

LICCON 2

Crane control system for crawler cranes



LIEBHERR

Everything under control

High-tensile fine grained steel. Precisely calculated structural strength. Maximum safety. These are important elements of a powerful Liebherr crawler crane. The crane control system is another important component to ensure that the crane can be controlled sensitively and accurately. The crane operator controls the crane with high precision, even when it is operating at maximum capacity.

This requires an intelligent software package: All our new developed crawler cranes feature the LICCON 2 crane control system. This was developed by our in-house crane and software specialists which guarantees perfect interplay between the crane and the control system. Its forward-looking control system architecture allows adjustments to meet the market's constantly growing requirements and is also in a process of continuous advanced development.





Failsafe



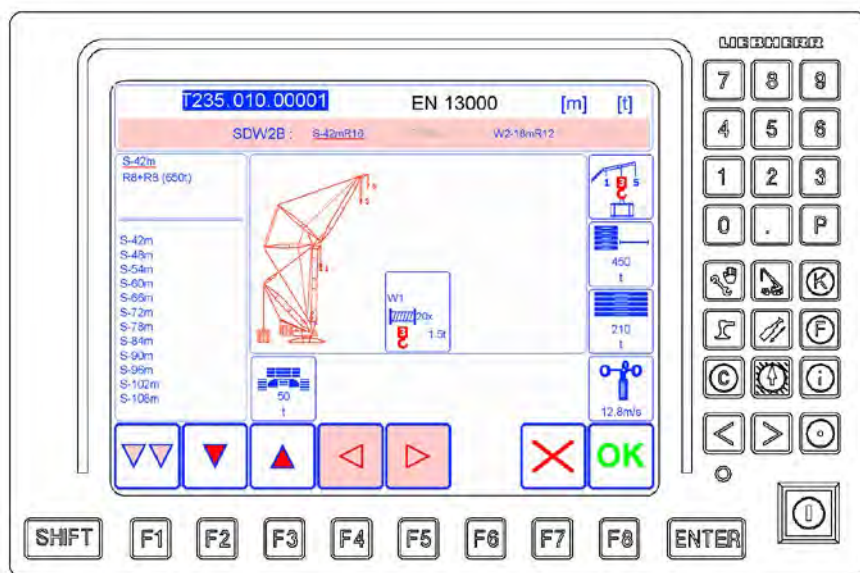
Load cell with 2 measurement points (plugs), two-channels each

Always ready: All the relevant sensors on the load moment limit have a redundant (double) design to increase the up-time of the crane. If one sensor fails, the crane can still continue working with the second sensor resulting in less downtime.

Setting up the crane

Simple and straightforward: Scrolling through a list of operating modes is no longer necessary. The simple menu control shows the set-up status of the crane at all times. The graphic selection allows the set-up procedure to be carried out quickly and precisely. The following functions, among others, can now be entered easily:

