



## Stoplogs

InfraCore® Inside is FiberCore Europe's proprietary technology to construct strong, lightweight and durable structures in fibre reinforced polymers (FRP, or composites). FRP is a proven technology, with significant advantages to steel, concrete and timber in lock gates, flood gates, stoplogs and other marine structures:

- Low maintenance and long design life; beneficial Life Cycle Costs (LCC)
- Fully prefabricated; high quality and fast construction
- Lightweight; tuned to be just heavier than water
- Ten times stronger than steel and more durable than wood
- Designed to provide a safe working environment
- 50 year warranty

Since its market introduction in 2007 in the Netherlands, InfraCore® Inside has established itself as an accepted major new construction material for infrastructure and marine construction. More than 300 projects have been realised in the Netherlands, UK, USA, China, Belgium and Italy. InfraCore® Inside meets the loading requirements from the Eurocodes.

## Low maintenance stoplogs

FRP features excellent properties when used in marine structures such as stoplogs and lock gates. Due to the significant strength-capacity of FRP, InfraCore® Inside is competitive on initial costs compared to structures in timber and steel. When considering the design life of 100 years, the minimal amount of maintenance required and the reduced likelihood of theft, the comparison is even more overwhelmingly in favour of FRP.

FRP cannot rot or corrode, it is resistant to moisture, salt and UV-radiation and does not decay over time. This gives reassurance that FRP stoplogs will always fit and perform their task, no matter how long they may have remained in storage.

### Fatigue resistance

Although FRP is used as a material by other manufacturers, only InfraCore® Inside uses special design and construction techniques to produce a finished product that will not suffer from fatigue, even after an impact. Test results have shown that the strength and durability of lock gates made from InfraCore® remains unaffected despite repeated collisions; a fact that reinforces the suitability of this innovative material for the construction of stoplogs.



### Design, fabrication and installation

InfraCore® Inside is designed to meet the specifications of each project and lead times can be as short as a few weeks. Due to the lightweight nature of FRP, the design of the stoplogs is tuned to be just heavier than water. This minimises wear and tear on the lifting equipment, thus saving on initial cost and maintenance.

InfraCore® Inside stoplogs can be supplied in a variety of widths to suit the application and any existing structure as well as being available in any colour. They can also be supplied pre-fabricated including the frame, ready to be cast into a reinforced concrete structure. This speeds up construction and ensures reliable performance of the stoplog installation.



### Lightweight, retrofit stoplogs

Existing stoplog installations require regular maintenance and in some cases replacement due to theft. The use of steel and aluminium is predominant in this application and both are subject to corrosion without regular intervention.

Introducing FRP stoplogs has a number of advantages either as a replacement or for a new installation. Most stoplog installations are made-to-measure and ECS has the design expertise as well as experienced field engineers to deliver a complete project from start to finish.

The weight of FRP stoplogs is specially tuned to give a suitable negative buoyancy without the need to add metal sub-frames or ballast. This provides the optimum weight for each stoplog which will be considerably less than a steel or aluminium original. This reduces the load on any existing lifting gear used to install the stoplogs and minimises the requirements for new lifting equipment.

Retrofit projects can be designed to use existing concrete channels or new stainless or galvanised steel guides can be installed by certified dive teams under the guidance of ECS project engineers.

*For more information please visit our website or contact us:*



Engineering Services ■■

**InfraCore**inside

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