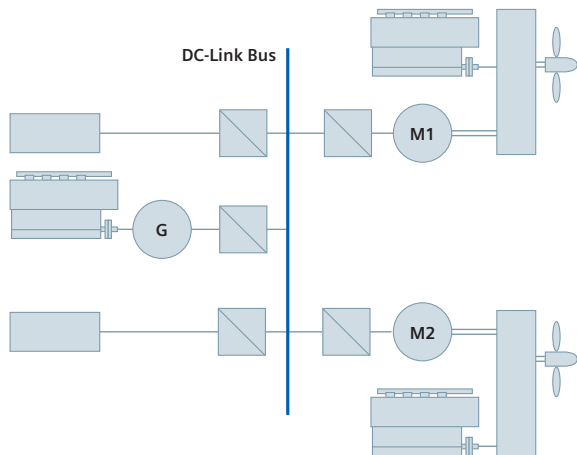


# A cost-efficient course for the future

To meet today's requirements for small vessels like yachts or fishing boats, Siemens provides an extremely flexible, compact and powerful solution that has its roots in decades of proven hybrid propulsion for trains and buses.

## A well-conceived concept

By going with a hybrid setup, the main diesel engine runs at a constant speed, turning an electrical generator that feeds a propulsion motor through a switchboard and converters. The system's greater efficiency comes from the unique characteristics of the diesel engines that operate productively only for a limited speed range. With intelligent hybrid control and the diesel-electric system, you can widen up this range by continuously driving your engines within the proper load range.



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CIS = Completely Integrated Solutions

The information provided in this brochure contains merely general descriptions or characteristics of performance which in case of actual use do not always apply as described or which may change as a result of further development of the products. An obligation to provide the respective characteristics shall only exist if expressly agreed in the terms of contract.

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SISHIP<sup>CIS</sup> EcoProp:

# Get on course for zero emissions

Green prospects with hybrid propulsions for small vessels

Marine Solutions

**SIEMENS**

# SISHIP<sup>CIS</sup> EcoProp: Motoring ahead on environmental protection

Cruising a yacht along a peaceful bay with scarcely a sound and no smog pollution – that natural experience is possible with diesel-electric hybrid propulsion. Advanced technology from Siemens now allows small vessels to reap the convincing advantages of increased range, greater reliability, reduced maintenance, fewer emissions, quieter operation and simplicity of operation.

Time has come to seek out a cost-effective propulsion solution that also complies with environmental requirements: SISHIP<sup>CIS</sup> EcoProp.

Energy conversion



## Braking waves with a green concept

With SISHIP<sup>CIS</sup> EcoProp, the ship can be operated in 4 different modes. Supported by an advanced hybrid control, you are free to choose the right propulsion mode for the right situation. For example, gliding along in calm waters without a sound or impact on the environment, and leaving nothing behind but a wake.

- **Diesel mode:** Power from propulsion diesels, driving a geared generator that charges batteries, and feeding the ship service net while propelling the vessel.
- **Battery mode:** Electrical power from batteries feeds the ship service net and propulsion load for absolute silent and zero-emission boat operation while anchoring, harbor docking, maneuvering or cruising at slow speed.
- **Electro mode:** Power from harbor generator charging batteries, supplying the ship service net and propulsion motors for cruising with totally silent, zero-emission operation.
- **Hybrid mode:** Propulsion diesels driving the vessel with additional power from geared motors (PTI), which receive electrical power from vessel service generator for maximum speed.

## Powering your ship forward to more freedom

Apart from the choices of operation modes, there are more advantages to power your ship to more efficiency and comfort.

- SISHIP<sup>CIS</sup> EcoProp complies with the most stringent environmental regulations
- SISHIP<sup>CIS</sup> EcoProp reduces the fuel consumption through efficient operation of the diesel engines
- SISHIP<sup>CIS</sup> EcoProp solution provides more flexibility for layouts – engines, generators and batteries can be mounted at any desired place
- SISHIP<sup>CIS</sup> EcoProp is a “plug and play” solution
- SISHIP<sup>CIS</sup> EcoProp allows full thrust, even at the lowest speeds – this means precise control while docking and maneuvering
- SISHIP<sup>CIS</sup> EcoProp offers longer diesel engine service life, as the engines are always running within the optimum load range
- The main engines also feed the ship service net. Alternative layouts with regenerative energy sources such as wind, solar or fuel cells can be easily integrated
- All Siemens components are from a single source

