

FLEXIBLE PUMP TECHNOLOGY FOR ALL REQUIREMENTS

Vogelsang rotary lobe pumps
and their application areas

VOGELSANG – LEADING IN TECHNOLOGY

VOGELSANG



Reliable performance, versatile use

Vogelsang rotary lobe pumps – proven reliability in the widest variety of pumping tasks

Pumping tasks, for the most part, are highly demanding tasks. Even with mature, robust and high-performance pump technology, pumping abrasive, aggressive, viscous media that are loaded with disruptive matter (such as sludge, paint and varnishes, chemicals, wastewater or liquid manure) is a complex task. Fibers, clumping and foreign matter or chemical properties can damage pumps and, in the worst cases, will bring plants to a complete standstill. This creates frustration in addition to costing time and money.

As the inventor of elastomer-coated rotary lobe pumps, Vogelsang has always focused on providing the optimal combination of quality, functionality and design. Our pumps, which are configured for specific applications, have become a benchmark worldwide for reliable and durable pump technology in many different industries.

Overview of Vogelsang rotary lobe pumps

EP series



EP136

IQ series

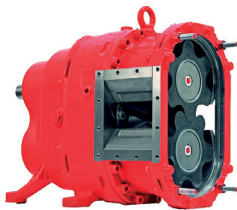


IQ112



IQ152

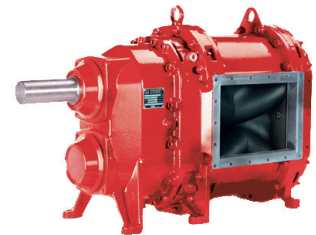
VX series



VX100



VX136



VX186



VX215

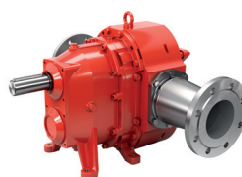


VX230

VY series



VY100



VY136

Safely resilient

Vogelsang rotary lobe pumps and their advantages

The principle

Vogelsang rotary lobe pumps are contactless, rotating positive displacement pumps. Thanks to the pulsation-free HiFlo rotary lobes, they enable highly uniform pumping performance with extremely low vibrations. Their unique design makes the pumps resistant to both foreign matter as well as dry running. The delivery rate increases in proportion to the speed, so Vogelsang rotary lobe pumps have proven themselves to be an efficient choice for virtually any type of pumping task.



Service and maintenance friendly:
Rotary lobe pumps of the VX and IQ series

Tough all around

The uses of Vogelsang pumps are virtually unlimited and they can be used to pump even abrasive fluids, aggressive chemicals or viscous sludge.

Compact and space-saving

These compact pumps can be integrated into any system – even in the most limited of spaces. Vogelsang pumps are also very easy to retrofit in most cases.

Practical, economical and easy to maintain

Vogelsang pumps are easy to operate and easy to maintain. This ensures minimal downtime, high availability and, above all, low operating costs.

Drives

A selection of diesel, hydraulic and electric motors are available in different versions – driven by a geared motor or, as a more compact option, a belt with a piggy-back electric motor. All pumps can be designed so that the control functions occur via a variable frequency drive to ensure optimal operation at all times.

Control technology

Progressive control technology significantly increases the performance and efficiency of our rotary lobe pumps. Pressure, power consumption and (optionally) speeds are monitored constantly; the correlations between them are intelligently linked. In this way, the performance control unit (PCU) is able to automatically register the load and ensures that the pump is operated in the optimum range, using appropriately defined control interventions.

PROFINET enables the control system to communicate rapidly with higher-level systems, thereby enabling the central collection and evaluation of detailed operating data. The OPC UA interface enables platform-independent data exchange.



Advantages of Vogelsang rotary lobe pumps

- Minimal space required, thanks to compact design
- Suitable for all applications with easy handling due to reversibility of flow direction, self-priming and dry-running resistance
- Resistant to foreign matter thanks to the innovative InjectionSystem
- Economical operation thanks to high efficiency and pulsation-free HiFlo lobes
- Easy to maintain and easy to service, optimizes operational efficiency thanks to low downtimes

Solid industrial foundation

Vogelsang rotary lobe pumps for needs-based, economical processes

As a specialist in efficient pumping of media of various stress-inducing consistencies, Vogelsang has also gained a strong reputation in the production of various consumable goods. The following industries already work successfully with our industry-specific pump technology:

Chemical and process industries

Vogelsang rotary lobe pumps are suitable for various materials such as adhesives, acids, alkaline solutions, hydrocarbons and polymers. Their long life and the QuickService concept enable uninterrupted operation and reduce the downtime required for servicing and maintenance. An especially attractive feature is that they allow exact metering in the manufacture of paints and oil products despite different operating pressures. The flow meters are very precise in operation thanks to the pulsation-free HiFlo lobes.

Food industry

The IQ and VX series pumps move all flowable and even semisolid substances in the food industry, such as highly viscous, stewed peeling and production waste from the potato processing industry. Here, too, foreign matter will not lead to blockages or downtime. Durable stainless steel rotary lobe pumps are used to handle chemically aggressive potato pulp, to ensure a safe, fault-free process. Selected variants like the IQ and VX series will pump all waste generated by the fish or meat processing industries just as easily.

Sugar

In the manufacture of sugar, whether from beets or sugar-cane, users benefit from the pumps' resistance to dry running and their ability to move even highly viscous and abrasive media. During the constant but gentle pumping process (thanks to the pulsation-free HiFlo lobes), the crystals are damaged only very slightly, increasing the efficiency of the overall system. At the same time, the work required for servicing and maintenance is considerably less than for many other positive displacement pumps.



"Thanks to the Vogelsang pump technology we were able to reduce our handling time and power consumption and improve our system efficiency, as well as the quality of the end product."

Jordi Muxach,
Head of Engineering at Juncà Gelatines, Banyoles, Spain



Enhanced scope for wastewater technology

Highly compact rotary lobe pumps for efficient pumping of sludge and wastewater

With a compact design despite their high power capabilities, Vogelsang pumps also enjoy an outstanding reputation throughout the wastewater industry worldwide. Additional features like simple maintenance directly on-site and reversible flow direction make a decisive contribution to the economy of a company.

Economical pumping of sludge

Regardless of the application location, rotary lobe pumps from the IQ and VX series ensure efficient, cost-saving processes. Thanks to their compact design, the space required for operation, servicing and maintenance is very small, so the machine room can be reduced in size accordingly.

Example case from Texas

After a thorough consultation, Texas A&M replaced the progressive cavity pumps in its sewage treatment plant with VX rotary lobe pumps in an articulated design. Since then, all maintenance and servicing work can be carried out directly on-site without dismounting the pump. Expensive repairs to burned out rotors or stators were no longer needed since the air of may run out piping is reliably evacuated.

Economical transportation of sewage sludge

Tankers equipped with rotary lobe pumps can be filled with sewage sludge faster and more fully – even in the case of higher DM content. This means reduced transport outlay and lower weight-based disposal costs.

Membrane filtration: One pump for two work processes

With Vogelsang rotary lobe pumps, reversing the flow direction is easy. Their delivery rate is proportional to speed and, by and large, independent of pressure, enabling them to be varied simply. For membrane filtration systems, only one pump needs to be installed for filtration and flushing the membrane.

Central pump station

In small sewage treatment plants, the installation of a single Vogelsang rotary lobe pump as a central pump unit is sufficient for handling numerous pumping tasks. Thus, they can feed the decanter or centrifuge as well as pump sewage sludge out of the tanks, thereby filling it into the tankers that pick it up. Even at a DM content of 8 % or more, Vogelsang rotary lobe pumps draw the sludge reliably and pump it to dewatering facilities or other destinations. In areas where space is limited, pumps with a piggy-back design are ideal. Their reversible flow direction means that all tasks can be implemented easily by changing the settings of gate valves.

