becoming increasingly pressing: general economic efficiency. Vogelsang rotary lobe pumps have long proven themselves in this regard thanks to their robust and easy-to-maintain design. With the EP series pumps, you can now benefit from these advantages in even more areas of application. This is because they have been specially designed for extreme conditions and continuous high pressures up to 18 bar. They can pump even abrasive, chemically aggressive, and ignitable media with temperatures up to 200° C with the reliability typical of Vogelsang pumps.

#### **Fewer sealing points, better flow properties**

It is the new, flow-optimized housing of the pumps in the EP series which not only makes them exceptionally robust but also gives them outstanding efficiency. The housing consists of a single casting, which is why it has very tight tolerances. Due to the reduction in ribbing, welds, and grooves, it is nearly free of dead space, so the fluids flowing through it cannot collect anywhere and form germs, or oxidize. This also enables the use of cleaning methods such as CIP and SIP.

The pump chamber is connected to the pipes by means of a Quick connection with O-ring sealing, designed for high flange loads. Also designed to optimize flow, this connection contributes to trouble-free delivery too.



#### **Invincible up to 200° C**

A new, flow-optimized, one-piece housing and a choice of different seals make EP series pumps more heat-resistant than ever before.

#### **Options**

- Supply systems for flushing plans in accordance with API 682 etc.
- Innovative ASU seal support system for longer bearing life
- ATEX conformity and TA-Luft conformity
- Stainless steel version
- Axial and radial wear plates for abrasive media
- CIP-SIP conformity
- QuickService housing protection

# Quiet and peaceful at 18 bar? You bet!

The high-reliability, high-performance gearbox of the EP series



Helical gears on the drive shafts of EP series rotary lobe pumps guarantee unprecedented running smoothness and low vibration

## Helical gearing for lower noise emissions

The most striking feature of the EP series gearbox is the helical gears on the drive shafts. This means that the torque is transmitted more evenly, which results in smoother running and significantly reduced noise emissions. The low-vibration operation also results in less wear on the adjacent pipes.

## Up to 18 bar, tougher than ever

The components of the new high-performance gearbox are built so tough that it operates trouble-free even at high differential pressure. Relatively thick, bend-resistant shafts, together with hardened and ground tooth faces, ensure unrivaled running smoothness. The use of stiff tapered roller bearings and large bearing spacing also contribute to a long service life, even at pressures of 18 bar. This technological advancement allows oil or sugar producers, for example, to use rotary lobe pumps for processes where previously only screw, gear, and progressive cavity pumps could be considered. At the same time, pumps of the EP series are both significantly more compact and space saving than those formerly more powerful pumps, and consume noticeably less energy.

## AirGap as gearbox protection

EP series pumps owe their outstanding heat resistance to another smart addition: the AirGap. This gap separates the gearbox from the pump chamber atmospherically, keeping the gearbox protected from the possible effects of heat when pumping hot media. The central advantage of the AirGap, however, is the fact that in the event of a leak in the pump chamber, no liquid will enter the gearbox. Instead, it drains to the outside. Integrated sensors in all chambers provide information on the current operating status, when needed.

