



ITT

Water & Wastewater
CASE STORY ■ WASTEWATER TRANSPORT

Sardinia reduces maintenance costs with Flygt chopper pumps

Pumps replace detritus filter screens along crowded Sardinian streets

In the past few years the bucolic Italian island of Sardinia has experienced a massive rise in tourism. This presented an added strain to the municipal system in southern Sardinia developed nearly 50 years ago.

The aging system in Sardinia still utilized grill screens just below the streets that captured items like plastic bottles that otherwise would clog the pumps. Since the grill screens had to be manually cleaned every day, vehicular traffic was disrupted. The municipal water company turned to ITT Water & Wastewater for a better solution.

Consultations resulted in installation of our F pumps familiarly known as “choppers” that readily deal with detritus—thus eliminating the need for grill screens altogether. The F pumps themselves chop larger objects and then pump the detritus to a wastewater treatment plant.

First-ever

“We were the first in Sardinia to adopt the F pump solution proposed by ITT Water & Wastewater,” said Engineer Maurizio Cittadini of the Abbanoa Municipal Water Authority. “Since installing six pumps at three pumping stations we’ve had no problems at all with clogging.”

“No problems at all with clogging”

“Of course, we still filter effluent, but this occurs at purification sites where filters are easier to install, monitor and manage.” Abbanoa manages an integrated wastewater system serving 720,000 users and encompassing an 8,000 km network, 5,000 km of aqueducts, 35 pumping stations and 350 purification plants.

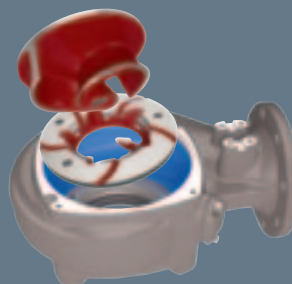


Customer: Abbanoa Municipal Water Authority in Sardinia

Challenge: Grill screens along streets would capture detritus like plastic bottles in order to prevent pump clogging. But the grills had to be cleaned every day, resulting in blocked traffic

Products: Installation of Flygt F 3153.350 (13,5 kw) pumps that chop up detritus. Grill screens were eliminated altogether

Benefits: Lower maintenance costs and improved traffic flows



The Flygt N-pump easily cuts tough solids without clogging or sacrificing pump efficiency

Engineered for life

Why Flygt pumps?

The municipal authorities initially chose six Flygt chopper pumps (13.5 kW) for three pumping stations because of their well-known efficiency. The pumps have an efficiency rating of about 80% compared to about 45% for a conventional pump. The unique toothed plate in the chopper pumps strains large objects, and the impeller then directs the flow of effluent toward the chopper insert ring. Abrasion is minimized because the impeller and insert ring are rendered in Hard-Iron™ containing a high percentage of chromium. In addition: the pumps are self-cleaning, with a reduced number of components for easier maintenance.

The water company has now purchased six additional Flygt F 3153 pumps.

Cost and efficiency benefits

Grill maintenance along the streets has been eliminated with installation of Flygt chopper pumps, resulting in cost savings for water authorities and improved vehicular traffic flows. The pumps have a significantly higher efficiency rating than ordinary pumps, successfully deal with abrasion, and are self-cleaning.



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