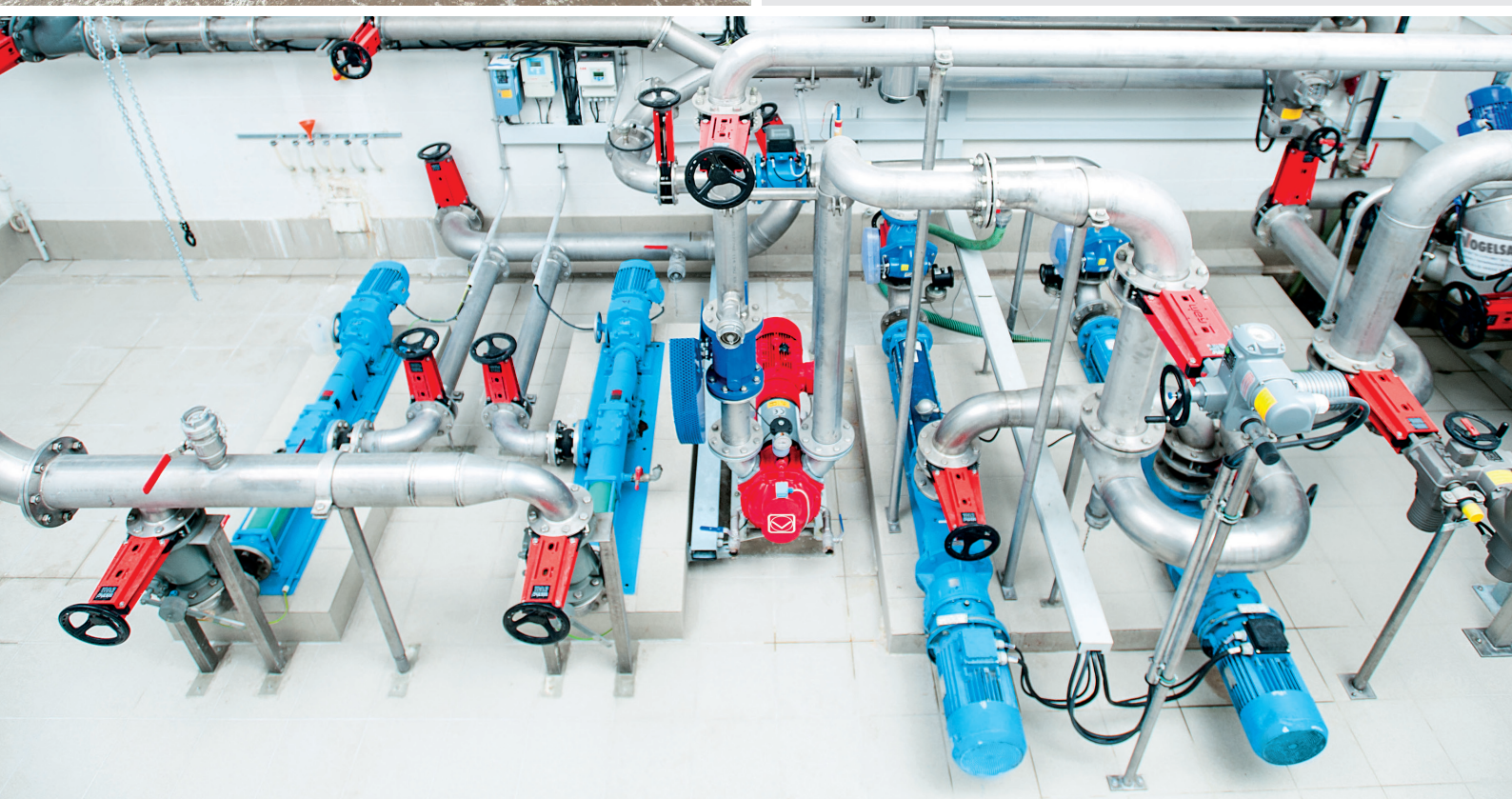


„We’ve been using the type VX186-130Q rotary lobe pump since 2004. It’s used for pumping sewage sludge and has met our expectations completely.“

Ralf Schmidt, Head of Wastewater
Nordhorn AöR, Nordhorn sewage treatment plant

„Replacement of parts is easy, fast and simple to handle compared to our progressive cavity pumps.“

Knut Sternkiker, Head of Wastewater Treatment,
Freiberg sewage treatment plant



Top marks for biogas plants

Rotary lobe pumps for efficient pumping of liquid manure loaded with fibers and disruptive matter and suspensions

The invention of Vogelsang rotary lobe pumps has its origin in agriculture. The ongoing development and addition of pumps with innovative features specially designed for biogas plants has enabled them to become successful in industry worldwide. Thousands of biogas plant operators profit from unrivaled efficiency and ease of maintenance.

Digester feeding and agitation

For decades now, VX series rotary lobe pumps in particular have supported the economical and trouble-free operation of biogas plants, either by pumping liquid manure, grease and other liquid media directly into the digester or by the reliable feeding of mashing tanks and equipment. They conduct recydate for mashing, pump the mashed organic suspension reliably into the digester and circulate its contents simply and efficiently.

The all-rounder

Because they even suction media that is loaded with foreign matter without blockages, while purging air from pipes, VX pumps have proven their value to operators as a central pump station in biogas plants. They reliably pump both organic suspensions and low-viscosity residue digestate, ensuring trouble-free transfer from remotely located tank farms to the plant or from digesters to post digesters, for example. Another advantage is that VX pumps can be installed compactly due to their design and are easy to maintain.

Efficient tank filling

Easy handling and a high pump capacity of up to 20,000 liters per minute ensure that tanks can be filled and drained quickly and simply using Vogelsang rotary lobe pumps. As well as pumps, Vogelsang also delivers FillMaster riser pipes with booms as a fixed installation or mobile unit in order to fill tankers quickly via the dome. As an optional feature, the filling can be controlled by remote control. Wait times are reduced to a minimum and there is a considerable increase in effectiveness in the spreading of digestate.



*„The RotaCut and the Vogelsang rotary lobe pump in our biogas plant work well.
The service and spare parts arrive as ordered without any complications“*

Hans Georg Mücke, Managing Director
Betreibergesellschaft Biogasanlage Möckern GmbH, Möckern

*„We wouldn't want to go back to a pump without the Cartridge mechanical seal.
Changing the seal is quick and easy: Pull out the old Cartridge seal, insert the
new Cartridge seal and you've changed the seal.“*

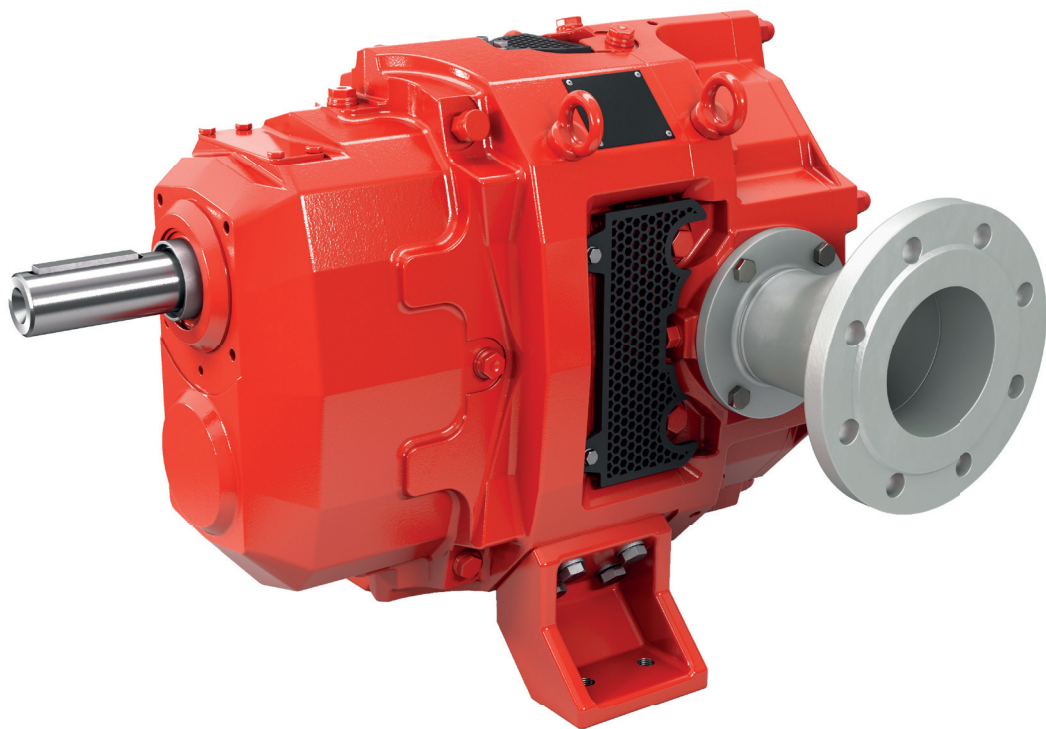
Max Boote, Technical Manager
Landwirtschaftlicher Betrieb Ohreland KG, Samswegen

*„Since the optimization with Vogelsang, the pump and the entire system have
been running more evenly, more smoothly and without malfunctions overall..“*

Jörg Graage
Owner of Bioenergie BAGUS GmbH & Co. KG

Outstanding under high pressure

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

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.

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 most striking feature of the transmission are the helical gears on the drive shafts.

This means that the torque is transmitted more evenly, which results in smoother running and significantly reduced friction noise emissions. The low-vibration running also leads to less wear on the adjacent pipes. The use of stiff tapered roller bearings and large bearing spacing also contribute to a long service life, even at pressures of 18 bar.

AirGap: an air gap to protect the gearbox

EP series pumps owe their outstanding heat resistance to another smart addition: the AirGap. This gap separates the gearbox from the pump chamber atmospherically, so that the gearbox is kept protected and no liquid will penetrate even at a possible leak.

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.



