



# MODULAR 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 jobs, for the most part, are highly demanding tasks. Even with a well-engineered, sturdy and powerful pump technology it is a complex task to pump. Fibers, clumping and foreign matter as well as chemical properties can damage pumps and, in the worst case, could bring the plant to a complete stillstand. This creates frustration and on the other hand costs time and money – which is why it is worth making a provisional cost/benefit assessment of a pump each time a new acquisition is made.

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

## VX series

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**VX100**  
The small one



**VX136**  
The compact and universal one



**VX186**  
The sturdy, strong one



**VX215**  
The powerful one



**VX230**  
The high-performance one

## IQ series

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**IQ112**  
The universal one



**IQ152**  
The high-performance one

# 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.

### Tough all around

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

### Compact and space-saving

These compact pumps can be integrated into any system – even in very narrow 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, or a compact saddle design with a belt driven 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 and 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.



Service and maintenance friendly:  
The VX and IQ series rotary lobe pumps

**Speak to our specialists to determine which rotary lobe pump design is best for you!**



#### **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 resistance to dry running
- Resistant to foreign matter thanks to the innovative InjectionSystem
- Economical operation thanks to high efficiency and pulsation-free HiFlo lobes
- Maintenance and service-friendly. Lower downtimes optimize operational efficiency

# 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 feared blockages or downtime. Durable stainless steel rotary lobe pumps are used to handle chemically aggressive potato pulp, to ensure a safe, trouble-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 sugar production, whether from beets or sugar-cane, users benefit from the pumps' resistance to dry running and their ability to transfer even highly viscous and abrasive media. During the constant but gentle pumping process (thanks to the pulsation-free HiFlo lobes), the crystals are hardly damaged, which increases the efficiency of the overall system. At the same time, the work required for servicing and maintenance is considerably less compared to 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

Thanks to the 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 a saddle 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 is reliably evacuated from the pipes that have run empty.

### **Economical transportation of sewage sludge**

Tankers equipped with rotary lobe pumps can be filled with sewage sludge faster and more complete – 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. Thanks to the delivery rate that is proportional independent of pressure, the pumps can be varied simply. Therefore is for membrane dfiltration systems one pump enough to filter and flush 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 saddle design are ideal. Their reversible flow direction means that all tasks can be carried out 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 of pumps with innovative features specially designed for biogas plants has enabled them to become successful in the industry worldwide. Thousands of biogas plant operators profit from unrivaled efficiency and ease of maintenance.

