

MULTI-PURPOSE, ZERO-EMISSION VESSEL

**Fusion of Technical Innovation and
Sustainability in
the Naval Industry**

www.symbbluepropulsion.com
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SYM
NAVAL

PORT VESSEL NEWBUILDING



SUSTAINABILITY & CUTTING-EDGE TECHNOLOGY

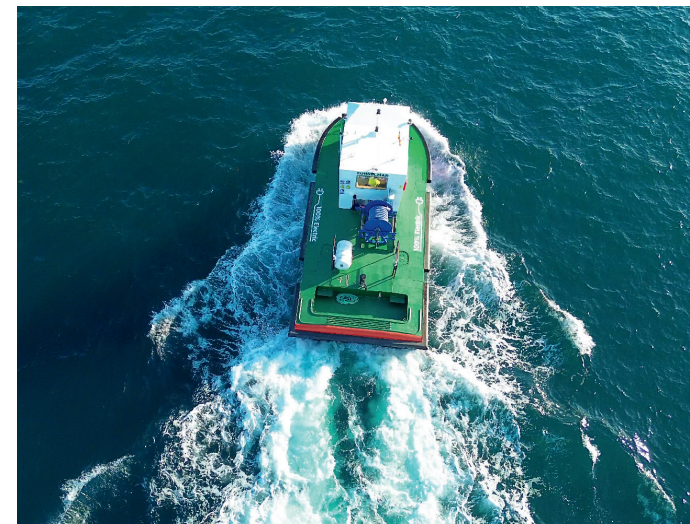
Pioneering Zero-Emission Excellence

Introducing zero-emission vessel— a remarkable **12.5-meter-long, 5-meter-wide** multipurpose harbour vessel that is setting a new standard in the maritime industry for a greener future.

- Empowering Green Pioneers
- Silent Powerhouse
- Control at Your Fingertips
- Proactive Safety Measures
- Adaptive Performance

ZERO-EMISSION VESSEL

This state-of-the-art zero-emission vessel will support various port activities, such as vessel **mooring** and **unmooring**, the **collection of MARPOL liquid** and **solid waste**, **personnel** and **provisions transport**, and maritime pollution control.



TECHNICAL SPECIFICATIONS	CASTALIA VESSEL
ENGINES	2 x 240 kw
OPERATIONAL RANGE	10 hours
LIQUID WASTE COLLECTION CAPACITY	30 m ³
TOWING FORCE	30 tons
ENERGY STORAGE SYSTEM	LiFePO battery system, capacity- 500 kwh
ACCOMODATION	room for 12 passengers



100% ELECTRIC, ZERO-EMISSION MULTI-PURPOSE VESSEL

The vessel houses a **lithium iron phosphate** (LiFePO) battery system with a total capacity of **500 kwh**, powering **two 240 kW** permanent magnet electric motors each. This setup provides autonomy for up to **10 hours**, offering a viable and sustainable alternative to internal combustion engines.

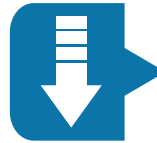
Integrated diagnostic tools offer continuous assessment of the electric propulsion system, facilitating predictive maintenance and swift problem resolution.





MULTI-PURPOSE, ZERO-EMISSION VESSEL

Features



Exhaust Emissions Reduction

The vessel eradicates exhaust emissions, promoting cleaner air and a greener environment. Its silent electric propulsion enhances crew comfort and reduces marine acoustic pollution.



Alarm Management

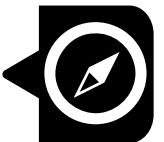
The vessel records battery alarms for early warnings, while continuous gas concentration monitoring in the battery room triggers automatic risk-mitigation measures.

Advanced Control System



The vessel uses CAN BUS for seamless onboard communication, integrating diagnostics for predictive maintenance and rapid issue resolution.

Versatile Navigation Modes



The vessel offers a range of navigation modes—eco, navigation, and maneuvering—allowing for optimal performance and energy efficiency tailored to specific operational needs.



01 NAVAL ENGINEERING OFFICE

A **technical department** capable of managing the demanding requirements of shipowners with the highest quality from the beginning to the end of the project.



02 QUALITY CONTROL

Shipbuilding in steel and aluminum. We design and build custom vessels. IACS classified vessels.



03 WORLDWIDE ASSISTANCE

Sailing, in port and in dry dock. Maintenance and repair service for vessels in dry dock in the Caribbean area. Worldwide coverage via riding squads.



04 CUSTOM PROJECTS

Analysis of technical needs of each client for the construction of customized vessels. Seriousness and commitment assumed in all our projects.



05 MORE THAN 25 YEARS OF EXPERIENCE

A team made up of professional naval engineers, project managers and technical staff that work in sync to develop the different phases of a project.



06 COMMITMENT TO THE ENVIRONMENT

We are **ISO 14001 certified**, a guarantee of our clear commitment to the environment which, in turn, obliges us to maintain the highest environmental standards in all our operations and facilities.



SYM Naval is ISO 14001 certified, a guarantee of its clear commitment to the environment.



SYM Naval has the international ISO 45001 certification for Occupational Health and Safety Management Systems (OSH), which guarantees that their jobs are safe and healthy, preventing accidents and occupational health problems.



SYM Naval is ISO 9001 certified, a guarantee that its processes conform to the highest standards in ship construction, conversion and repair.



SYM Blue Propulsion contributes to carrying out maintenance, reforestation, cleaning and environmental protection actions, defining specific action plans with the responsible authorities.

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