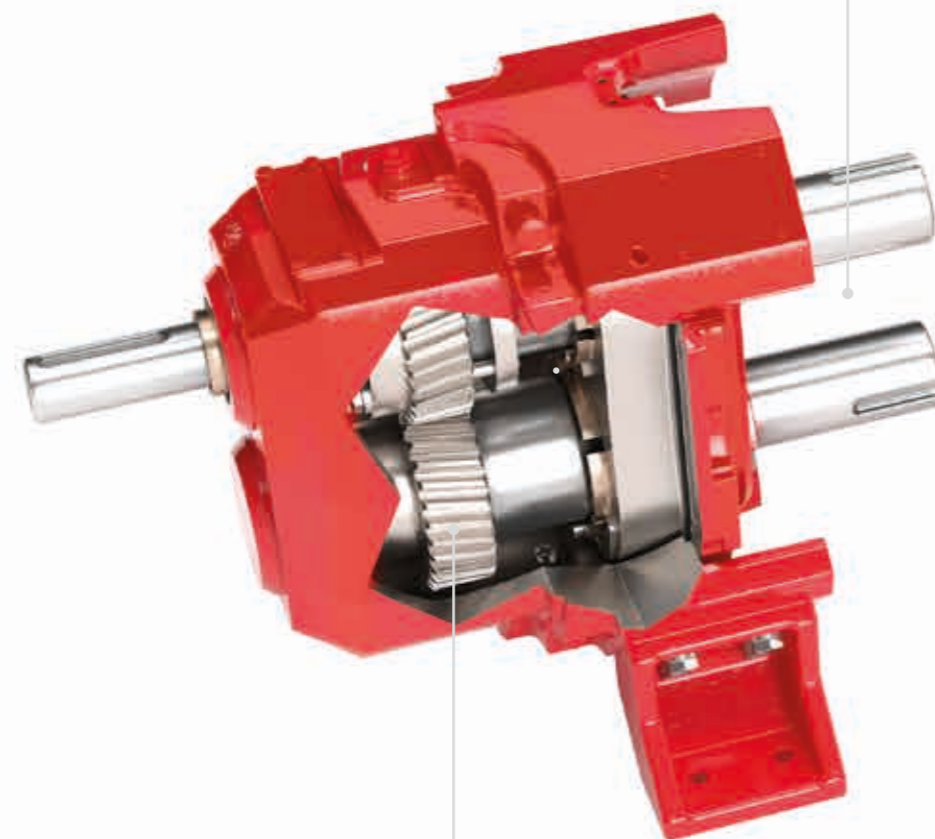
## Advantages of the EP series

- High differential pressures of up to 18 bar are possible
- Incomparable running smoothness due to high-performance gearbox
- High efficiency due to one-piece housing
- AirGap to protect the gearbox in the event of leakage
- Alternative seals per industry standards and customer requirements (see p. 17)
- Quick connection for higher flange loads and easy maintenance



# A thoroughly refined powerhouse

The design details of the EP series at a glance



**AirGap gearbox protection**  
Atmospheric separation prevents liquid penetrating from the pump chamber to the gear chamber

