

Press release

HKV's Liebherr LR 1500 crawler crane extremely flexible for handling heavy loads and erecting construction cranes, bridges and wind turbines

- Two jobs within a week – short set-up time and good transport logistics impress
- Liebherr 500-tonne crane can be used flexibly for erection work and heavy loads
- Special boom systems available for erecting wind turbines with hub heights of up to 145 metres

“Powerful – compact – simple” was the slogan used by Liebherr to advertise the LR 1500 crawler crane at its market launch during the Bauma 2016. The overall concept of the 500-tonne lattice boom crane is designed for simplicity in everything and great economy. By completing two jobs in one week, HKV Schmitz + Partner GmbH from Cologne proved that the Liebherr concept is a successful one – firstly a 76 metre tower crane was dismantled in Cologne Deutz, and then, just four days later, a heavy steam drum was hoisted at the Cologne port of Worringen. Just a few days later the Liebherr 500 tonne machine hoisted the support girders of the Viktoria Bridge in Bonn which is being demolished. From there it travelled to a wind power job in Unkenbach.

Ehingen / Donau (Germany), 17 September 2020 – Managing Director Michael Schmitz is full of praise for his 500 tonne crawler crane: “The fact that you can complete two jobs in a week demonstrates its fantastic transport logistics and the fast set-up time of the LR 1500”.

Crawler cranes of this size are normally not the first choice for erecting construction cranes. But in this case it was the most economical solution. “Since we could get closer to the tower crane with the crawler after we had set up the boom system, which meant we could reduce the radius, the load case was easier to achieve than if we had used a large telescopic crane, for example an LTM 1750-9.1”, said Schmitz.

Nevertheless, a radius of 65 metres and a hook height of 86 metres were required for dismantling the slewing platform and the tower, each of which weighed 12.5 tonnes.

Although the boom on the construction crane was heavier at 18 tonnes, the radius was somewhat less at 54 metres.

After quickly dismantling the LR 1500 with its SLF boom system measuring over 100 metres, its 40 tonnes of central ballast and 170 tonnes of slewing platform ballast, the crane moved on around 30 kilometres to the port of Worringen, where it was required to unload a steam drum weighing 120 tonnes from a barge and load it onto a heavy haulage vehicle. For this job, the LR 1500 was set up with a 30 metre S main boom, 40 tonnes central ballast and 130 tonnes of slewing platform ballast.

A short time later the LR 1500 was set up for several nights of work in Bonn. This job involved the removal of bridge support girders which were being removed as part of the removal of the Viktoria Bridge in Bonn to create space for a new structure. To remove the support girders, which weighed up to 60 tonnes and required a radius of 67 metres, the crane used the SL2DB system with up to 280 tonnes of suspended ballast. In addition, the detachable VarioTray derrick ballast was used, which, Liebherr developed for the LR 1500 at the suggestion of HKV. After removing the support girders, which were attached to the crane hook using a spreader system, VarioTray was unbolted from the suspended ballast pallet. This meant the girders could be placed on the ground at the site using just 90 tonnes of ballast.

After completing this varied work, the LR 1500 then had to tackle some wind power jobs. At the first project, the crawler crane used its powerful SL4DFB system with a derrick and suspended ballast. A gearbox weighing 30 tonnes had to be replaced on a wind turbine with a hub height of 128 metres. It then switched to the SL3F, a simple main boom with a fixed jib, to move on to the next turbine. These projects also demonstrated the flexibility of the LR 1500 when faced with a wide diversity of requirements.

To enable it to work even more flexibly in the wind power industry, Liebherr has developed an update for the LR 1500, working closely with HKV – in future, service work can now be completed on turbines with a hub height of up to 145 metres.

HKV Schmitz + Partner GmbH, whose headquarters are in Cologne, has a 48-strong workforce and runs 26 Liebherr cranes. The fleet's flagship is an LR 1500 crawler crane. In addition to crane work, the family-run company, which was founded in 1995, also provides heavy haulage, erection and project planning services.

About Liebherr-Werk Ehingen GmbH

Liebherr-Werk Ehingen GmbH is a leading manufacturer of mobile and crawler cranes. Its range of mobile cranes extends from 2-axle 35 tonne cranes to heavy duty cranes with a lifting capacity of 1200 tonnes and a 9-axle chassis. Its lattice boom cranes on mobile or crawler crane chassis deliver lifting capacities of up to 3000 tonnes. With universal boom systems and extensive additional equipment, they can be seen in action on construction sites throughout the world. The Ehingen site has a workforce of 3,500. Extensive, global service guarantees the high availability of Liebherr mobile and crawler cranes. In 2019, the Liebherr plant in Ehingen recorded a turnover of 2.1 billion euros.

About the Liebherr Group

The Liebherr Group is a family-run technology company with a widely diversified product range. The company is one of the largest manufacturers of construction machines in the world, but also supplies technically advanced, user-focused products and services in many other sectors. The group currently comprises more than 140 companies based in every continent of the world, has a workforce of over 48,000 and recorded a consolidated total turnover of more than 11.7 billion euros in 2019. Since it was founded in 1949 in Kirchdorf an der Iller in southern Germany, Liebherr's aim has been to win customers by supplying high quality solutions and to contribute to technological progress.

Photographs

liebherr-hkv-lr1500-construction-crane.jpg



Construction crane erection – HKV dismantles a 76 metre tower crane at MesseCity in Cologne Deutz.



liebherr-hkv-lr1500-ship.jpg

Heavy load– the LR 1500 unloads a steam drum from a barge at the Cologne port of Worringen.



liebherr-hkv-lr1500-bridge.jpg

Bridge construction – the LR 1500 is fitted with the SL2 boom and derrick system to hoist the support girders of a bridge.



liebherr-hkv-lr1500-windpower.jpg

Wind power – the LR 1500 replaces a gearbox using the SL4DFB system.

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