

## Concrete for the largest lock in the world



### Situation

Dyckerhoff Basal is the Dutch subsidiary of the cement manufacturer Dyckerhoff GmbH, which in turn belongs to the Italian Buzzi Unicem Group and currently employs 11,000 people in more than eleven countries worldwide. Dyckerhoff Basal is one of the largest suppliers of ready-mix concrete and cement in the Netherlands.

In order to make Amsterdam, one of the most important European ports, accessible for the new generations of ships with even larger dimensions, the largest lock in the world will be built in IJmuiden. IJmuiden is located at the mouth of the 27-kilometer-long North Sea Canal, which connects Amsterdam with the sea.

### Task

The construction project comprises an investment volume of approx. 700 million euros and is to be completed within a construction period of approx. seven years. The new lock is to be opened for shipping at the beginning of 2022. The largest lock in the world requires around 300,000 m<sup>3</sup> of concrete.

For Dyckerhoff Basal, the most important criterion in selecting the concrete mixing plant was a rapid start of operation and the possibility of a rapid change of location in the future in order to be able to start concrete production at short notice for construction projects with limited time. In addition, a theoretical output capacity of up to 150 m<sup>3</sup>/h was an essential requirement for the mixing plant in order to reliably cover delivery peaks throughout the day.

### Solution

Liebherr and Dyckerhoff Basal have selected the Mobilmix 3.5-C in container design with CSC approval for cost-effective and worldwide ship transport as the optimum solution under the given conditions. Thanks to its container design and installation on steel foundations, the Mobilmix 3.5-C is ideally suited for quick installation and relocation in temporary construction projects. The plant can be relocated in four days. Thanks to the already integrated insulation, the Mobilmix 3.5-C is also optimally equipped for winter operation. The Mobilmix 3.5-C is equipped with a robust and reliable Liebherr DW 3.5 twin-shaft mixer. The DW 3.5 enables optimum concrete homogeneity thanks to the three-dimensional mixing principle. In addition, the Liebherr twin-shaft mixer is particularly suitable for short-term recipe changes.

With the Mobilmix 3.5-C, theoretically up to 150 m<sup>3</sup> of concrete can be produced per hour, as a double plant even up to 300 m<sup>3</sup>. The plant is operated intuitively via Liebherr's own Litronic-MPS control system at a PC workstation.

All components are optimally accessible for maintenance work thanks to the generous steps and platforms and offer sufficient space for tools and working equipment.

Technical data	Mobilmix 3.5-C
Theoretical discharge output in compacted mixed concrete	150 m <sup>3</sup> /h
Mixer type	DW 3.5 (twin-shaft-mixer)
Feeding system	Skip
Aggregate storage capacity	105-600 m <sup>3</sup>
Control system	Litronic-MPS

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