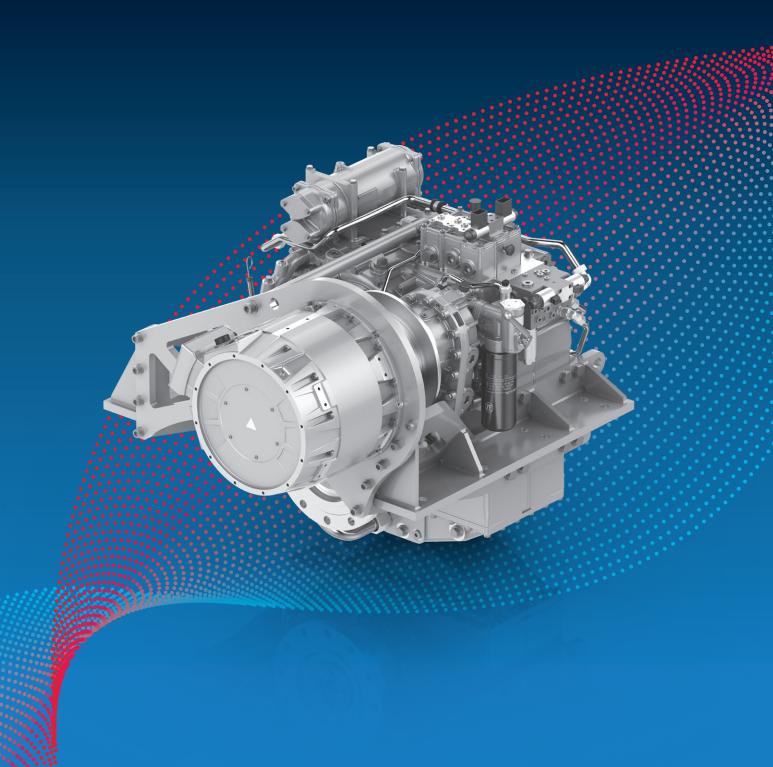


# Hybrid Module

High propulsion power, comparatively compact



## Plug and Play for more sustainability

The combination of the ZF 3300 PTI transmission and an electric motor in one propulsion system guarantees perfect interaction and optimum power output in a comparatively compact design.

In the new innovative marine hybrid module, ZF combines its established ZF 3300 PTI transmission, which can cover a power range of up to 1,940 kW at 2,450 rpm, with an application-specific electric motor in the options 150 kW, 200 kW and 300 kW. The key feature is an all-new supporting frame.

The frame design eliminates the need for a separate base for the electric motor and for an offset-adjustment coupling between the components. A custom designed torsion clutch absorbs the torsional vibrations from the electric motor. The supporting frame also centers the electric motor in relation to the transmission.

This plug-and-play setup, which is unrivaled in the marine market, hugely simplifies the installation of the hybrid drive module and the maintenance of the electric motor. The drive also takes up much less installation space. This pays dividends particularly when designing yachts and ferries, where every square centimeter of available space counts. The hybrid module can also be combined with standard equipment, allowing existing ship platforms to be fitted and electrified with this module.

### **ZF Group**

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Get to know more about our transmissions for marine applications: zf.com/marine





### **Benefits:**

- All-in-one solution allows easy electrification of new and existing marine platforms.
- Newly developed and unique supporting frame centres the e-motor to the gearbox and enables plug and play setup.
- Simplified installation as no need for a separate base for the e-motor. The bearing is realized by a joint angle bracket with the transmission. No offset compensating coupling is required.
- Good accessibility to the e-motor simplifies maintenance and service.
- High drive power with a compact design that saves installation space.
- A wide range of variants available, as different hybrid transmissions can be connected to an application-specific e-motor in the options 150 kW, 200 kW and 300 kW.
- Flexibility to be integrated into a wide variety of hybrid vessel propulsion solutions.