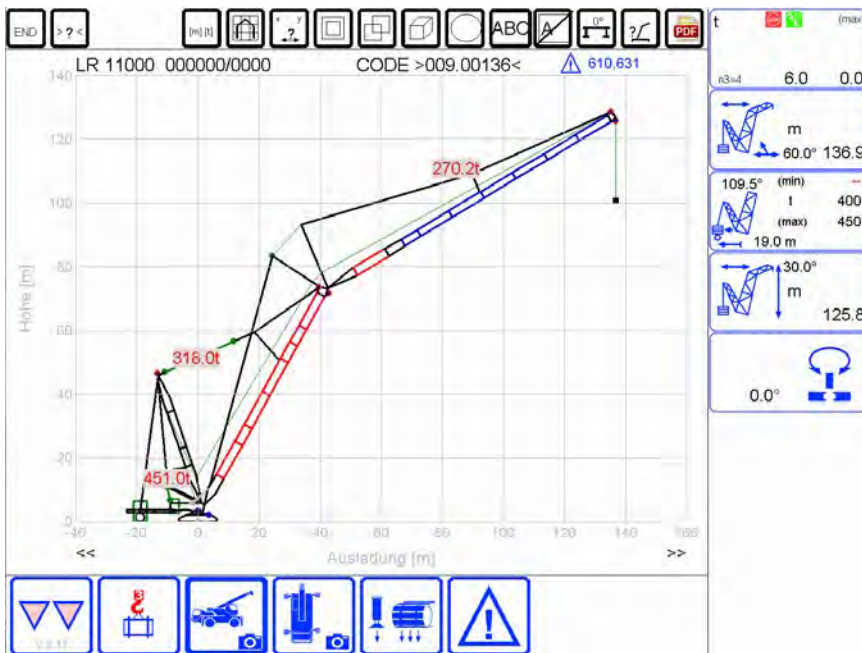
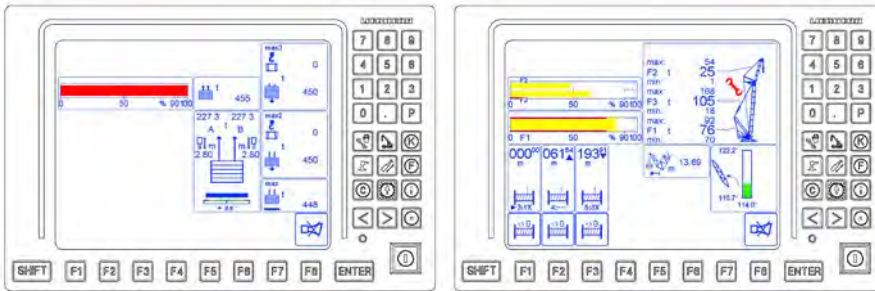
- Hook / Sheave set assignment
- 2-hook operation (additional equipment is required for operation with luffing jib)
- Clear set-up of operating modes and lengths
- Only plausible combinations can be selected
- Set-up of sheave sets for precise lifting capacity details
- If reeving is selected, it affects the lifting capacity– the available rope length is taken into consideration





Supervised erection

Clear overview: All the forces are permanently monitored on the crane. This particularly enhances safety during operation. Furthermore, the stability and boom strength during the raising process are constantly monitored by the measurement points on the crane.



Predictability

Preparation is half the job: Good preparation often decides whether a job is successful or not. Thus is why individual lifts can be preplanned in the work planner and the configuration can then be transferred to the crane by using a code. This means:

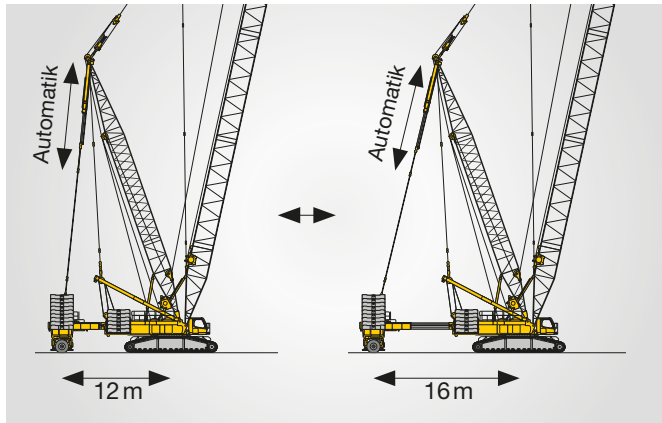
- Planning of coordinated ballast levels
- Planning of the appropriate hook blocks and their weights
- Planning of the ground pressure during erection* and during the job
- Planning of negative boom angles during erection

*(Not with the additional mechanical outrigger)

Automatic extension of ballast systems

Automatic extension of ballast systems

Convenient counterweight trailer: The LICCON 2 takes control as soon as the crane changes the radius of the counterweight trailer. The crane control system ensures that the derrick cylinder with the counterweight trailer automatically adjusts its. Quick, simple and safe.



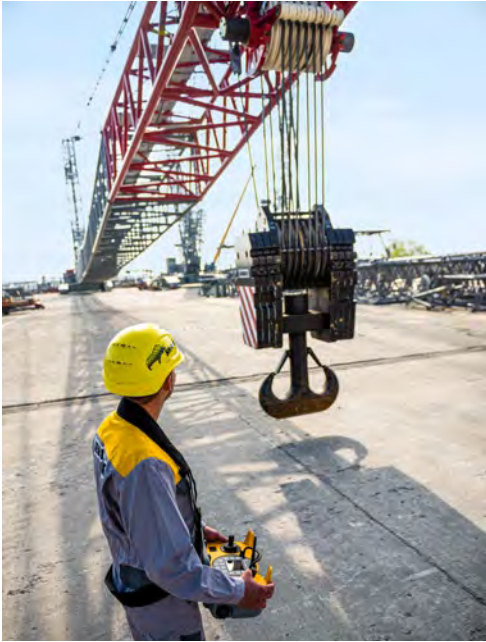
Innovative derrick ballast with V-frame

A new type of counterweight system is used for the suspended counterweight: A hydraulically adjustable folding frame allows the ballast radius to be adjusted flexible. On the LR 1800-1.0, for example, this enables to achieve a radius of up to 23 metres. The crane operator only has to select one movement to adjust the folding frame. The derrick cylinders meanwhile automatically hold the ballast at the selected height.



