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# Port and transshipment solutions

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Product range

[www.liebherr.com](http://www.liebherr.com)

# LIEBHERR

Maritime cranes



# We've got you covered

Bulk, cargo and container handling with cranes on barges, transshippers or as fixed installed solution are an established part of logistics chains around the world. Decisive factors for success in this business are reliability, speed and flexibility. These characteristics are also becoming more and more important for cargo handling.

Our portfolio of port and transshipment solutions includes permanently installed port cranes as well as transshipment cranes. They all have one thing in common: Customers everywhere benefit from fast handling speeds in continuous operation at 24/7 level.

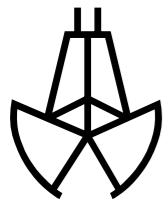
With the CBG 500 E, we also offer an all-electric handling solution. The crane is equipped with electric drives that use the available energy efficiently and operate in an environmentally friendly manner. The all-electric CBG 500 E has a boom length of up to 50 m and handles up to 2,000 t per hour. In sheltered water the maximum load capacity in grab operation is 90 t and in open water 65 t.



# Applied modularity

Our fix installed cargo cranes type FCC are the perfect complement for ports and terminals with limited space. With our transshipment cranes type CBG, we also offer solutions that can be used for various applications on barges or transshippers, for bulk, general cargo or container handling, in sheltered or open water.

## Operation mode:



### Bulk handling

Different material densities occur when handling raw materials, construction materials or agro bulk. How quickly and efficiently the goods are handled depends on the equipment used. Therefore, fast and reliable equipment is essential.



### General cargo handling

General cargo is less standardised and uniform, because individual shapes and sizes define general cargo and make it special in handling. Accordingly, flexibility is required in the load lifting equipment.



### Container handling

Container vessels require reliable and fast solutions. Because fast unloading means short lay times per ship, low costs and larger handling volumes, as more containers can be handled in a short time.

## Options for various applications:



# Fixed cargo cranes

## Space-saving design

Due to the small diameter of the crane base column and a minimum tail swing, those machines are optimal for space restricted areas and quays.

## Local emission-free

With their main electric drives, the cranes operate emission-free on site and thus contribute to the pollution-free environment in the port.

## Long life cycle

The crane consists of components tested and proven for extreme conditions and performance. In addition, important components are protected inside the crane.

## FCC 230

### Maximum lifting capacity:

45 t (hook operation)  
35 t (grab operation)

### Maximum outreach:

29.5 m

## FCC 280

### Maximum lifting capacity:

45 t (hook operation)  
35 t (grab operation)

### Maximum outreach:

38 m

## FCC 310

### Maximum lifting capacity:

45 t (hook operation)  
30 t (grab operation)

### Maximum outreach:

32 m

## FCC 360

### Maximum lifting capacity:

50 t (hook operation)  
45 t (grab operation)

### Maximum outreach:

36 m

## FCC 500 E

### Maximum lifting capacity:

105 t (hook operation)  
90 t (grab operation)

### Maximum outreach:

50 m



**Video:**  
Pioneers in Paraguay – How two FCC 280 handle more than 50% of the total container traffic in Paraguay per year.



# Transshipment cranes

## Heavy duty, high performance

The CBG series of four-rope grab cranes is specially designed for continuous transshipment operation in sheltered or open water and allows a constant and reliable turnover of dry bulk cargo. The cranes can be used for various applications and ensure efficient and uninterrupted handling of goods on vessels up to Capesize.

### CBG 310

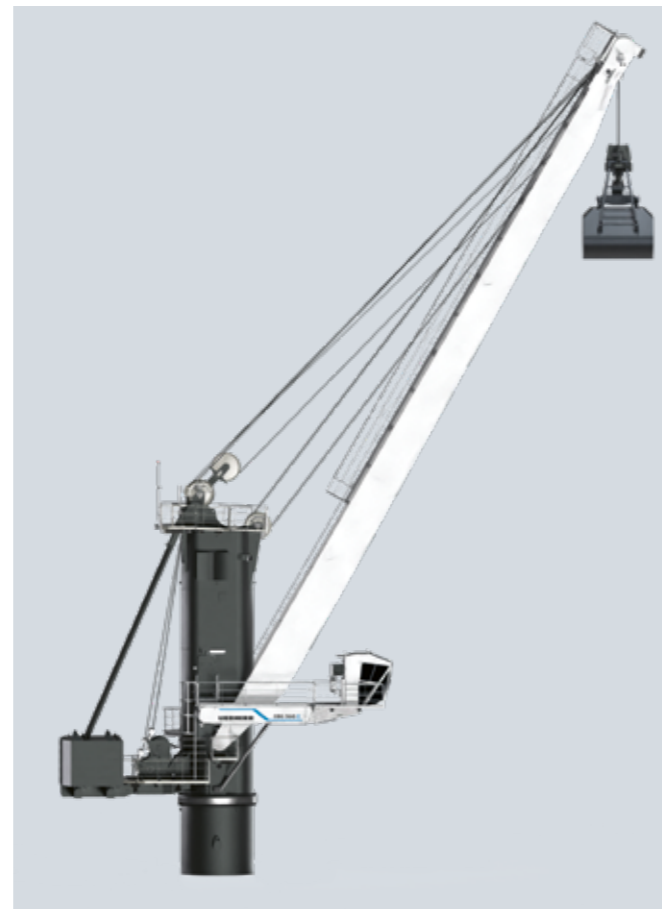
**Maximum lifting capacity:**  
45 t (hook operation)  
30 t (grab operation)

