



Speed, comfort, efficiency, locally emission-free - mtu Hybrid PropulsionPack

Rolls-Royce's mtu Hybrid PropulsionPack offers more than one way to design hybrid propulsion for ships. Adapted to the customer's wishes, it can not only ensure lower emission levels, but also silence on board - whether in the harbor or at anchor.

Anchoring without climate-damaging exhaust gases and quiet maneuvering in port: The mtu Hybrid PropulsionPack from Rolls-Royce offers a propulsion solution that enables pure battery-electric operation over a certain period of time. The low engine noise and vibrations then offer even more comfort on board. Large luxury yacht or working vessel: for the optimum propulsion solution, the hybrid system can be adapted to customer requirements. Rolls-Royce will be launching the mtu Hybrid PropulsionPack for the engines of the mtu Series 2000 and Series 4000 from 2023.

High flexibility

The mtu hybrid portfolio offers flexible propulsion solutions for yachts, ferries, tugs and windfarm vessels. The mtu Hybrid PropulsionPack is offered in a power range from 1,119 kW to 4,300 kW by the diesel engines plus 165 kW to 743 kW by the electric motors per drive train. The maximum propulsion power is 10,000 kW per vessel. The system integrates the diesel engines with electric propulsion modules, batteries, gearboxes, control and monitoring systems and other electronic components. To ensure the optimum propulsion solution for each type of ship, Rolls-Royce offers a modular kit with standardized components. This hybrid system serves as the basis for a future standard architecture with other new technologies as well.

Comfort Hybrid, Premium Hybrid or Sport Hybrid?

What options do the different hybrid systems from Rolls-Royce offer for yachts? With the "Comfort Hybrid", small batteries, small electric motors and small gensets ensure quiet and



emission-free driving and maneuvering. Even anchoring and power supply on board are possible without noise and exhaust emissions.

The "Premium Hybrid" with large batteries, electric motors and gensets provides power supply without noise and exhaust emissions even over longer periods on the yacht. The performance of the individual components enables long excursions in e-drive mode. Thus, in pure electric drive, neither nitrogen oxides nor sulfur or other particles are emitted. A special feature: depending on the propeller design, the e-drive module can be switched on (speed boost) to support maximum engine power and achieve top speed. In an example configuration for a 40-meter yacht, emission-free anchoring would be possible for up to 8 hours, as well as emission-free cruising at a speed of over 10 knots for 30 minutes.

In the "Sport Hybrid", small batteries, medium-sized electric motors and medium-sized gensets ensure an optimal ratio of hybrid capability, weight and performance. The yacht's maneuverability as well as speed increase with the "Speed Boost."

"Through the different options as well as our individual consulting, we offer our customers the possibility to find the optimal propulsion solution for their requirements. Not only can maximum performance be achieved for yachts, but also climate-friendly anchoring and maneuvering in the harbor," says Alexander Scheffauer, Project Manager Marine Business Yachts at Rolls-Royce Power Systems.

In order to find the right propulsion solution for yachts, the Hybrid PropulsionPack configurator offers assistance: Taking into account the size of the ship, the boat dimensions and the specification of individual wishes, the configurator calculates the optimal propulsion solution for the conditions on board the ship.

Sustainable fuels and other new technologies for carbon-neutral shipping

On the road to Net Zero, Rolls-Royce offers further opportunities to reduce greenhouse gas emissions in shipping. The engines of the mtu Series 2000 and Series 4000 will be approved for sustainable fuels such as e-diesel and HVO in 2023, enabling climate-neutral operation. New technologies such as methanol engines and CO₂-free fuel cell systems are also already under development.

News and photos are available from

<https://www.mtu-solutions.com/eu/en/news-and-media/media-center.html>



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