

Press release

Three Liebherr 800-tonne cranes at a wind farm

- Three Liebherr 800-tonne cranes assemble the tallest onshore wind turbines in the world
- Flexible ballast handling and transportability of the cranes increase productivity
- Liebherr's service provides reliable support

An LG 1800-1.0 from Nolte and one LR 1800-1.0 each from Neeb and Hofmann erected ten Nordex N175/6.X turbines at the Mahlsdorf wind farm at the end of 2025. Large rotor diameters, hub heights and component masses placed high demands on the cranes, which were masterfully handled by the HSL4 boom system, VarioTray and V-Frame. Short conversion times, well-planned logistics and Liebherr's reliable service were further factors contributing to the success.

Ehingen (Danube) (Germany), 13 February 2026 – The construction site impressively demonstrates that modern 800-tonne cranes are a key success factor for the assembly of the next generation of wind turbines, especially when time frames are tight and wind conditions are challenging.

Larger rotor diameters on wind turbines allow for higher yields, especially in low-wind areas. Taller turbines also increase effectiveness, as the rotor is further away from the boundary layer near the ground and thus experiences higher wind speeds. The Nordex Group has now launched a new wind turbine as part of its Delta4000 series, the N175/6.X. As the name suggests, it has a rotor diameter of 175 metres. UKA and Nordex built the first wind farm with ten of these new turbines, each with a capacity of 6.8 MW, in Mahlsdorf, Brandenburg. With a hub height of 179 metres, these turbines are among the tallest onshore turbines in the world.

Requirements for the cranes

As the turbines get bigger, so do the demands on the cranes. At the end of 2025, three 800-tonne Liebherr cranes were in use on the construction site: an LG 1800-1.0 from Nolte, and one LR 1800-1.0 each from Hofmann and Neeb. All auxiliary cranes were also Liebherr machines, meaning that a total of nine cranes from Ehingen worked together.

The powerful 800-tonne cranes are the smallest cranes that can handle these tall and heavy structures: the gearbox is the heaviest single component, weighing in at 83 tonnes net. To this end, all three cranes were equipped with the HSL4 boom system, a 174-metre main boom plus an 18-metre fixed jib. For the lifts, 170 tonnes of upper carriage ballast and 100 tonnes of suspended ballast were loaded.

Flexible ballast handling as a productivity factor

A total of around 400 tonnes of suspended ballast is required to erect the mast. With the help of the VarioTray, the large pallet weighing 300 tonnes can be disconnected from the smaller pallet with the remaining 100 tonnes and set down within minutes. This saves time and effort during erection and setting down. This was useful at the Mahlsdorf wind farm in that it made it possible to make good use of a weather window of only two days. The V-Frame also saves time: rotor blades stored further away could be picked up with a large ballast radius and mounted with a smaller radius without having to stack ballast.

Minimisation of conversion times and easy transport

A key factor in optimising construction costs is minimising crane conversion times, both within and between different wind farms. Hofmann used SPMTs so that the crane did not have to be completely dismantled. For example, the base unit (without tracks) and the entire counter jib are transported as a single unit. Transport considerations were also the reason why Nolte chose the LG over the LR 1800-1.0: "We are basically a mobile crane company. Since the LG 1800-1.0 does not require the transport of 70-tonne crawler tracks, it is a better fit for our low-loader fleet," says Jürgen Peters, project manager at Nolte.

Logistics was also the key challenge for Neeb in this project. Ingo Klees, a member of the technical field service team, explains: "As the wind farm was due to be completed by the end of the year, we were called in at short notice to provide support. Accordingly, the crane was moved within seven days, including dismantling and reassembly. And that despite the fact that the crane had previously been in use in the Black Forest, some 850 km away from Mahlsdorf. This achievement was only possible thanks to an excellently coordinated team and a well-thought-out assembly and transport concept."

Fast and competent service

Machine defects are inevitable with intensive use. This makes it all the more important that they are repaired quickly and the machine is back in operation. One of the crawlers had problems with a hydraulic pump; a few hours after the problem occurred, Liebherr Service was on site and the problem was resolved together with colleagues from the crane company. Thanks to an additional night shift and taking advantage of a day of bad weather, the crane was erected in time to assemble tower segments in sync with the other crawler on the neighbouring plant.

Rainer Schlesner, crane operator at Nolte, confirms: "The excellent and fast service is one of the main reasons why we always choose Liebherr cranes."

Well equipped for the future

Erik Piper, crane operator and SPMT operator at Hofmann, is confident about the suitability of the 800-tonne crane for future installations: "The LR 1800-1.0 is ideal for assembling the next generation of wind turbines with increasing hub heights and higher masses. The crane is strong enough to be able to work at wind speeds of up to 30 km/h based on the wind load tables." Systems such as the APS, which stabilises and controls the rotor blade traverse with two electronically controlled propellers, also contribute to this. "If you tried to do this with just ropes and personnel on the ground, you could only work

at significantly lower wind speeds, which would lead to longer downtimes," agree Piper and his colleague von Schlesner von Nolte.

