



## ZF Expands Marine Portfolio to Include ZF 5200 A/V PTI Hybrid Transmission

- **ZF presents its first hybrid-capable down angle transmission with power take-in**
- **Powerful and flexible: suitable for many different applications thanks to a wide transmission-ratio range**
- **New variants extend the proven ZF 5000 transmission model range**

**Friedrichshafen. With the ZF 5200 A/V PTI, ZF Marine is expanding its portfolio with something unprecedented: the brand's first hybrid transmission that can be installed in the ship in both V (V drive) and A (down angle) positions. Thanks to the wide range of transmission ratios and space-saving design, the ZF 5200 A/V PTI is ideally suited for many different types of marine vessels.**

Ship designers currently face a wide array of challenges: In the leisure yacht segment, customers want as much living space as possible, while the boom in logistics and tourism requires ferries to make ever more space available for cargo. In response to more stringent environmental laws shipyards are looking for space-saving drive assemblies that also need to operate with the lowest possible emissions. Nevertheless, they do not want to make sacrifices in terms of performance and reliability. "We are now setting a new benchmark for these applications as well as others," says Wolfram Frei, Head of Global Sales for the Commercial and Fast Ships product line at ZF, in regard to the ZF 5200 A/V PTI. This addition to ZF's marine portfolio, in the form of a new variant of the proven ZF 5000 series, is also the Group's first hybrid transmission that can be installed in the ship in both the V (V drive) and the A (down angle) positions.

### **High performance with low emissions**

In the past, such a configuration has been difficult to bring about due to the packaging challenges of adding the additional input shaft for the PTI. With the ZF 5200 A/V PTI, the Group was able to successfully meet



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this challenge for the first time. It is thus possible for the additional power take-in to be coupled with an electric motor in both installation variants. At the same time, the marine transmission can transmit primary drive outputs of up to 2,462 kW (3500 HP). In combination with the wide transmission-ratio range (main drive: 2.588 to 4.250; power take-in: 2.5888 to 13.813), it guarantees high-performance operation with reduced emissions and noise for a wide range of ship types. These include leisure boats such as charter yachts and fast ships as well as commercial applications in ferry operations, governmental vessels or patrol boats. ZF has also improved maneuverability and crash-stop behavior with the optionally integrated shaft brake.

**A space-saving miracle and modular construction**

Another advantage is the transmission's modular design. ZF relies on the proven individual components of the ZF 5000 series, which simplifies service and maintenance for the hybrid solution. The engineers at ZF were able to further reduce the size of the aluminum housing. The space-saving design gives shipyards a great deal of latitude when drafting plans for new ships: yachts can have additional cabins as well as more spacious decks, while storage space can be more generously allotted on ferries.

Caption:

Low-emission, powerful and compact: the ZF 5200 A/V PTI is the first ZF Marine hybrid transmission that can be installed in both V (V drive) and A (down angle) positions.

Image: ZF

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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. Based on a comprehensive technology portfolio, ZF offers integrated solutions for established automotive manufacturers, mobility providers, and emerging companies in the transportation and mobility sector. Digital networking and automation are focal points of ZF system development. ZF allows vehicles to see, think, and act.

The company has a global workforce of 149,000 with approximately 230 locations in 40 countries. In 2018, ZF achieved sales of €36.9 billion. ZF invests over six percent of its sales in research and development annually.

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