

ROTARY LOBE PUMPS

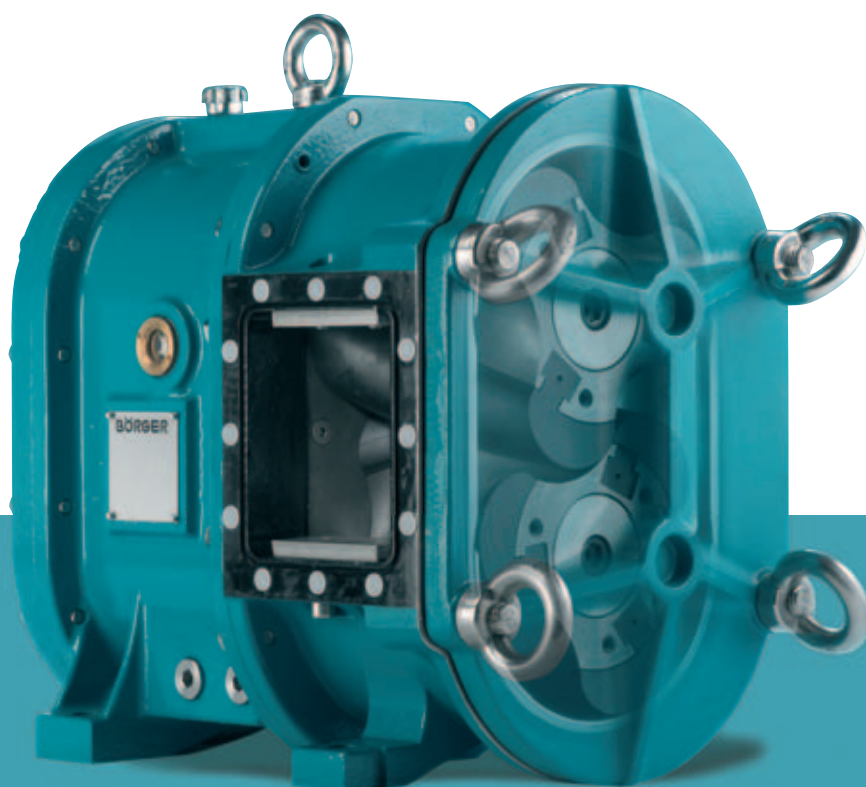
MACERATING TECHNOLOGY

SOLIDS FEED TECHNOLOGY

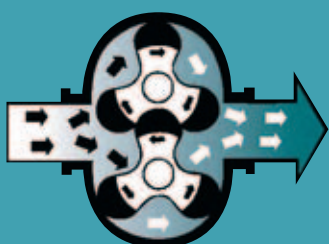
The Boerger Concept: Focus on Innovation



The Boerger Concept: Focus on Flexibility



Rotary Lobe Pumps are self-priming, valveless positive displacement pumps. The screw rotor enables pulsation free and low shear operation. The pump rotation is reversible.



The newest development from Boerger: The **Optimum Rotor**. The heavy-duty lobe heads incorporate long sealing lines to the pump casing and between the rotors. Slip is reduced to a minimum. Especially pump units in abrasive applications benefit from the Optimum Rotor. The modular design and the high manufacturing standards of Boerger Rotary Lobe Pumps make it possible, that most models in the field can be upgraded to the new Optimum Rotor.



Boerger is synonymous for Rotary Lobe Pumps. The simple and ingenious principle of a self-priming, valveless positive displacement pump found its marketplace in all industries. 17 pump models in five series with flow rates between 0,5 – 1,250 m³/h (2.2 – 5,500 usgpm) build the base for your individual pump application: The variety of components and materials of construction enables Boerger to supply an optimized pump to each customer. Rotor shapes and / or tips, elastomer coatings, shaft seals and materials of the pump casing and protection plates are all chosen depending on the pumped fluid.

Boerger Rotary Lobe Pumps are constructed following our MIP- Design criteria. MIP (Maintenance In Place) ensures optimum maintenance friendliness. All fluid wetted parts can be quickly maintained and replaced when necessary by your own staff – without the removal of pipe or drive system. Quick, Easy and Cost Effective.