**High-performance gearbox**  
Helical gearing for smoother running and less noise emission

**HiFlo lobes**  
Pulsation-free pumping for exceptionally smooth running – available in a wide range of versions

**Housing variants**  
Choice of steel or stainless steel

**QuickService design**  
Quick and easy access to all wetted components without removing the pump from the pipe

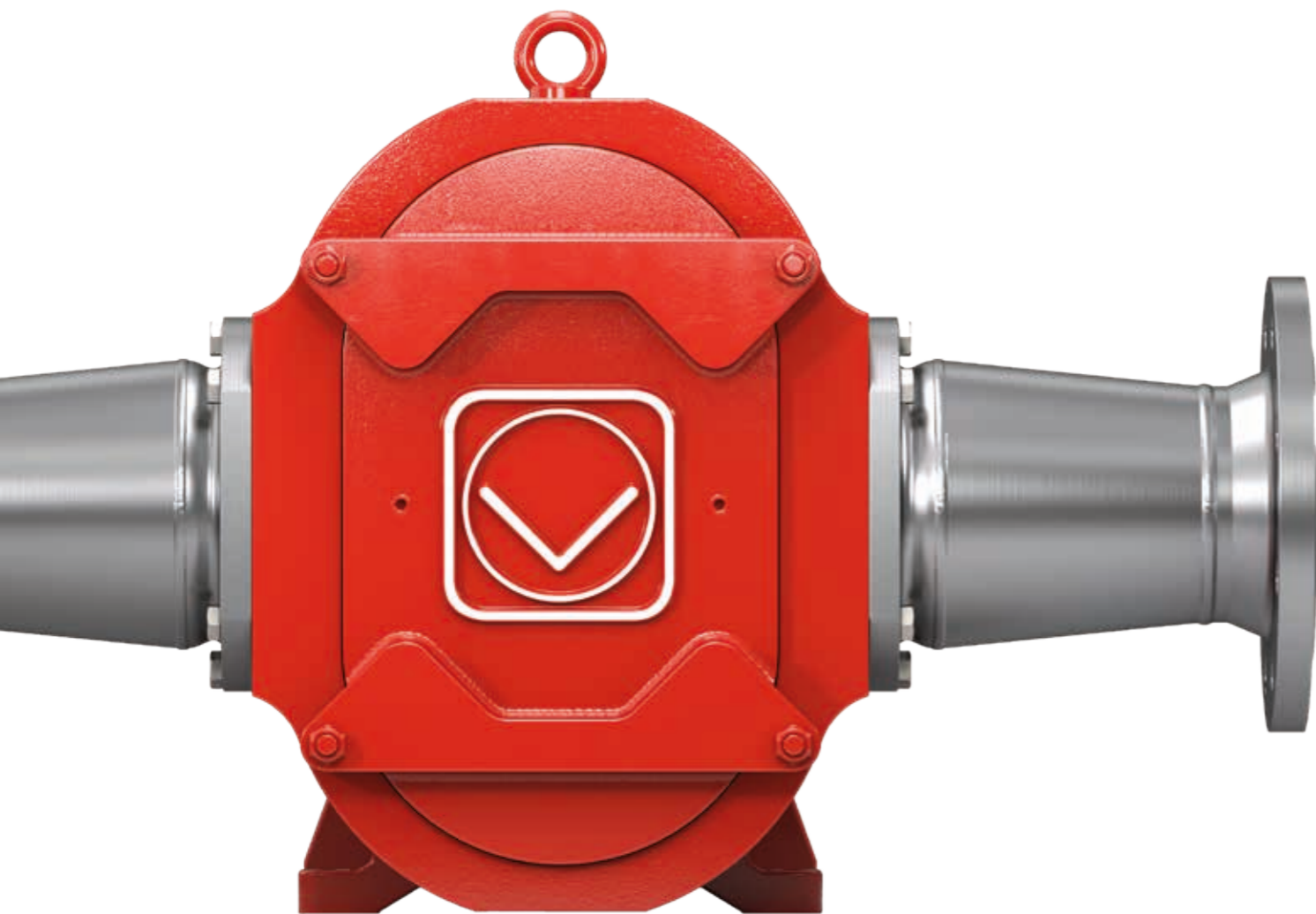
**Axial and radial wear plates**  
Made of highly wear-resistant special steel, to extend service life and facilitate maintenance

**Seals**  
Available with proven Vogelsang Quality Cartridge and as API-compliant or pressure-resistant seals, e.g. for adhesive media

**One-piece housing**  
Flow-optimized, with smooth surfaces and fewer sealing and weld points

# Knowhow in action: the versatile with high efficiency

The VY series rotary lobe pumps  
for maximum energy efficiency



As customers from the chemical and process industry or the food sector will tell you, who have long relied on Vogelsang's trusty rotary lobe pumps: you can depend on this technology. And not only because the pumps effortlessly transport abrasive, aggressive, viscous, or contaminated media such as paint, sugar, wine or raw materials for the construction chemistry from A to B. Depending on your requirements, you can choose between different sizes, delivery rates, speeds, and differential pressures.

With the rotary lobe pumps of the VY series, Vogelsang remains true to these characteristics, which are very important for the economic efficiency of a pump. However, to better meet the highly demanding applications of industry, the housing of these pumps is designed in one piece and with a minimum of sealing points, like that of the EP series pumps. This manufacturing technique results in a high-precision, flow-optimized end product that is highly efficient even with difficult media. The VY housing is also low in dead space and prevents the accumulation of residues.

#### **Demand-oriented, performance-optimized, economical**

The performance spectrum of VY series rotary lobe pumps ranges from 1m<sup>3</sup>/h to 120 m<sup>3</sup>/h at a max. pressure of 10 bar. Naturally, these features also affect the size of the pump. The general rule is: as compact as possible, as powerful as necessary. This not only saves precious space, but also a lot of energy. VY series pumps can also be equipped with double mechanical seals designed for specific applications.



