

The EC-B Flat-Top cranes.

**New ideas –
new technology.**



LIEBHERR

EC-B Flat-Top cranes. Connect and Work.

Liebherr works consistently on developing modular systems for simple, practical and quick assembly and which take into account the relevant safety aspects. The customer benefits from many simplifications, such as the quick-connection system for jib and counter-jib, new LiConnect jib connection system, a removable, pin-down crane cab, pin magazines and electric plug connections to the drive units and switchgear. Even electronic function modules such as work-area limitation (ABB) and remote data transmission (DFÜ) follow a modular system and are easily extended. All assemblies come pre-installed.

Connect and Work – Assembly simplifications for practical use. Only at Liebherr.

1 The small and medium-sized EC-B cranes.

Crane operators in medium-sized building projects can choose between nine small and medium-sized EC-B Flat-Top cranes. On these EC-B cranes, the compact head contains the hoist gear, slewing gear, the central switchgear and the complete slewing ring support. The trolley travel gear is housed in such a way in the jib pivot section as to make it easily and safely accessible straight from the compact head. Crane operators have the option of using the crane and all its functions with or without the cab.

2 The large EC-B cranes.

Five large, Litronic EC-B Flat-Top cranes guarantee up to 20 % greater load capacities at the touch of a button and ensure excellent material-handling on your construction site.

High hook heights and large load capacities are the large EC-B Flat-Top cranes' specialisations. The compact head on these cranes contains the entire switchgear, the slewing ring support, the movable comfort cab, the slewing gear and the fold-out frame.

3 Completely new jib technology.

The EC-B jib sections are tight-welded. Internal rust and corrosion don't stand a chance. The EC-B crane LiConnect quick jib connection system has been designed from scratch and patented. With the help of LiConnect, the jib sections are quick, safe and easy to fasten in place.

4 Liebherr high-performance drive units.

All drives used on the EC-B Flat-Top cranes were developed and even manufactured at the Liebherr Group's own competence centre for drive technology in Biberach. These intelligent drives offer excellent operating safety and are uncompromisingly efficient. High-performance drive units from Liebherr lead to significant increases in material handling output. Whether one-speed or two-speed FC hoist gear, FC or EDC slewing gear or FC trolley travel gear, we have the right drive for every job.

1 The small and medium-sized EC-B cranes.

These Liebherr cranes are characterised by their quick, easy assembly. The compact head is mounted by an auto crane in a single lift. All drive pedestals and rails are zinc-coated and designed to last. All drives are easy and safe to reach for maintenance work straight from the compact head.

The newly designed comfort cab is attached and removed by means of quick-release fastenings and is identical for all small and medium-sized EC-B cranes. This cuts crane fleet costs. The cranes are used in either 2-fall or 2/4-fall mode, or exclusively in 2-fall where the FR.tronic version is concerned.



Connect and Work. Quick assembly.

Preassembly of the newly designed counter-jib is carried out in just a few manoeuvres on the ground. The rails have a fold-out design, meaning once unfolded all rails are fully attached. Assembly has also been simplified by means of fold-out assembly supports for use in positioning the counter-jib guying system. The guy rods are in the exact assembly position.

The compact head is put in place by an auto crane in a single lift. This compact head is delivered pre-installed. Only a few plug connections are needed to complete the electric installation. Pin magazines are positioned within easy reach. As soon as the compact head has been positioned on the tower, it can be slewed into the perfect assembly line.



Fold-out rails for minimal preparatory work.

Rapid pinning of the counter-jib guying systems.



Connect and Work. Sophisticated assembly technology.

An important feature of EC-B Flat-Top cranes is the emphasis placed on quick and easy assembly during their construction: exact positioning of the counter-jib guying system, preset lifting tabs for the auto-crane hoist and slots for the jib and counter-jib connections. New quick-release fastenings also make pinning the jib and counter-jib considerably easier. The counterweights for EC-B cranes of up to 130 mt are all identical. Having reduced the weight of individual package units, small, cost-effective mobile cranes can be used for assembly.



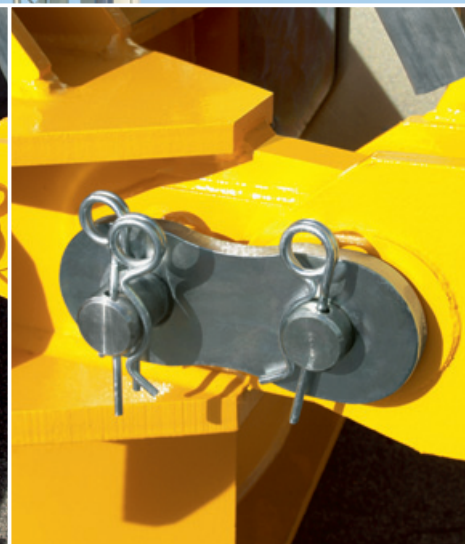
Simultaneous ballasting and reeving of the hoist rope saves precious time.