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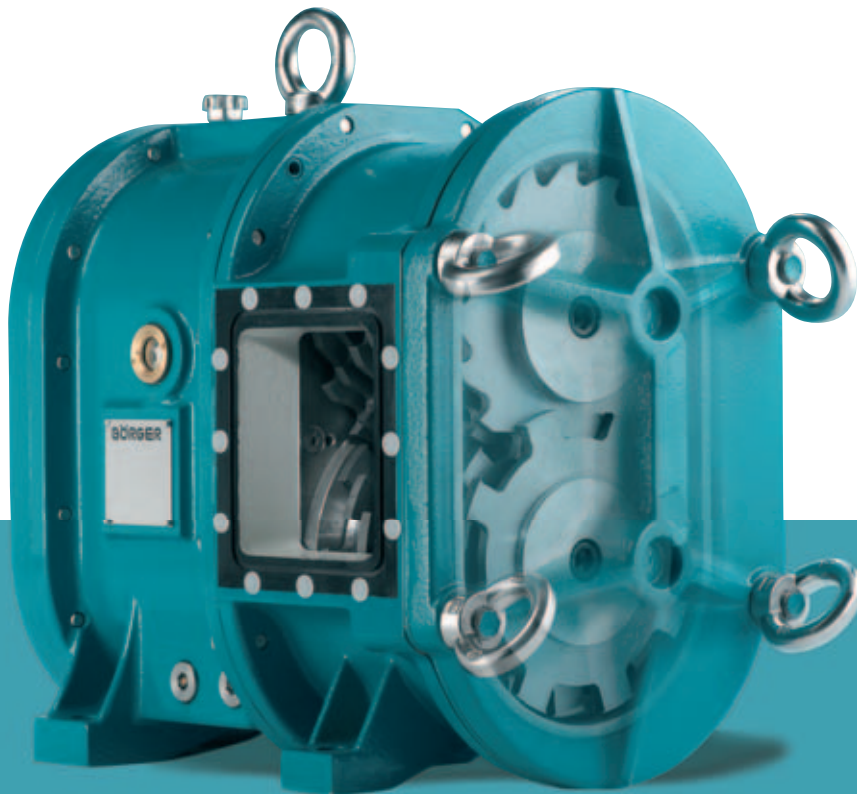
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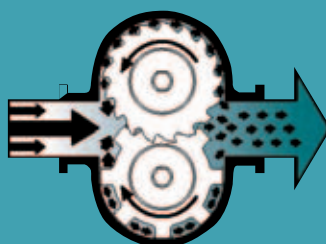
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- 1 Börger Model FL 518 installed in high pressure sewage lift station
- 2 Reversible Börger Model PL 200 in Membrane Bio Reactor (MBR)
- 3 Parallel Pump operation, used individually or together
- 4 Börger Model FL 776 positioned under storm basin

The Boerger Concept: Focus on Power



The Multicrushers are applied in various industries. Especially where debris needs to be reduced to an acceptable and unproblematic solid size for the protection of downstream equipment. Boerger customizes the right blade / cutter combination for your application to achieve the required size reduction.



The Boerger Multicrusher is an effective, widely applicable twin shaft macerating machine for solids and debris laden fluids. The Multicrusher grinds and crushes foreign objects like stringent materials, wood, plastics, skins, textiles etc. and ensures trouble free operation of downstream equipment. The Multicrusher incorporates the same unique advantages of the Boerger MIP-Design as the Rotary Lobe Pumps: MIP (Maintenance In Place) allows the quick and convenient replacement of all fluid wetted parts without removal of pipes, drives or other components of the macerating unit by your own staff.

The optimized shaft distance and the blade / cutter set up performs a strong „Pull-In-Function“. The relative rotation speed of the two shafts ensures an optimized macerating effect and prevents stringy material from wrapping around the blades and cutters.

