

Monster keeps major infrastructure project on track

A Sulzer Channel Monster™ has been a lifeline for a large-scale wastewater treatment project in Vác, Hungary. Faced with the need to keep a municipal wastewater treatment plant in operation during a EUR 14.5 million upgrade, Hungarian contractor Mészáros és Mészáros Inc. called on the assistance of Sulzer water treatment specialists. Local Sulzer partner, Zultzer Pumpen Ltd., supplied a heavy-duty Channel Monster grinder, pumps and support services for the duration of the project.



“On a project like this, it is extremely difficult to manage both the investment timeline and the operation of a live wastewater treatment plant. Sulzer’s technologies acted as a shield for us when we did not have the main screen house. The grinder was literally our life-line to keeping the plant operational, helping to ensure that water could continue to be treated during the upgrade project.”

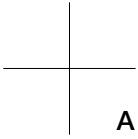
Csaba Csetneki– Deputy Project Site Manager at Mészáros és Mészáros Inc.



The Channel Monster integrates rotating screening drums with Muffin Monster technology, the dual-shaft system accommodates high flows while shredding solids into particles that pass harmlessly through pumps and other process equipment.

Thirty-five kilometers north of Budapest, Vác wastewater treatment plant processes around 10'000 m³ of sewage every day, serving the adjacent Hungarian town along with homes and businesses across a much larger area. Located in a residential area next to the River Danube, the plant operates under stringent conditions for odor and output water quality. Facing rising demand from households and industrial users, the local water utility embarked on a major upgrade program in 2019. As part of that EUR 14.5 million project, contractor Mészáros és Mészáros Inc. was to completely rebuild the inlet screening building used to remove large debris from the incoming waste stream.

Working under very tight time and budget constraints, the project team needed to keep the rest of the plant running for the duration of the screen house reconstruction, which would be no easy task. The mixed-use wastewater stream entering the plant is heavily contaminated with unconventional waste including textiles, household rubbish and discarded construction materials. Without the protection offered by the screen house, those objects would be free to enter the facility, blocking pumps, damaging equipment and disrupting operations.



A Monster challenge

The team's search for a fast and cost-effective answer to its unconventional waste issue led it to local Sulzer specialist, Zultzer Pumpen Ltd. After assessing the site, the planned works and the facility's operational requirements, Zultzer proposed a complete equipment and services solution for a temporary pumping station to bypass the screen house.

At the heart of that solution was the Sulzer CDD5016-XDM2.0 Channel Monster. The largest Sulzer grinder available in the country, the patented Channel Monster integrates rotating screening drums with proven Muffin Monster grinder technology. The dual-shaft system accommodates high flows while shredding solids, such as rags, trash, rocks and wood, into particles that pass harmlessly through pumps, pipes and other process equipment.

For the Vác upgrade project, Zultzer installed the Channel Monster into a cage 10 m below ground level in a specially constructed rectangular pit. A five-ton crane above the pit allowed the unit to be lifted if cleaning or maintenance were required. Sulzer also supplied three lift pumps installed behind the grinder: two 45 kW XFP 206J units along with a smaller 37 kW XFP. All the equipment was supplied on a hire basis for the duration of the project with Zultzer Pumpen delivering support services.

Kept on running

The Sulzer technology used in the temporary pumping station proved exceptionally robust and reliable during the 18-month duration of the screen house replacement project. Continual monitoring and periodic cleaning kept the grinder operating at peak performance, with the lift pumps requiring only routine maintenance during that time.

"We are proud to have provided the crucial equipment that protected the plant during this project," says Kristóf Lyócsa, Service Manager at Zultzer Pumpen. "The grinder was easily able to handle the heavy loads and the pumps performed exceptionally well."

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