

### **A new LPI gearbox generation from Liebherr**

- Modular planetary gearbox series for a wide range of applications
- Higher output torques with optimised weight and space
- Maximum flexibility with a variety of gearbox options
- A one-stop solution: From engineering support to after-sales service
- Documentation and acceptance according to the regulations of recognised classification societies

**Munich (Germany), 8 April 2019 – At this year's Bauma, Liebherr presents its vast product portfolio of planetary gearboxes and rope winches. The new LPI gearbox generation in particular is showcased. The new series includes seven basic gearboxes from LPI 600 to LPI 1200, covering a torque range from 20,000 Nm to 335,000 Nm. Large tailor-designed gearboxes with a dynamic torque of up to 2,300,000 Nm can also be produced.**

The significantly reduced complexity and standardisation of the components make the gearboxes easier to configure for any application. It is predestined for lifting applications, for example in rope winches, as well as for driving applications, for example, as drives for chain and crawler vehicles.

#### **Higher output torques with optimised weight and space**

LPI planetary gearboxes are designed for use in both stationary and mobile applications. They impress with their high power density and score points with their minimal weight and reduced installation space.

The use of new manufacturing and material technologies has increased the permissible output torques by 20% compared to existing planetary gearboxes.

## **Maximum flexibility and safety**

A wide range of configuration options ensures that the gearboxes are ideal for all common applications, in which planetary gearboxes are used.

The planetary gearboxes of the new LPI series can be equipped with different brake sizes according to customer and application requirements. Depending on the intended use, various types, such as electromagnetic brakes or multi-disc brakes, can be used.

The interfaces to the engine are even designed to allow for the effortless assembly of any commercially available electric and hydraulic motor. This ensures the best possible gearbox/ motor drive combination.

Depending on the application, the gearbox seals are designed as radial shaft seals, V-rings, mechanical seals or labyrinth seals. In the area of oil control and ventilation, the customer can choose between a large number of oil measuring devices and expansion vessels.

Alternatively, the gearboxes can be equipped with sensors to monitor oil quality or condition. This gives the user a fast and safe overview of the operating condition of the gearbox.

The necessary test certificates according to the standards of common classification societies can be issued for the new LPI series gearboxes and necessary inspections can be carried out in-house.

## **Engineering for top quality**

Liebherr engineers applied the latest simulation and calculation methods when designing the new generation of gearboxes. This included optimisation using the finite element method. The series was then tested and verified on internal load test rigs.

**Caption**

liebherr-lpi-drives.jpg

A new LPI gearbox generation by Liebherr.

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