FLENDER

Press

Voerde, September 19, 2024

WindEnergy Hamburg

Winergy presents 10MW+ gearbox and generator at the leading wind energy trade fair

- **Original-sized exhibits bring modern drive systems to life**
- **Record in the wind industry: 400 gigawatts of installed drive power**
- **Increasing torque density is crucial for wind turbine efficiency**

For visitors to WindEnergy Hamburg, the Winergy stand will be one of the highlights of this year's trade fair. Drive specialist Flender markets its technologies and systems for the wind industry under the "Winergy" brand. The company will be exhibiting these products in their original size in Hamburg. A gearbox, generator and coupling exhibit will provide an insight into the heart of onshore and offshore turbines in the current power classes. Flender is the only manufacturer on the market that can supply all components for the drive train and combine them to create state-of-the-art drive systems.

The dimensions of the gearbox and generator, which are among the largest exhibits at the trade fair, are impressive: the 10-megawatt gearbox for an onshore turbine measures 3.72 x 2.66 x 2.63 meters in length, width and height and weighs 57 tons in its original design. The 14-megawatt offshore generator is 4.20 meters high, 2.20 x 3 meters long and wide and weighs 17 tons. Flender has produced a lighter version of the exhibits for WindEnergy.

Flender is also focusing on couplings with an own exhibit. These important connecting elements ensure optimum power transmission in the drivetrain and maximum operational reliability even under extreme operating conditions. With AIQ Detect, Flender has developed a sensor and analytics solution specifically for couplings. AIQ Detect monitors the torque limiter in a wind coupling, detects overload situations and issues an alarm in the event of critical values. This enables

predictable maintenance and increases the operational reliability and service life of turbines.

System expertise for the energy transition

With its Winergy products, Flender combines the expertise for the entire drive train under one roof. The portfolio includes main shaft, gearbox, generator and couplings and can be combined into an integrated drive system at the customer's request. Also unique: Winergy offers drive concepts for all types of turbines. From high-speed drive trains to medium-speed machines and direct-drive turbines without gearboxes.

Aarnout Kant, President Wind at Flender: "With this unique positioning, we can develop solutions together with the wind turbine OEMs that go far beyond individual drive components. This system expertise is the basis for innovations and developments in the entire drive train with which we are making wind energy ever more efficient."

Electricity for more than 300 million households

Winergy's expertise is also the basis for a very special milestone that the company will be celebrating at the trade fair. Winergy products are the first in the wind industry to reach the 400-gigawatt installed capacity mark. This corresponds to the average annual electricity demand of around 300 million households.

Andreas Evertz, CEO of the Flender Group: "400 gigawatts is a gigantic output. It corresponds to the electricity requirements of all households in the EU and USA combined. It proves that the switch to a renewable energy supply is possible. Together with our partners in the wind industry, we have been successfully working on the energy supply of the future for more than 40 years. We are extremely proud of this."

To mark the occasion, Flender is hosting a 400 GW party at the Winergy stand. On Wednesday, September 25 from 5:30 p.m., trade fair guests are invited to raise a glass with the company and celebrate the future of wind energy.

Drives of the future: more power, more compact designs, less weight

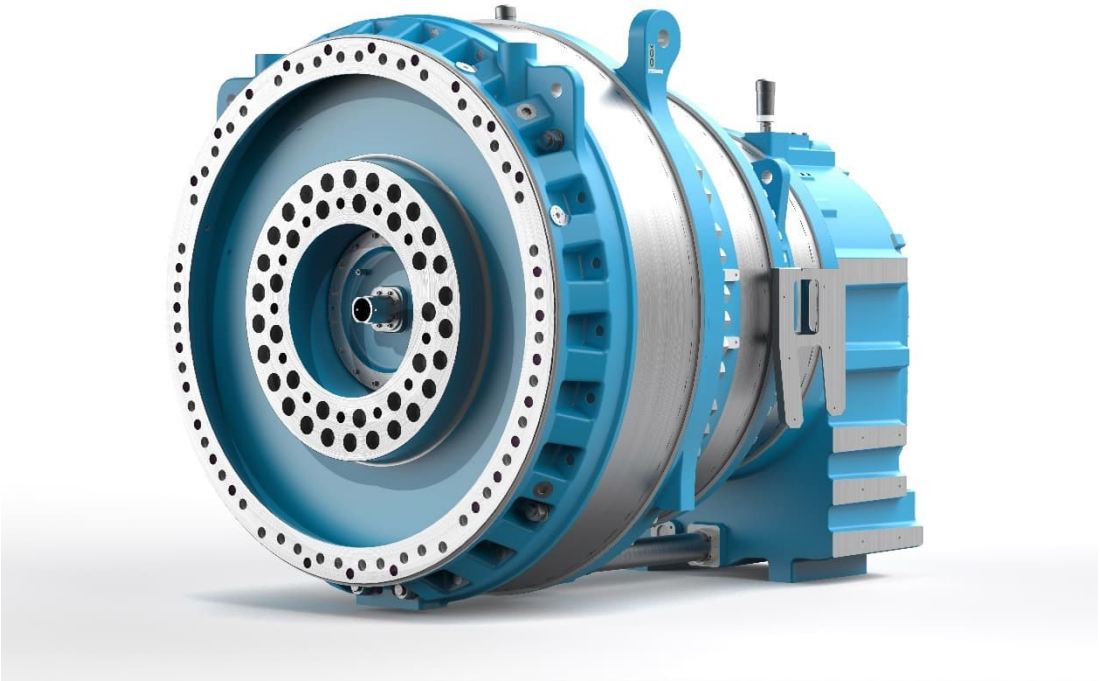
A decisive aspect for the efficiency of wind turbines is the torque density of the drive, also known as power density. "Wind gearboxes today deliver more than twice the power than they did ten years ago and are more reliable than ever, with the same dimensions and weight. We achieve all this by increasing the torque density. It

