



Hybrid patrol boat

A new vessel design offers high performance and reduced emissions for the Italian authorities

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The FSD N800 HY Carabinieri patrol boat, destined for use by the Italian military/police force (the fourth independent service to use the vessel, after the air force, land force and navy), was present at the 2021 Venice Boat Show. Supply of the FSD N800 HY offshore patrol boats has been assigned to the Ferretti Security Division, which already has the first boat operational in the Italian seas.

The FSD N800 HY is the first hybrid patrol boat to join the Carabinieri fleet, and will be deployed for rescue and security operations, as well as patrolling coastal and territorial waters. The FSD N800 HY patrol boats feature a new-generation hybrid propulsion system, are easy to use and are highly maneuverable. The vessel design makes switching from diesel to electric mode and back a simple operation, enabling a significant reduction in emissions.

The vessels have a length of 16.75m, a beam of 4.43m and a draft of 1.57m. The composite-material hull is made

from glass fiber and carbon fiber. The boats are powered by a Transfluid HM3350 parallel hybrid system, integrated with Transfluid PM electric motors and LiFePO₄ batteries. All of these systems are DNV-GL type approved.

The boat has an electric operating time of approximately one hour at 7kts and two hours at 5kts. Maximum speed in electric mode is 8kts, and in diesel mode is 30kts. In diesel mode, total regeneration of the ship's batteries is carried out in approximately 90 minutes. Electric operation, in addition to reducing fuel consumption, can also enable savings in maintenance costs, as the operating time of the diesel system is reduced.

The combination of innovative technology and skillful design significantly reduces fuel consumption and environmental impact, safeguarding the marine ecosystem without compromising on performance. +



1. The FSD N800 HY features a new hybrid propulsion system
2. The vessel is powered by a Transfluid HM3350 parallel hybrid system
3. The ship can easily switch between diesel and electric operation