## **Digester feeding and agitation**

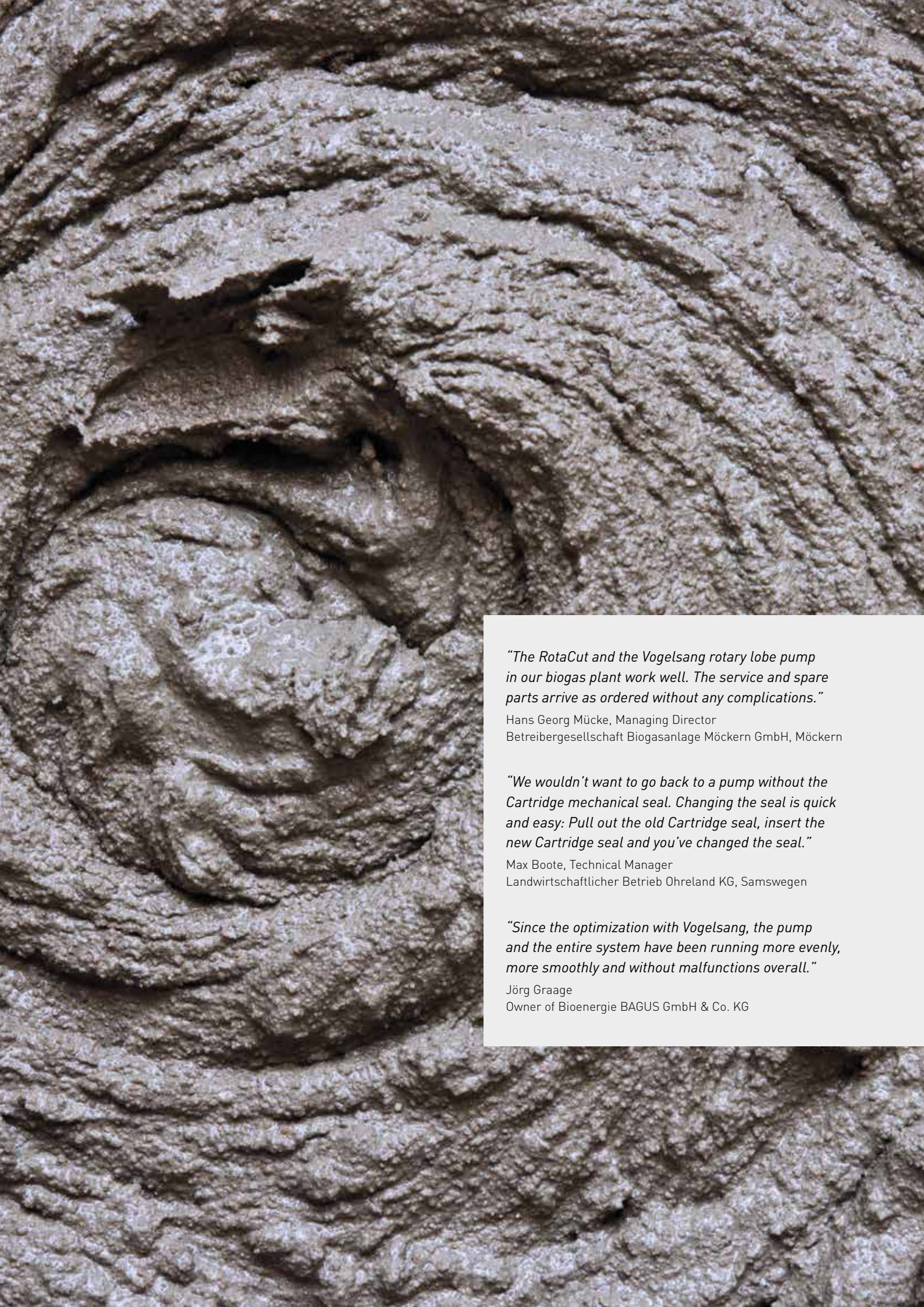
For decades now, VX series rotary lobe pumps in particular have supported the economical and trouble-free operation of biogas plants, either by pumping liquid manure, grease and other liquid media directly into the digester or by the reliable feeding of mashing tanks and equipment. They conduct recyclate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

## **The all-rounder**

Because they even suck media that is loaded with foreign matter without causing any blockages, while evacuating the 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 are due to their design, space-saaving and 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

# ESTABLISHED ROTARY POWER PACK

The adaptable VX series  
for task-oriented pumping



VX230 rotary lobe pump

Vogelsang VX series rotary lobe pumps handle the widest variety of media from low-viscosity to highly viscous, abrasive or aggressive types. The worldwide used, easy to maintain VX series pumps are available in five models. Depending on the application area and power requirements, there are up to eight sizes, virtually for every delivery rate and every differential pressure.

Each individual pump is configured according to the application. The housing and lobe material, coating of interior or construction type and drive type are coordinated individually to the requirements of the media to be pumped.

As well as liquid manure and wastewaters, they also pump semi-solid or sticky substances from the food industry as well as chemically aggressive media effectively and economically – without any impairments to performance.

#### **Faster access for less maintenance work**

Thanks to the QuickService design, you only need to open the cover to easily access the pump chamber. Wearing parts can be replaced in the blink of an eye without completely removing them from the pipe and disassembling the pump. For more stability when working with high pressures, the QD version with third support bearings in the cover is placed.

#### **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

## **Special designs**

Upon request, we can also develop special designs in-house to meet your specific requirements. For example:

- Multi-chamber pumps
- Long-shaft pumps
- Submersible pumps
- Mobile pump units
- Combinations of drives
- TA Luft-compliant\*\*
- ATEX-compliant

\*\* TA-Luft is the German air pollution control regulation



Pump housing segment with Injection\*\*\* module



Radial wear plate

\*\*\* For more information on the innovative InjectionSystem, see page 24.

