

Xylem offers unlimited possibilities with integrated intelligence and full insight into a major port's water management system

Scandinavia's largest RoRo port, Trelleborg, needed help with getting complete insight into its wastewater stations, to prevent floodings, pump stopping, as well as correctly charging incoming vessels for offloading sewage when in port. Xylem's solution was a package of Flygt Concertor XPC in combination with Xylem's cloud-based alarm service to streamline operations to save time and money on fewer call-outs and have equipment tailor-made to the customer.

The port, located only 85 kilometers from Germany, is continuously developing and growing. The port receives a large number of vessels, and trucks and today, more than 11 million tonnes of goods and 1.8 million passengers are transported via the port. The many ferry lines creates an effective link to and from the Continent, via Travemünde, Rostock, Sassnitz, Swinoujscie and, Klaipeda. Port of Trelleborg is a professional, positive and service minded port with strong focus on development and sustainability, and with respect for both people and environment.

The Challenge

The customer has previously had older pumps installed that worked only occasionally. Which has resulted in the service staff not arriving in time to the station with flooding as a result. Furthermore, the old equipment offered no overview or insight into the condition of the station or when service is needed. Besides this it's also very important that the pumping stations are always operating as the ferries needs to empty their tanks on wastewater and gray water (bath, dish, and wash water).

"We needed to solve our pump station problems immediately. So I called Xylem who I knew had great, high-quality products," says Håkan Nilsson, Service Manager at the Port of Trelleborg.



Technical facts:

- Two Concertor XPC pumps - The world's first wastewater pumps with integrated intelligence
- Avensor - A monitoring platform for pump stations which enables informed decision making and fast response to alerts before the issue becomes serious and expensive. The platform makes it easier:
 - o Receive alerts via email and sms (iOS och Android)
 - o Send alerts to the right staff
 - o Easy installation by Xylem
 - o Possibilities to get emergency support and maintenance from Xylem

The Solution

The customer called Xylem and asked for advice. The first step was to rent pumps from Xylem while replacing the older ones. Since this solution showed great results, the customer decided to invest in a complete solution from Xylem. The solution consisted of Xylem's Flygt Concertor XPC, the world's first wastewater pumping system with integrated intelligence along with Avensor, the smart monitoring platform. Flygt Concertor senses the operating conditions of its environment and adapts its performance in real-time to provide feedback to station operators, enabling the customer to make the greatest possible energy savings. Avensor OPC was installed to enable information transfer between the port's existing SCADA system and Avensor. In this way, Port of Trelleborg had one system for all alerts. Avensor consists of a modem that is installed in the pump station, which communicates with the controllers and the cloud solution that allows remote monitoring of the station on smartphones, tablets or desktop computers. The alerts are displayed in real-time and can be seen directly in the application as well as sent via SMS or email.

"Xylem's cloud-based alarm service gives us a whole new overview. We can see everything that's going on and can quickly be in place if needed," says Håkan Nilsson.

The customer can now keep track of the stations and keep statistics on the water levels, flows, the amount of power used, and how fast the pumps are running. They also know when a station needs servicing, which is completely new to the service staff. The statistics are used to streamline operations and to understand how much wastewater the shipping companies offload when in port. Knowing the exact amount of wastewater that is emptied and purified is very important because you charge the shipping companies for that service.

The Result

The new installation has been running for six months and has during that time worked outstandingly. The efficient monitoring service means that the customer always knows what is happening at the various stations and can act quickly if anything happens. They can also evaluate, and correctly plan service in time.

"Xylem should be praised for having solved the situation so well. We are very pleased with our new system. Getting great and fast service is important to us as well as being able to trust an organization", says Håkan Nilsson.

The Port of Trelleborg continues to grow and is currently undergoing major work with many new pumping stations that will be ready by 2026. The legal requirement from 2021 is that no shipping companies may offload black or gray water directly into the sea. This means that all pumping stations must be functioning perfectly. With Xylem's cloud-based monitoring service, the customer has a complete overview of the system and can now prevent any downtime leading to flooding inside the station and leaks into the sea.