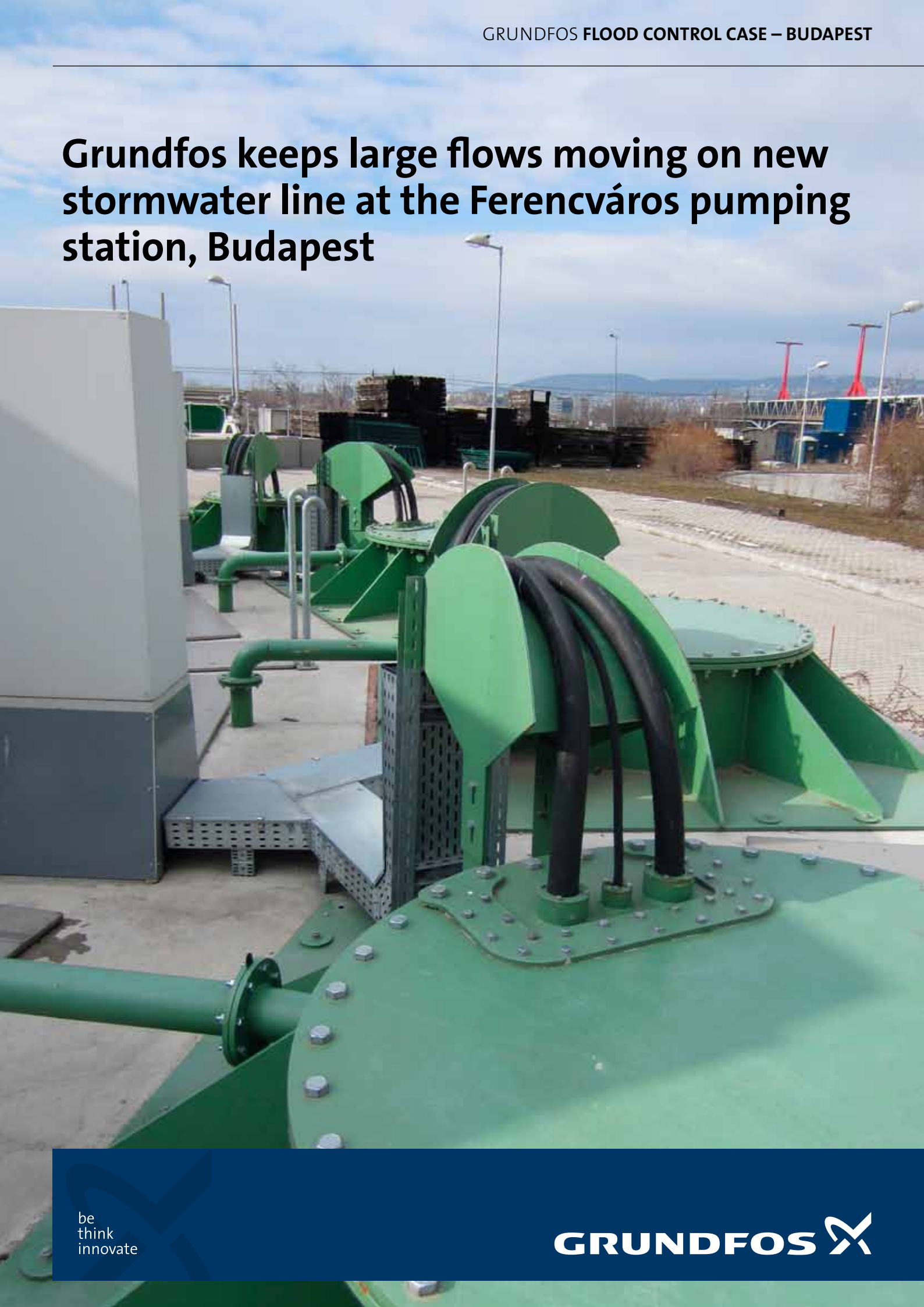
Grundfos keeps large flows moving on new stormwater line at the Ferencváros pumping station, Budapest



be
think
innovate

GRUNDFOS

GRUNDFOS **CASE STORY – BUDAPEST**

Even with two cranes required to lift the pumps, installation is straightforward with Grundfos on-site.

