

WASTEWATER TREATMENT

BÖRGER®

The unique
Rotary Lobe Pump
with MIP!



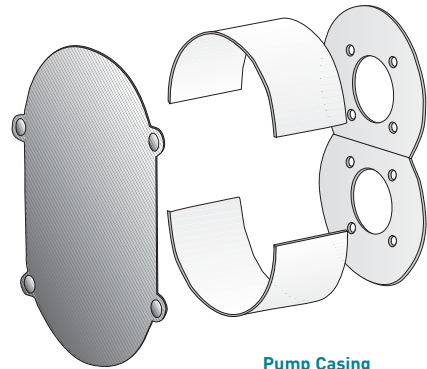
Clean Solutions: Wastewater Pumping Technology from Boerger.

The wastewater industry depends heavily on robust and durable pumping systems. The wide range of pump sizes, the option loaded modular design and the peripheral equipment enable Boerger to supply a suitable Rotary Lobe Pump for your wastewater and sludge application.

For flexible and emergency situations we offer individually selected mobile pump units, optionally fitted on car trailers.

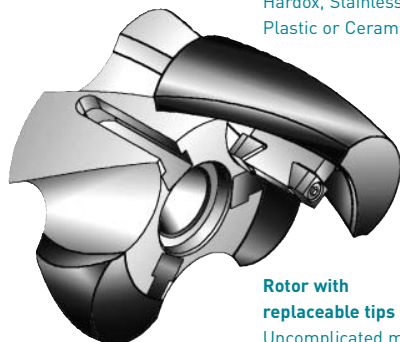
The Boerger MIP-Design is a unique advantage to minimize downtime and maintenance: MIP (Maintenance In Place) allows the quick and convenient replacement of all fluid wetted parts without removal of pipes, drives or other components of the pump unit by your own staff. Quick – Uncomplicated – Inexpensive.

Particularly the patented Boerger features rotor tips and readjustable lobes have a proven record in the wastewater and sludge industry. Entirely coated rotors and screw rotors for almost pulsation-free operation are reliably working in many 24/7 applications on wastewater treatment plants.



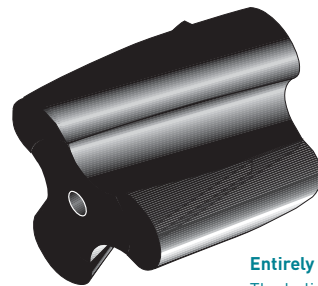
Pump Casing Protection Plates

Optional materials from Hardox, Stainless Steel, Plastic or Ceramic.



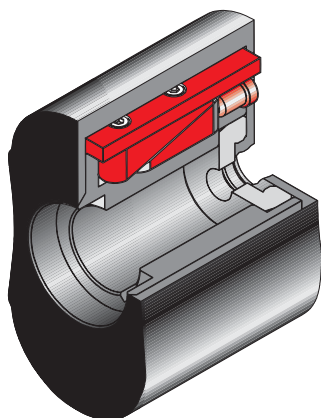
Rotor with replaceable tips

Uncomplicated maintenance and reasonable repair costs by exchanging the rotor tips.



Entirely coated screw rotor

The helical screw rotor geometry ensures an almost pulsation-free operation and gentle handling of the pumped fluids.



Readjustable Rotors

Readjusting saves costs and time: This patented rotor design is readjustable, which can easily compensate for wear and tear.

Worldwide unique and exclusive from Boerger: Unrivalled MIP-Design reduces life cycle cost and downtime.





Clarifier Sludge | In a wastewater treatment plant in Norway a Boerger Rotary Lobe Pump conveys a well flowable clarifier sludge with a solids content of 1–3%. The operation costs are lowered remarkably compared to previous applied pumps thanks to the maintenance friendliness of the pump with MIP Radial Liners.

TECHNICAL SPECIFICATION

Pump	PL 200
Flow Rate	20–30 m ³ /h, 88–132 usgpm
Pressure	1 bar, 15 psi
Power	3 kW, 4 HP



Lime Milk | For a sludge stabilization process city engineers inquired for a reliable pump with high wear resistance to transfer liquid lime milk in a conditioning application. The choice was a Boerger Rotary Lobe Pump with axial and radial housing protection plates and mechanical seals with seal faces from silicon carbide.

