



XRipper®: Reliable shredding of coarse matter in domestic wastewater

Case Study - Wonnegau local authority association



Problem

Pumps being clogged by wet wipes and sanitary products

Solution

Retrofitting of the XRipper XRP136-140Q

The customer and the problem

Wonnegau local authority association, Heiko Schuch (plant supervisor)

Part of the wastewater produced in the area governed by the Wonnegau local authority association is conveyed to the sewage treatment plant at Worms. To transport the wastewater, there is a pumping station in Osthofen with three centrifugal pumps, to which about 8000 inhabitants and an industrial area are connected. The pumping station pumps the water to street level. It then flows to the Worms sewage treatment plant by gravity. The bulk of the wastewater produced is pumped by the smallest of the three centrifugal pumps, which is in operation for around 20 hours a day.



Wonnegau local authority association

The problem

Malfunctions due to foreign matter

Sanitary products, especially wet wipes, repeatedly led to operational disruption of the main pump. Once or twice each week, employees had to open this pump in order to remove about 50 l of entwined material from the pump and pipe. This occupied them for about two hours on each occasion.

To solve the problem, the local authority association decided in 2016 to install a twin-shaft grinder. They opted for the Vogelsang XRipper XRP because it satisfied all the required criteria: maintenance and part replacement on the grinder unit are carried out by the association's own personnel. For servicing work, the entire drive unit, together with the shafts and shredding tools, can simply be lifted up out of the housing by a chain hoist. There is no need for numerous specially designed tools or intensive training.

The cutter had to be small, easy to install, and yet also powerful when shredding. With its space-efficient construction, the XRipper XRP has a small footprint. Its inline design allowed the XRipper to be integrated easily into the existing pipe. The cutter is controlled through an accompanying control cabinet, so the modifications made to the existing equipment were minimal. The starting and stopping of the XRipper is triggered by the pump. If there are malfunctions, both devices stop automatically.



Clogged pump without XRipper



Wastewater grinder XRipper XRP136-140Q

The solution

Power consumption and maintenance time reduced

"Since going into operation, the pump and the XRipper XRP have been running smoothly. There's no more clogging at the pump." Plant supervisor Heiko Schuch.

Overall, the intervention has paid off for the local authority association: The trouble-free process has significantly reduced the average power consumption of the centrifugal pump. The additional power consumption from the XRipper is offset by work time savings of more than 200 hours every year due to the elimination of maintenance work.

Advantages of the XRipper®

- Reliable shredding of coarse matter in wastewater
- Minimal space required and easy to integrate inline
- Maintenance and servicing on site by plant's own personnel

Benefits for the user

- Wastewater pumps no longer clog on a regular basis
- Weekly maintenance interventions are no longer necessary
- Reduced power consumption of the wastewater pumps

Mentioned Vogelsang product

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



Mentioned Vogelsang product

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



Vogelsang Ltd., Crewe

Gateway | Crewe Gates Industrial Estate, Crewe |
Cheshire CW1 6YY | United Kingdom
Phone: +44 1270 21 66 00 | uk@vogelsang.info

vogelsang.info/uk

