

Liebherr 542 HC-L Luffing Jib Crane at the Conexpo Con/Agg 2014

March 2014 – Liebherr will be exhibiting its 542 HC-L luffing jib crane, the successor to the time-tested 540 HC-L at the Conexpo Con/Agg 2014. The 540 HC-L is available in 12/24-tonne or 18/36-tonne versions. The 18/36-tonne version has a maximum lifting capacity of 79,370 lbs (36,000 kg). Its lifting capacity at the maximum radius of 213 ft (65 m) is 9,480 lbs (4,300 kg).

The climbing process has been improved during the development of the new luffing jib crane by an electronically secured climbing guide section. Sensors on this guide section report the current climbing status to the Litronic crane controller. Using this recorded data, special climbing load curves are provided by the Litronic controller. This ensures maximum safety. For a job involving internal climbing, the 542 HC-L can be dismantled at the end of the crane use with the Liebherr 200 DR 5/10 Litronic derrick crane.

The space required by the 542 HC-L on site has also been improved compared to its predecessor. For example the position of the 164 ft (50 m) jib when it is not in use has been reduced by approx. 8 ft (2.5 m) to 57 ft (17.4 m). The crane can operate freely in a very restricted space due to its slewing radius of 7.5 m. This is a real boon for the crane operator to ensure economical crane use involving multiple cranes in a small area. The package units have also been improved to reduce transportation costs. The crane can now be transported in 40' high cube containers.

The 542 HC-L is fitted exclusively with Liebherr infinite frequency converter drive units. The hoist and luffing gear on the 542 HC-L have a drive rating of 87 hp (65 kW) each. Alternatively the 542 HC-L 18/36 Litronic can be fitted with a 3-speed frequency converter hoist unit which develops 148 hp (110 kW) or 214 hp (160 kW). The 214 hp version can achieve hoist heights of up to 3,609 ft (1,100 m). In addition to the drastically increased hoist capacity, the adjustment of the luffing gear has also been improved. Overall this enables the crane to reach operating speeds which are extremely economical even when handling large loads.

The simple re-reeving of the load hook from 1 to 2-line operation means that it can be adjusted quickly to different loads with excellent hoist speeds. Simple reeving and high empty hook speeds increase the crane's economy on site.

The 542 HC-L is normally supplied in the luxury Litronic version. The programmable logic controller PLC allows the load to be moved using level luffing at the touch of a button like on a top-slewing trolley crane. Jib movements are controlled automatically by a hoist gear controller so that the load hook moves horizontally. This is particularly useful for erection and concreting work. Time-tested MICROMOVE mode is another component of the Litronic concept. This allows the load to be positioned with millimeter accuracy without applying the hoist unit brake, thus delivering another plus point for safe, efficient crane operation.

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