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
- Quick connection for higher flange loads and easy maintenance

Options

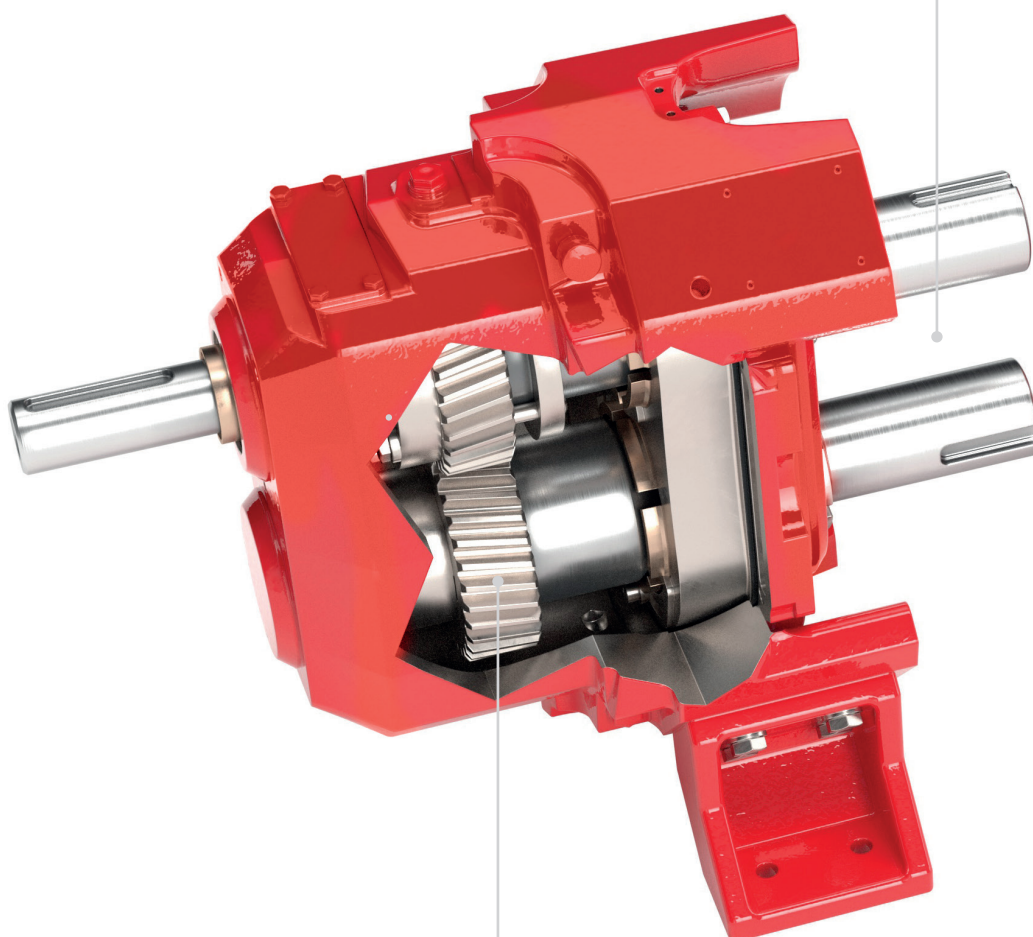
- Supply systems for flushing plans in accordance with API 682 etc.
- Innovative ASU seal support system for longer bearing life
- Axial and radial wear plates for abrasive media
- ATEX conformity and TA-Luft conformity
- Stainless steel version

A thoroughly refined powerhouse

The design details of the EP series at a glance

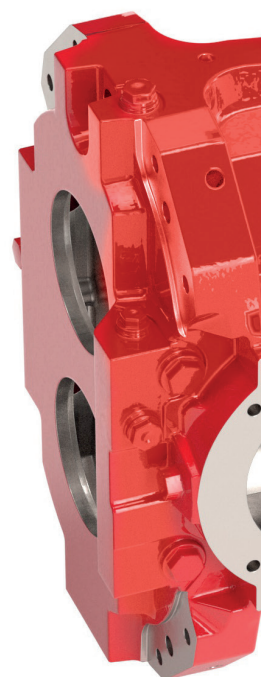
AirGap gearbox protection

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



Housing variants

Choice of steel or stainless steel

HiFlo lobes

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

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 wearresistant 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

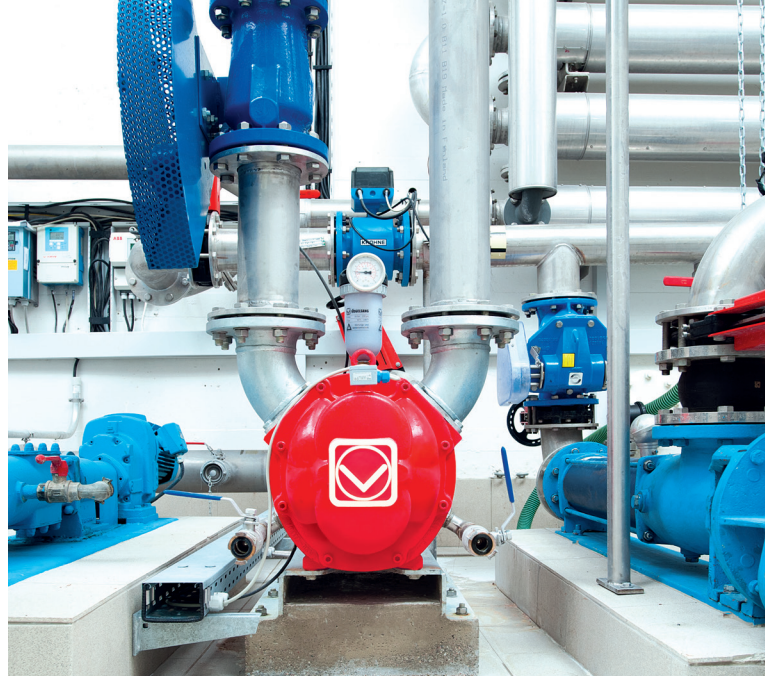


Service and handling made even easier

The highly economical IQ series
for maximum performance
yet less work



IQ112 rotary lobe pump



With its design reduced to just a few individual elements that makes handling even easier compared to rotary lobe pumps of the VX series, the Vogelsang IQ series is proof that even successful technology is worth redesigning.

IQ series rotary lobe pumps are also equipped with the tried and-tested pulsation-free HiFlo rotary lobe. The unique InjectionSystem makes it just as resistant to foreign matter as it is to dry running – and protects the lobe from damage, thereby ensuring a uniform pumping speed. In contrast to the pumps of the VX series, the pump housing of the IQ series consists of just a single component; it can be dismounted with just a few movements, giving access to the pump elements, while the pump remains firmly screwed into the pipe.

Long service life and low operating costs

As well as the gentle-wearing InjectionSystem, the simplified design also helps to lower costs. Since the number of central spare parts is reduced by half, compared to the conventional design, the outlay for spare parts is also reduced. In addition, less time is required for maintenance and replacement of parts. Pumps of the IQ series are designed so that replacement of all wearing parts –including rotary lobes, wear plates, pump housings and seals – takes less than half of the usual time.

Simple integration

The variable series connecting parts on IQ series pumps are suitable for the most common installation situations. This means that they can be quickly and easily attached or installed in a wide range of positions, including to tank vehicles and mobile units, without the need for special connectors.

IQ series – for special applications

The delivery rate of IQ pumps is up to 154 m³/h at pressures of up to max. 7 bar. The IQ series is perfectly suited to demanding applications with abrasive media, for example in the field of disposal.



Advantages of the IQ series

- Quick and convenient access to pumping elements
- Intelligent, integrated foreign matter handling
- Excellent suction capacity and integrated dry-running protection
- Significantly reduced spare parts costs

