

Flygt Concertor™ eliminates clogging at Austrian wastewater pumping station

World-first intelligent pumping system saves Stierberg pumping station €5,400 in just 9 months

The Stierberg wastewater pumping station in the Reinhalteverband Mühlthal and Region Böhmerwald area of Upper Austria was struggling with severe clogging due to high levels of debris in the plant's wastewater flow. In fact, clogging instances in this station were becoming so common that operators, RHV Mühlthal, were required to unclog the pumps at least once a week. To address the issue, RHV Mühlthal agreed to trial Xylem's Flygt Concertor system with integrated intelligence, yielding immediate and impressive results.

The Challenge

RHV Mühlthal is the largest wastewater management utility in Upper Austria, overseeing twenty-four municipalities across the Reinhalteverband Mühlthal and Region Böhmerwald. The pumping station at Stierberg is one of the smaller stations under the company's remit, with a capacity to pump just 80 cubic meters (m³) per day. Despite the comparably low levels of wastewater carried by Stierberg, the pumping station proved most problematic for RHV Mühlthal, experiencing more instances of clogging than any other station in the region.

The pumping station's biggest challenge was dealing with the high levels of debris, including wet wipes, rags and solid materials, entering the sewer system. Wet wipes are made from non-woven fabrics and their fleece-like properties mean they cannot be easily broken down like regular tissue paper. As a result, the cloths twist to form thick resistant braids which wrap around the pump's impeller vane, clogging the entire sewage system. Solid objects and other media also get caught on the leading edges of the pump's impeller vane and slide up towards the perimeter of the inlet, causing further blockages to the system.

Customer: RHV Mühlthal

Challenge: To address chronic clogging at the Stierberg pumping station

Offer: Flygt Concertor™, the world's first wastewater pumping system with integrated intelligence

Results:

- Clogging incidents eliminated
- Reduced number of maintenance call-outs, saving Stierberg pumping station €5,400 in just 9 months
- Increased operating efficiency and reliability



Xylem's Flygt Concertor is installed at RHV Mühlthal, Austria

The Solution

To reduce chronic clogging and allow for reliable, uninterrupted pumping, Xylem's Flygt Concertor was installed at the Stierberg station in December 2016, and the pumping system has operated without disruption throughout the six-month trial period.

Klaus Pflieger, Managing Director of RHV Mühlthal recalls, "Clogging at Stierberg had become a major issue, resulting in the need to unclog the existing pumps as frequently as once a week. The debris carried in the wastewater flow was also wearing out the pump impellers which meant that they had to be replaced every two years. We were relieved to learn that there was a solution to our problem, one which can eliminate clogging and increase operational efficiency."

Integrated clog-free technology

Flygt Concertor is a pumping system with integrated intelligence that senses the operating conditions of its environment, adapts its performance in real time and provides feedback to pumping station operators. It features sump, pipe and pump-cleaning functions which, together with Adaptive N-hydraulics, effectively prevents, detects and solves clogging.

The Result

During the six-month trial period, no instances of clogging were reported at the pumping station. The trial period was so successful, Flygt Concertor was permanently installed at Stierberg in June 2017. Since initial installation, Concertor has been operating without disruption and the system has delivered significant cost-savings as regular maintenance call-outs are no longer necessary. In the 9 months that Concertor has been in operation, RHV Mühlthal have saved an estimated €5400 in maintenance costs and the pump continues to operate without interruption.



A view of Flygt's clean pump sump after installation at the pumping station

"Since installing Flygt Concertor at Stierberg, we have noted a considerable increase in the efficiency of the pumping station. Flygt's SCADA system gives us complete control, allowing us to monitor the pump system and quickly detect any problems. We can now accurately adjust the pumping operation based on real time and logged data and as a result, wear on the impellers has reduced significantly"

Klaus Pflieger,
Managing Director of RHV Mühlthal