Improved remote control

Everything under control: With our BTT remote control unit the crane can be fully set up from outside the crane cabin. The crane operator can be right on the spot where the set-up process is taking place so that he can supervise every millimetre of movement. This means: Simple, fast and safe set-up process.



Camera surveillance

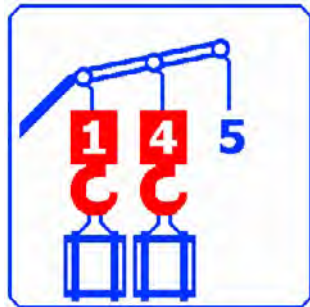
The eye of the crane operator: The camera surveillance system provides the crane operator with a constant overview of the main areas on and around the crane. Live images of the winches, the counterweight and the area behind the crane are transferred to the two multi-function colour displays in the crane cabin. The optional boom head camera also enables the crane operator to observe the hook from above at all times.



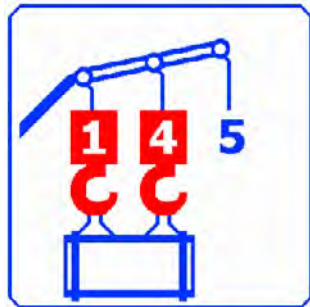
2-hook operation

Turned in seconds: The completely monitored 2-hook operation enables either 2 different loads to be lifted on two hooks or a single load on two hooks. The selection of the load case for the actual hoisting process is entered in the LICCON control system.

