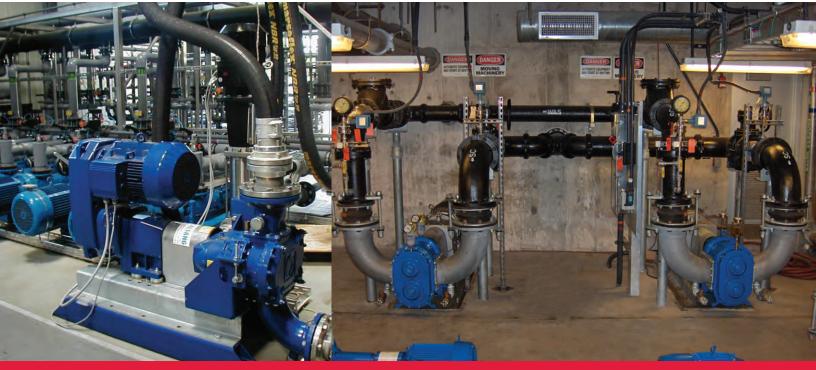


HIGH PERFORMANCE PUMPS DESIGNED FOR TOUGH APPLICATIONS

VX Series Pumps

Rotary Lobe Pumps Designed for Abrasive and Viscous Liquids





ROBUST, RESILIENT, RELIABLE!

High Performance Pumping, Easy Inline Maintenance

Vogelsang offers the premier positive displacement pump in the wastewater market. Due to the nature of our rotary lobe pump, our exclusive lobe design, most types of wastewater sludge can be pumped throughout your system with ease as compared to progressing cavity, centrifugal and other rotary lobe pumps. Our products are built to pump thick and abrasive sludge with no pulsation. Vogelsang pumps offer quick and easy access to the wet end for inline repair without disturbing connected piping.

HiFlo® VXQ series VX100, VX136 & VX186



ROBUST, RESILIENT, RELIABLE!

The VX HiFlo Rotary Lobe Pump Product Line

Vogelsang offers a full line of Rotary Lobe Pump models to suit various applications and operating conditions. The VX HiFlo® Q Series is our standard design and works well in most wastewater applications requiring a positive displacement pump. For increased flow and medium pressure, we offer the VX HiFlo® QD series which features a much larger wet end and outboard bearing configuration to eliminate deflection. For high flow and high pressure applications, the Marathon QDM2 Series handles pressures to over 200psi in a two stage outboard configuration.

All Vogelsang pumps can run dry without damage, self prime and run in forward or reverse. Vogelsang pumps are great for suction lift applications up to 25'. Due to our convoluted HiFlo® Lobe design, the pump delivers pulsation free pumping action making it ideal for applications such as dewatering feed.



HiFlo® VXQ Series VX136



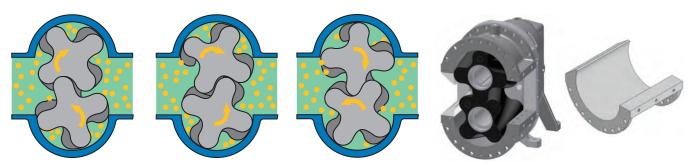
HiFlo® VXQD Series VX186

HiFlo[®] VXQDM₂ Series

How the Rotary Lobe Pump Works

Two intermeshed lobes are affixed each to gear driven shaft. The shafts rotate in opposite directions. The rotating motion of the lobes creates an expanding cavity on the suction side. This allows fluid to enter and fill the suction side of the pump. The rotors carry the fluid around the housing to the discharge side where it is expelled out of the pump by the closing cavity.





Hard solids are passed through the pump within the cavities between the lobe and outer housing. Vogelsang offers a true unique solids passing design, all build into our Dynamic Injection housings. This design allows for solids passing, without damage to the lobes, and extends operation life. The Vogelsang pump can pass most any solid that can fit in the cavity. Maximum non-compressible solid size varies by pump model up to 2.5".

IT'S ALL ABOUT THE LOBES

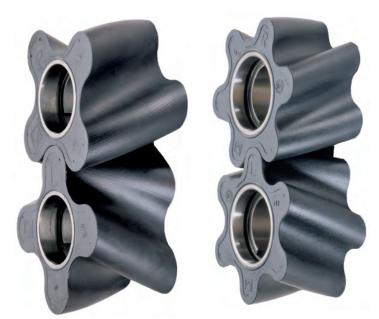
Pulsation Free, High Abrasives & Low Shear

The state of the art in positive displacement pumps. The HiFlo Lobe has increased capacity compared with former lobe designs while eliminating pulsation. The convoluted design of the HiFlo® Lobe provides a large cavity

that's perfect for harsh and abrasive sludge. This design also makes it possible to achieve a required pressure at a slower rpm which results in less damage to lobes and minimal wear to the rest of the pump.