Simple pinning of the jib pivot section.



The new quick connection system for jib and counter-jib.



Crane operation with cab or without: You choose.

Crane operators have the choice between operating the crane with all its functions with the cab or without. The wiring is plugged in in just a few moves. The new cab, mounted outside the tower with quick-release fastenings, is the same for cranes of type 50 EC-B 5 to 130 EC-B 6 and can thus be fitted to any EC-B crane in this size category. These cranes can easily be operated using radio remote control too, with acknowledgement of the crane parameters.

An electronic monitoring system (EMS) is available as an option when equipping the FR.tronic crane. The following electronic modules are easily extended: load-moment limitation (LMB), work-area limitation (ABB), machine data analysis (MDA), anti-collision system (AKS) and remote data transmission (DFÜ).



The clearly and ergonomically designed crane cab.



All crane data visible.





2 The large EC-B cranes.

The large EC-B cranes set standards on the market for Flat-Top cranes: the compact head forms a central unit which is mounted in a single lift. These cranes offer well-staggered working radii up to 75 m and maximum load capacities of up to 12 t. All drives are stepless.

The large EC-B cranes are available exclusively in the Litronic version. Litronic cranes provide 20 % greater load capacities at the touch of a button. The Litronic control system incorporates the load-moment limitation system (LMB), the work-area limitation system (ABB) and the machine data analysis system (MDA). The anti-collision system (AKS) and remote data transmission are optional extras. All assemblies come pre-installed.

The comfortable workspace in the sound-proofed, heat-insulated complete-visibility cab provides an unhindered view of the entire working environment, meaning every load is perfectly positioned. The control panels for all functions are integrated into the seat and can be repositioned in a multitude of ways. Roll-down sunblinds protect from the sun's rays and prevent dazzling. Air conditioning is also available as an option.

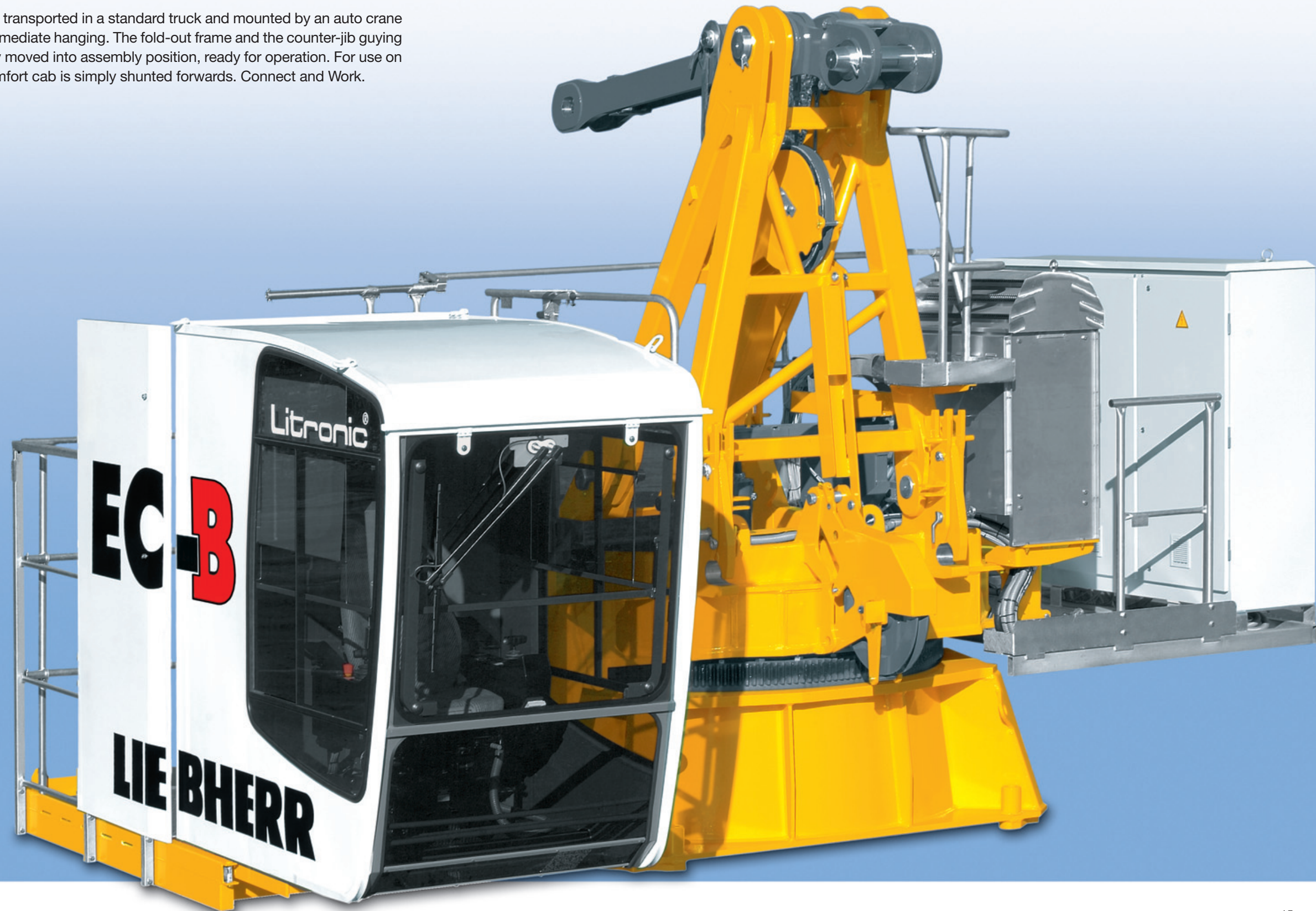
The compact head.

