

Comprehensive knowledge in deep foundation applications: Liebherr at Conexpo showcases numerous US-premieres

- Innovative machines for the deep foundation industry: piling rig LRH 600, piling and drilling rig LRB 355, duty cycle crawler crane HS 8130 HD and hydraulic free-fall hammer H 15 L
- Machines adapted to local requirements of North American market
- Special machinery for various requirements with equally high fuel efficiency and performance

Las Vegas, NV (USA), March 7, 2017 – At Conexpo 2017, Liebherr showcases its machine range for the deep foundation industry: the piling rig LRH 600, the hydraulic free-fall hammer H 15 L, the piling and drilling rig LRB 355 and the duty cycle crawler crane HS 8130 HD. These machines have been especially adapted according to US requirements, and are premiering in North America.

Piling Rig LRH 600

The crawler crane model LR 1300 with attached fixed leader system serves as the basic machine for the piling rig LRH 600. In this constellation configuration, the rig enables a diverse range of applications including: piling work with a hammer or vibrator, drilling operations with continuous flight auger or down-the-hole hammer, and various soil improvement methods. At Conexpo, it is displayed with the rotary drive BAT 320 and continuous flight auger.

The leader elements of the LRH 600 allow quick and easy assembly through the pin connections. Stability is ensured by the lattice boom design and through the kicker, secured via supporting tubes at the boom head. The two compensating cylinders ensure that the leader always remains parallel to the upper carriage, and provide the maximum transmission of the torque. Inclination and radius can be adjusted using another pair of cylinders. The LRH 600 achieves an effective working length of 164 ft. (51 m) and a maximum radius of 50 ft. (15 m) with a fixed leader. Inclinations of up to

14° backwards and 9.5° forwards are possible due to the superior design of the kinematics. The pull force extends to roughly 132 US tons (120 tonnes).

Free-Fall Hammer H 15 L

In Las Vegas, Liebherr is presenting the hydraulic free-fall hammer H 15 L. The hammer is currently the largest model of three in the new series of working tools, and has a maximum impact energy of 165,952 lbf-ft (225 kNm). The key advantages of the attachment include the modular weights, which allow the hammer can be perfectly adapted to the respective piling requirements. The short, lightweight design of the hammer is extremely efficient, as well as user-friendly in terms of transportation and maintenance. At the same time, the pile helmet is soundproof in the standard version.

The innovative control is perfectly integrated in the system of the Liebherr basic machines. This control allows for better adjustment in accordance with the respective conditions, and thus ensures more efficient operation. The crawler crane LR 1300 or the duty cycle crawler crane HS 895 HD can accommodate the free-fall hammer H 15 L attachment. Since both machines possess a high engine power, the hammer can be operated directly from the on-board hydraulic system, and no additional power pack is required.

Piling and Drilling Rig LRB 355

The LRB 355 has been especially equipped with a larger undercarriage for the US market, which increases the machine's already high level of stability. Another advantage of the new undercarriage is the minimized transport weight. The jack-up system allows the crawlers to be dismantled, resulting in a transport weight of only 42 US tons (38 tonnes) for the basic machine.

The machine's parallel kinematics provide for a large operating area. Since all winches are mounted directly on the leader, this allows for a direct view from the operator's cab to the main winch, and ensures the ropes do not move during leader adjustment. The optional elevating working platform of the LRB 355 enables safe and easy access to the attachments. Additionally, it facilitates the assembly of tools and maintenance work at the jobsite.

The rig is available in two different configurations with a maximum height of 110 ft. (33 m) and a maximum weight of approximately 105 US tons (95 tonnes), without attachments. It is driven by a powerful V12 diesel engine offering 600 kW / 805 hp (option: 750 kW / 1006 hp), which complies with the European emission standards, stage IV, and the US Tier 4 final.

The LRB 355 has been specially designed for drilling with full displacement tool and achieves a torque of 331,902 lbf-ft (450 kNm) in this application. It can be used for other applications including: drilling with Kelly equipment, double rotary head and continuous flight auger, soil mixing, and piling jobs with vibrator and hydraulic hammer.

Duty Cycle Crawler Crane HS 8130 HD

The Liebherr duty cycle crawler crane HS 8130 HD – also on display at Conexpo 2017 – can be used for various deep foundation applications or for the typical material handling tasks of a duty cycle crawler crane. These include working with slurry wall grabs and casing oscillators, material loading with grab or dragline bucket, dynamic soil compaction, and various dredging applications.

When developing the 143-US-ton (130 tonnes) duty cycle crawler crane, Liebherr paid special attention to the robust design of the steel fabrication, the optimization of performance and safety, the easy and quick transportation, and fast set-up of the machine. The HS 8130 HD can be transported with the railings, catwalks and pedestals fully assembled on the upper carriage. This accelerates the mobilization of the crane on the jobsite. The undercarriage has been enlarged for the requirements of the US market, and lowers the ground pressure of the crawler crane while increasing the lifting capacity.

The HS 8130 HD is fitted with new generation diesel engines, and works with lowered engine speed. This results in a further reduction of fuel consumption and an increase in efficiency. The hydraulic system has been improved so the machine achieves a higher material handling capacity than the previous model, despite its lower engine power.

Captions

liebherr-piling-and-drilling-rig-lrb355.jpg

A new LRB 355 piling and drilling rig working in an Austrian village.

liebherr-lrh600-piling-rig-rendering.jpg

Rendering of a LRH 600 piling rig.

liebherr-duty-cycle-crawler-crane-hs8130hd.jpg

A duty cycle crawler crane HS 8130 HD with slurry wall grab.

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