#### **Advantages of the VX series**

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

# VX SERIES ROTARY LOBE PUMPS

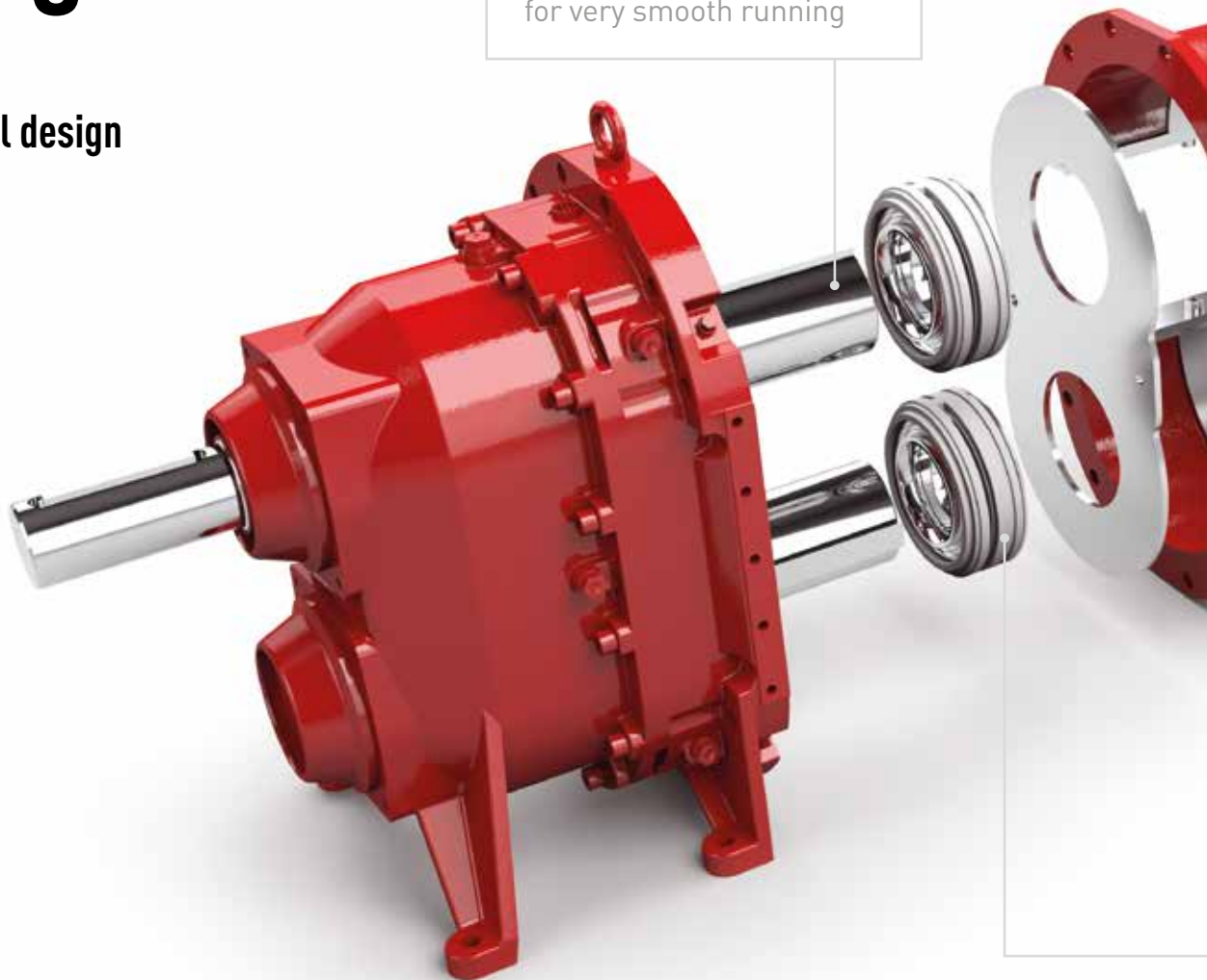
Perfection,  
from technical design  
to service

## Adjustable pump housing segments

Optimum utilization  
of materials for  
prolonged service life

## Break-proof shafts

Maximum shaft diameters  
for very smooth running



## Up to 37% less weight

For greater payloads in vehicles



The image shows an exploded view of a rotary lobe pump assembly. The main components are arranged from left to right: a red inlet/outlet flange, a black rotor with three lobes, a silver-colored axial wear plate, a red radial wear plate, and a red housing. Callout boxes with leader lines point to various parts, providing technical details about the pump's design and maintenance features.

