

Xylem's Flygt Experior® cuts energy use at pumping station by 35 percent

Annual saving of €4,500 thanks to Xylem's sustainable wastewater pumping solution

Xylem's sustainable pumping solution Flygt Experior successfully reduced the energy consumption and operating costs at a municipal wastewater pumping station on the Italian island of Sardinia by 35 percent.

The water challenge:

The Macchiareddu plant, one of Sardinia's largest water treatment facilities, is located in an industrial area outside the capital city, Cagliari. The treatment plant cleans 600 litres of sewage wastewater per second and provides 100 litres of drinking water per second to inhabitants in the capital city, as well as water for industrial and irrigation purposes in the region.

Situated off Italy's east coast in the Mediterranean Sea, Sardinia has a delicate ecosystem. The island receives a minimal amount of rainfall, making water an extremely precious resource. In addition, the Macchiareddu water treatment plant is situated beside the Santa Gilla lagoon, a nesting area for pink flamingos and a protected habitat.

The treatment plant is operated by Tecnocasic, in conjunction with CACIP (Industrial Consortium of the Province of Cagliari). Claudio Fantera, head of water at Tecnocasic outlined the challenge they faced, "We were looking for a partner who could provide us with quality wastewater transport solutions that would have minimal impact on the fragile, local ecosystem while delivering significant operations and cost savings."

"Xylem's Flygt Experior was the most sustainable, cost-effective solution to help us meet our goal of efficient wastewater pumping to provide clean and safe water to the people of Cagliari."

The Xylem solution:

After analysing the situation and the specific challenges faced by the plant operators, the local Xylem team recommended their Flygt Experior wastewater transport system. Flygt Experior combines high performing hydraulics, premium efficiency motors and intelligent controls to deliver the ultimate in reliability, efficiency and simplicity. It is specifically designed for wastewater pumping stations and delivers efficient, trouble free pumping.



The Macchiareddu plant, Cagliari, Sardinia.

Customer: Tecnocasic, operators of the Macchiareddu water treatment plant

Challenge: to deliver an energy efficient and sustainable wastewater pumping solution in a delicate environmental area.

Products: Flygt Experior®

Results: a sustainable, cost efficient solution that cut energy consumption by 35 percent.

Flygt Experior combines state-of-the-art hydraulics, premium efficiency motors, and intelligent controls for the ultimate in reliability, efficiency, and simplicity.

Flygt Exuperior, including two Flygt N-pumps with a single channel impeller and Flygt SmartRun™ pump controller, was installed at one of the sewage pumping stations that collect and then transport sewage to the Macchiareddu treatment plant. Flygt Exuperior can be easily retrofitted into an existing wastewater pumping system and simplifies a complete system upgrade. By eliminating clogging it minimises system downtime, unscheduled call outs and maintenance costs.

Flygt SmartRun is an intelligent pump controller specifically designed to adjust the speed of the pump in response to real time requirements. This ensures the lowest energy consumption per cubic meter of pumped liquid.

The technology was installed for three months on a 'try and buy' basis. This enabled Tecnocasic and CACIP to try out the solution and ensure that the projected energy savings were achieved before investing in the technology.

The result:

The result is a cost-effective, sustainable and high-quality water transport system with minimal environmental impact. After installing Flygt Exuperior, average energy consumption at the pumping station fell by 35 percent, from 191 to 125kWh per day, delivering an annual saving of approximately €4,500.

"Xylem's Flygt Exuperior was the most sustainable, cost-effective solution to help us meet our goal of efficient wastewater pumping to provide clean and safe water to the people of Cagliari," said Fantera.



Xylem's monitoring and control system provides complete control of all remote pumping stations.



Flygt SmartRun intelligent pump controllers reduce system clogging with automatic sump cleaning and pipe flushing functions.



Sardinia's delicate ecosystem and minimal rainfall make water an extremely precious resource on the island.



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