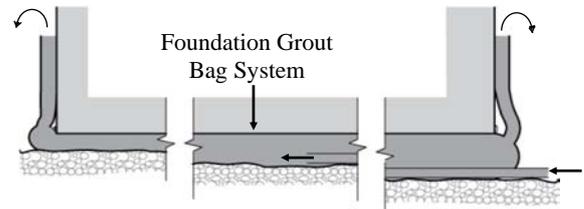


Foundation Grout Bag System

For Precast Marine Structures

Proserve's Foundation Grout Bag System has been used on many important maritime projects over the last 25 years.

The grout bags are prefixed to the bottom of foundation caissons or elements and grouted when these units are placed in position above the seabed.



Aktio Preveza ITT, Greece (B69)



Second Severn Crossing, UK (B73)



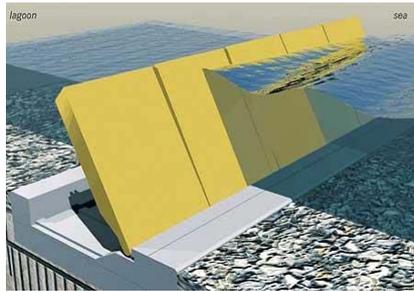
Confederation Bridge, Canada (B67)



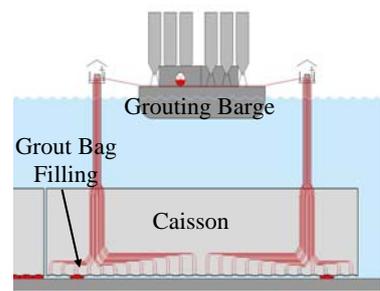
Boston ITT, USA, Trial (B51)



Venice, Lagoon



Venice Barrage (B123)



Venice, Automation

The system provides compartments under large bases that can be more reliably grouted. It avoids the washout of grout and copes with undulating bed levels. Importantly the system can be automated so it can be used without operation by divers. A recent example of this is the Venice Barrage project in Italy. Grout hoses and monitors were prefixed to the barrage caissons allowing the foundations to be grouted automatically from the surface. This automation was a significant improvement in efficiency and safety, as the tidal currents were too high for divers to work.

Proserve's engineers apply a risk management and quality control system, working in conjunction with contractors to overcome marine conditions and provide reliable foundations. The system is engineered to each application with appropriate site testing, mix development, training and site support worldwide. The grout bag system is also used for bearings and seals between concrete elements (Stockholm ITT B159, Olmsted Dam B117) and to underpin/infill underscour to existing marine structures.

Further technical details and relative merits of the system are described in a 2009 paper 'Foundations to Precast Marine Structures' Hawkswood and Allsop and project case histories are also available as noted in grey above.

The innovation and development of the system by Proserve's professional engineers has greatly improved the reliability, speed, economy and safety of installing large foundation elements underwater.



Ben C Gerwick Innovation Award
Design and Construction of
Marine Foundations
2015