



XRipper®: Danger for pumps averted

Case Study - Private waste management company



Problem

Clumped rubbish clogged pumps in surface water disposal

Solution

Vogelsang XRipper

The customer and the problem

Our customer operates as a service provider for the waste management of private and commercial customers and operates several disposal facilities and recycling centers. Garbage and bags with reusable material are stored outside for subsequent disposal, treatment and recycling.

The surface water, including rain and snow that accumulates on the sealed surfaces is captured via drains and collected in a shaft for a first treatment. After that, two dry-installed centrifugal pumps equipped with vortex impellers pump the water to the sewage treatment plant. The system must perform reliably both, mechanically and operationally 24 hours a day, 365 days a year, and is monitored using regular analyzes.

To avoid clogging of the drains in the storage area and uncontrolled water drains off, these drains are only equipped with coarse sieves. The surface water therefore often contains garbage, for example, pieces of wood or plastic parts.

In dry periods, the water hardly contains any solids and therefore does not cause any problems for the pumps.

During heavy rain events, a large amount of disruptive matter is collected because the water flow flushes away waste that has accumulated over time. Bands or tape-like material, such as those used in garbage bags or tapes from video cassettes, clump together along with other substances and lead to blockages of pumps, valves and bents.

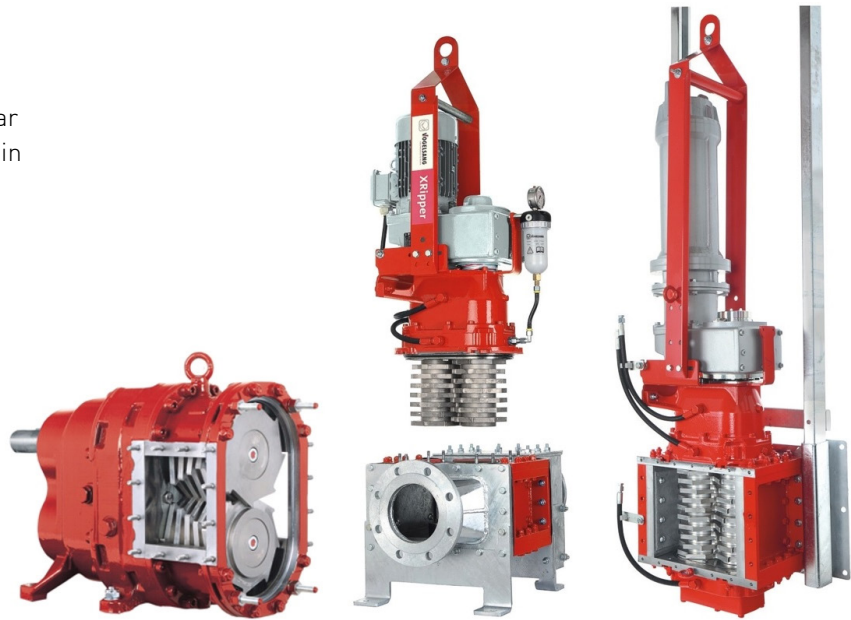


Vogelsang XRipper

Employees were called out around twelve times a year (often on holidays or at night), to deal with the faults in the underground chamber taking around 2-3 hours of work. Additionally, in the event of a malfunction, untreated surface water contaminates the already pretreated water, which means that the complete water needs to pass through the system again.

The solution

To avoid faults and their damaging effects, a shredder should be installed upstream of the pumps. Due to the narrow shaft, the space was limited. Because the drive of the XRipper XRP is arranged vertically over the shredder, it could be installed in the intake of the two centrifugal pumps. Since the XRipper implementation, it reduces solids and larger clumps to a manageable size and thus, protects the pumps. Even one year later, there have been no more blockages and faults in the pumps, valves or bents. At the same time, a visual inspection of the Ripper rotors showed no noticeable wear.



Vogelsang XRipper

“With a significant reduction in maintenance work on the pumps, the investment turned out to be the right economical decision for us”, says the responsible plant manager.

Advantages of the XRipper®

- Economical shredding of solid and disruptive matter such as wet wipes, wood, fabric, trash, and waste
- Efficient protection for pumps and system components from clogging, blockages, and damage
- Always ready for operation thanks to straightforward maintenance

Benefits for the user

- Employees no longer have to travel monthly to solve problems
- Already pretreated water is no longer contaminated again due to malfunction
- Reduced time required for service work
- Low operating costs

Mentioned Vogelsang product

[XRipper: Twin-shaft grinder for sewer and wastewater treatment plants](#)



Mentioned Vogelsang product

[XRipper: The wastewater grinder for wastewater applications](#)



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