The central feature in the EC-B series is the newly developed compact head. The complete unit contains movable cab, switchgear cabinet, fold-out frame, slewing gear, slewing ring with slewing ring support and current collector. The electrics are soon connected by means of just a few plugs. Just one central switchgear cabinet is integrated into the compact head for the whole crane. Maintenance work is easy and safe to carry out. The compact head of the EC-B cranes leaves the factory completely pre-installed.

The compact head can be transported in a standard truck and mounted by an auto crane in a single lift, with no intermediate hanging. The fold-out frame and the counter-jib guying system are simultaneously moved into assembly position, ready for operation. For use on construction sites, the comfort cab is simply shunted forwards. Connect and Work.



A single lift and the compact head is ready for operation.



One lift from the truck and it's up on the tower.

With no intermediate hanging of the compact head, this central unit is hoisted onto the tower in a single lift. As soon as the compact head has been mounted onto the tower and the electric connection established, it can be slewed straight into the ideal assembly position. The compact head leaves the factory completely pre-installed.

Assembly-friendly transport.

For efficient transportation, the counter-jib is loaded using a piggyback system. Again, the rear part of the counter-jib is pinned directly to the rest of the counter-jib from in the truck. The compact head is transported upright in the truck. The entire EC-B series is laid out in standard 40' containers for loading. The entire upper part of the 280 EC-B 12 Litronic crane can be transported at maximum radius in four standard 40' containers.



Upright transportation of the compact head in the truck.

Piggyback loading of the entire counter-jib.

3 Completely new jib technology.

The complete jib is pre-assembled on the ground. The jib sections are tight-welded to protect them from internal rust and corrosion.

The new quick jib connection system: LiConnect.

The jib sections are quickly and securely fixed together using the new LiConnect quick jib connection system. Centring pins ensure a perfect and automatic centring of the lower chord.

The transport position of the hook block is also new. On cranes of up to 130 mt, the hook block is now integrated into the jib pivot section for transport. Upon assembly, the hook block is released using a crank and reeving carried out with ease. In the FR.tronic version, the load hook is integrated into the trolley for transport.



Hook block transport position.

The new LiConnect quick jib connection system.

Tight-welding ensures a long life.



Connect and Work.

Liebherr works consistently on developing simple, quick and safe assembly systems. Many new ideas and innovations have been incorporated as practical details in the crane design. Plug connections ensure a quick erection. Even the high-performance hoist gear is quickly assembled using plug connections. The new LiConnect quick-jib connection is patented and sets new standards. The pin magazines sit in just the right place, within easy reach. The crane cab itself can be taken on and off and is quickly installed with the help of electric plug connections. Many sophisticated details come together for quick assembly times.



Electric plug connections.



Hoist gear electric plug connections.



Quick connection system for jib and counter-jib.



New LiConnect quick-jib connection.



Pins in just the right place, within easy reach.



4 Liebherr high-performance drive units.

All drives used on EC-B Flat-Top cranes were developed and manufactured at the Liebherr Group's own competence centre for drive technology in Biberach. High-performance drives from Liebherr ensure safe, quick and efficient handling of loads. Their low power consumption also has a noticeably positive effect on operating costs.

The FC hoist gear.

When selecting hoist gear drives, you have a choice between one-speed and two-speed frequency controlled high-performance drives. They come with different capacities depending on operations. The greatest advantages they offer include automatic load detection, micro-speed travel, use of the entire control-lever travel range and load retention without application of the hoist gear brake. The load is delicately positioned at the touch of a button on the control panel.

These drives make safe command and optimal control of the crane really easy.