IQ series rotary lobe pumps

**Perfection, from technical design
to service and maintenance**

Dry running protection and optimum suction

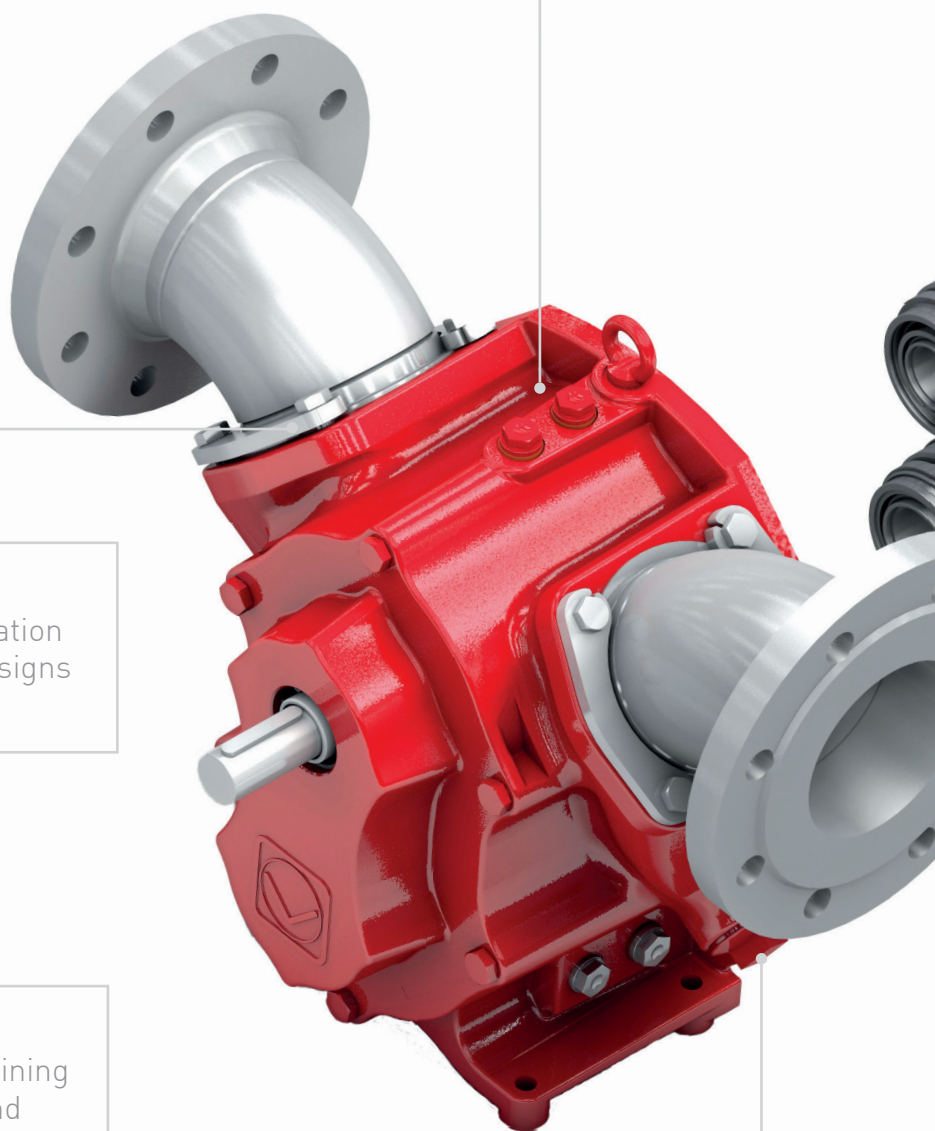
Protection from dry running and powerful suction due to provision of fluid reservoir and innovative gearbox housing

Flexible connection options

Versatile connectors allow integration in the widest variety of system designs in just a few hand movements

Drain plug

Simple, clean, almost complete draining of the pump chamber for service and maintenance work thanks to intelligently positioned drain plug



QuickService design

Fast disassembly of the pump cover and simple access to pump elements as an optimal prerequisite for service and maintenance

Wear plates

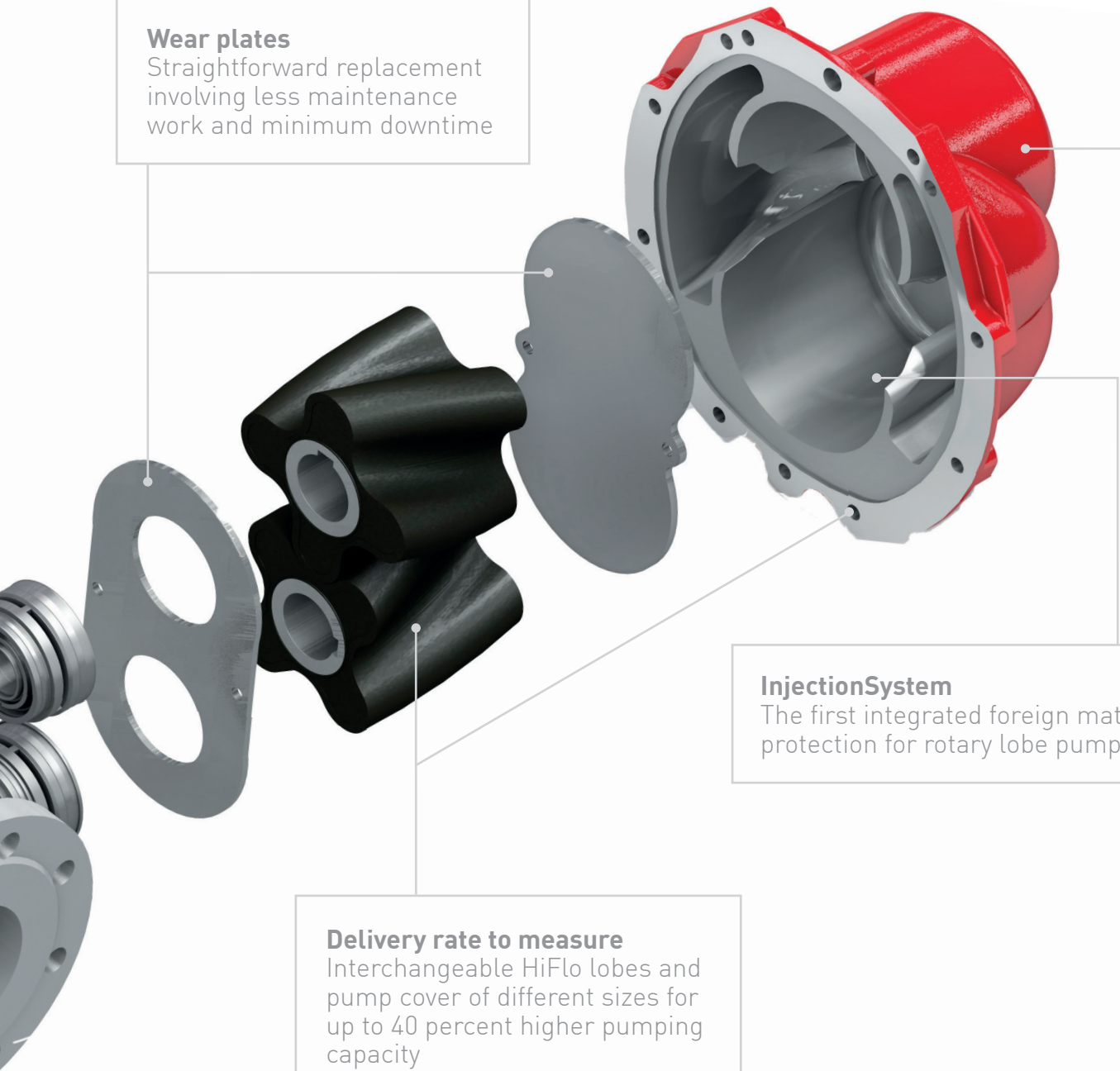
Straightforward replacement involving less maintenance work and minimum downtime

InjectionSystem

The first integrated foreign matter protection for rotary lobe pumps

Delivery rate to measure

Interchangeable HiFlo lobes and pump cover of different sizes for up to 40 percent higher pumping capacity



Established rotary power pack

The adaptable VX series
for task-oriented pumping



VX230 rotary lobe pump

The all-round pump of the VX series is characterized by its compact design and robust properties. She is easy to maintain, self-priming and dry running resistant. That's why it's ideal for media and substances ranging from thin to highly viscous, abrasive or aggressive as well as those who react sensitively to shear forces. As a service-friendly classic rotary lobe pump used worldwide, the VX series pumps are available in five series with up to eight sizes. Depending on the task and performance requirements, a specially designed version of the reliable rotary lobe pump can be assigned for almost any delivery rate and any differential pressure.

Housing features and options

A wide range of materials for the housing enables needs-based adjustment to the specific location conditions and application. Alongside the standard model in abrasion-resistant gray cast iron, versions in ADI and stainless steel are also available. On request, the components of the pump chamber can be manufactured from duplex steel or a nickel-based alloy, e.g., Hastelloy®. Other options for customizing the pump housing include heat treatment and wear-resistant coatings for the wearing plates and housing components.

Only with Vogelsang rotary lobe pumps is the pump chamber clad with additional radial wear plates made from special highly wear-resistant steel, e.g., Hardox®, in addition to the axial wear plates always present. These are formed using a unique process, and are characterized by an extraordinary degree of wear resistance. Virtually the entire pump chamber is protected by this sophisticated replacement system, which extends maintenance intervals, thereby reducing operating costs.

Faster access for less maintenance work

Simply open the cover for easy access to the pump chamber thanks to the QuickService design. Wearing parts can be replaced in the blink of an eye without completely removing them from the pipe and disassembling the pump.

Shaft warranty

A large cross-section, no recesses – the result: Vogelsang pumps have break-resistant shafts! And that's how we can provide a five-year warranty against internal shaft breakage* for all pumps in the VX series.

* Under the normal conditions of use in accordance with our terms of warranty



The type of construction of the VX series determines its capacity:

Vogelsang VX-Q

Dual overhung bearings, easy maintenance: Rapid, easy access to the pump chamber enables all wearing parts in the pump chamber to be replaced without removing the pump. From the lobe, to the front and radial wear plates, to the shaft seal – everything can be replaced on site. This saves money and ensures short downtimes.