saves CO_2 emissions and makes the wind industry extremely competitive. We will be demonstrating this with our exhibits at WindEnergy," says Aarnout Kant.

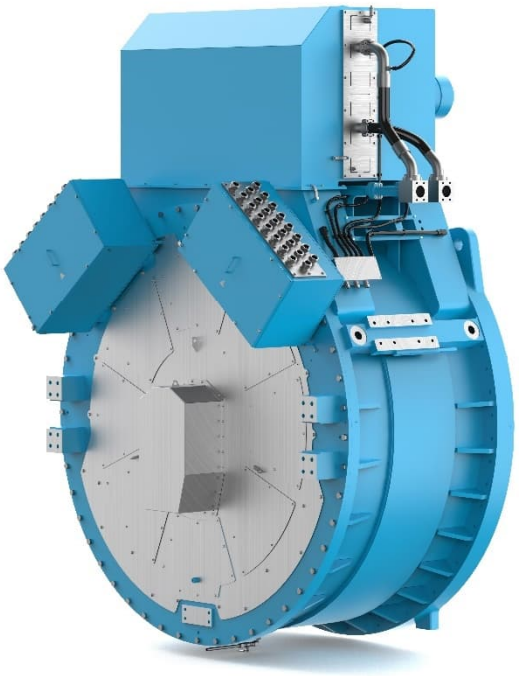
The technological leap is made possible by innovative, compact gearbox designs that feature load distribution across a greater number of planetary gears, space-saving and durable journal bearings, and optimized gear materials.

The effects are decisive: despite higher performance classes, drives and turbines remain compact and therefore still transportable. The new design saves weight and valuable raw materials. More compact drives enable compact nacelles and therefore less tower head mass. The entire turbine is lighter and requires fewer materials for the tower and foundation. Transport costs and construction costs are reduced, as is the CO_2 consumption of the entire turbine. The quieter journal bearings also ensure lower noise emissions and help to meet the guidelines for the construction of new onshore turbines in Europe.

The Winergy stand is located in Hall B5, Stand 130.



Winergy will be exhibiting this 10-megawatt onshore gearbox in its original size of 3.72 x 2.66 x 2.63 meters in length, width and height at the trade fair stand.



The exhibit of a generator for a 14-megawatt offshore turbine impresses with its height of 4.20 meters.

Technological leap made visible: thanks to the increase in power density, wind gearboxes are now more powerful and at the same time more compact than 10 years ago. An older 6-megawatt gearbox at the front and the much more compact new 7.2-megawatt gearbox at the rear.

Record in the wind industry: with 400 gigawatts of installed capacity, Winergy drives are making a major contribution to the global energy transition. This corresponds to the annual electricity requirements of more than 300 million households.

This press release and press pictures are available at www.flender.com/company/press.

Contact for media and press

Press mailbox: press@flender.com

Doris Bush
Vice President Corporate Development & Communications
Phone: +49 152 54718127; E-mail: doris.bush@flender.com

Tobias van der Linde
Manager Corporate Communications
Phone: +49 174 2415434; E-mail: tobias.vanderlinde@flender.com

Flender is a leading international manufacturer of mechanical and electrical drive systems, supplying the highest quality, performance, and innovation for 125 years. The two product brands "Flender" and "Winergy" offer a wide range of gear units, couplings, generators, and associated services, focusing on key industries such as wind energy, cement, raw material processing, gas, power generation, water and wastewater, marine, cranes, and conveyor technology. With efficient drive solutions and a strong CSR focus, Flender is the partner of choice for a sustainable future. The renowned sustainability rating by EcoVadis ranks Flender among the top 1 percent of the most sustainable companies worldwide. Flender employs approximately 9,000 people globally. The company is headquartered in Bocholt, Germany. For more information, visit www.flender.com.