

Field of expertise: Hydraulic Structures
Client: Volker InfraDesign BV

Design Lock 'Havenkwartier Assen', the Netherlands

Project description

The municipality of Assen has developed the vision 'sailing, connecting, recreation' to reshape and enhance the area along the channel that runs through the heart of the city. To reach this goal, six bridges and two new locks are to be realized. The first lock was completed in the year 2013 and the second one at the 'Havenkwartier' will be finished in the spring of 2017. Together with our client Volker InfraDesign BV we won the Design and Construct Tender procedure and made the design for the lock.

The lock was a width of six meters and is forty meters long, including lock heads. The water level difference between the upstream and downstream part of the channel is approximately 2.5 meters.

The upstream lock head and the lock chamber are surrounded by water on both sides. The downstream lock head connects to a cofferdam that connects the two banks of the channel. Especially this narrow cofferdam was a major engineering challenge. The dam has to provide stability for the lock and is subjected to substantial ice loads in winter. MH Poly designed an innovative anchoring solution that can withstand extreme ice loads and provides stability within strict deformation requirements.

Project activities

- ◆ Design calculations: lock heads and chamber, sheet pile walls, guiding works, geotechnics;
- ◆ Drawings: plan overviews, construction details and cross-sections, 3D-animations;
- ◆ Reports: Design basis, sustainability report, drawing explanation guides, construction planning.