Vogelsang VX-QD

Triple bearing for high pressure: Due to the additional, third support bearing of the unique QD design, these VX versions are not only tougher, the shafts also bend significantly less. This reduces start-up wear and extends the service life, while maintenance can be performed and all important parts can be replaced simply on-site.

Advantages of the VX series

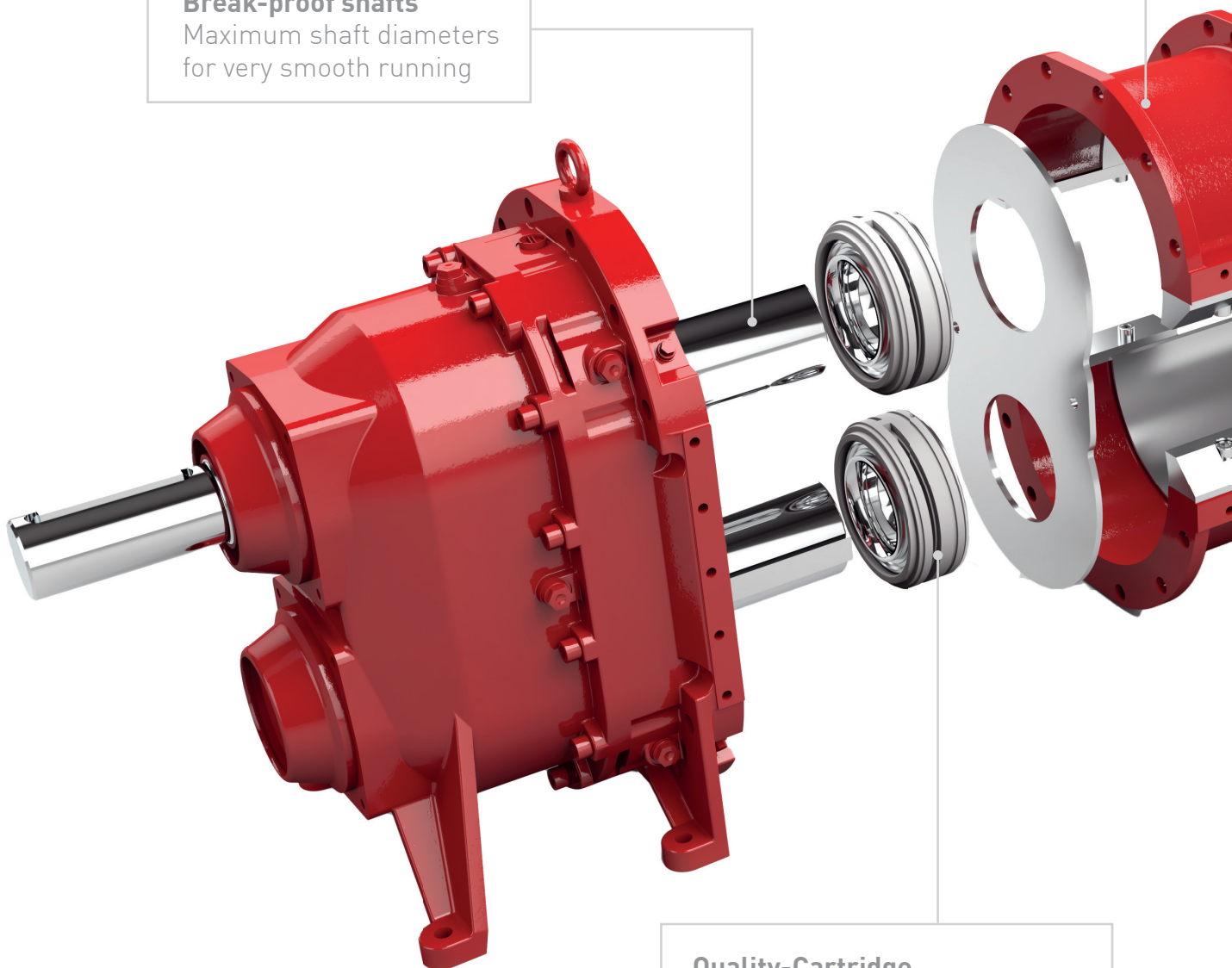
- Comprehensive range of features and options
- Self-priming and dry-running resistant
- Shaft warranty
- Quick access to the pump chamber by removing the cover
- Simple service and maintenance

VX series rotary lobe pumps

Perfection, from
technical design to service

Adjustable pump housing segments
Optimum utilization of materials for
prolonged service life

Break-proof shafts
Maximum shaft diameters
for very smooth running



Quality-Cartridge
Professional sealing technology
for maximum reliability



The image shows an exploded view of a rotary lobe pump assembly. On the left, a red pump housing is partially visible. In the center, two black lobes with a smooth, rounded profile are shown. To the right of the lobes is a red circular flange with a silver-colored wear plate. Further right is the main red pump housing, which is open, revealing internal components. A silver-colored wear plate is also shown separately. Lines connect the text boxes to the corresponding parts of the assembly.

HiFlo lobes

Pulsation-free pumping
for very smooth running

QuickService design

Quick-and-easy access to all the
medium-affected parts without
dismounting the pump

Axial and radial wear plates

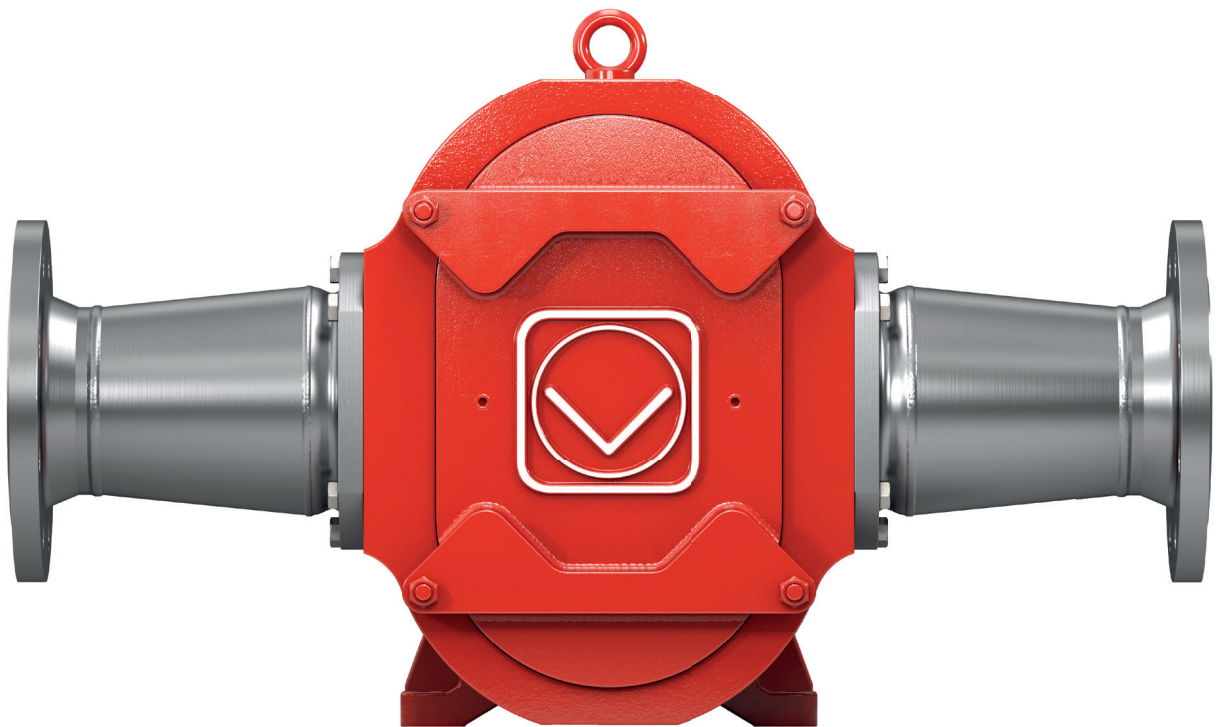
Lined pump housing made from highly
wear-resistant special steel to extend
maintenance intervals and make
servicing easier

InjectionSystem

Integrated foreign matter protection
for rotary lobe pumps paired with
greater internal sealing

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 1 m³ / h to 120 m³ / 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.



