



Vestas and ZF Wind Power Launch First Serially Produced EnVentus Powertrain

- World's first serial powertrain for Vestas' EnVentus platform is launched onto the wind market
- Vestas and ZF Wind Power bundled forces to anticipate the growth trajectory of renewable energy
- Customers all over the world will benefit from more flexible solutions and a wide range of customized turbine variants

Lommel, Belgium. ZF Wind Power and Vestas launched the world's first serially produced EnVentus powertrain onto the wind market. The unique platform design is the result of intensive teamwork between both parties and is an answer to the development of next generation wind technology, lowering the Levelized Cost of Energy. Furthermore, it illustrates both partners' competencies and the importance of this strategic partnership.

With a contribution of more than 85 percent of renewable electricity by 2050, renewables will be the largest driver for change in the global energy transition according to the International Renewable Energy Agency IRENA (Global Energy Transformation Study 2019). Wind remains a competitive energy source and will collaborate with other main renewable energy sources.

ZF Wind Power and Vestas bundled forces to anticipate the growth trajectory of renewable energy. After a dedicated period of development and enthusiastic teamwork, both parties are proud to release an integrated and modular powertrain design that includes main shaft, main bearing housing, two-stage planetary gearbox and permanent magnet generator. The EnVentus powertrain guarantees an output of up to 6.0 MW and is developed and tested at the facilities of ZF Wind Power in Lommel.



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“With this strategic partnership, both partners leverage their respective advantages in engineering, innovation and market experience, while jointly producing high-reliable and cost competitive wind turbine technology for the fast-growing wind market,” says Tommy Rahbek Nielsen, COO of Vestas.

Customers all over the world will benefit from more flexible solutions and a wide range of customized turbine variants due to its modular design, competitive lifecycle costs, and a high-quality design which allows a fast integration in the customer development roadmap addressing new market segments.

As a result of its constant dedication to new technological innovations, ZF Wind Power built the powertrain which is the first of its kind in the global wind industry. “Its innovative, modular design and intelligent concept manifests ZF’s position as a global leader in the development of next generation wind turbine gearbox technology,” says Mitja Schulz, Head of ZF Wind Power.

Captions:

- 1) World’s first serially produced powertrain for Vestas’ EnVentus platform, leaves the ZF plant in Lommel (Belgium).
- 2) The EnVentus powertrain guarantees an output of up to 6.0 MW and is developed and tested at the facilities of ZF Wind Power in Lommel.
- 3) The integrated and modular powertrain design includes main shaft, main bearing housing, two-stage planetary gearbox and permanent magnet generator.

Please also watch our video on YouTube: <https://bit.ly/2ljDsdB>



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About Vestas

Vestas is the energy industry's global partner on sustainable energy solutions. We design, manufacture, install, and service wind turbines across the globe, and with more than 122 GW of wind turbines in 82 countries, we have installed more wind power than anyone else. Through our industry-leading smart data capabilities and unparalleled more than 108 GW of wind turbines under service, we use data to interpret, forecast, and exploit wind resources and deliver best-in-class wind power solutions. Together with our customers, Vestas' more than 25,500 employees are bringing the world sustainable energy solutions to power a bright future.

For updated Vestas photographs and videos, please visit our media images page on:

<https://www.vestas.com/en/media/images>.

We invite you to learn more about Vestas by visiting our website at www.vestas.com and following us on our social media channels:

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ZF Wind Power

ZF Wind Power is a worldwide leading technology driven manufacturer and pioneer in the global wind turbine gearbox industry. The company is leading the high-performance onshore segments with products up to 7300 kNm and first in exceeding 175 Nm/kg torque density in compact designs. ZF delivered the world's first offshore 9.5 MW wind turbine gearbox and has the largest global installed capacity of 8 MW offshore wind turbine gearboxes. Since the company entered the wind industry in 1979, ZF Wind Power has delivered more than 75,000 gearboxes, powering as much as 150 GW wind turbines, covering approximately 25 percent of the total installed capacity of geared-driven wind turbines worldwide.



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ZF Friedrichshafen AG

ZF is a global technology company and supplies systems for passenger cars, commercial vehicles and industrial technology, enabling the next generation of mobility. ZF allows vehicles to see, think and act. In the four technology domains Vehicle Motion Control, Integrated Safety, Automated Driving, and Electric Mobility, ZF offers comprehensive solutions for established vehicle manufacturers and newly emerging transport and mobility service providers. ZF electrifies different kinds of vehicles. With its products, the company contributes to reducing emissions and protecting the climate.

ZF, which acquired WABCO Holdings Inc. on May 29, 2020, now has 160,000 employees worldwide with approximately 260 locations in 41 countries. In 2019, the two then-independent companies achieved sales of €36.5 billion (ZF) and \$3.4 billion (WABCO).

For further press information and photos, please visit: www.zf.com

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