The gentle pumping action of the HiFlo Lobe is also friendly to shear sensitive liquids. This also applies to applications where large amounts of entrained air is present in the liquid.

Vogelsang offers six wing lobe options in the VX100 series and four wing for the VX136 & VX186 series. There are several elastomer options for maximum chemical compatibility, abrasiveness and temperature requirements.





Maintenance is performed in place without disturbing connected piping

Wear resistant internal plates maximize pump life and reduce service downtime.

Robust Cartridge or Component Mechanical Seals provide long lasting protection of the buffer chamber and gearbox. Both Single and double mechanical seals are available. Seals can also have an air gap if required by the application, and also be water flushed if required.

No step down shafts. We have maximized the diameter of our shafts to prevent wear lobes, seals and bearings caused by shaft deflection. **The lowest shaft deflection in the industry!**

HiFlo rotary lobes provide pulsationfree pumping and adjustable housing segments allow for low cost wetend repairs & routine service.

Adjustable housing segments provide an accurate gap between the lobes and housing to minimize wear and maximize efficiency. Our housings come standard with grey cast iron, and also available in tungsten carbide for high wear applications. We also have designs with radial liners, and advance housing designs to assist solids passing.

QUICK & EASY INLINE MAINTENANCE

VX Pump Series Performance Specifications:

Model		Capacity gpm	m3/h	Displacement gal/100rev		Max. So in	olids mm	Flange in	Size mm	Max Pre Q: psi	essure bar	QD: psi	bar	Max. Speed rpm 1/min
VX100												QD. P31	Bai	
VX100	45 64	13-57 22-84	3-13	7.7 11.1	29	.79	20 20	2.5	65 80	145	10			1000 1000
	90	22-04 26-1114	5-19 6-26	15.6	42	.79	20	3.0 4.0	100	131 102	9			1000
	90 128	40-167	9-38	22.2	59 84	.79	20	4.0 4.0	100	58	7			1000
	120	. ,	9-30	22.2	04	.79	20	4.0	100	20	4			
VX136	70	44-198	10-45	33.5	127	1.57	40	4.0	100	145	10	174	12	800
	105	66-308	15-70	50.2	190	1.57	40	4.0	125	145	10	174	12	800
	140	88-396	20-90	66.8	253	1.57	40	6.0	125	116	8	174	12	800
	210	132-616	30-140	100.4	380	1.57	40	6.0	150	73	5	145	10	800
	280	176-793	40-180	133.7	506	1.57	40	6.0	150			116	8	800
	420	264-1233	60-280	200.5	759	1.57	40	6.0	150			87	6	800
	140M2	44-198	10-45	33.5	127	1.57	40	6.0	125			232	16	650
	210M2	66-308	15-70	50.2	190	1.57	40	6.0	150			232	16	650
	280M2	88-396	20-90	66.8	253	1.57	40	6.0	150			203	14	650
	420M2	132-616	30-140	100.4	380	1.57	40	6.0	150			174	12	650
VX186	92	88-440	20-100	94.0	356	2.40	61	6.0	125	145	10	174	12	600
	130	132-638	30-145	132.9	503	2.40	61	6.0	150	145	10	174	12	600
	184	176-881	40-200	188.1	712	2.40	61	6.0	150	116	8	174	12	600
	260	264-1277	60-290	265.8	1006	2.40	61	8.0	200	73	5	145	10	600
	368	352-1761	80-400	376.2	1424	2.40	61	10.0	250	44	3	116	8	600
	390	396-1915	90-435	398.6	1509	2.40	61	10.0	250	44	3	102	7	600
	520	528-2554	120-580	531.0	2012	2.40	61	10.0	250			87	6	600
	736	704-3522	160-800	752.4	2848	2.40	61	14.0	350			44	3	600
	184M2	88-440	20-100	94.0	356	2.40	61	6.0	150			232	16	600
	260M2	132-638	30-145	132.9	503	2.40	61	8.0	250			232	16	600
	368M2	176-881	40-200	188.1	712	2.40	61	10.0	250			203	14	600
	520M2	264-1277	60-290	265.8	1006	2.40	61	10.0	250			174	12	600



APPLICATIONS

Wastewater

Vogelsang pumps are widely specified for common wastewater applications. Typical applications include: Primary & Secondary Sludge, Digested & Thickened Sludge, WAS, RAS & TWAS, Sludge Transfer, Dewatering, Scum & Septage. Our pumps are specified because they are built to handle thick sludge that contains grit, abrasives and debris often found in wastewater sludges. Our pumps provide an even, pulsationfree flow of liquid which makes them ideal for transferring sludge and feeding dewatering equipment such as Belt Press, Centrifuge and Screw Presses. In DAFT applications we provide a slower operating pump that can handle excessive air through the pump, along with other floatable debris such as hair and rags.