Advantages of the VY series

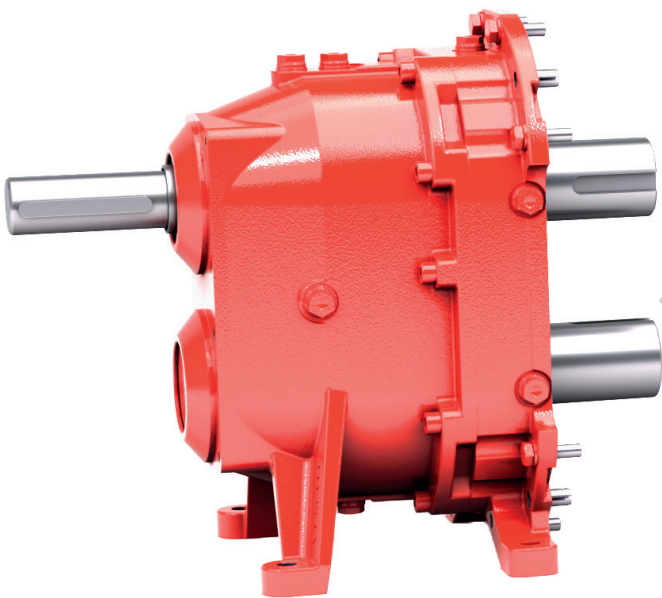
- High efficiency even with demanding media
- Variety of models for a wide performance spectrum
- Cleaning according to CIP or SIP processes
- Alternative seals per industry standards and customer requirements
- Quick connection for higher flange loads and easy maintenance

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

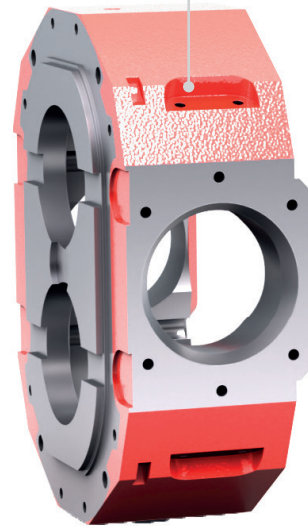
Performance perfectly designed

The design details of
the VY series at a glance



One-piece housing

Flow-optimized construction
with smooth surfaces and
fewer sealing points



Seals

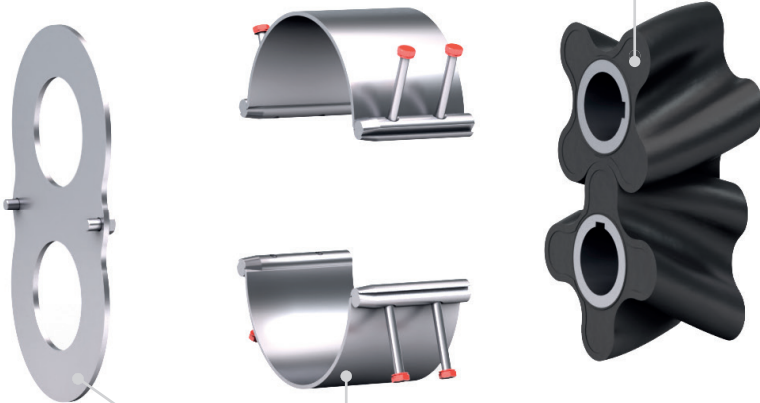
Available with proven Vogelsang Quality
Cartridge or pressure-resistant seals,
e.g. for adhesive media

HiFlo lobes

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

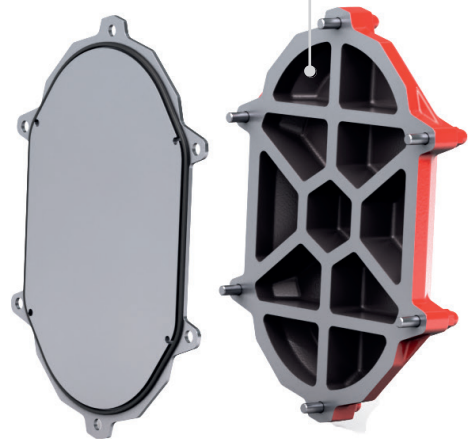
QuickService design

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



Demonstrated flexibility and compatibility

**Use of uncompromising pump power
regardless of site**

The unique variety of the drive and setup options of Vogelsang pumps means their range of applications is virtually limitless. This is true just as much for the type of medium as for the application location: you decide where to pump. On a vehicle, on a ship, on agricultural machinery, in a plant, or mobile.

In addition to the compact design of the VX series and IQ series pumps making installation in confined spaces easier, the flexible combination of drive, pump variant and model expand the range of installation options of machines. They perform their work reliably and safely, even in complex circumstances.

Designs and adaptation options

- Versatile and needs-adjusted models and sizes
- Different drives such as geared motor, hydraulic motor, electric motor with belts or mechanical via a power take-off
- Replaceable lobe with 2, 3 or 4 wings made from various materials
- Flexible connection options without any special connection requirements

Vogelsang pumps in use of a real flood event



A safe way to pump more

**Innovative techniques for maximum
safety and long service life, also
with ease of maintenance**

Only Vogelsang offers a way to significantly extend the service life of the lobes in your rotary lobe pump, thanks to our patented InjectionSystem. Field trials have proven that the pump's service life can be extended by as much as 2.5 times.

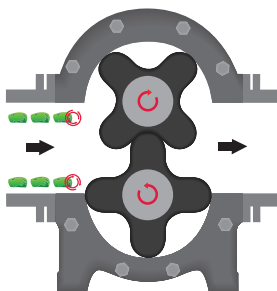
The principle is ingeniously simple. It prevents damage to the lobe tips by foreign matter, as the innovative geometry of the housing facilitates problem-free flow through the pump. The internal sealing of the pump is also improved. That increases not only its efficiency, but also its suction capacity.

We offer you the following equipment variants

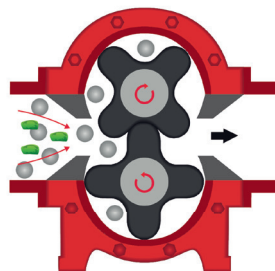
- Injection S for pumping easily flowing fluids containing foreign matter
- Injection A for pumping fluids with coarse foreign matter or viscous media with lots of foreign matter

The advantages at a glance

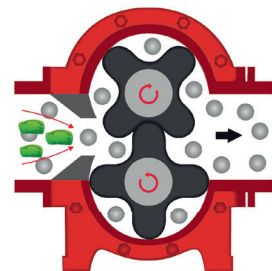
- Significantly improved resistance to foreign matter
- Increased efficiency and improved suction capacity through optimized volumetric efficiency
- Significantly extended service life – up to 2.5 times longer in field trials



**Rotary lobe pump
in conventional design**



Injection S: Symmetrical pump housing segments with the InjectionSystem design, arranged on the discharge and suction sides



Injection A: Asymmetrical pump housing segments with the InjectionSystem design, arranged on the suction side

Innovation steps up to the plate

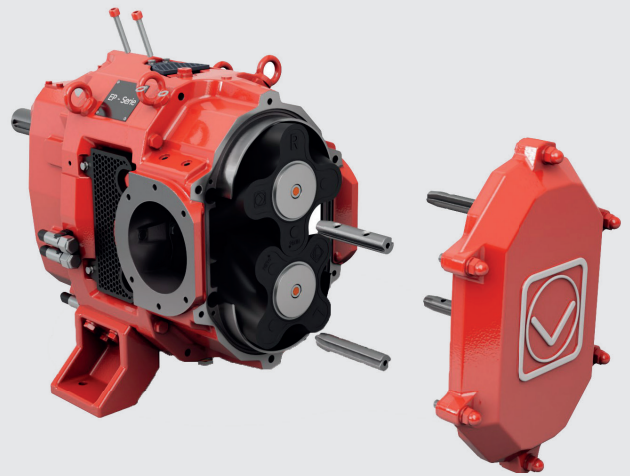
The easy-to-maintain housing wear plates for abrasive or aggressive media

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 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.

Advantages of the new plating concept

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



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

Holding tight no matter what

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

Professional sealing technology for maximum reliability

A pump seal that can be replaced in just a few turns of the hand, significantly simplifying maintenance while also lowering the risk of gearbox damage? This is a reality with the Quality Cartridge mechanical seal from Vogelsang. This user-friendly mechanical seal in a cartridge design is fully pre-assembled. It represents the highest factory-tested safety standard, runs optimally and installs quickly. Thanks to its unique construction, it incorporates all seal components, thus allowing reliable replacement of all the sealing elements when the seal is changed – including the sealing between the gearbox and the buffer chamber. Expensive special tools are not necessary.

