

Press release

ZHD Stevedores orders first all-electric CBG 500 E

- ZHD Stevedores orders first all-electric transshipment crane CBG 500 E
- The crane, which was recently launched on the market, impresses with a lifting capacity of up to 105 tonnes in hook operation and a maximum grab capability of up to 90 tonnes
- The crane will be used for bulk handling in the area of Rotterdam and the ZHD terminals in Dordrecht and Moerdijk

The crane combines state-of-the-art drive technologies with Liebherr's in-house developed crane control system "Master V." Another highlight is the energy recovery system LiCaTronic, which makes best possible utilisation of the available energy (source). The CBG 500 E supports a lot of tailor-made features that have been developed in close cooperation with ZHD to best suit to the demands of the operation fields to serve.

Rostock (Germany), July 6, 2023 – A crane created through close partnership. At the time of contact between ZHD and Liebherr during the earliest project phases in 2021, the prototype of the CBG 500 E was still in development phase. Based on shared core values and an interest in improving maritime products, ZHD has worked closely with Liebherr on this project to incorporate its many years of experience in transshipment and specific requirements for the machine into the process. As a result, additional features were added to the crane, such as the external comfort access to the cabin, the optional enlargement of the cabin to 10 m³ and an optimised boom design.

The prototype of the all-electric CBG 500 E will remain on the test rig at Liebherr's factory in Rostock until Q3 2023. Thereafter the crane will be installed on ZHD's refurbished barge "Ahoy 50." In the future, the crane will be used for bulk handling in sheltered waters of the Netherlands. Thanks to the crane's extended outreach and application-specific features, direct transshipment, i.e., loading and unloading of barges and ships without additional loading equipment, will be possible.

New interior and exterior, process-adapted design and features

The new all-electric crane CBG 500 E offers a handling performance of up to 2,000 tonnes per hour and a maximum outreach of 50 metres. The specially designed lattice boom makes it particularly rigid and light, which further improves the turnover performance and at the same time reduces energy requirements. Resulting in a lifting capacity of up to 105 tonnes in hook operation and a maximum grab ability of up to 90 tonnes. The extension of the cabin and the high positioning ensure that the crane operator has an optimal viewing angle on all processes. With the crane's focus on dry bulk operation, where it will load and unload barges and ships, this configuration is particularly welcomed by ZHD. According to the requirements of ZHD, the CBG 500 E will be optimized for the configuration of 50 tons safe working load at maximum outreach to cover the operational needs.

"Our collaboration with Liebherr over the past two years to develop and construct an all-electric crane for our transshipment operations has exceeded our expectations," notes Yves Borne, Creator / Manager of

the Project and Partner in ZHD. “We were able to test-drive early prototypes and incorporate our own industry experience that ended up defining practical options and benefits that are now part of the final product. Our investments in infrastructure and new products are based on current and emerging market needs. We want to meet competitive loading rates, but also do so in an environmentally- and operator-friendly manner. Our collaboration with Liebherr and the resulting creation of the CBG 500 E on our pontoon Ahoy 50, help us to achieve this.”

Crane fitted for future, emerging market trends

The all-electric drives inside the crane in combination with the supercapacitors turn the rope luffing CBG 500 E into a unique handling solution in the market. The supercapacitors used as standard in Liebherr’s own LiCaTronic energy recovery system support the increasing demands regarding energy efficiency. With evenly distributed slewing gears, optimum performance and steady power transmission are thereby achieved during dynamic crane movements. This helps the operator maximize turnover during cycles with smoother movements.

More stringent environmental regulations affect an increasing number of ports and maritime operators. ZHD has adopted an early preference for electric options. Compared to non-electric alternatives, the crane does not need hydraulic oil within the drive system. Power consumption is also reduced, since there is no hydraulic circuit that would require continuous empowering of the main drives. The constellation of advanced inverter technology, power storage and application-specific power management leads to a potent drive system with simultaneous reduction of required energy. The CBG 500 E is thus a heavy-duty transshipment crane that operates emission-free and environmentally friendly.

Due to the future-oriented approach of ZHD, the “Ahoy 50” floating crane will be able to operate either with shore power supply or with onboard power supply when connection to the terminal is not available. The onboard electricity will be generated by newly installed Stage V gensets, conforming the latest emission standards in the business.

Digitalisation is also becoming increasingly prevalent in new market technologies. With the crane’s new software architecture, future demands can be accommodated. The crane operator is supported operationally by the new, integrated “Master V” crane control system. These components form the basis for integrating future assistance and automation systems into the crane in the long term, such as Liebherr’s own LiMain Remote Maintenance.

End of construction of the crane is scheduled for October 2023 and is currently foreseen to commence operation in the Netherlands around December 2023/January 2024.

About ZHD Stevedores

ZHD Stevedores is a privately owned and independent company that has been providing stevedoring services since 1968. As a fourth-generation, family-owned business, ZHD has over 55 years of extensive experience in the industry. With a team of 90 employees, ZHD operates in the Rotterdam-Rijnmond area using both mobile harbour and floating cranes. In order to meet the needs of clients, ZHD terminals can operate round the clock. The terminals are situated in Dordrecht and Port of Moerdijk. In addition, they are providing stevedoring services in Port of Rotterdam through their floating cranes. The operations of ZHD involve handling approximately 9.5 million metric tons of various products annually, comprising over 80 different products. Their comprehensive services include handling bulk, breakbulk, steel products, coils and containers, as well as providing open and covered storage facilities.

About Liebherr-MCCtec Rostock GmbH

Liebherr-MCCtec Rostock GmbH is one of the leading European manufacturers of maritime handling solutions. The product range includes ship, mobile harbour and offshore cranes. Reach stackers and components for container cranes are also included in the product portfolio.

About the Liebherr Group

The Liebherr Group is a family-run technology company with a broadly diversified product range. The company is one of the largest construction machinery manufacturers in the world. However, it also offers high-quality, user-oriented products and services in many other areas. Today, the group comprises more than 140 companies on all continents. In 2021, it employed more than 49,000 people and generated a total consolidated turnover of over 11.6 billion euros. Liebherr was founded in 1949 in Kirchdorf an der Iller in southern Germany. Since then, the employees have pursued the goal of convincing their customers with sophisticated solutions and contributing to technological progress.

Images



liebherr-zhd-stevedores-cbg-500-e-1.jpg

The crane will be painted in ZHD Stevedores' corporate colours of blue, yellow and red.

Contact

Anne Lau
Product Marketing Manager SC/PTS
Phone: +49 381 6006 5031
E-Mail: Anne.Lau@liebherr.com

Published by

Liebherr-MCCtec Rostock GmbH
Rostock / Germany
www.liebherr.com