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 travel gear 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 5,000. An extensive, global service network guarantees the high availability of Liebherr mobile and crawler cranes. In 2024, the Liebherr plant in Ehingen recorded a turnover of 3.19 billion euros.

About the Liebherr Group

The Liebherr Group is a family-run technology company with a highly diversified product programme. The company is one of the largest construction equipment manufacturers in the world. It also provides high-quality, user-oriented products and services in a wide range of other areas. The Liebherr Group includes over 150 companies across all continents. In 2024, it employed more than 50,000 staff and achieved combined revenues of over 14 billion euros. Liebherr was founded by Hans Liebherr in 1949 in the southern German town of Kirchdorf an der Iller. Since then, the employees have been pursuing the goal of achieving continuous technological innovation and bringing industry-leading solutions to its customers.

Images



liebherr-ig1800-1-0-nolte-windblade.jpg

Nolte's LG 1800-1.0 lifting a rotor blade from the N175/6.X. The blade is 87.5 metres long and weighs 30 tonnes.



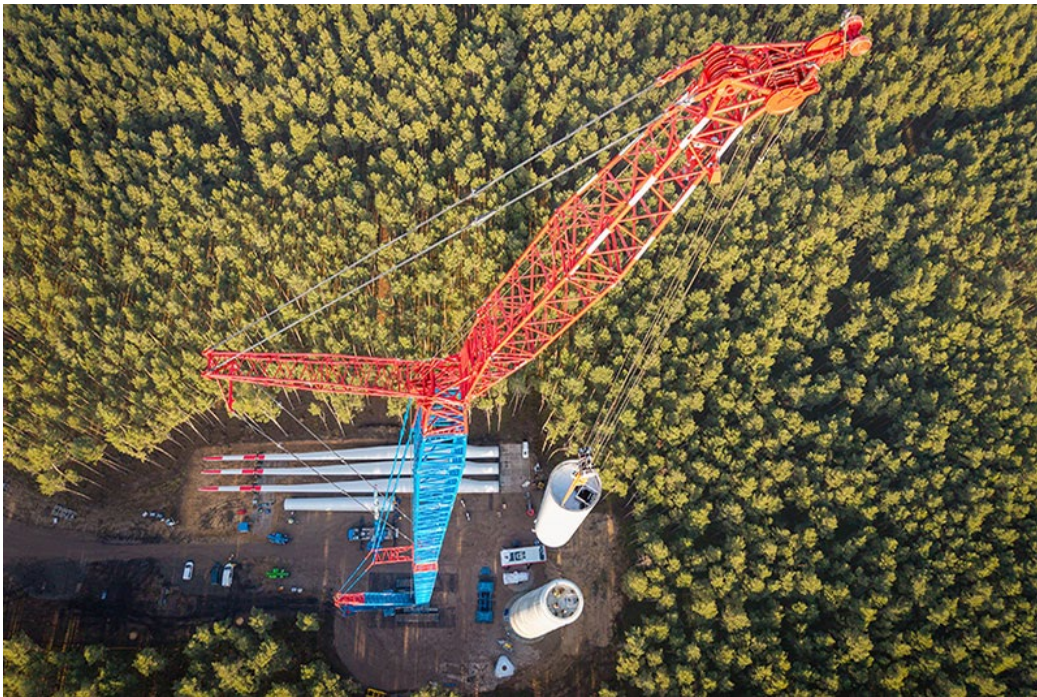
liebherr-ig1800-1-0-nolte-liftra.jpg

A crossbeam from Liftra and the Autonomous Positioning System from Seasight Solutions were used to stabilise and control the position of the blades. The two propellers allow the position of the blade to be controlled even in winds of up to 30 km/h.



liebherr-ig1800-1-0-hofmann.jpg

After transporting the crane components from the previous plant, the LR 1800-1.0 was assembled by Hofmann at night. An LTM 1250-5.1 was used as an auxiliary crane.



liebherr-lg1800-1-0-hofmann-lift.jpg

Hofmann's LR 1800-1.0 lifts a 65-tonne steel tower segment and installs it on the Nordex concrete tower.



liebherr-lg1800-1-0-neebe.jpg

Neube's LR 1800-1.0 erecting the boom. The crane was equipped with a total of 400 tonnes of counterweight.



liebherr-three-800-tonne-cranes.jpg

Three 800-tonne cranes were in operation at the wind farm at the same time. In the foreground is Neeb's LR 1800-1.0, and in the background you can see the Nolte LG 1800-1.0. The third in the group was an LR 1800-1.0 from Hofmann.



liebherr-lg1800-1-0-nolte-ballast.jpg

Flexible ballast handling is a key productivity factor. The V-frame allows the moment to be changed by altering the radius. The VarioTray allows the ballast required only for raising and lowering the mast to be disconnected. Both features eliminate the need for constant stacking and unstacking.

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Published by

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