#### **Options**

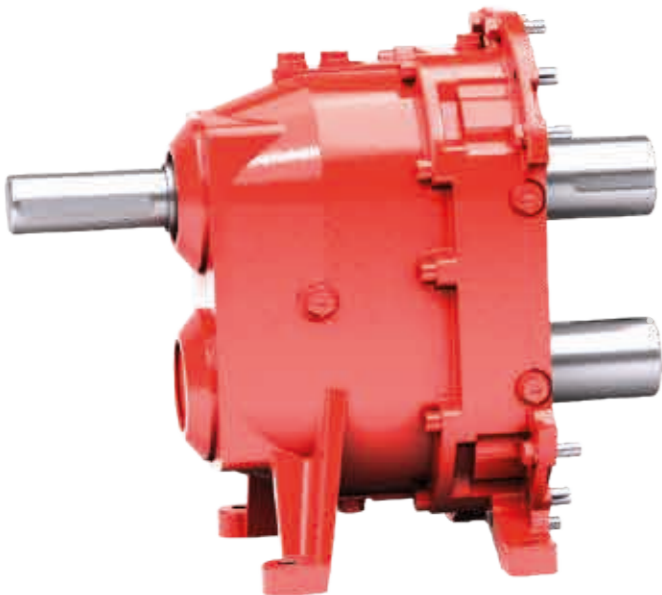
- ATEX and TA-Luft compliant
- Supply systems for flushing plans in accordance with API 682, etc.
- Stainless steel version
- Axial and radial wear plates for abrasive media
- ASU seal support system to extend seal service life (see p. 18)

#### **Advantages of the VY series**

- High efficiency even with demanding media
- Variety of models for a wide performance spectrum
- Cleaning according to CIP or SIP processes
- Alternative seals per industry standards and customer requirements (see p. 17)
- Quick connection for higher flange loads and easy maintenance

# Performance perfectly designed

The design details of the VY series at a glance



**One-piece housing**

Flow-optimized construction with smooth surfaces and fewer sealing points



**Seals**

Available with proven Vogelsang Quality Cartridge or pressure-resistant seals, e.g. for adhesive media



**HiFlo lobes**

Pulsation-free pumping for exceptionally smooth running – available in a wide range of versions



**Axial and radial wear plates**

Made of highly wear-resistant special steel, to extend service life and facilitate maintenance

**QuickService design**

Quick and easy access to all wetted components without removing the pump from the pipe

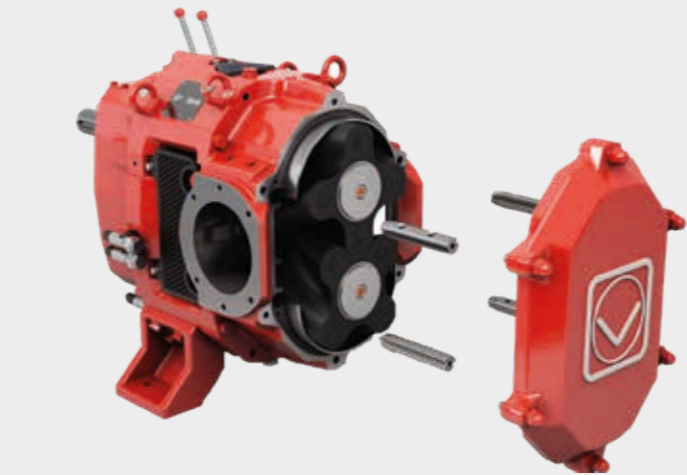


# Innovation steps up to the plate

The new, easy-to-maintain housing wear plates for abrasive or aggressive media

More and more users are choosing Vogelsang rotary lobe pumps – not just for technically intelligent solutions to the challenges of modern production processes and their demands on pumping technology, but also for the pumps’ outstanding ease of maintenance. This is due to the deliberately compact QuickService design of our pumps and the easy access to the pump chamber.

To protect the high-quality pump housings from abrasive media, the interiors can be protected with radial wear plates. The new plating concept makes it possible to undo the bolting from the outside. For maintenance or service purposes, you only need to remove the cover and take out the modules. It is no longer necessary to dismantle the pistons to remove the wear plates. This ease of handling makes access much easier, saving time and money. The new plating concept once again underlines the extreme ease of maintenance of Vogelsang pumps.



The novel plating concept is based on a smart fastening system consisting of four modules that are bolted from the outside. In this way, the radial wear plates are optimally positioned and can be changed very easily in the event of maintenance



The new wear plates are fastened with the help of four modules designed for easy handling

### Advantages of the new plating concept

- Simplified access for cleaning or parts replacement
- Reduced downtime for maintenance or service

# Holding tight no matter what

New seals for even more versatile use of Vogelsang rotary lobe pumps

High pressures, extreme temperatures, aggressive media – in the production of paper, paint, or adhesives, as well as in the oil and gas industry or the chemical sector, seals in pumps are exposed to particularly high stress. That’s why Vogelsang worked with well-known manufacturers to develop two new kinds of sealing system that allow EP and VY series pumps to be used in precisely those environments.

