

# SIEMENS

*Ingenuity for life*



## SISHIP and SINAVY SiPOD

High-performance outboard drives with mono  
or twin propellers for high-performance vessels

Electric pod systems are widely used on diesel-electric powered vessels requiring very high levels of maneuverability, efficiency and reliability. With SISHIP SiPOD, Siemens offers a solution in the power range from 5–25 MW that provides maximum vessel design and layout flexibility thanks to its minimal onboard space requirements. The crucial advantage of SISHIP SiPOD is its substantially higher overall efficiency resulting from the combination of a compact, hydrodynamically optimized design and an efficient, permanently excited synchronous motor.

### One system – two versions

In the area of electric pod-based systems, Siemens is the only supplier of podded propulsion systems that can be optionally equipped with mono or twin propellers. In other words, the propulsion system can be optimally adapted to suit your needs according to the vessel type and operating profile. Combining all of the features of an innovative drive system, both the mono (SISHIP SiPOD-M) and twin propeller (SISHIP SiPOD-T) versions pack a lot of performance in a compact package.

### SISHIP SiPOD – our solution in detail

The unique performance of SISHIP SiPOD drives is the result of a combination of hydrodynamically optimized drive module, permanently excited motor and state-of-the-art converter technologies.

**The SISHIP SiPOD-M:  
Optimized open water performance  
with mono propeller**

SISHIP SiPOD-M is the podded system of choice for vessels with highest open water performance and efficiency demands. It is equipped with an optimized strut to prevent vibrations and increase course stability. The hydrodynamic efficiency is further increased thanks to the slim propeller hub and streamlined design. Mega yachts and, in particular, cruise ships and other large passenger vessels as well as other vessels with specific ice class requirements stand to benefit from the advantages of SISHIP SiPOD-M.

**The SISHIP SiPOD-T:  
Maximum thrust in minimal space  
due to twin-propeller layout**

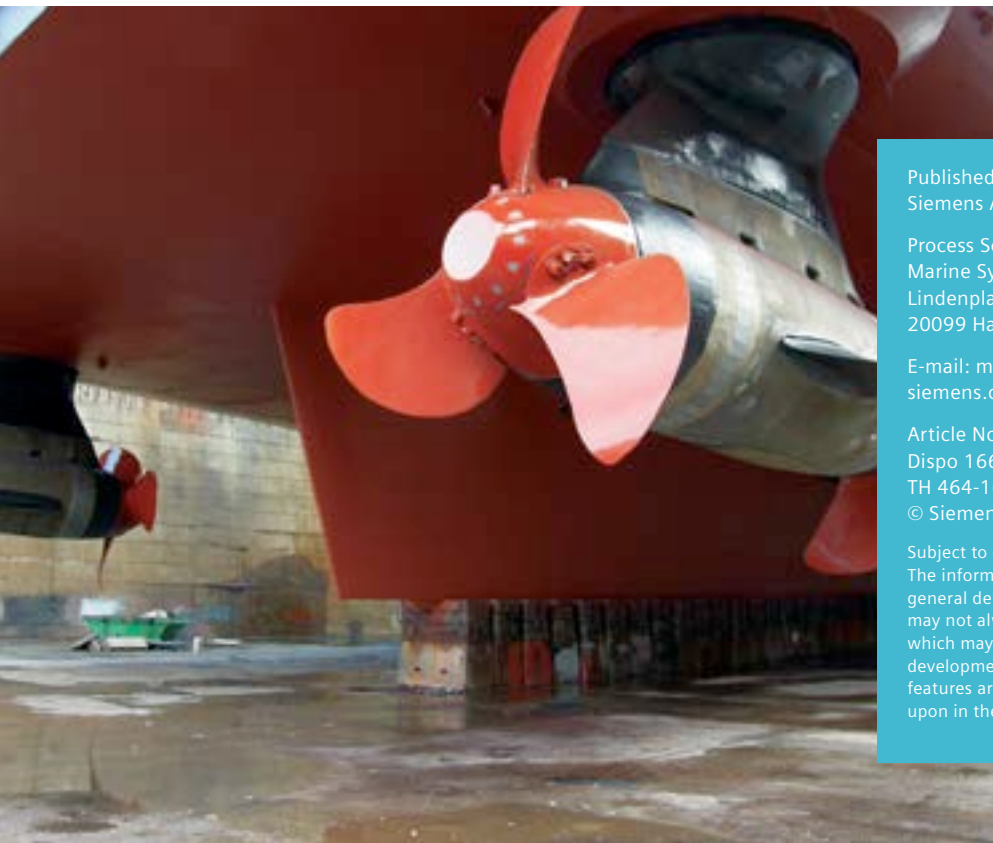
Twin-propeller systems keep space requirements under the stern to an absolute minimum. SISHIP SiPOD-T allows more flexible ship designs while also maximizing payload capacity. This is especially advantageous for ferries, offshore vessels and naval support vessels.

**Space-saving, flexible design**

Having electrical properties resembling those of a conventional synchronous motor, the permanently excited motor can be integrated without limitations into conventional drive systems. In the process, the higher level of availability of the diesel-electric outboard drives also leads to a marked increase in operational reliability. No other type of drive system offers comparable flexibility for designing hulls and engine rooms than azimuthing diesel-electric propulsion systems. The space saved with the drive system can be utilized to increase cargo and passenger space, or simply provide for a more compact ship design.

**SISHIP SiPOD advantages at a glance:**

- Extremely quiet, low-vibration operation
- Outstanding maneuverability
- Excellent propulsion efficiency over a wide operating spectrum
- Highest energy efficiency
- Onboard space savings thanks to compact design
- Reliable propulsion system with highest redundancy
- Low maintenance costs through passive cooling
- Standardized components available worldwide
- Safe, competitive investment



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