

FRP harbour bridges



FiberCore Europe harbour bridges in the port of Rotterdam, the Netherlands.

The FRP harbour bridge is the low-maintenance successor of conventional harbour structures in steel. While steel structures have always been prone to corrosion, this harbour bridge developed by FiberCore Europe is not. Fiber reinforced polymers (FRP, or composites) enable the construction of strong, lightweight and durable structures. In a port-environment FRP offers significant advantages over steel:

- Low-maintenance and long design life → beneficial Life Cycle Costs (LCC)
- Fully prefabricated → high quality and fast construction
- Lightweight → easy transport and simple foundations
- Strong and safe
- 50 year warranty

FiberCore Europe is specialised in the design and construction of FRP-structures for heavy duty civil applications, amongst other in civil engineering and marine construction. It has built over 250 bridges, many of them with its proprietary InfraCore® Inside-technology.

The high strength and low maintenance requirements have made FRP an excellent alternative to concrete, timber and steel. The innovative material cannot rot or corrode, is resistant to salt, chemicals and UV-radiation, and is also light-weight, safe, fast to install, durable and sustainable. FiberCore Europe's FRP structures meet the design requirements as set out in Eurocodes.

Advantages of the Harbour Bridge

The FiberCore Europe Harbour Bridge is the contemporary answer of traditional harbour structures in steel. It is a high-tech structure, fully made of fiber reinforced polymers. It is made as one piece without the use of any bonded or bolted connections.

Thanks to its low self-weight, the bridge can easily be transported and quickly be installed. The bridge can be installed in a static manner, but can also be used as the link between a fixed abutment and a floating pontoon or jetty by using a pivot point and a sliding support at the lower end.



Harbour bridges follow a modular design.

FRP harbour bridges have been developed by FiberCore Europe for the Rotterdam Port Authority. They are successfully in use since 2012.

Design, in use and further use

The bridges can be supplied in any colour. The flooring can either be closed or as a grating, in both cases in FRP with a non-slip surface finish. A duct is integrated in the bridge to

transfer cabling through such as to connect moored vessels to the grid, thus avoiding noisy generators. Also, lighting operated by movement-sensors has been integrated in the bridge to enable a safe passage in the dark. Since Harbour Bridges are resistant to chemicals, they also perform excellently as ductwork-bridges in chemical plants or on industrial sites.



The FiberCore Europe harbour bridge is a lightweight structure that can be installed in less than an hour.

Design characteristics of Harbour Bridges

Distributed loading	500 kg/m ²
Max. length	20 meter
Modular length	2,4 meter
Width	1,8 meter
Expected design life	> 100 years
Integrated lighting	optional
Integrated duct for cables	optional



Details of the FiberCore harbour bridges.

For more information please visit our website or contact us:



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