xylem
Let's Solve Water

Case Story
Pressurized water supply & Wastewater

Xylem handles the pressure for landmark towers in Malta

XYLEM PRODUCTS ARE GOING TO SOLVE WATER CHALLENGES IN THE MERCURY TOWERS, ONE OF THE MOST ICONIC BUILDINGS IN MALTA.

Challenge

The futuristic twisted design of the Mercury Towers in St Julian's in Malta has an impressive impact on the skyline. Created by Zaha Hadid Architects, it is the tallest building on the island. Phase 1 of the development was opened in November 2023 including a three-level shopping mall, a plaza and a 4-storey underground car park. Phase 2 will include a hotel, an entertainment area (including a kart track and an ice rink), and a residential accommodation, and is due in March 2024.

While certain water infrastructure exists on the former derelict site, there were immediate challenges. Initially the developers required a supply of water during construction. They also needed pumps to fulfil significant wastewater and clean water needs across all project – comprising a 6-floor basement, 34-storey 68,000 m² tower and second 20-storey multi-use space.

Zahra Enterprises Ltd, the local representative of Xylem, said: "Following the issue of the pump sets tender, ECL recommended that Xylem pumps are used at the Mercury Towers Project, Malta.

"We worked with ECL Consulting Engineers to provide the most suitable booster sets within our product ranges and solution to suit their requested engineering specifications.

"We formed a close working relationship with ECL, consulting on technical requirements, helping overcome issues which made the handing over to the client a smoother transition."

Solution

At the start of construction in 2018, Xylem supplied two GHV20 multi-pump variable speed booster sets, each featuring two Lowara e-SV series multistage vertical pumps. These temporary sets supplied water to two zones of the project – and once phase 1 was opened they remained operational for phase 2.

In 2022 the project moved to the supply phase where Xylem solutions supported basement-level drainage, and domestic water supply to the main buildings and hotel.

CUSTOMER:	Zahra Enterprises Ltd and ECL Consulting, Malta
APPLICATION:	Water supply and drainage
SYSTEM:	Multiple GHV booster sets with e-SV multistage pumps with Hydrovar variable speed drives; Lowara 1300 wastewater pumps; e-LNE in-line pumps
RESULTS:	The solution will deliver the necessary pressure and flow while minimising the use of electricity and excellent performance for partial loads and variable demand

LOWARA
a xylem brand

GHV booster sets provide sectorized pressurisation across the development. A GHV80 booster set featuring eight e-SV pumps in parallel and mounted with Hydrovar variable speed drive is used to pressurize domestic water to the residential part of the tower. The booster set includes six duty pumps and two standby, that allow the optimal operation and power consumption of the pumping unit. The unit was specified to take full advantage of pump performance within the stipulated need for a 22 kW power rating per pump.

A GHV30 booster set with three e-SV pumps (two duty and one standby) with Hydrovar supplies water to the listed building (Mercury House) and the pavilion and landscaped area. Two further GHV30 sets supply water to the hotel kitchens and residences – each with two duty and one standby pump.

A further GHV20 two-pump booster set with Hydrovar (one standby and one duty) manages water treatment for the hotel.

Xylem also provided multiple Lowara 1300 series hydraulic submersible pumps, known for trouble-free operation in the toughest environments. This included seven lifting stations equipped with 1315S / 1320S non-clog pumps (14 total), and four 1330H vortex pumps for two cesspits. Xylem also specified a 5-ton Maxisub 1820 septic tank to overcome limited connections to the town's drainage infrastructure.

Xylem also supplied two Lowara e-LNE inline circulating pumps for hot water recirculation.

Results

The client, together with the support of Francesco Costanzo, Xylem Sales Engineer and of Fabio De Agostini, Xylem Service technician, specified a solution from Xylem that would overcome issues related to drainage and water supply, providing the necessary pressure and flow while minimising the use of electricity, and offering excellent performance for partial load and variable demand.

Xylem's reliable submersible pumps and GHV booster sets (with e-SV pumps mounted with Hydrovar variable speed drives), has given the development a robust, energy-efficient solution that will meet the demands of its extensive infrastructure.

A Mercury representative commented "Xylem was recommended by our consulting engineers. They come from well-known brands which provided us with the required specifications and good solution at an affordable price.

"They have helped us overcome a range of challenges and delivered a technical solution that meets the demands of this landmark building."