

PROJECT MOSE CASE STUDY

How Technetics Helped Protect Venice from Floods



MOSE – Modulo Sperimentale Elettromeccanico – is a project designed to protect Venice from floods resulting from the acqua alta tides, a phenomenon which can be traced back centuries and can have harmful effects on the city. Efforts to find a feasible solution to Venice's flooding problem motivated the creation and design of MOSE. The project involves the construction of an artificial dyke and three locks, with each lock having two doors. To be successful, sufficient sealing of the locks' doors located at the entrance of the Venetian lagoon is required, which will allow for boats to circulate between the lagoon and the sea when the artificial dykes are in action.

An engineer from the MOSE project contacted Technetics seeking a sealing solution for the half-cylindrical lock gates. The project specifications necessitated a durable sealing solution that was suitable for sea water conditions. Technetics' expertise allowed for a high-quality solution, meeting the critical challenges and requirements of the project, to be identified, engineered, and manufactured.

CEFIL'AIR® inflatable seals were established as an optimal sealing solution for the lock gates. This elastomer seal has the ability to expand and retract with the movement of fluids, making it appropriate for seawater conditions. Furthermore, the CEFIL'AIR® seal has highly resistant mechanical and physical properties, which ensure a long lifetime and numerous operating cycles. The solution was designed with one horizontal seal and two vertical seals, or three seals per lock gate.

Technetics received and fulfilled orders to equip three gates at the three inlets located at the entrance to the lagoon: Lido, Malamocco, and Chioggia. The seals proved to be a success when, in October 2020, Venice did not experience flooding during the acqua alta tide for the first time in many years.

To learn more about CEFIL'AIR® inflatable seals, download the CEFIL'AIR® seal brochure or [visit our website](#) to contact a specialist for a custom-engineered solution for your application.