Grundfos keeps large flows moving on new stormwater line at the Ferencváros pumping station, Budapest

The Budapest Sewage Works (BSW) Ltd. – part of the VEOLIA Group – is the biggest public wastewater and environmental protection company in Hungary. BSW provides services in the field of sewage network operation, wastewater treatment, and flood and inland water protection. The company is the leader in the introduction and installation of new environmental technologies and biological waste handling in Hungary.

BSW operates the entire 5400 km long sewage network system and two of the wastewater treatment plants in Budapest. The capital city has 1.7 million inhabitants with large industrial areas which generate more than 0.5 million cubic meters of wastewater per day.

The situation:
A reconstruction and capacity increase was necessary at the Ferencváros Pumping Station – the biggest pumping station in the wastewater system – in connection with the construction works at the Budapest Central Wastewater Treatment Plant. If conditions are dry, 200,000 cubic meters of wastewater is pumped per day to the plant.

The new Ferencváros Pumping Station is a part of a huge environmental protection investment in Budapest focusing on the Central Wastewater Treatment Plant construction, the collection system and mains construction, and pumping stations that cross the River Danube. When the final stages are completed, 100% of Budapest wastewater will be biologically treated; compared to 95% today.

To ensure that all wastewater passes through treatment processes even in heavy rain or surface flooding events, a bypass stormwater line was required. In 2010, the new pumping station was constructed with the separate stormwater line, on the site of the original wastewater pumping station from 1893. Ten high performance KPL submersible axial-flow stormwater pumps were delivered and installed into the stormwater line by Grundfos.

The Grundfos solution:
The solution presented by Grundfos was 10 vertically-installed submersible axial-flow stormwater pumps. These 365 kW pumps are capable of pumping 3018 litres per second at 9.6 meters head.

Grundfos pumps were chosen, because the technical details, efficiency, delivery time and price of the pumps met the requirements of the investment committee, which consisted of the operator (BSW) and the construction company (Colas Alterra).

Pumps supplied:

- Manufacturer: Grundfos
- Type/model: 1200 KPL submersible axial-flow pumps 365 8T4
- Number of units: 10
- Performance: 365 kW x 8 pole x 400 Volt
- Duty Point (Q, H): Q = 3018 l/s, H = 9.6 m
- Application: vertically-installed stormwater pump

The outcome
This type of application with its special design and using very large pumps was unique in Hungary. Close cooperation was needed with the designers, the construction company and the operators. Pumps of this size require specialised technical staff and processes; for example two cranes had to work together for installation because of the heavy weight of the pumps and cables and tight tolerances.

After two years operation all the pumps work well without any problems and the customer is satisfied.

Grundfos supplied:

- Pre-sales consultancy
- KPL submersible axial-flow stormwater pumps
- Supervision of installation
- Resolution of all issues prior to commissioning
- Commissioning

About KPL submersible axial-flow stormwater pumps

The range of KPL submersible axial-flow propeller pumps represents strength and durability and is ideal for flood control and other heavy-duty pumping applications. These pumps now include innovative features such as the Turbulence Optimiser™ that increases efficiency by up to two percentage points.

The market-leading lightweight design, substantially reduced from earlier models, does not compromise the renowned robustness of the KPL axial-flow pump. Built from cast iron or stainless steel, a wide range of variants using different materials, sensors, surface coatings and shaft seal materials is available, ensuring reliability in corrosive environments.

"This was a major project that offered substantial challenges to our plant design and construction, not least pump selection, installation and commissioning. Therefore we chose to work with Grundfos who were able to modify the large stormwater pumps to meet the specifications as we required, meeting all our deadlines and at a price we are extremely happy with," says Ferenc Mezö, Head of Investment department, at Budapest Sewage Works (BSW) Ltd.

0612/WATER UTILITY/10764-D&I

GRUNDFOS Holding A/S
Poul Due Jensens Vej 7
DK-8850 Bjerringbro
Tel: +45 87 50 14 00
www.grundfos.com

GRUNDFOS