

FiberCore Harbour Bridge

100 years design life with minimal maintenance under the most extreme circumstances...



FiberCore Europe developed a streamlined, composite truss bridge which is insensitive to corrosion, graffiti, salt, bird droppings, diesel oil and chemicals. The FiberCore Harbour Bridge is based on the globally patented InfraCore® technology. The harbour bridge is one fully integrated structure, in which vulnerable or high-maintenance bolted or bonded connections are avoided. The lightweight bridges are available in an effective width of 1.5 metres, in spans to just over 36 metres, in one piece. There is no need for an intermediate support (undamaged incline, no UXO investigation). The FiberCore Harbour Bridge integrally fulfills the design requirements of the Dutch CUR and the Eurocode.

Customised

The FiberCore Harbour Bridge can be supplied totally customised, in different lengths, with integrated cable protection piping, LED lighting, shore-based power units, movement sensors and an integrated access gate.

The harbour bridges come in two standards:

- supplied with traditional open lattice railings and open grating anti-slip floors.
- supplied with fully closed sides and closed, impervious floor.

These high-tech bridges are therefore ideal as a piping support bridge or as an escape bridge in general industry or petrochemical industries. The bridges are safe, non-conducting and even the fire properties can be tailored to customer requirements. The harbour bridges are supplied as standard in fire class D (Dutch Building Code - *Bouwbesluit*). In line with customer requirements, the harbour bridge can also be supplied in higher fire classes, such as fire class B - s2, d0 (ISO 13501 - 1:2007).

Economically competitive

Because of the maintenance-free, long design life (> 100 years), the environmental characteristics of the FiberCore Harbour Bridge are exceptional. In line with customer requirements, the environmental effects can be further tailored and improved, with bio-based resin systems and eco-friendly fibres. The FiberCore Harbour Bridge does not require any preservation during its entire design life. The economical competitiveness of this unique bridge concept is exceptional due to maximum availability plus low Life Cycle Costs (LCC). Furthermore, because of its low self weight, the prefab harbour bridge can easily be transported and can be installed quickly. The bridge can be installed as a static structure, using a pivot point or sliding support, and due to its lightness, also as the link between a fixed abutment and a floating pontoon.

Proven technology

FiberCore Harbour Bridge is a well-proven concept. Commissioned by the Port of Rotterdam, in the Rotterdam harbour and the Maasvlakte area alone, more than thirty bridges have been installed within a short period of time.

FiberCore Europe is now focussing its energies on a wider version for passenger cars.





The benefits at a glance

- ✓ Maintenance-free load-bearing structure
- ✓ Lightweight
- ✓ Ultra-long spans (to just over 36 m)
- ✓ Short installation time
- ✓ Resistant to UV, graffiti, salt, bird droppings, diesel oil and chemicals
- ✓ Parts not prone to corrosion
- ✓ No cathodic action: does not decay or rust
- ✓ Can be supplied in different fire classes
- ✓ Self-extinguishing
- ✓ No electrical conduction
- ✓ No resin-dominated connections
- ✓ Resistant to delamination
- ✓ More than 100 years design life
- ✓ Resistant to fatigue following impact
- ✓ Fully integrated structure, without any vulnerable connection
- ✓ High level of damage tolerance
- ✓ 50 years manufacturer warranty on the structure
- ✓ Extremely robust
- ✓ Very low Life Cycle Costs (100 years permanent availability)
- ✓ Because of its ability to float, easy to transport
- ✓ Can be installed as a static or pivoting structure
- ✓ Minimal requirements in relation to the foundation
- ✓ Can be installed on a floating pontoon
- ✓ Can easily be relocated in one piece and easily installed
- ✓ Highly durable
- ✓ Can be manufactured using biobased resins and fibres
- ✓ Optimal availability during the entire design life
- ✓ Economically competitive
- ✓ Incontestable well-proven track record

