

Press release

"The rooster sheave adds the last few centimetres"

- An LTM 1450-8.1 owned by Feldmann assembles Liebherr construction crane on the edge of Lake Zurich
- A rooster sheave makes the use of a lattice jib superfluous
- A mobile crane bridges the vast distance of 48 metres to the construction site

A mighty Liebherr tower crane was erected to carry out conversion work on a castle in the Swiss municipality of Rapperswil-Jona. A mobile crane of the type LTM 1450-8.1 provided the necessary power in this medieval town on Lake Zurich. Due to the limited space in the castle's elevated surroundings, the crane assembly had to be carried out at a considerable distance. Radii of up to 48 metres were required for this purpose. Due to the use of a whip line on the pulley head, it was not necessary to attach a lattice jib.

Ehingen (Donau) (Germany), 10 March 2023 – For extensive conversion work on Rapperswil Castle, a large type 172 EC-B construction crane had to be erected. For this to be possible, a large gantry first had to be assembled to create a set-up area for the tower crane. The topography around the 800-year-old complex, which towers over the old town of Rapperswil-Jona, did not allow access by lorry or with heavy machinery, which meant the assembly work could only be carried out at an extended distance. The Liebherr LTM 1450-8.1 mobile crane from Feldman Pneukran + Transport AG, based in Bilten east of Lake Zurich, was used for this task. Over a distance of almost 50 metres, the modern mobile crane had to lift the parts of the steel substructure and the individual components of the top-slewing crane to the construction site.

Thanks to the hydraulically adjustable VarioBallast® system, only 104 tonnes of counterweight at maximum radius were sufficient for the LTM 1450-8.1 to handle even the heaviest loads during this job. The construction crane's 60-metre-long main boom represented the heaviest of the components with a gross load of ten tonnes. The only shortage of telescopic length occurred when the slewing ring was installed at a hook height of almost 70 metres. To compensate for this, the Feldmann team had fitted a rooster sheave to the pulley head on the telescopic tip of the mobile crane. "The rooster sheave effectively gives us about 80 to 90 centimetres more radius and saves us having to add a lattice jib," explained Manfred Moosmann, Feldmann's crane driver on the LTM 1450-8.1.

Disassembly of the construction crane planned for the coming year

Not only did Moosmann and his powerful mobile crane assemble the construction crane and portal, which will allow public access to the castle grounds during the renovation work, but they also equipped the construction site with containers and other materials in two days, which were hoisted into position from the lower-lying old town. The plan is to erect the LTM 1450-8.1 once again between the picturesque

houses of the old town in summer 2024, in order to dismantle the crane once the work on the medieval fortress building has been completed.

Feldmann Pneukran + Transport AG has three locations in the region around Lake Zurich, which it uses for activities focusing on crane work, heavy transport and assembly technology. The company has two dozen mobile cranes and mobile construction cranes in operation. Among them is the first Liebherr mobile crane of the type LTM 1300-6.3 to be delivered.

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 3,800. Extensive, global service guarantees the high availability of Liebherr mobile and crawler cranes. In 2021, the Liebherr plant in Ehingen recorded a turnover of 2.33 billion euros.

About the Liebherr Group

The Liebherr Group is a family-run technology company with a highly diversified product portfolio. The company is one of the largest construction equipment manufacturers in the world. It also provides high-quality and user-oriented products and services in a wide range of other areas. The Liebherr Group includes over 140 companies across all continents. In 2021, it employed more than 49,000 staff and achieved combined revenues of over 11.6 billion euros. Liebherr was founded in Kirchdorf an der Iller in Southern Germany in 1949. Since then, the employees have been pursuing the goal of achieving continuous technological innovation, and bringing industry-leading solutions to its customers.

Images:



liebherr-ltm1450-8-1-feldmann-01.jpg

800-year-old backdrop: The LTM 1450-8.1 was not only needed to assemble the Liebherr construction crane with the 60-metre-long main boom at a distance of around 50 metres – containers and other construction site equipment also had to be transported to the castle on crane hooks from the lower-lying old town.

LIEBHERR



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Clever solution: When attaching the construction crane's slewing ring, the 85-metre telescopic boom on the LTM 1450-8.1 reached its limits in terms of hook height and radius. The use of a rooster sheave spared the Feldmann team the more complex installation of a lattice jib.



liebherr-ltm1450-8-1-feldmann-03.jpg

Old hand: Manfred Moosmann sat at the controls of the 8-axle Liebherr mobile crane during the crane operation in Rapperswil-Jona. The experienced crane driver has been working for Feldmann Pneukran + Transport AG for 19 years.



liebherr-ltm1450-8-1-feldmann-04.jpg

Steady: From the sloping street of the old town, the modern Liebherr crane completed all the lifting work swiftly and without any problems.

Contact

Wolfgang Beringer
Marketing and Communication
Phone: +49 7391/502 - 3663
Email: wolfgang.beringer@liebherr.com

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Liebherr-Werk Ehingen GmbH
Ehingen (Donau), Germany
www.liebherr.com