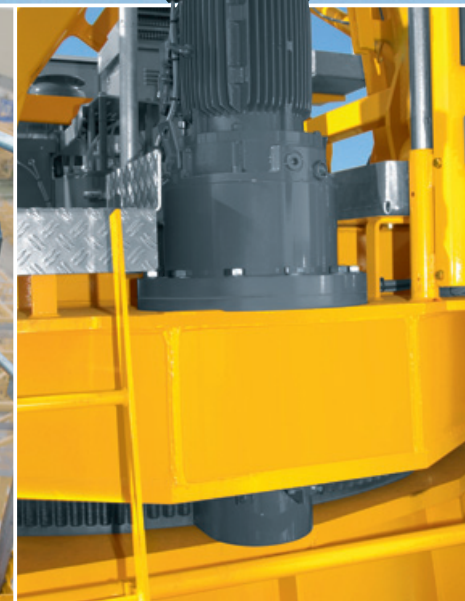
The FC slewing gear.

The FC slewing gear drives enable absolutely jolt- and jerk-free slewing at micro-speeds. Wind and load influences are all detected. Integrated anti-sway damping detects and compensates for crane vibration and load swing. The integrated electrical wind release can be activated directly at the base of the tower.

A completely new development is personalised slewing. The crane operator now has a choice between three different operating modes: rotational-speed control, torque control or a combination of the two.

The FC trolley travel gear.

Liebherr FC trolley travel gear is known for its delicate, stepless travel. A cable storage area is integrated into the cable drum for short working radii. Liebherr trolley travel gear offers excellent performance ranges and high trolley travel speeds, especially under load.



All drives are safe to access straight from the compact head on small and medium-sized EC-B cranes.

Frequency controlled FC trolley travel gear.

High-performance hoist gear for high material-handling performance is quick to install using plug connections.

The FC slewing gear for delicate, jolt-free slewing movements.

Overview of advantages.

Series

- 14 crane types from 50 - 280 mt:
 - 50 EC-B 5
 - 63 EC-B 5
 - 71 EC-B 5
 - 90 EC-B 6
 - 90 EC-B 6 FR.tronic
 - 110 EC-B 6
 - 110 EC-B 6 FR.tronic
 - 130 EC-B 6
 - 130 EC-B 6 FR.tronic
 - 160 EC-B 6 Litronic
 - 160 EC-B 8 Litronic
 - 200 EC-B 10 Litronic
 - 250 EC-B 12 Litronic
 - 280 EC-B 12 Litronic

Compact head

completely pre-installed incl. hoist gear (50-130 EC-B), slewing gear, slewing ring support, switchgear cabinet, cab

- Drives and switchgear cabinet easily accessible
- Plug connections on the drive units
- One transport package, upright
- One assembly hoist
- Uniform comfort cab with modern design:
 - Removable
 - Can be shunted in transport position (160-250 EC-B)
 - Identical on all cranes up to the 130 EC-B and from the 160-250 EC-B
 - EMS with basic function and radius display (optional)
 - Heating with thermostat and time switch
 - Wiper system

Modular design

- Many possible tower-system combinations within the series
- Customised crane configuration

Connect and Work assembly

- Low assembly weights – small auto crane
- Pin magazines positioned within easy reach in tower
- Quick connection system for jib and counter-jib
- Jib:
 - New LiConnect quick jib connection
 - Jib sections tight-welded
 - Pin magazines
 - Jib with safety rope
 - Hook-block park position in jib pivot section (50 – 130 EC-B)
- Counter-jib:
 - Fold-out supports for counter-jib guying system enabling highly-accurate assembly position
 - Fold-out counter-jib rail (50 – 130 EC-B)
 - Piggyback loading (160 – 250 EC-B)

Operation

- Very small working radii possible
- Radio remote control operation with acknowledgements

Litronic

- Monitors, controls and coordinates all important crane functions
- 20 % greater load capacities at the touch of a button
- Electronic module for load-moment limitation (LMB), work-area limitation (ABB), anti-collision system (AKS), machine data analysis (MDA) and remote data transmission (DFÜ)

FR.tronic

- All drives frequency controlled
- Stepless lifting, lowering and travel
- Can be used on 50 Hz or 60 Hz and 400 V or 480 V power supply

FC hoist hear

from 71 EC-B 5

- Automatic adjustment to load (from 30 kW FC)
- Liebherr motor
- Low-maintenance single-disc spring-loaded brake
- Micro-positioning of load
- Stepless speed change through zero
- Positioning mode – hoist speed reduced to ¼ (from 30 kW FC)

FC trolley travel gear

all EC-B cranes

- Compact construction
- Trolley travel gear with rope-storage facility for small working radii
- Delicate, stepless travel
- Excellent performance ranges and high trolley travel speeds

FC or EDC slewing gear

from 71 EC-B 5

- Absolutely jolt- and jerk-free slewing
- Integrated wind-load control
- Automatic anti-sway damping
- Integrated electrical wind release
- Personalised slewing via:
 - Rotational-speed control
 - Torque control
 - Combination of rotational-speed and torque control