The new seals not only comply with specific industry standards, they also increase the reliability of the pumping process and thus help to ensure plant availability. Less frequent service deployments also reduce the operating costs of the already low-maintenance Vogelsang rotary lobe pumps.



The EP and VY series pumps can be equipped with various sealing systems. They can therefore be used flexibly in demanding fields such as paper production, the pumping of paint and adhesives, the oil and gas industry, and the chemical sector.



### Quality - Cartridge

- User-friendly mechanical seal in cartridge design
- Easier, faster and safer seal replacement compared to conventional seal replacement
- Easy to maintain
- Reduced risk of gear damage
- Comprehensive range of features and options in the same basic design
- The highest level of factory-tested safety



### CoX-Cartridge

- Double mechanical seal for use at high pressures and temperatures
- Coaxially arranged pairs of seals for a robust space-saving design
- TA-Luft compliant
- Pressure-relieved for low wear
- Ideal seal for adhesive or chemically aggressive media
- Geometry can be designed according to the specific needs of the medium
- The highest level of factory-tested safety



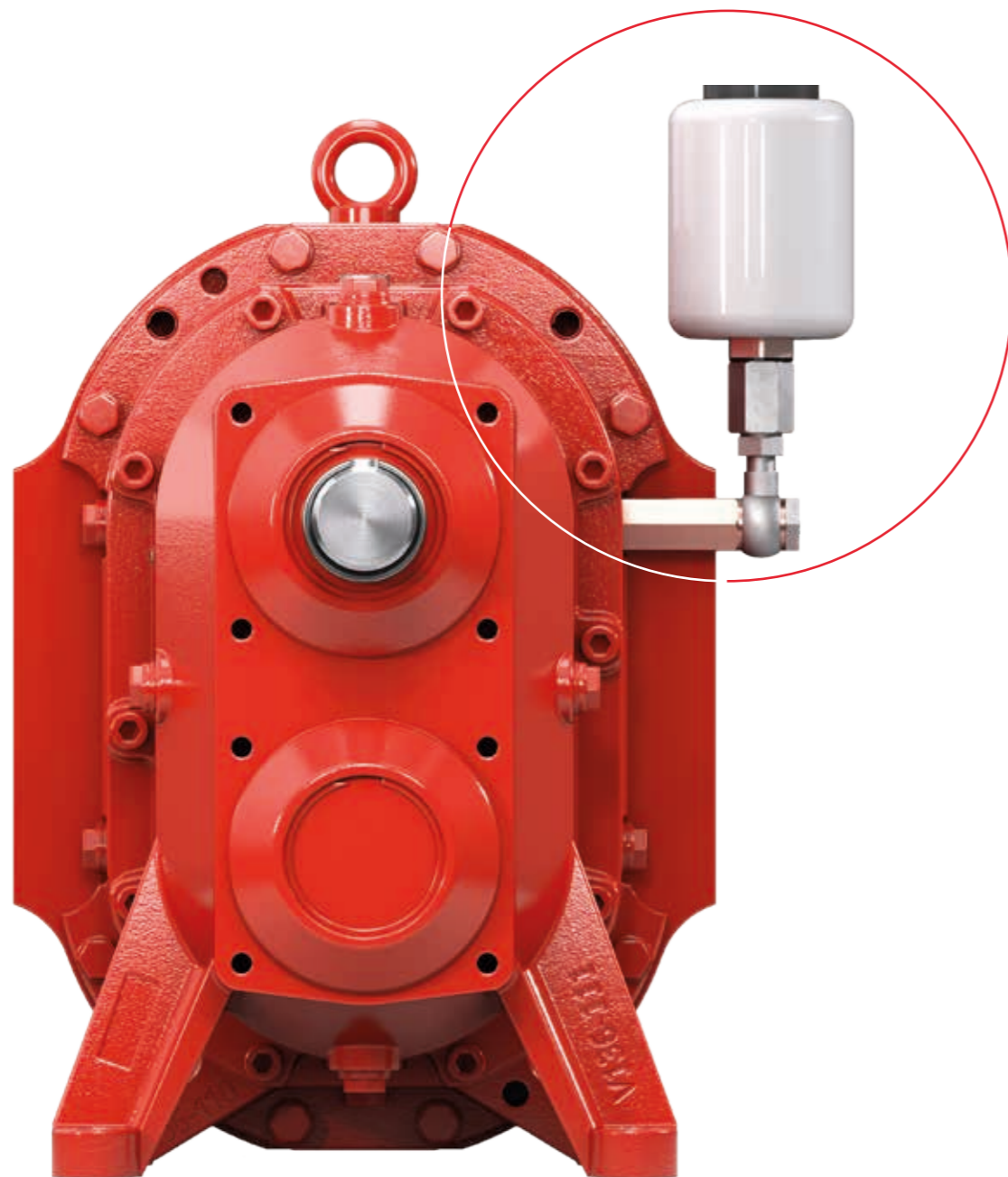
### API-Cartridge\*

- Robust double mechanical seal per API 682 guidelines including the execution of flushing plans in accordance with API specifications
- Suitable for use in the chemical, petroleum, and natural gas industries
- The highest level of factory-tested safety

\* Only available for EP series

# Ingenious and affordable seal lubrication

The Automatic Supply Unit (ASU) –  
the seal support system of the future



To ensure that seals do their job reliably over the long term, pumps in many industrial plants are equipped with complex seal support systems. They continuously supply the seal with the appropriate buffer fluid and maintain the necessary pressure in the buffer chamber. This protects the sliding surfaces so the seal can fulfill its task for the long term.

The problem is the large number of components and units that conventional seal support systems require to perform these tasks. In addition to the additional space required, companies are faced with high acquisition costs that sometimes even exceed those of the pump itself.

