

Increasing reliability and efficiency in the Netherlands

Grundfos S-tube® impeller ensures long term costs savings



Installed horizontally, the easy to open clamp construction used on the smaller SE wastewater pumps ensures extremely straightforward inspection and service, which can be done by just one person.

Reliable wastewater pumping in Amsterdam using the S-tube® impeller

Waternet Amsterdam, the service organisation for Amsterdam municipal water utility, and Grundfos Netherlands recently installed two 7.5 kW and two 22 kW SE wastewater pumps with S-tube® impellers at the Kasterleepark and Oslofjordweg pumping station. The initial plan was for a wet-pit pumping station at Oslofjordweg; however a dry-installed pumping station met Waternet's requirements for an easy-to-service and reliable solution with cost savings for many years ahead.

The situation

The area where the pumping station is located is being developed by the municipality for recreational purposes. A permanent, year-round boat show has been built, which is expected to attract 30,000 visitors per year. In addition, old factories have been turned into office buildings and further developments are planned, such as hotels, restaurants and entertainment.

The capacity of the old dry-installed Oslofjordweg pumping station was therefore too low. With this in mind, the Amsterdam municipality first designed a wet pit, because this requires little space, and space was at a premium in this area. The municipal engineering department calculated the cost of a new wet pit at approximately EUR 300,000.

However, the serviceability of a dry pit is much easier than a wet pit, and Waternet decided to engineer a dry pit design with new pumps and frequency converters which could handle the wastewater load now and in the future.

Kasterleepark pumping station was running old, dry-installed pumps, which needed replacement. The focus here was on a future reduction of costs connected with operation, inspection and service.

The Grundfos solution

Following a complete calculation for a dry pit installation with all the existing piping network and required flows, Waternet concluded that using SE wastewater pumps with Grundfos S-tube® impellers would

guarantee the maximum capacity required and reduce costs for installation and service. Grundfos Netherlands then engineered the best possible wastewater pumping solution using 7.5 kW and 22 kW SE wastewater pumps with S-tube® impellers, which offer outstanding non-clogging capabilities. Grundfos SE wastewater pumps are designed for both submersible and dry installation, depending on the requirements of the customer.

The 22 kW dry-installed SE wastewater pumps were selected as replacement pumps together with frequency converters and new piping at the Oslofjordweg pumping station. The easy access offered by dry-installed pumps and the quick-release bolts on the 22 kW SE wastewater pumps ensure cost savings on inspection and service for the pump lifetime. The final cost of the completed renovation was around EUR 40,000, substantially down on the initial calculation of EUR 300,000 for a wet-pit installation only.

The 7.5 kW SE wastewater pumps were installed at the Kasterleepark pumping station, where they replaced existing dry-installed pumps. Installed horizontally, the easy to open clamp construction used on the smaller SE wastewater pumps ensures extremely straightforward inspection and service, which can be done by just one person.



The SE pumps with the S-tube® impeller give the highest efficiency over a wide range and the largest free passage providing reliable and trouble-free operation with lower energy consumption.

The outcome

The maintenance department at Waternet Amsterdam are very satisfied with the 7.5 kW and 22 kW SE wastewater pumps with S-tube® impellers. This was the first major order for wastewater pumps with S-tube® impellers received by Grundfos Netherlands, and the installation continues to work properly.

The pumps have now been running for more than one year without any clogging, jamming or other incidents, and Waternet is very satisfied with the performance of the SE wastewater pumps with S-tube® impeller.

Products supplied:

- • 2 pcs 22 kW SE1.80.100.220.2.52S.C.N.51 wastewater pumps with S-tube® impellers
- 2 pcs 7.5 kW SE1.80.80.75.4.51D wastewater pumps with S-tube® impellers



The capacity of the old Oslofjordweg pumping station was too low. Waternet decided to engineer a dry pit - with serviceability much easier than a wet pit - which could handle the wastewater load now and in the future. The two 22 kW SE pumps with S-tube® impellers have been running for more than one year without any clogging, jamming or other incidents

Quotes



"Keeping costs down were important to Waternet, as they required the pumps to handle wastewater loads now and well into the future. The customer did their own calculations and could see that the dry-installed wastewater pumps on offer are extremely easy to service, and the non-clogging abilities of the S-tube® impeller reduce downtime substantially," says Sander Smit, Account Manager Water Utility, Grundfos Netherlands

"Grundfos pumps are easy to maintain and service, because of the straightforward access offered by the clamp construction on the smaller SE pumps and the quick-release bolts on the larger SE pumps, saving us a lot of time and money. We were pleasantly surprised by the large amount of water at high pressure that the SE pumps with S-tube® impellers could transport," says Rinus Visser, Service Engineer, Waternet.