2 hook positions,
2 different loads

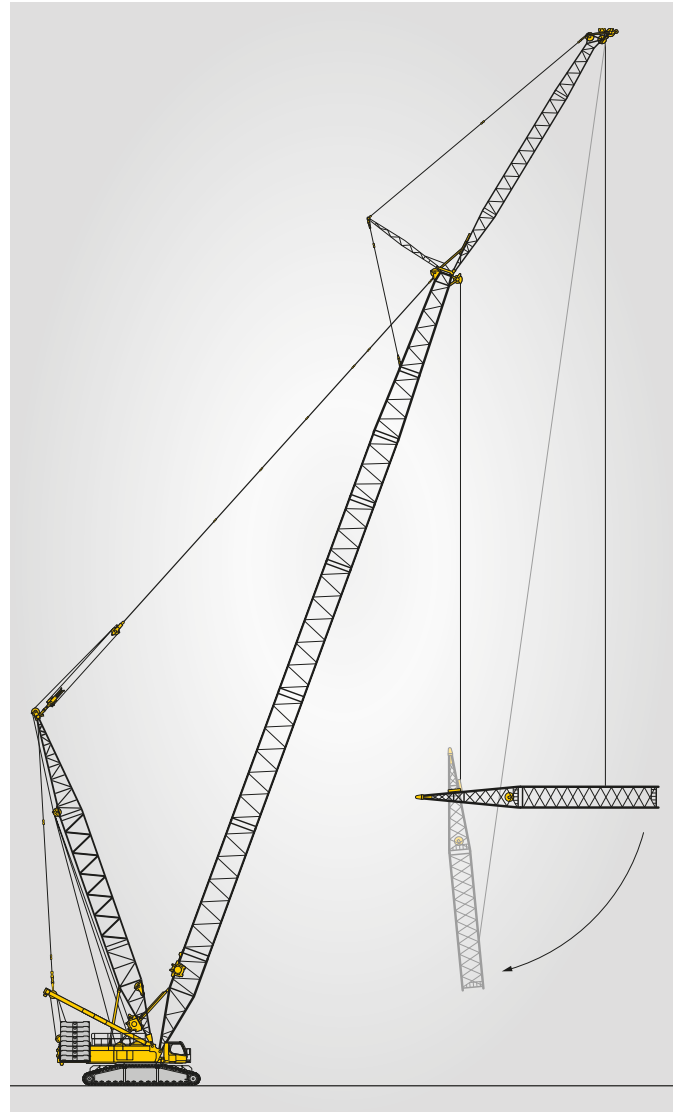


2 hook positions,
1 combined load



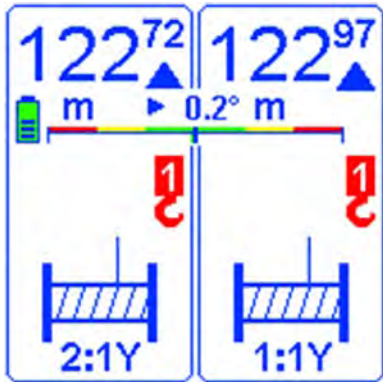
Benefits

- Selection of the load case in the LICCON control system to suit the actual hoisting process
- Completely monitored 2-hook operation



Parallel hook block operation

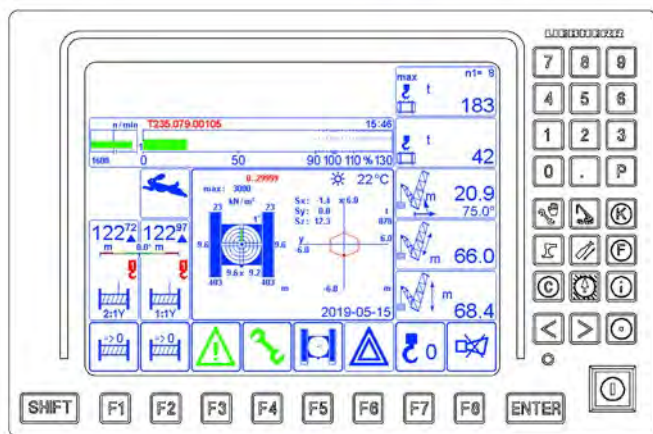
Everything in line: The battery-powered wireless inclination sensor on the hook block automatically controls the two winches operating in parallel mode. This means that the crane operator does not have to adjust the individual winches during the lift. In addition to the charging status of the battery, the operating screen also shows the angle of the hook block.



Monitoring the centre of gravity

Never lose your grip: The ground pressure indicator calculates the current ground pressure of the machine and compares it to the specified safety limit values defined by the crane operator in the system.

The ground pressure is displayed on the screen so that the crane operator knows at all times whether the crane is in a critical condition.



Mobile and Crawler Cranes from Liebherr-Werk Ebingen GmbH

Liebherr-Werk Ebingen GmbH develops and manufactures highly modern telescopic and lattice boom cranes on mobile and crawler chassis. The company is the global market leader in mobile cranes. The keys to this success are its innovative products, high quality and excellent worldwide service. The needs of the customer are the primary focus.

Liebherr-Werk Ebingen GmbH is part of the global Liebherr Group of Companies. This family-run company is one of the largest manufacturers of construction machinery in the world and is also renowned as a supplier of technically advanced, user-focussed products and services in many other industries.



LTM mobile cranes



LR crawler cranes



LRT rough-terrain cranes



LTC compact cranes



LTF telescopic
truck-mounted cranes



LG lattice boom mobile cranes



LTR telescopic crawler cranes

LTM Mobile Cranes

The all-terrain chassis is ideal for combined on-road and off-road use. The powerful, long telescopic booms can reach great working heights quickly and easily.

LR Crawler Cranes

LR crawler cranes are used all over the world, wherever very heavy loads need to be moved safely and economically.

LRT Rough-Terrain Cranes

The LRT rough-terrain cranes deliver maximum off-road capability and safety.

LTC Compact Cranes

Compact cranes are ideal for use on extremely constricted sites.

LTF Telescopic Truck-Mounted Cranes

LTF truck-mounted cranes are a low cost alternative in the taxi crane class. Mounted on standard truck chassis, they cost very little to drive around to jobs.

LG Lattice Boom Mobile Cranes

LG mobile cranes with lattice booms can handle particularly heavy loads, enormous working heights and radii.

LTR Telescopic Crawler Cranes

Telescopic cranes on crawler chassis deliver short set-up times and excellent off-road manoeuvrability.

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