### HiFlo lobes

Pulsation-free pumping for very smooth running

### QuickService design

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

Unique! The first integrated foreign matter protection for rotary lobe pumps paired with greater internal sealing

### Quality Cartridge mechanical seal

Professional sealing technology for maximum reliability

### Component-based design

Major savings from single part replacement

### 100% renewal of the pumping chamber

Capacity like on the first day of use – after replacement of medium-affected parts

# TOUGH PARTS INTELLIGENTLY COMBINED

## VX series housing concept and types of construction

The VX gearbox housing is a compact, rigid part that provides a long life for the bearings and gearbox. Just a minimal distance separates the bearings and lobe, minimizing both shaft deflection and wear during start-up. This compact design guarantees quiet running, a high degree of efficiency and effective pumping.

### Housing features and options

To offset any traces of wear, the housing segments of the VX pumps can be readjusted simply, without integrating additional parts. Single pump housing segments can be replaced if required. Only the Vogelsang rotary lobe pumps give you the opportunity to equip the pump chamber with radial wear plates made from special highly wear-resistant steel e.g., Hardox®, in addition to the present axial wear plates. 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.

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.

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

#### Vogelsang VX-Q – QuickService pumps

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 – QuickService pumps

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.

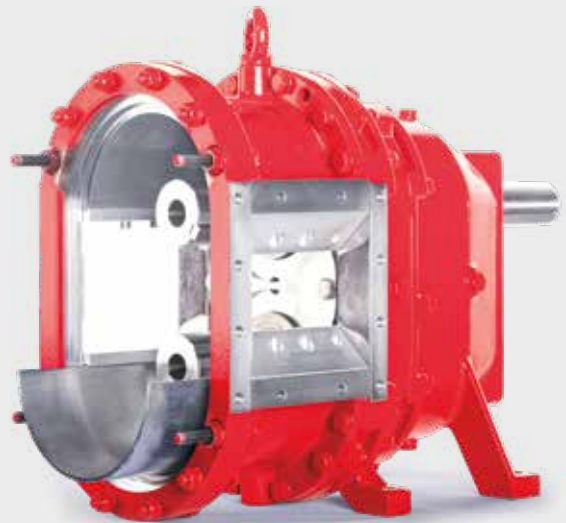




Vogelsang VX-Q – QuickService pump



Vogelsang VX-QD – QuickService pump with third flange bearing



#### **QuickService housing**

Very straightforward maintenance is a priority at Vogelsang, so everything is handled on-site without dismantling the pump from the pipe. Even the radial wear plates are clamped and fixed using modules, which are also available in the InjectionSystem\* design, and can, therefore, be replaced quickly and easily.

\* For more information on the innovative InjectionSystem, see page 24.

# SERVICE AND HANDLING MADE EVEN EASIER

The highly economical IQ series  
for maximum performance  
with less effort



IQ112-114 rotary lobe pump



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

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 dismantled 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 m<sup>3</sup>/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**

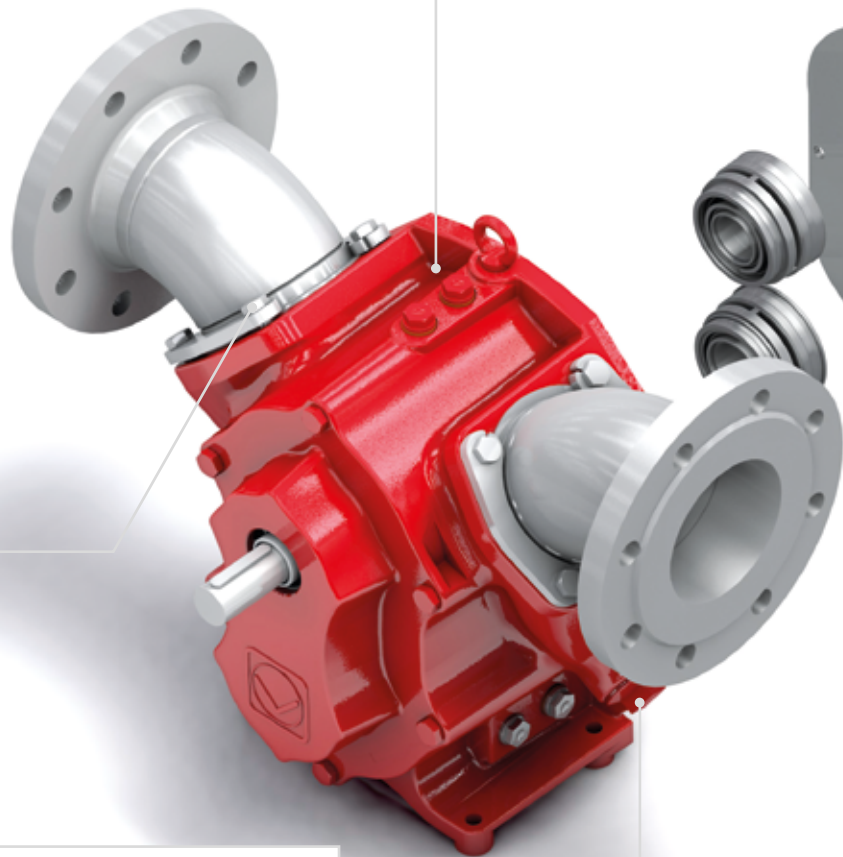
Protection from dry running and powerful suction due to provision of fluid reservoir and innovative gearbox housing