## Maximum performance in a mini format: the Automatic Supply Unit

As customer-oriented pump specialists and industry experts, Vogelsang's design engineers have now found a revolutionary solution to this predicament too. The new Automatic Supply Unit (ASU) is barely larger than a beverage can and, unlike conventional seal support systems, it is based on a principle that is as simple as it is ingenious: If there is a drop in pressure, a reciprocating pump pumps the selected buffer fluid into the seal chamber with each revolution of the mechanical seal. The seal chamber pressure is kept constant at either 2.0 or 4.3 bar.

Thanks to the small dimensions of the patented new ASU, Vogelsang's compact rotary lobe pumps can be installed in the smallest installation spaces, even with the seal support system included. An ingenious idea that is so far unique in the world: Installing an ASU extends the life of a seal by up to 50 % and reduces the maintenance costs by 25 %. Plant operating costs fall while plant availability rises. And the price? More than manageable when compared to conventional seal support systems. Which is why Vogelsang's ASU makes previous standards obsolete, and is the new benchmark in the field of professional seal support systems.



As simple as it is ingenious: even the slightest drop in pressure is automatically and simultaneously compensated by the interaction of the reciprocating pump and the seal.

## Available in two versions:

- For 2 bar seal chamber pressure and applications up to 3 bar differential pressure
- For 4.3 bar sealing pressure and applications from 3 bar to 7 bar differential pressure

## Advantages of the Automatic Supply Unit – ASU

- Compressed seal supply system at an economical price
- 1,5x longer service life
- 25 % fewer seal changes
- Declining operating costs with increased system availability
- Energy saving because no own drive
- Small installation space
- Easy to maintain

## What we offer

We provide solutions in the following sectors:  
AGRICULTURAL TECHNOLOGY, BIOGAS,  
INDUSTRY, TRANSPORTATION, WASTEWATER



## Our broad range of products and services

- Consulting and service
- Data management and control technology
- Disintegration technology
- Individually tailored solutions for special applications
- Pumps and pump systems
- Solid matter feeders
- Spreading technology
- Supply and disposal systems for railway, busses and boats
- Wet grinders and solids reduction as well as separation technology

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Vogelsang GmbH & Co. KG  
Holthoege 10 – 14 | 49632 Essen (Oldenburg) | Germany  
Phone: +49 5434 83 - 0 | Fax: +49 5434 83 -10  
germany@vogelsang.info

**vogelsang.info**

