

# Flygt Concertor™ eliminates clogging at Italian wastewater pumping station

## Xylem's new system reduces energy consumption by 30%

The Squero wastewater pumping station serves the popular seaside town and beach resort of Fano in the Marche region of Italy, bordering the Adriatic Sea. In an effort to address long-standing clogging issues at the pumping station, operators Aset S.p.A. agreed to trial a revolutionary new wastewater pumping system - Flygt Concertor - from Xylem. The system eliminated clogging at the facility and dramatically reduced energy consumption by 30%.

### The Challenge

Squero wastewater pumping station handles waste from the town of Fano. The station consists of two 5.9 kilowatt (kW) pumps equipped with an FMC200 monitoring unit (a Xylem pump controller for pump stations with 1-2 pumps) and dedicated control panel. The station's location, adjacent to Fano's bustling harbour, means that overflows as a result of heavy rainfall or clogging must be avoided at all costs. Clogging had become an issue at the station however, requiring frequent maintenance call-outs to restore operation, as well as increasing energy consumption at the facility.

In order to reduce clogging and improve the efficiency of the pumping station, Aset S.p.A., a multi-utility company that runs the wastewater and drinking water networks in the Marche region, worked with Xylem to trial the new Flygt Concertor wastewater pumping system.

The Squero station presented a suitable testing site with a challenging wastewater pumping environment where a robust system was required to avoid clogging and keep the sump clean. With Xylem's Flygt technologies installed in 40 important wastewater pumping stations across the region, Aset S.p.A. had seen first-hand the reliability and efficiency offered by these solutions. Aset was eager to try another innovative technology which could potentially solve the pumping challenges facing its wastewater network and specifically, the Squero pumping station.

### Clog-free pumping for reliable, uninterrupted pumping

Xylem's Flygt Concertor was installed at the Squero pumping station in September 2015 and the system ran without interruption throughout the nine-month trial period.

Flygt Concertor is a new state-of-the-art pumping system with integrated intelligence - a smart, interconnected wastewater pumping system that senses the operating conditions of its environment, adapts its performance in real time and provides feedback to pumping station operators.

Following the system's installation, both the pump and sump were kept continuously clean over the nine-month period. The pumps ran reliably and the system delivered significant cost-savings and regular maintenance call-outs were no longer necessary.

**Customer:** Aset S.p.A. public utility company, Italy

**Challenge:** To deliver clog-free pumping at the Squero pumping station where frequent clogging resulted in interruption to operations and costly maintenance call-outs

**System:** Flygt Concertor, the world's first wastewater pumping system with integrated intelligence

**Results:**

- Clog-free pumping with no emergency call outs
- Energy consumption reduced by 30 percent



Flygt Concertor™

Xylem's Flygt Concertor features a built-in sump and pipe-cleaning features in a single integrated solution - a first for a wastewater pumping system. Furthermore, the pump cleaning function together with Adaptive N-hydraulics effectively detects and solves clogging from large debris.

### Energy reduced by 30%

Flygt Concertor delivers proven reliability at the lowest total cost of ownership and significantly reduces energy consumption. Regular monitoring of the Flygt Concertor system at the Squero pumping station, using data acquired via a Flygt Scada system, showed a dramatic reduction in energy consumption by 30%.

Concertor's patented Energy Minimizer function, together with its IE4 high efficiency motor, self-cleaning Adaptive N-hydraulics and constant power functionality, automatically ensure that all the pumps in a pumping station run at their most efficient duty points. Additionally, since there is no need for ventilation, cooling or heating of cabinets, customers benefit from substantial energy savings over the system's total lifecycle.

### User-friendly and simple to install

Flygt Concertor offers cutting-edge integrated intelligence for wastewater pumping with a system that is user-friendly, simple to install, commission and operate. The Aset maintenance team was delighted to find that installation, management and removal of the pumps was straightforward and time-efficient.



The canal at Fano in the Marche region of Italy



The Squero wastewater pumping station