Industry

A majority of industrial clients use Vogelsang pumps for transfer, or process pumps throughout their plants. Our small & compact design provides a pump that can be installed in a variety of ways such as in-line, belt drive, hydraulic and even cart mounted. Processes requiring pumping liquids such as ceramics, bentonite, oils, chemical wastes, molasses, paraffin, paints, and even wines & juices use Vogelsang pumps due to their high quality and smooth pumping action. Vogelsang's unique pump designs can be provided in several materials to match the customers application to get them the best possible life from the pump in the specific application. Materials such as Cast Iron, 316 Stainless, Duplex Stainless, Super Duplex Stainless can be chosen to suit your requirements.

Biogas

Vogelsang offers pumping configurations specifically suited for biogas applications. Our pumpsare popular in biogas for many of the same reasons they are successful in wastewater - such as digester and dewatering feed. In biogas, we offer arraystyle piping arrangements where we can perform digester feed and recirculation for several digesters using a single pump assembly. Our pumps feed and recirculate disgesters with the ability to pass gas from the fluid without causing damage to the pump. Since our pumps can run dry for short periods of time, we can continue pumping without burning up costly materials. Our easy to maintain pump design keeps your plant up and running with minimal downtime.





APPLICATIONS

Food Processing

The unique geometry of the Vogelsang rotary lobe pump design ensures a gentle pumping action that will not damage your products. Typical food products include handling tomatoes, potatoes, juice, grapes or pastes. Vogelsang pumps are commonly chosen for food applications such as Transfer, Centrifuge Feed or Thickening, Waste and Mash & Peel. Each application has its challenges but the overall factors for specifying Vogelsang are: low shearing, zero pulsation, high solids handling lobe design provides unmatched quality to our process. We also have the ability to pump both forward and reverse so a single pump can be used for multiple purposes without a dedicated pump or complicated valve structure.

Mining

Our pumps have been widely chosen for handling abrasive slurries, pumping silica suspensions up to 85% solid by weight. Transferring tailings including particles up to 5mm in diameter, our pumps help recover wate materials that are used to mine metals such as gold, platinum, vanadium, nickel, coal, copper kaolin, trona and uranium.

Our pumps are maintained inline without removing connected piping. Removing a few bolts allows replacemebt of wear parts in under an hour. The advantages include reduced manpower and low cost spare parts.

Vogelsang pumps also have applications in various tailings, natural kaolin, acid slurry, platinum waste, ammonia metavanadate slurry, thickener underflow, flocculent, and dewatering to be more specific.

Oil & Gas

Our pumps have been designed for use in a variety of oil-related pump applications and are able to pump a wide range of viscous liquids that contain heavy abrasives and solids, or refined clean materials.

Typical applications for Vogelsang pumps including Barge Loading, Drilling Fluids, Tank Cleaning, Transfer, Centrifuge Feed, Offloading, Tanks Stripping. In addition, Vogelsang is chosen by many OEM Environmental Cleanup Equipment manufacturers for Skimming, Side Collectors, Transfer and Offloading. Vogelsang pumps are widely specified due to their small size, high capacity and ability to handle tough operating conditions.



Our company

Innovation and progress have been hallmarks of Vogelsang for over 80 years and have made us a leading designer and manufacturer of pumping, solids handling and process products. Time and time again we have achieved significant milestones of innovation and product development. Today, we manufacture some of the most innovative and reliable products for municipalities, industry and agriculture.

Our products are proudly made and assembled in Ravenna, Ohio, USA.



Our product range

We offer solutions for the following areas:

- Industry & Processing
- Wastewater treatment
- Biogas
- Railway wastewater disposal
- Agriculture

We offer a broad range of products:

- Rotary lobe pumps
- Grinding technology
- Distributors
- Spreading technology
- Supply and disposal systems
- Complete solutions

We also offer customized solutions for your specialized applications.

vogelsangusa.com

How to reach us

Vogelsang is present worldwide. Visit us online for more information about our company and wide range of services:

Vogelsang

7966 State Route 44 • P.O. Box 751 Ravenna, Ohio 44266, USA

Toll Free: 800.984.9400 Tel: 330.296.3820 Fax: 330.296.4113 www.vogelsangusa.com sales@vogelsangusa.com



RotaCut[®] Inline macerator cuts and separates damaging solids suspended in liquid process stream.



HiFlo[®] Rotary Lobe Pump Designed to handle viscous liquids and tough solids.



BioCut[®] Pump & RotaCut[®] combines the power of both products into one compact unit.



RotaCut[®] RCX48 & RCX58 Inline macerator offers higher pressure, lower headloss and maximum solids reduction.



Low-maintenance, drop-in alternative to other inline twin shaft grinders.



XRipper[®] XRC with SIK Dry Solids & Slurry Mixing System creates optimum slurry mixtures for maximum gas output.