## **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



### **Wear plates**

Straightforward replacement involving less maintenance work and minimum downtime

### **QuickService design**

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

### **InjectionSystem**

Unique! 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

### **Innovative design**

The IQ series, which is based on just a few individual elements, makes maintenance easier and saves on spare part costs

### **Save time and money each day**

The intelligent design with flexible connectors and adaptive pump capacity makes installation easier and guarantees efficient operation





### **Innovation – a question of details**

The wide range of applications for rotary lobe pumps comes down to the competence of Helmut Vogelsang alone, cause he ws the onle who came up with the idea of cladding lobes with a rubber layer.

The currently used HiFlo*plus* 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

### 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 double-wing 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.

### The right 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.

### Vogelsang lobes are ideal for the following media, among others

- **NBR** (sewage sludge, mineral oil products, biogas plants, grease)
- **NBR, white** (food)
- **SBR** (liquid manure)
- **EPDM-SL** (water, acids, lyes)
- **EPDM-AL** (drinking water)
- **EPDM, white** (food)
- **CSM** (gasoline, oil, acids, alkaline solutions)
- **FKM** (saltwater, solvents, acids, alkaline solutions, chemicals)
- **PU** (extremely abrasive media)
- **Stainless steel** (aggressive media, food, higher temperatures)
- **Steel, nitrided** (abrasive media, higher temperatures)



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.

### 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

# A SAFE WAY TO PUMP MORE

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

## InjectionSystem

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.

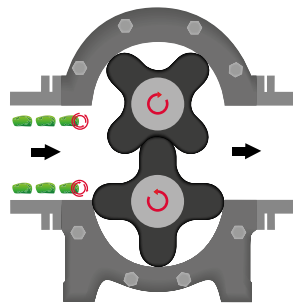
The principle is ingeniously simple. It prevents damage to the lobe tips by foreign matter, as the innovative geometry of the housing facilitates problem-free flow through the pump. The internal sealing of the pump is also improved. That increases not only its efficiency, but also its suction capacity.

### We offer you the following equipment variants

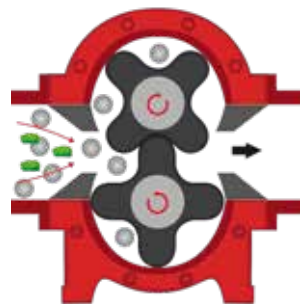
- Injection S for pumping easily flowing fluids containing foreign matter
- Injection A for pumping fluids with coarse foreign matter or viscous media with lots of foreign matter

### The advantages at a glance

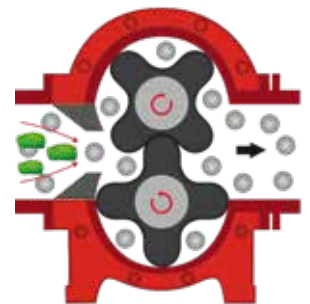
- Significantly improved resistance to foreign matter
- Increased efficiency and improved suction capacity through optimized volumetric efficiency
- Significantly extended service life – up to 2.5 times longer in field trials



**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



## Quality Cartridge mechanical seal

### 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

Each application has other requirements. 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.

### The advantages at a glance

- Easy and safe change of seal: prevents installation errors
- Installation takes less time than when changing conventional seals
- Automatic activation of shaft seal
- Comprehensive range of features and options in the same construction element

\* TA Luft is the German air pollution control regulation.



Quality Cartridge mechanical seal



Rotary lobe pump with InjectionSystem



# SOPHISTICATED CONCEPT, QUICK REPLACEMENT OF PARTS

## Maintenance and service with Vogelsang rotary lobe pumps

We never lose sight of real-world practices when we are developing our products. That is why we have always built machines that allow you to work in an uncomplicated and economical way. Our pump designs and the comparatively low number of spare parts reduces the effort for service and maintenance, helps lower costs and ensures a high level of availability – a MUST for modern companies faced with pressure from rising costs.