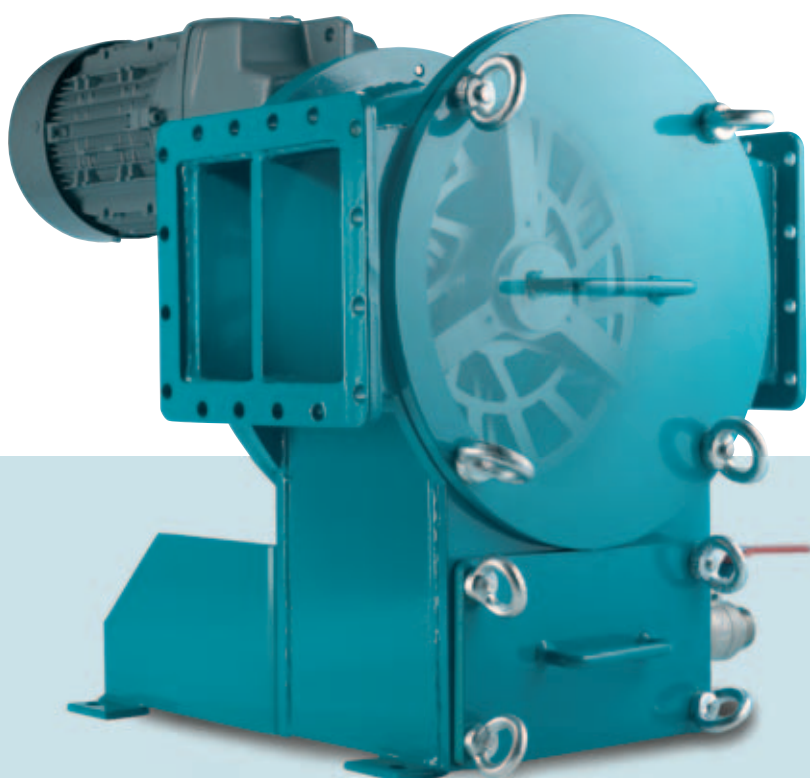


- 1 Pump and Multicrusher combination in biogas plant
- 2 Multicrusher with debris collector in receiving station of WWTP
- 3 Mobile Unit with Pump and Multicrusher combination
- 4 Submerible Pump and Multicrusher combination with hydraulic drive for oil lagoon



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The Boerger Concept: Focus on Quality and Life Cycle Cost



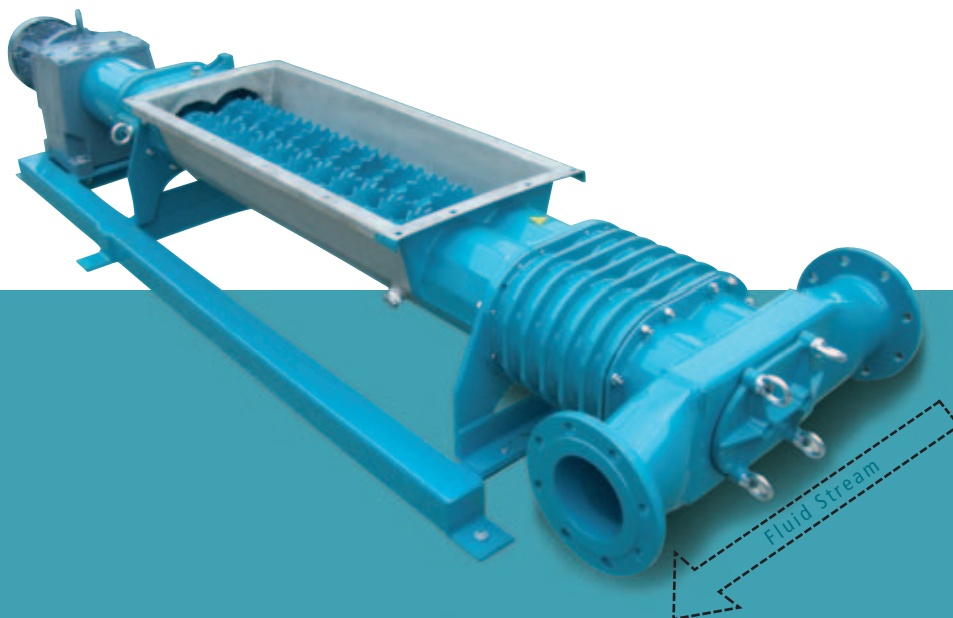
The fluid (normally waterlike sludge and slurries with large debris) is conveyed with a pump unit through the cutterblade of the **Multichopper**. Equipped with knifeheads on both sides of the cutterblade, the Multichopper delivers six cuts per rotation, ensuring reliable maceration of the debris. Large foreign object like rocks or metal parts accumulate in the collection area, which is easily accessible through a large cleaning port.

