

The 380 EC-B Flat-Top crane: A new dimension in efficiency and safety

March 2014 – Liebherr will be unveiling the 380 EC-B 16 Litronic Flat-Top crane at Conexpo Con/Agg 2014. With a maximum radius of 246 ft (75 m) this model has a lifting capacity at the tip of 7,500 lbs (3,400 kg). The 380 EC-B can be supplied in a 12-tonne or 16-tonne version.

Flexibility and safety

The 380 EC-B 16 Litronic delivers a great deal of flexibility due to the fact that it can be erected on either an IC or HC tower system. The 256 IC and 355 IC towers from Liebherr feature a low tower cross-section of just 6' 2" x 6' 2" ft (1.9 m x 1.9 m). This makes them suitable for erection in elevator shafts. The climbing function of the IC tower system works outside and inside a building. Using the IC tower system a free-standing hook height of almost 230 ft (70 m) can be achieved.

If the job requires greater hook heights, the 380 EC-B can also be erected as an option on the 355 HC or 500 HC tower system reaching a free-standing hook height of almost 279 ft (85 m). Both tower systems are erected using durable, zero-play taper pin connections. The 380 EC-B also supports the use of existing modules of IC and HC tower systems, of course.

A good deal of attention was given to safety during erection and use during the product development phase. The design complies with all the safety standards set out in EN 14439. A great deal of thought has gone into every individual element to contribute to their high safety standards during erection and operation. This includes non-slip catwalks on the jib and counter-jib with no gaps between the catwalks and an adequate number of railings.

Powerful drive units and innovative controller

All the drive units used in the 380 EC-B are powerful, fast and energy-efficient frequency converter units. Frequency converter technology from Liebherr delivers excellent comfort and safety levels for all types of crane movements. Depending on the

configuration, frequency converter hoist units with a capacity between 60 hp and 148 hp (45 kW and 100 kW) are available for the 380 EC-B. The MICROMOVE fine positioning mode for the hoist units means that the load on the crane hook can be positioned and held with millimeter precision.

Luxury features such as integral load swinging damping, which minimizes crane vibrations and load swinging, and the crane turning at micro-speeds with zero shocks and jerks are now standard for almost all frequency converter slewing gears on Liebherr top-slewing cranes.

The Litronic version of the 380 EC-B can deliver up to 20% more lifting capacity at the touch of a button. This crane control system monitors, controls and coordinates all the main functions of the crane. The load moment limiting system LMB, operating range limiting system ABB and machine data evaluation system MDA are all included for this purpose. As an option the Flat-Top crane can also be fitted with the LiDAT data transfer and tracking system.

Transport and erection

The striking appearance of the 380 EC-B is created by its expressive top section. The 4-chord counter-jib and the compact head are characteristic features. The crane can be loaded on just five trucks with its maximum radius of 246 ft (75 m). In addition all the parts are designed so that they are suitable for transporting in containers, meaning that they are perfect for easy shipping. The erection weights of the EC-B compact head can be reduced easily by being split into simple packages. This means that small mobile cranes can be used for the erection process, thus saving costs.

Like all Flat-Top cranes from Liebherr, the 380 EC-B features "Connect and Work" erection technology. This includes quick-release connectors for the jib and counter-jib, the patented LiConnect fast jib connection and electrical plug connectors for the drive units and switchboard system. The quick-release connections for the cab and switchboard platform are a new development for the 380 EC-B Flat-Top crane. The pins for the quick-release connection are ready to hand, easy to insert and can be secured quickly.

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