Individually modified, always a perfect fit

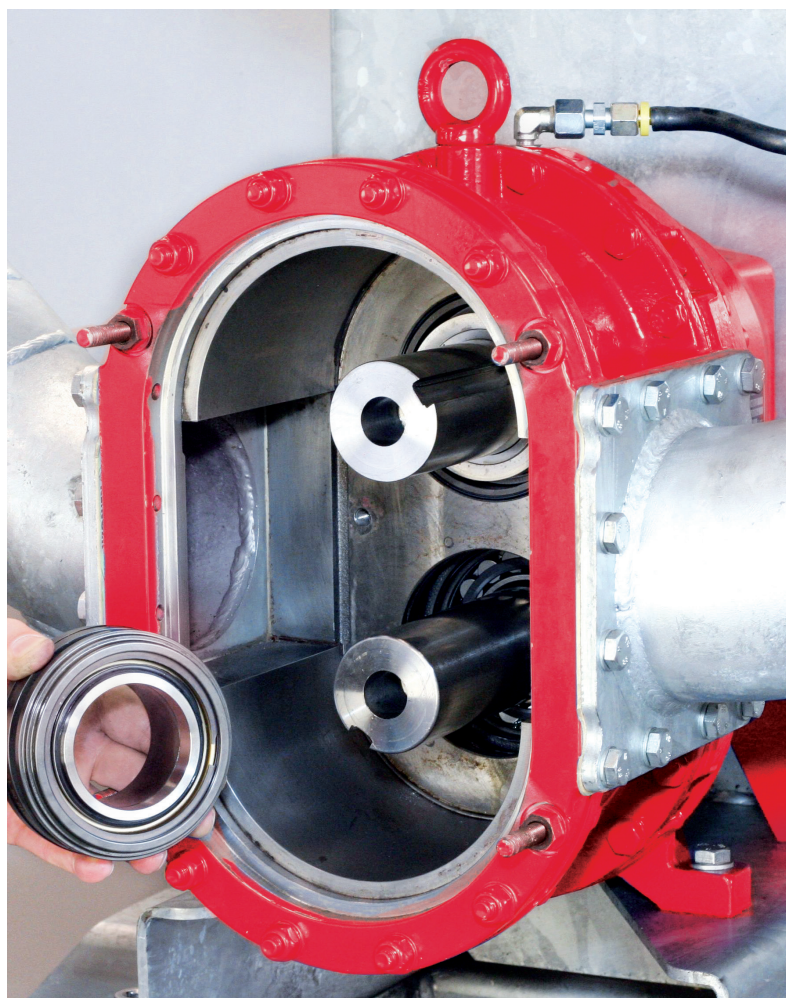
Every application makes different demands. Vogelsang Quality Cartridge mechanical seals are available in individually customized versions, such as for installations in sewage treatment plants and biogas plants, or in the chemical or food industries, or in drinking water supply. Solutions are available in the same installation space for media with a high proportion of fibrous matter or chemically aggressive media, or TA Luft*-compliant designs with a double mechanical seal. Whether pressurized or dry running, with or without inspection chamber, or various flushing options – anything is possible. The installation space remains the same every time, of course.

* TA Luft is the German air pollution control regulation.



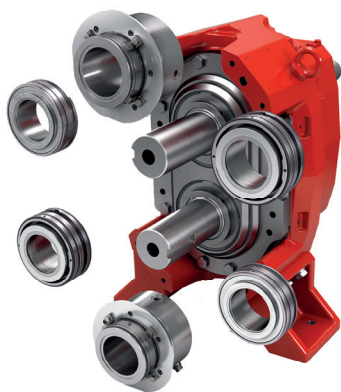
Quality-Cartridge

- 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

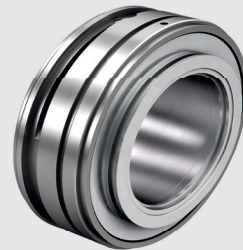


High pressures, extreme temperatures, aggressive media – in the production of paper, paint, or adhesives, as well as in the oil and gas industry or the chemical sector, seals in pumps are exposed to particularly high stress. That's why Vogelsang worked with well-known manufacturers to develop two additional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

The 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.



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



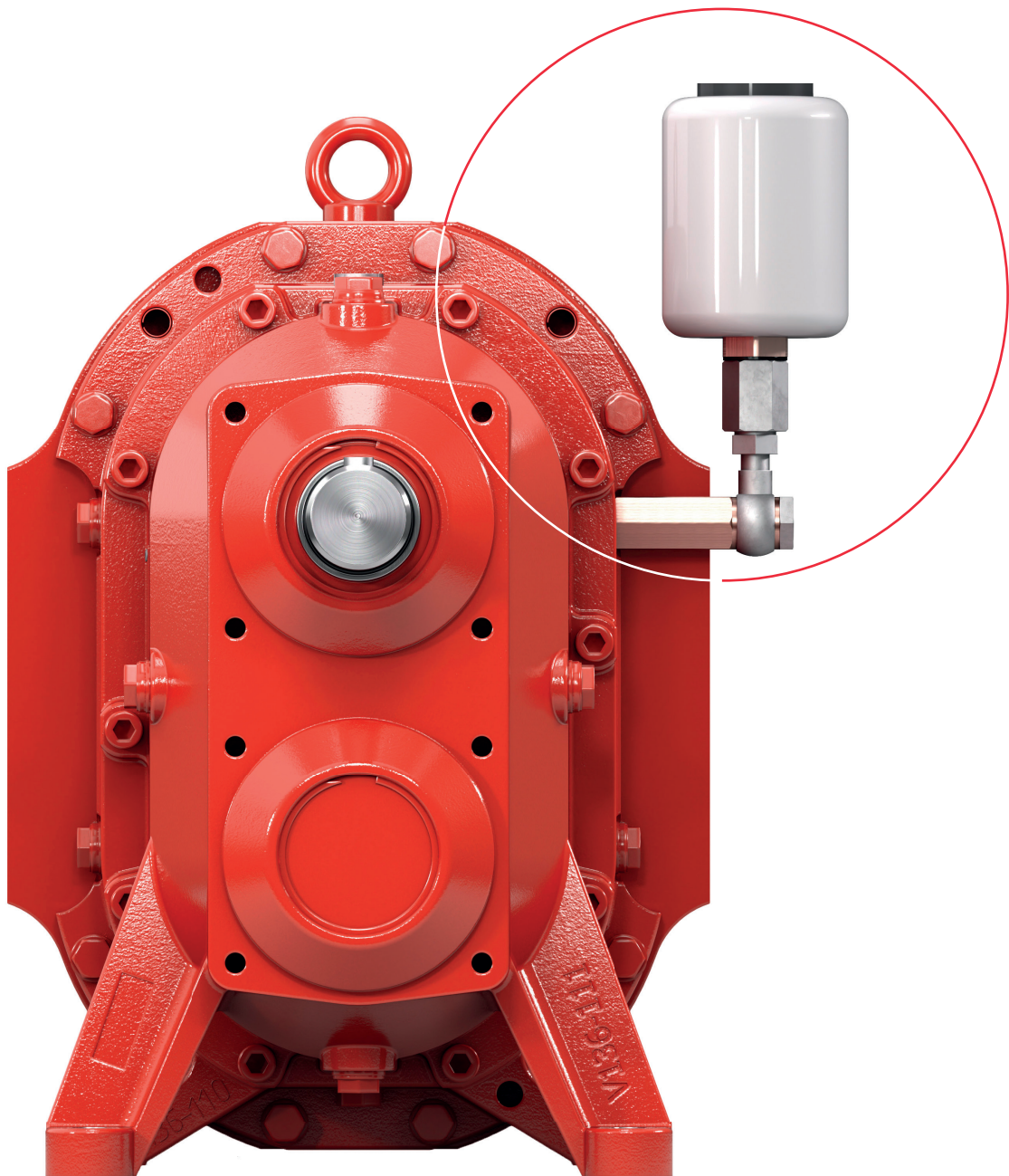
API-Cartridge*

- 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 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.

Thanks to the small dimensions of the patented 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 %. And the price? More than manageable when compared to conventional 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.

Advantages of the Automatic Supply Unit – ASU

- Compressed seal supply system at an economical price
- 1,5 x 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



Innovation – a question of details

The wide range of applications for rotary lobe pumps comes down to the competence of Helmut Vogelsang alone, for it was he who came up with the idea of cladding lobes with a rubber layer. The HiFloplus reduces vibrations and noise build-up from Vogelsang rotary lobe pumps, particularly at high pressures, to a scale that one might otherwise expect of centrifugal pumps.

Enhancing performance:

HiFlo lobes by Vogelsang

The correct lobes for all cases

Every medium has its own special requirements. Some are highly viscous, some are abrasive while others are loaded with foreign matter or fibers, and others still are sensitive to shearing forces. Non-Newtonian behavior of the medium can have an effect on the flow capabilities and, of course, the application can also play an important role in the choice of lobe. Thanks to a comprehensive selection of lobe geometries and materials, your Vogelsang pump can be adjusted to the pumping of the widest variety of fluids.

Low-vibration running thanks to HiFlo lobes

To optimize the volumetric efficiency compared to conventional pumps and ensure smooth running, Vogelsang pumps are normally delivered with our patented HiFlo or HiFloplus lobes. As well as uniform pumping, more sealing lines enable high pressures to draw fluid out of deep pits. Wherever the focus is on sturdy operation however, classic bi-lobes have proven their worth. Both lobe types are also available with replaceable lobe tips on request.

Lobes and elastomers

The construction and material of the lobe are just as important as its shape. The elastomer coating is inseparably joined to the lobe core in a hot vulcanization process using a special primer (bonding agent) so that the lobes are seamlessly rubberized all around. In addition to the elastomer-coated lobes, the Vogelsang lobe range also includes solid material lobes made of steel or stainless steel.