The Boerger Multichopper is a single shaft macerator with central cutterblade and doublesided knifeheads for solids and debris laden fluids. The Multichopper especially macerates and conditions stringent material in homogenous sludge. The innovative design of the Multichopper with a central shaft clamp construction allows quick and easy replacement of wear parts onsite. The well known MIP-Design ensures, that all fluid wetted parts are quickly maintainable or replaceable when necessary by your own staff – without the removal of pipe or drive system.



Multichopper for Maceration and Conditioning with Rotary Lobe Pump for Centrifuge Feed.

The Boerger Concept: Focus on Performance and Reliability



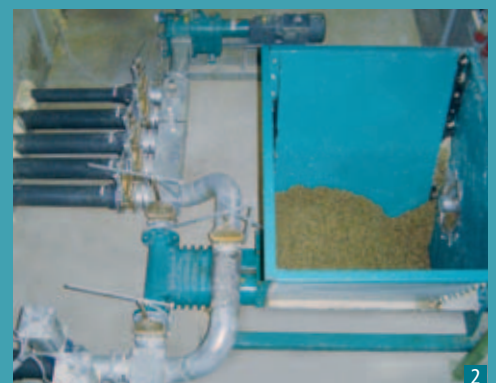
The Powerfeed SSR displaces organic solids and similar materials into a fluid stream. The unit incorporates a Twin Shaft Design with a robust, intermeshing auger pair. The Twin Screw Auger, synchronized and balanced through a heavy duty timing gear, displaces the material smoothly into the fluid backflow preventing SSR Twin Screw Pump. The Twin Screw Rotors are housed in a rubber lined casing.

Boerger offers with the Powerfeed SSR a technology for solids feed into fluid filled pipe systems. The Powerfeed SSR can be installed in various distances from digesters, independent of digester height and type. The operation sequence is simple: Open valves – start up pump – start up Powerfeed SSR. Macerate, pump and solids feed trouble free - simple and ingenious.

The Powerfeed SSR enables a Closed Loop Digestion System. The recirculation flow and therefore the digester are not air exposed with the solids feed operation.



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- 1 Powerfeed SSR with Receiving Hopper
- 2 Central Rotary Lobe Pump with Powerfeed SSR in Biogas Plant

The Boerger Concept: Focus on Improvements



Boerger is known for groundbreaking innovations, designed with operation and maintenance departments in mind. Difficult problem applications in the field and higher technical standards drive our engineering mentality. The Boerger specialty: From the first idea to the finished product, everything is done in house. We are convinced that the concentration of the design and manufacturing process enables the most perfect product. With our engineering and manufacturing capabilities, we set standards in flexibility and customization of individual machinery. The Boerger Team is determined to make things better.

Boerger equipment is applied for sewage / biosolids management in municipal and industrial wastewater treatment plants, biogas plants, general waste disposal, the chemical industry, pulp and paper, starch and sugar mills and the production of paint and coatings. Not to forget the marine industry, ship yards and oil industry on- and offshore. Additionally, we are always exploring new markets and new technology. Boerger continues to deliver customized solutions.



The powerful product lineup with robust rotary lobe pumps and heavy duty macerating technology including SSR Powerfeed is matched with professional consultation, outstanding customer service, on time delivery and superior product quality. The unique MIP-Design (Maintenance in Place) enables easy access to all inner components of the equipment. All fluid wetted parts can be quickly maintained and replaced when necessary by your own staff – without the removal of pipe or drive system. Quick, Easy and Cost Effective.

BÖRGER®
Innovation

Milestones 1975 till 2006

1975 – 1985	Founding period on the regional market
1985 – 1990	Pump development and market introduction
1990 – 1995	Establishment of national presence
1995 – 2000	Establishment of international sales
2000 – 2005	Worldwide sales with currently 7 subsidiaries
2006	Focus on Innovation

BÖRGER GmbH
Benningsweg 24
46325 Borken-Weseke
Germany
Telefon +49 (0) 28 62 / 91 03 - 0
Telefax +49 (0) 28 62 / 91 03 - 46
info@boerger-pumps.com
www.boerger-pumps.com