### How to disassemble a VX pump

- 1 **Open the cover:**  
Unfasten four nuts, remove the cover and you have free access to the pumping chamber. If necessary, you can also replace the wear plate of the cover at this stage.
- 2 **Dismount the rotary lobes:**  
Unfasten the strain bolts, remove the pressure discs on the lobes. Then place the puller on the lobes and dismount them.
- 3 **Remove the wear plates:**  
After you have removed the lobes, all you have to do is remove two screws and you can remove the wear plate at the gearbox side.
- 4 **Remove the Quality Cartridge mechanical seal:**  
Using a simple pull-out device, you can now pull out the Cartridge mechanical seal and then replace it just as easily.
- 5 **Assembly:**  
Insert the wear plate at the gearbox side, fasten it with two screws, install the lobes and fasten them on the shaft with pressure discs, and put the cover in place.

### How to dismount an IQ pump

- 1 **Open the pumping chamber:**  
Simply unfasten a few screws, remove the pump cover and you have free access to the rotary lobes. This makes it quick and easy to inspect both the lobes and the pump cover itself. If necessary, you can also replace the wear plate in the pump cover.
- 2 **Dismount the rotary lobes:**  
Unfasten the strain bolts, remove the pressure discs on the lobes, place the puller on the lobes and dismount them.
- 3 **Remove the wear plates:**  
After you have removed the lobes, all you have to do is remove two screws and you can remove the wear plate at the gearbox side.
- 4 **Remove the Quality Cartridge mechanical seal:**  
Using a simple pull-out device, you can now pull out the Cartridge mechanical seal and then replace it just as easily.
- 5 **Assembly:**  
Fix the wear plate at the gearbox side with two screws, install the lobes and fasten them on the shaft with pressure disks, fit the pump cover and screw it in place.



## Vogelsang pumps for all applications



Rotary lobe pump installed  
on an industrial trailer



Mobile and portable pump unit with IQ series rotary  
lobe pump. Powered via directly flanged-in electric motor



VX series rotary lobe pump on a special base for mounting  
on municipal vehicles. Powered via Cardan shaft or oil motor

**Ask us today. We will be happy to advise you  
and help you find the optimal type of installation  
for your needs.**

# 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 unlimited. 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 and independent on a hand cart or trailer – a suitable Vogelsang pump is available for every option.

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

# Mature technology for future-compatible, economical handling of fluids of all types



**VX Series and IQ Series**

Elastomer-coated rotary lobe pumps in uniquely compact type of construction. Particularly versatile and economical due to its self-priming, easy-to-maintain design that is resistant to foreign matter as well as its constant performance and reliability.



**CC Series®**

Progressive cavity pump for pumping highly viscous and abrasive media as well as those with high foreign matter content. Its unique design sets new standards for maintenance: The rotor and stator are easily and quickly replaced as a unit.

## Pumps and more!

Besides rotary lobe pumps of the VX and IQ series, Vogelsang offers a wide range of innovative products and system solutions, which make the pumping, shredding and treatment of liquid or near liquid media easier and adapted to your needs. Robust and reliable technology, the key features of which comply with Vogelsang pumps: compact design, long service life and easy to repair and maintain.



**XRipper®**

Grinder for efficiently shredding disruptive matter in wastewater and liquid media. Available in special types of construction for inline assembly in pipes, in open sewers and ducts or intake or inflow structures.



**RotaCut®**

Macerator and heavy material separator in one. Reliably separates foreign matter such as stones or metal parts and effectively macerates fibrous and coarse matter in liquid media, thereby ensuring more homogeneous and flowable suspensions.



**PreMix®**

The universal 4-in-1 solid matter feeder. Separates foreign matter, optimally treats wide range of substrates; chops down coarse and fibrous content and feeds several digester with optimally treated suspension.



**BioCrack® II**

The electrokinetic disintegration method. Ideal for lowering operating costs and increasing efficiency through higher gas yields and the reduced energy requirement of pumps and mixers.



**DisRuptor**

Flexible and efficient mechanical disintegration through adjustable functional unit. Reduce the viscosity and prevents floating layers, thereby lowering the operational costs of pumps and mixers and increases the gas production.