Standard spans from one piece

span length	effective width	total weight	load
5 m	1,5 m	1,1 tonnes	5kN/m ²
7,4 m	1,5 m	1,6 tonnes	5kN/m ²
9,8 m	1,5 m	2,1 tonnes	5kN/m ²
12,2 m	1,5 m	2,6 tonnes	5kN/m ²
14,6 m	1,5 m	3,1 tonnes	5kN/m ²
17 m	1,5 m	3,6 tonnes	5kN/m ²
19,4 m	1,5 m	4,2 tonnes	5kN/m ²
21,8 m	1,5 m	4,8 tonnes	5kN/m ²
24,2 m	1,5 m	5,5 tonnes	5kN/m ²
26,6 m	1,5 m	6,3 tonnes	5kN/m ²
29 m	1,5 m	7,5 tonnes	5kN/m ²
31,4 m	1,5 m	8,0 tonnes	5kN/m ²
33,8 m	1,5 m	8,6 tonnes	5kN/m ²
36,2 m	1,5 m	9,2 tonnes	5kN/m ²

Standard colours

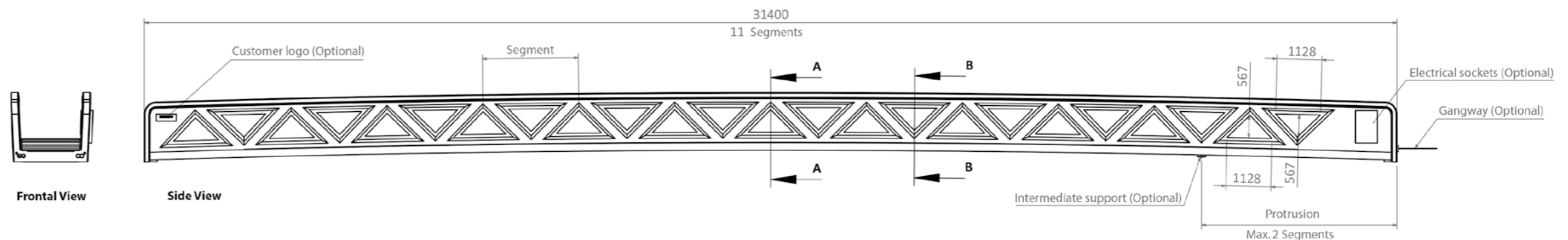
Anthracite grey	RAL 7016
Black grey	RAL 7021
Concrete grey	RAL 7023
Light grey	RAL 7035
Pure white	RAL 9010

All other RAL colours can be supplied in consultation.

Options for customisation

- Length of span
- Colour (including non-standard RAL colours)
- Finishing quality
- Maintenance-free composite open grating floor or closed floor
- Open railings or closed railings
- Additional protrusion possible (2 x 2.4 m)
- Integrated LED lighting
- Integrated cable protection piping for electricity, water, other fluids or gas
- Type of support
- Pivot point and sliding support for tidal circumstances
- Gangway
- Integrated (lockable) access gate
- Biobased
- Integrated customer logo

FiberCore Europe specialises in the design and production of ultra-light, self-supporting structures which can carry high loads, made out of fibre-reinforced polymers (composite). The introduction of the globally patented InfraCore® technology, the Rotterdam-based company caused a veritable revolution. In both the Netherlands and abroad, during the past five years, more than 700 (heavy traffic) bridges, bridge decks and lock gates have been built using this pioneering technology. The FiberCore Harbour Bridge was developed based on the same basic principles: 100 year design life with manufacturer warranty, minimal maintenance, maximum availability, strong and safe, plus available in any design tailored to customer specifications.





Maintenance-free composite open grating floor, equipped with wear-resistant surface layer.



Integrated power unit.



Integrated durable LED lighting.



Integrated cable protection pipes for electricity, water or gas.



Simple standardised support on pile, pontoon or sheet pile wall.



Pivot point and sliding support for tidal circumstances.



Integrated fencing is easy to install.



Simple standardised support on pile, pontoon or sheet pile wall.



Incontestable track record.



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