

Project Spotlight



Kloosterboer KDT-3 Rotterdam Maasvlakte, NL

Coldstore - SFRC ground bearing Ultimate®
'seamless' floor slab

Kloosterboer Vastgoed Maasvlakte B.V. offers total supply chain solutions for temperature controlled food products, as in a storage, logistics services and cooling/freezing capacity.

After proven expertise in building coldstore facilities, main contractor B-Built found Twintec to be the partner to meet the needs of Kloosterboer Vastgoed B.V.

This frozen storage facility has the capability of holding up to 23.000 pallets. For transport within the coldstore a flatness of NEN2747 Klasse 2 was required.

In a joint effort with B-Built, the Twintec Engineering department provided the most suitable floor design, meeting the demands of Kloosterboer Vastgoed B.V. This resulted in the design and construction of a "seamless" steel fibre reinforced concrete floor slab, in combined with a layer of traditional mesh; a Twintec Ultimate upper floor slab combined with rails and a traditional groundfloor slab.



Project Data

End User:		Slab Depth:	160mm
Investor	Kloosterboer Vastgoed BV	Fibre Type:	MPZ HT50
		Fibre Dosage:	35kg/m ³
Main Contractor:	B-Built	Completion Date:	March 2019
M2:	23.819 m ²		
Pour Days:	19 Days		

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Twintec Research and Engineering has designed a floor slab which corresponds to the local demands of the Eurocode and the modelcode 2010. Taking in all specifics of the customer.

Kloosterboer KDT-3 has been produced to the high flatness tolerance NEN2747 Klasse 2, which has been reached fully.

A complex project, due to rails, specific needs and a combination of different flooring types.

Twintec is unique worldwide offering a package, taking total responsibility for the floor slab. **Design-Build-Guarantee.**

Design: Twintec in-house engineering team considered all elements of the building. Specifically considering loading requirements onto the slab of UDL 50kN/m² and racking leg load 90kN, the operational traffic within the facility and durability and life costs. A 160mm slab thickness in the warehouse to all areas was utilised with a fibre dosage of 35kg/m³ high tensile strength MPZ HT 50 steel fibres in combination with traditional mesh. An underfloor, rails and taking into account of the insulation provided a complex but durable floor slab.

Build: Co-ordination of activities on site is a key success factor and this was achieved by the professional project management team at B-Built, ensuring all parties worked together to deliver a successful project. All Twintec floor slabs are constructed by directly employed, skilled and experienced team of workers. This was especially important on this project as the slab had to be laid by hand whilst ensuring compliance with the project's stringent flatness requirements. Concrete is a key component to ensure quality in the floor slab and an excellent supply by Mebin met Twintec's daily requirements. The Twintec team laid approximately 10.000m² in 4 working days, easily achieving the NEN2747 Klasse 2 flatness requirements for the project.

Guarantee: The Twintec assurance guarantee is provided to all parties in a project. This incorporates insurances, warranties and advisory notes together with Twintec quality guarantees that come from employing professional staff throughout the business, a high level of customer service and a robust aftercare system.

Contact the Twintec Netherlands business team for further information:

Tel: +31 345 53 28 78 Email: info@twintec.nl

Regional Office: Gutenbergweg 6 - 4041BA - Culemborg (NL)