

Higher Safety, Easier Handling: the Latest Generation of Liebherr's LR 1300 SX Crawler Crane

- Now globally available
- Assistance systems Boom Up-and-Down Aid and Ground Pressure

Visualization

- Personnel lift and new cabin design

Las Vegas (USA), 10 March 2020 - At this year's Conexpo Liebherr Werk Nenzing GmbH presents the LR 1300 SX of the new generation. The crawler crane impresses with many innovative assistance systems, which both increase operational safety as well as simplify handling. The elegant new cabin design has many features for high operator comfort

The LR 1300 SX, which belongs to the newest generation, has a lifting capacity of 661,387 lbs (300 t). For heavy loads, the crane can be fitted with a derrick boom in combination with an additional counterweight. The new suspended counterweight of the LR 1300 SX no longer has a fixed counterweight radius and instead can simply be hydraulically displaced.

Assistance system: Boom Up-and-Down Aid

Crane operation can be demanding during lifting jobs – even when the hook is empty! If the center of gravity of the crane is too far forward, there is a risk that the crane can tip when lowering the boom and jib.

The Liebherr assistance system "Boom Up-and-Down Aid" indicates the approach to the tipping border and automatically stops operation before the operator unintentionally enters an unsafe zone. It assists the operator in leaving the danger zone without having to activate the safety bypass switch. The new Liebherr LR 1300 SX is fitted with wind sensors on the main boom and jib. Both the measured wind speed and the actual crane configuration (boom length, boom angle) are taken into consideration when calculating the current hazardous situation for the crane. When the conditions become too dangerous, the system gives a warning. The actual status is visible for the operator

in the cabin at all times. At wind speeds of (imperial mph) 10-16 m/s the operator can adjust the maximum lifting capacity through a simple selection on the control panel.

Ground Pressure Visualization

In addition to the influence of the wind, the ground load-bearing capacity and the monitoring of the ground pressure are also significant factors for the safe operation of the crane. The Ground Pressure Visualization of the new Liebherr crawler crane LR 1300 SX calculates the current ground pressure of the machine in real time and compares it with the specified safety limits of the relevant position. The ground pressure is displayed in the operator's cab and the operator is constantly aware of whether the machine is situated in, or is approaching, a critical area. Dangerous work maneuvers can so be avoided or adapted in good time.

Three different driving speeds can be selected by the crane operator. Driving is always carried out in "Safe Mode" with active Load Moment Limiter, and is dependent on the driving speed. That means that the Liebherr crane control system, Litronic, automatically adjusts the lifting capacities to suit the driving speed, when driving with a load on the hook. Furthermore, for barge operation, the lifting capacities are automatically adjusted depending on the inclination of the barge.

Personnel Lifting and New Cabin Design

The LR 1300 SX, belonging to the newest generation, is approved for personnel lifting. This mode is selected using a separate key switch. Thanks to the EC type approval certificate of the Liebherr crane for the occasional lifting of persons, local approval from an acceptance authority is no longer required by the crane operator. The statutory emergency generator and emergency controls required for personnel lifting are offered by Liebherr as a simple Plug-and-Play solution. In case of emergencies, the crane availability can be restored within a few minutes.

The Liebherr LR 1300 SX is fitted with a new cabin concept, which focuses on increased operator comfort. This is achieved through a modern air-conditioning system with improved airflow, an optimized field of vision and reduced noise protection, as well as an ergonomic orthopaedic operator's seat with integrated heating and cooling.

Further features for the operator are an optional cooler for snacks as well as a USB port for charging mobile phones.

Work safety through plannability

Crane handling under special conditions, e.g. in heavy-lift operation or in confined spaces, involves potential risks for man and machine. With the aid of the Crane Planner 2.0 planning software, these sources of danger on the construction site can be minimized. The tool is fed with actual planning data and the optimum crane configuration is calculated based on the corresponding load moment limitation (LMB).

The Crane Planner 2.0 is an intelligent software for planning demanding lifting applications. All work steps from picking up to setting down the load can be simulated on the PC or even in virtual 3D space. The feasibility of the entire project is checked in advance directly at the planning table. The advantages are obvious. In addition to time and cost savings, safety standards in particular are being redefined.

Caption

liebherr-lr1300sx-derrick.jpg

The brand new crawler cranes LR 1300 SX with derrick boom and displaceable suspended counterweight.

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