**Maximum radius:**  
30 m

### CBG 360

**Maximum lifting capacity:**  
50 t (hook operation)  
45 t (grab operation)

**Maximum radius:**  
36 m



## Areas of application:



### Open water

The ever-larger transport vessels around the world sometimes have no access to quays and port berths. Consequently, the relocation of dry bulk handling to the open water increases, as well as the need for fast and reliable crane operations.



### Sheltered water

In space restricted ports or midstream operations, flexible handling equipment plays a decisive role. Without external influences such as high waves and when ambient conditions allow, floating cranes maximise their handling performance when being deployed in sheltered water.

# The all-electric transshipment crane: CBG 500 E

## Maximum lifting capacity:

105 t (hook operation)

90 t (grab operation)

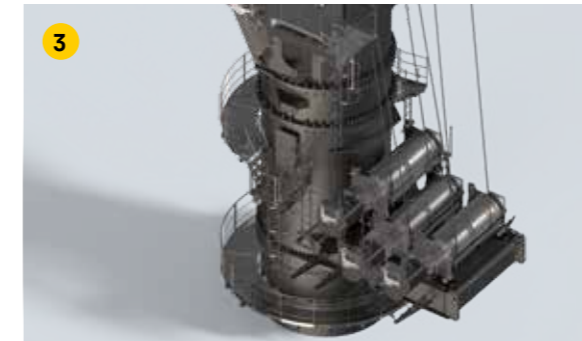
## Maximum outreach:

50 m



### Video:

The beginning of a new era –  
Introducing the CBG 500 E



### 1 All-electric

The CBG 500 E is an all-electric transshipment crane. The electric motors used ensure emission-free and environmentally friendly operation of the crane. The fact that the crane is also rope-luffed means that there is no need for hydraulic oil.

### 3 Energy efficient

The CBG 500 E is characterised by the energy recovery system developed by Liebherr, which makes optimum use of the energy available. The standard use of supercapacitors ensures that no energy is lost.

### 5 Improved boom design

The boom of the CBG 500 E is designed as a lattice boom. This makes it particularly stiff and very light, which improves the turnover performance and at the same time reduces the energy need.

### 2 Innovative crane control system

Together with an even more efficient software architecture, it forms the basis for integrating future assistance and partial automation systems into the crane in the long term.

### 4 Operator comfort

The cabin of the CBG 500 E has been extended and positioned higher. This gives the crane operator an optimal viewing angle of the handling processes.

### 6 Flexibility

The CBG 500 E can be used in both open and sheltered waters or as a fix installed crane on land. It can be configured with either a 43 m or 50 m boom for grab and hook operation as well as operation with special lifting equipment by installing an electrical cable drum. In addition, there are optional features such as a comfort ascent and counterweights as well as additional platforms and a boom walkway for maintenance purposes.

# Technology



## LiSIM®

Liebherr Simulator increases port safety and productivity by providing a cost-effective and highly efficient crane operator training solution. The development of this sophisticated training tool was prompted by Liebherr's extensive experience in crane operator training. Based on the original Litronic® crane control system, LiSIM® is the only realistic virtual solution available on the market for learning to handle the precise and innovative control of Liebherr maritime cranes.



## LiCAS

Liebherr cranes can be equipped with the Liebherr Collision Alert System (LiCAS). This additional assistance system sets new levels in operational safety during heavy-duty cargo handling. LiCAS supports the crane driver by permanently detecting the distances between several cranes and warns of potential unsafe conditions.



## LiDAT smartApp

With LiDAT smartApp, it's possible to analyse your crane (operating and performance) data and get answers from it almost immediately. That leads to direct decisions. The ability to work faster gives operators a competitive edge they didn't have before. Big data analytics helps to detect bottle necks and to identify new opportunities.



## SmartGrip®

The SmartGrip grab technology is capable of optimising the filling rate of the grab in a self-learning manner. In this way, SmartGrip learns after only a few lifting cycles how to optimise capacity utilisation of the grab even for less experienced crane operators.

# Customer service



Based on many years of experience, Liebherr provides effective assistance and support through specially trained technical advisors and service engineers stationed worldwide. Professional field engineers carry out inspections and recommend customised maintenance programmes to suit all operational requirements. In training courses at the company's own training centres and at the customer's site, experts pass on their detailed specialist knowledge and help to make daily operations more efficient and reliable. Whether it is regular maintenance work, repairs, remote support, or customised solutions - competent support makes a significant contribution to the maximum availability and reliability of Liebherr's maritime products.



**Technical support**



**Parts & service products**



**Service agreements**



**Upgrades, retrofits & overhauls**



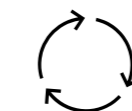
**Field service**



**Digital solutions**



**Maritime training centre**



**Reman programme**



