

Sulzer Pumps

Case Study

Sanepar, Brazil Replacing Pumps to Upgrade Efficiency



Inside a Sanepar lifting station

The Sulzer Difference

- Significant energy savings – up to 9% per pump
- Ability to handle widely varying flow
- Efficient operation with less electrical input power

As it approaches its 50th anniversary, Sanepar (Companhia de Saneamento do Paraná) is one of the largest and most efficient sanitation companies in Brazil. In addition to providing 9,500,000 people with clean water, the company handles wastewater collection, wastewater treatment and solid waste management for 6,000,000 people.

Sanepar's operations are in the southern state of Paraná. Headquartered in the state capital of Curitiba, the company has 176 water treatment plants and 225 wastewater treatment plants throughout the state. One of them is the Iguaçu Plant in Curitiba, which is the state's largest water treatment plant.

Energy Savings in Wastewater Collection

In order to improve its collection operations, Sanepar needed to replace the pumps in 42 lifting stations within the Paraná coastal area – a tourist area that receives a great number of visitors during the summer months. Updated technology with higher levels of efficiency was the primary requirement. ABS submersible sewage pumps XFP, with capacities from 47 l/s to 153 l/s (745 gpm to 2425 gpm), were installed in four lifting stations: Solimar, Matinhos, Marumbi and Esperança.

Sulzer Pumps was responsible not only for the delivery, but also for the pump start-up. The ABS submersible sewage pumps XFP, which replaced older ABS AFP pumps, were chosen for their exceptional efficiency. With their premium-efficiency IE3 motors and advanced hydraulics, the ABS submersible sewage pumps XFP give Sanepar energy savings of 6–9% per pump.



Sanepar staff with an ABS submersible sewage pump XFP



ABS submersible sewage pumps XFP

Superior Performance in Water Treatment

In response to changing needs within water treatment, Sanepar also needed to replace pumps in its Iguaçu Plant. Sanepar required new equipment that could:

- Handle a widely varying flow of 85 l/s to 300 l/s (1347 gpm to 4755 gpm) depending on the time of the day, ensuring water supply at peak times and avoiding damage to the system during off-peak periods
- Operate more efficiently, with higher hydraulic performance and less electrical input power

ABS submersible sewage pumps XFP were installed here as well, with Sulzer Pumps responsible for the installation and start-up. Two pumps were installed to run in parallel according to the demand, while a third was installed as a standby. Together, they handle a head up to 50 m (164 ft) and a flow up to 313 l/s (4961 gpm).

In all respects, the three ABS pumps exceed Sanepar's expectations. To begin with, the pumps' input power is 46 kW less than the set maximum. In addition, the pumps deliver hydraulic performance and motor efficiency that are substantially higher than Sanepar's stipulations.

Key Benefits

- Significant energy savings – up to 9% per pump
- Ability to handle widely varying flow
- Efficient operation with less electrical input power

Contact

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Applicable Markets

Water and Wastewater

Applicable Products

ABS submersible sewage pump XFP



Iguaçu Plant: Sanepar's biggest water treatment plant