TECHNICAL SPECIFICATION

Pump	PL 100
Flow Rate	2–10 m ³ /h, 9–44 usgpm
Pressure	3 bar, 45 psi
Power	3 kW, 4 HP



Waste Activated Sludge | A wastewater treatment plant installed two Boerger Rotary Lobe Pumps in the return sludge pump station to transfer waste activated sludge. The maintenance friendly design with pushed on rotor tips was selected. Frequency controlled geared motors adjust the pump speed according to the specific requirements.

TECHNICAL SPECIFICATION

Pump	FL 518
Flow Rate	50–100 m ³ /h, 220–440 usgpm
Pressure	1.5 bar, 22 psi
Power	9.2 kW, 15 HP



Primary Sludge | Primary Sludge with up to 10% solids content is pumped in a WWTP by using a Boerger Rotary Lobe Pump with readjustable dual lobe rotors. In this case also the maintenance friendliness of our Rotary Lobe Pump convinced the customer. The test phase quickly led to the final purchase of the pump unit.

TECHNICAL SPECIFICATION

Pump	PL 200
Flow Rate	8–20 m ³ /h, 35–88 usgpm
Pressure	3–5 bar, 45–72 psi
Power	7.5 kW, 10 HP



Dewatered Sludge | A Boerger Rotary Lobe Pump is used to transfer dewatered sludge from a centrifuge. The non-flowable sludge is pressed into the pump by a screw auger feed system. The electric motors of both the feed screw auger and the pumps are controlled by a common frequency inverter that is adjusted to the output of the dewatering machine.

TECHNICAL SPECIFICATION

Pump	CL 390*
Flow Rate	12 m ³ /h, 53 usgpm
Pressure	4–6 bar, 58–87 psi
Power	9.2 kW, 15 HP

* with screw auger feed system



Raw Sludge | Two Boerger Rotary Lobe Pumps convey raw sludge in this wastewater treatment plant. The overhead mounted drives is a space saving design; also the flange connections with integrated elbows are adapted to the special requirements.

TECHNICAL SPECIFICATION

Pump	PL 200
Flow Rate	25 m ³ /h, 110 usgpm
Pressure	2.5 bar, 36 psi
Power	5.5 kW, 7.5 HP



Sewage | This Boerger Rotary Lobe Pump has to manage high suction lifts and is installed in a vertical long shaft design. The pump aggregate is submerged into the liquid and the drive is kept over the fluid level. With the guide rails and the auto connect flange the pump can be pulled out easily for maintenance.

TECHNICAL SPECIFICATION

Pump	PL 200
Flow Rate	30 m ³ /h, 132 usgpm
Pressure	2 bar, 29 psi
Power	3 kW, 4 HP

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Digested Sludge | The Berlin Wastewater Treatment Plants operate many Boerger Rotary Lobe Pumps. In this application the pump with high power geared motor transfers digested sludge with a discharge pressure of 5 bars (72 psi). The unique maintenance friendliness and the high load capabilities of the pump package convinced the owners.

TECHNICAL SPECIFICATION

Pump	FL 776
Flow Rate	100 m ³ /h, 440 usgpm
Pressure	max 5 bar, max 72 psi
Power	30 kW, 40 HP



Thickened Sludge | In this WWTP a Boerger Rotary Lobe Pump is installed for pumping of thickened sludge. To ensure a troublefree operation the pump was fitted horizontal. The variable speed geared motor allows the adjustment of the speed and thus the flow rate to the individual displacement needs.

TECHNICAL SPECIFICATION

Pump	AL 75
Flow Rate	5–10 m ³ /h, 22–44 usgpm
Pressure	2 bar, 29 psi
Power	2.2 kW, 3 HP



Various Fluids | Many wastewater authorities use mobile Boerger Pumps in sewage treatment plants and in flexible emergency services. Quick couplings at the suction and the discharge side allow many different applications. For higher flow rates double connections are possible. A torque-limiting system prevents damages in case of larger foreign objects blocking the pump unit.

TECHNICAL SPECIFICATION

Pump	FLA 1540
Flow Rate	up to 500 m ³ /h, 2,200 usgpm
Pressure	2–3 bar, 29–44 psi
Power	50 kW, 67 HP



Thickened Sludge | Two Rotary Lobe Pumps are driven by one helical bevel geared motor in the Boerger Two-Phase-Power-Pack (2PPP) feeding a filter press: The high flow at the beginning is achieved by parallel service; when reaching the switch pressure the fluid flow is changed to series operation for high pressures up to 16 bar (232 psi).

TECHNICAL SPECIFICATION

Pump	2 x PL 200
Flow Rate	60–5 m ³ /h, 264–22 usgpm
Pressure	0–16 bar, 0–232psi
Power	22 kW, 30 HP