# 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
- Solids reduction, separators and mixers
- Spreading technology
- Supply, disposal and cleaning

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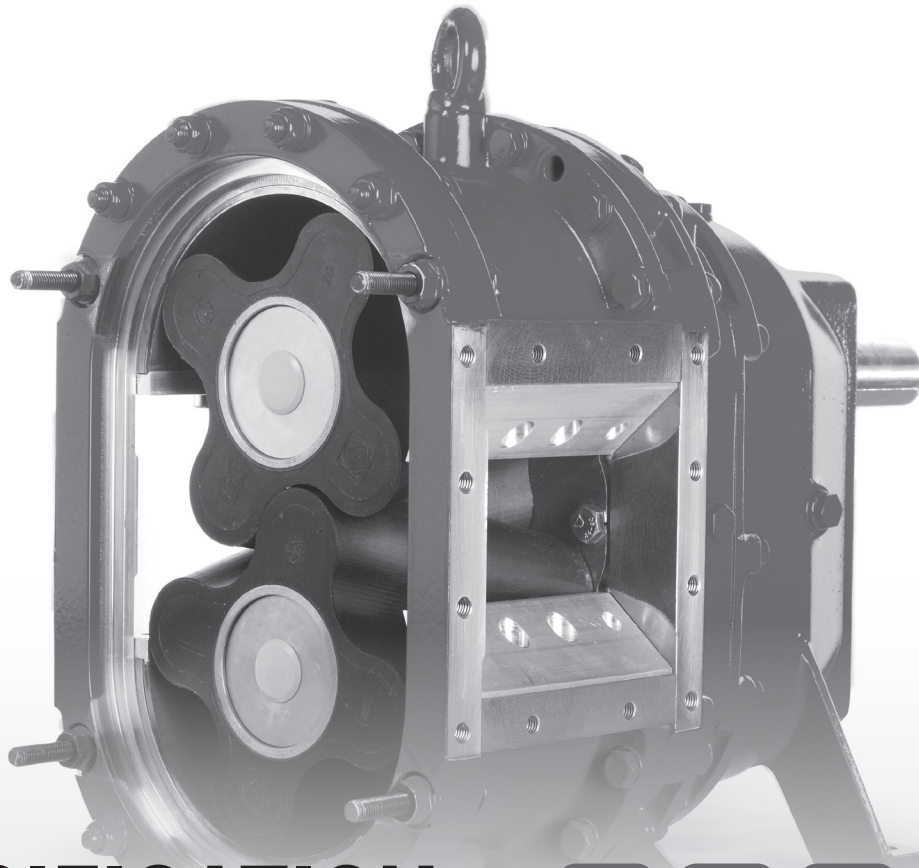
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# SPECIFICATION



# MODULAR PUMP TECHNOLOGY FOR ALL REQUIREMENTS

Vogelsang rotary lobe pumps  
and their application areas

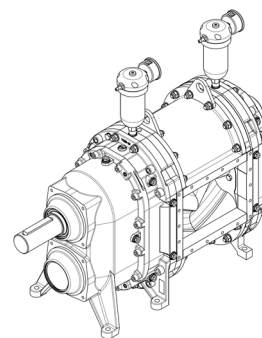
VOGELSANG – LEADING IN TECHNOLOGY

**VOGELSANG**



# VX series

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

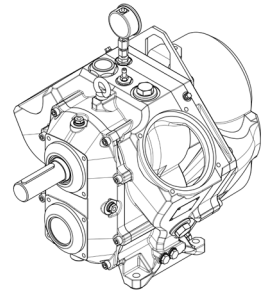


Type	Stroke volume	Max. capacity*		Max. pressure		Max. speed	Max. shaft deflection	
		l/rev.	m <sup>3</sup> /h	l/min	Q bar		QD bar	Q mm/bar
<b>VX100 series</b>								
45	0.29	17	290	10		1,000	0.01	
64	0.42	25	420	9		1,000	0.02	
90	0.59	35	590	7		1,000	0.04	
128	0.84	50	840	4		1,000	0.08	
<b>VX136 series</b>								
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
<b>VX186 series</b>								
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	8	600	0.33	0.028
390	15.09	543	9,054	2	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
<b>VX215 series</b>								
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
<b>VX230 series</b>								
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.

# 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 <sup>3</sup> /h			
<b>IQ112 series</b>						
81	1.02	55	918	7	900	0.04
114	1.44	78	1,296	5	900	0.08
<b>IQ152 series</b>						
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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