Vogelsang lobes are ideal for the following media, among others

- **NBR** (sewage sludge, mineral oil products, biogas plants, grease, fertilizer)
- **NBR, white** (foodstuffs)
- **EPDM-AL** (drinking water, water, acids, alkaline solutions)
- **EPDM, weiß** (foodstuffs)
- **FKM** (saltwater, solvents, acids, alkaline solutions, chemicals, petrol, oil)
- **Stainless steel** (aggressive media, foodstuffs higher temperatures)
- **Steel, nitrided** (abrasive media, higher temperatures)

HiFlo lobe advantages

- Pulsation-free running, resulting in longer lifetimes and lower noise emissions
- Greater capacity thanks to higher limiting speeds
- Improved suction capacity because cavitation is avoided
- Higher pressures because pulsation-related pressure peaks are eliminated

Special version HiFloplus



HiFloplus reduces vibrations and noise build-up from Vogelsang rotary lobe pumps, particularly at high pressures, to a scale that might otherwise be expected of centrifugal pumps.

When it comes to service, we leave nothing to chance

Comprehensive services for smooth operation and a long lifetime

Support and supply from A to Z

Because we are aware that close customer proximity is essential for our mutual success, we design our services to best meet your needs. In Germany and in countries where we have subsidiaries, Vogelsang service centers and contractual partners generate an active dialog with our customers and provide reliable support.

This means you always get the precise support you need in every phase of our partnership. Our highly qualified staff make it possible – experts such as consultants and technicians who know your Vogelsang machines inside and out.



Since its establishment in 1929, Vogelsang has become an internationally recognized mechanical engineering company with numerous branches, sales centers and subsidiaries.



We think ahead

Thinking ahead in your best interest begins with our extensive and detailed product documentation. Spare parts are available within a short time due to our high degree of vertical integration in production. In addition, you will always find an authorized service partner in your area who can help with repairs and wear part replacement. The Vogelsang ServicePack completes the offer. Whether you need start-up, on-site training, training at the Vogelsang facility, or full service support with a maintenance contract and a wear parts service package – we offer a support program tailored specifically to your needs.

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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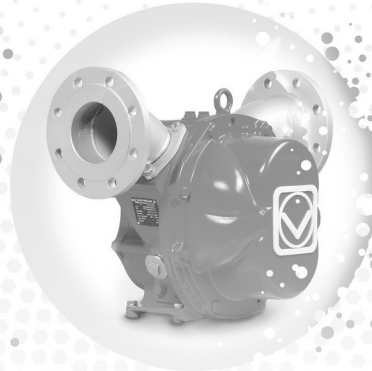
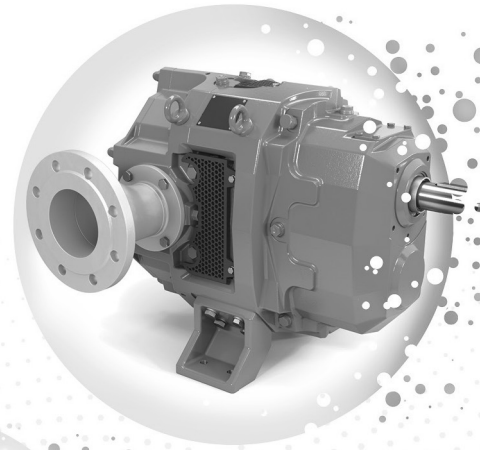
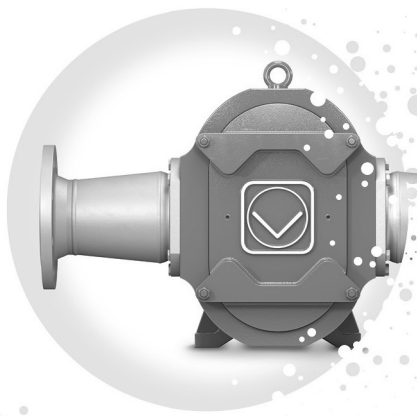
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SPECIFICATION



FLEXIBLE PUMP TECHNOLOGY FOR ALL REQUIREMENTS

Vogelsang rotary lobe pumps
and their application areas

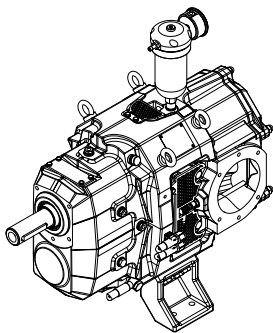
VOGELSANG – LEADING IN TECHNOLOGY

VOGELSANG



EP series

Rotary lobe pump for extreme conditions with high pressures

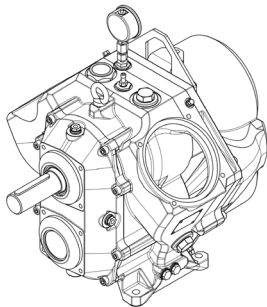


Type	Max. pressure	Max. flow rate*	Max. speed	Max. temperature	Max. free passage
	bar	m ³ /h	min ⁻¹	°C	mm
EP 136 - 70	18	60	800	200	40
EP 136 - 105	13	90	800	200	40
EP 136 - 140	10	120	800	200	40

* Maximum theoretical capacity. In practice, the capacity is normally lower, depending on pressure difference, medium viscosity and pump installation.
We would be happy to configure the best rotary lobe pump for your application with the help of our computer-assisted sizing software.

IQ series

Greater cost-effectiveness thanks
to reduced maintenance and service

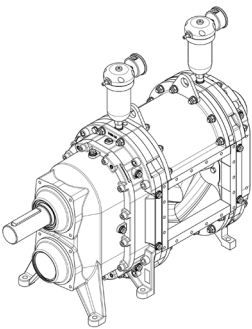


Type	Stroke volume	Max. capacity*		Max. pressure	Max. speed	Max. shaft deflection
	l/rev.	m ³ /h	l/min	bar	min ⁻¹	mm/bar
IQ112 series						
81	1.02	55	918	7	900	0.04
114	1.44	78	1,296	5	900	0.08
IQ152 series						
112	2.61	110	1,827	7	700	0.03
158	3.67	154	2,569	5	700	0.08

* Maximum theoretical capacity. In practice, the capacity is normally lower, depending on pressure difference, medium viscosity and pump installation.
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VX series

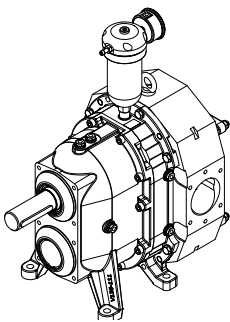
Vogelsang VX series rotary lobe pumps –
proven reliable in the widest variety of pumping tasks



Type	Stroke volume	Max. capacity*		Max. pressure		Max. speed	Max. shaft deflection	
	l/rev.	m³/h	l/min	Q bar	QD bar	min ⁻¹	Q mm/bar	QD mm/bar
VX100 series								
45	0.29	17	290	10		1,000	0.01	
64	0.42	25	420	9		1,000	0.02	
90	0.59	35	590	7		1,000	0.04	
128	0.84	50	840	4		1,000	0.08	
VX136 series								
70	1.27	61	1,016	10		800	0.01	0.002
105	1.90	91	1,520	10	12	800	0.03	0.004
140	2.53	121	2,024	8	12	800	0.05	0.007
210	3.80	182	3,040	5	10	800	0.16	0.016
280	5.06	243	4,048		8	800		0.031
420	7.59	364	6,072		6	800		0.090
VX186 series								
92	3.56	128	2,136	10		600	0.01	
130	5.03	181	3,018	10	12	600	0.02	0.003
184	7.12	256	4,272	8	12	600	0.05	0.008
260	10.06	362	6,036	5	10	600	0.12	0.012
368	14.24	513	8,544	2 (3**)	8	600	0.33	0.028
390	15.09	543	9,054	2 (3**)	7	600	0.40	0.028
520	20.12	724	12,072		6	600		0.069
736	28.48	1,025	17,088		3	600		0.191
VX215 series								
226	15.47	501	8,354	5	8	540	0.10	0.010
320	21.88	708	11,815	2.5	7	540	0.29	0.026
452	30.94	1,002	16,708		5	540		0.063
640	43.76	1,417	23,630		3	540		0.167
VX230 series								
226	13.45	436	7,263	8	12	540	0.05	0.006
320	19.04	617	10,282	5	10	540	0.13	0.012
452	26.90	872	14,526		8	540		0.029
640	38.08	1,234	20,563		6	540		0.073

* Maximum theoretical capacity. In practice, the capacity is normally lower, depending on pressure difference, medium viscosity and pump installation.
We would be happy to configure the best rotary lobe pump for your application with the help of our computer-assisted sizing software.

** Not in continuous operation.



VY series

Versatile and powerful

Type	Max. pressure	Max. flow rate*	Max. speed	Max. temperature
	bar	m ³ /h	min ⁻¹	°C
VY100 - 45Q	10	18	1,000	200
VY100 - 64Q	9	25	1,000	200
VY100 - 90Q	7	35	1,000	200
VY100 - 128Q	4	50	1,000	200
VY136 - 70Q	10	60	800	200
VY136 - 105Q	10	90	800	200
VY136 - 140Q	8	120	800	200

* Maximum theoretical capacity. In practice, the capacity is normally lower, depending on pressure difference, medium viscosity and pump installation.
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