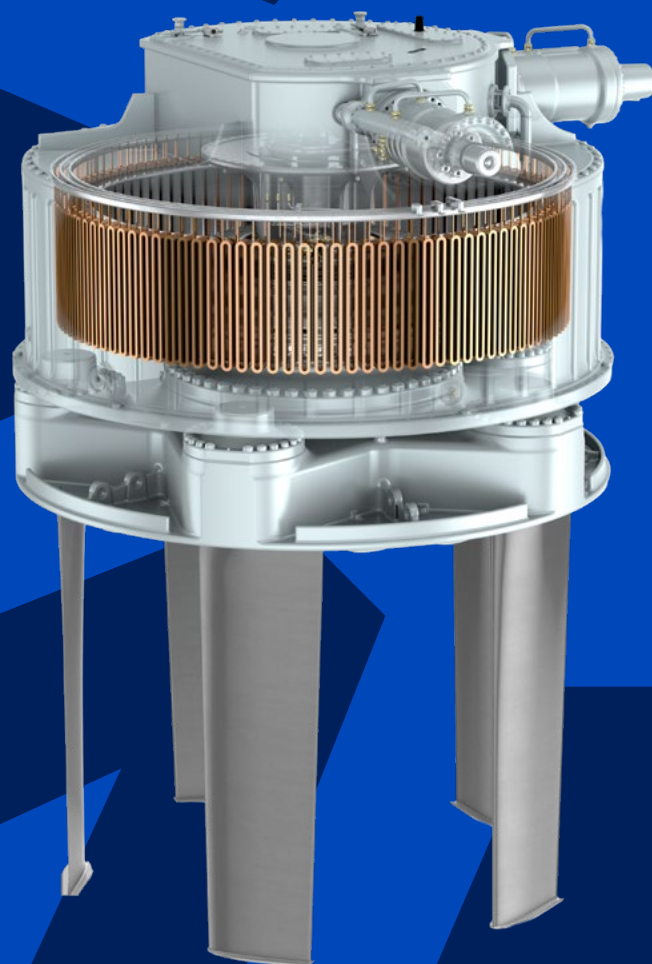


VOITH

voith.com

Advanced propulsion for naval applications

The electric Voith Schneider Propeller in military configuration: Based on decades of military experience.



Propulsion, steering and roll stabilization in one integrated system for MCMV applications

Low signature, accurate maneuvering and silent propulsion are the most important benefits of reliable and efficient applications for mine countermeasure vessels (MCMV). Based on decades of military experience with the Voith Schneider Propeller (VSP), Voith has developed the propulsion concept further and provides the electric Voith Schneider Propeller in military configuration (eVSP MIL). Already successfully installed in many MCMVs as well as in civil offshore and passenger vessels, the eVSP MIL combines propulsion, steering and roll stabilization in one integrated system. That makes it a perfect fit for the latest generation of minehunters and other military applications.

© Tomasz Grotnik

Key benefits of the eVSP MIL

> Accurate, silent, reliable and efficient

The eVSP MIL brings Voith's proven VSP heritage with an installed base of more than 90 minehunters across 15 navies worldwide into the electric era for MCMV applications, setting new standards – e.g. for low noise and low magnetic signature, since its integrated permanent-magnet synchronous motor eliminates gearbox and shaft line losses, improving underwater acoustics and efficiency.



Low noise and low magnetic signature



Increased overall efficiency, reliability and nearly loss-free transformation



Fast acceleration and response for precise and safe maneuvering leads to best Dynamic Positioning (DP)



No shaft line restrictions: optimum resilient mounting possible for increased shock resistance



Integrated feature:
Voith Roll Stabilization (VRS)



Fully integrated motor for flexible installation and minimal space requirement



Maintenance free motor for high reliability and low operating costs



Maximum safety for vessel, passengers and the environment with VSP principle



Silent mode, low under water noise signature at all speeds



Optional feature: Environmentally Acceptable Lubricants EAL



Product details

Basically, the eVSP MIL combines propulsion, steering and roll stabilization in one integrated system and delivers extremely fast, precise X/Y thrust generation that is particularly advantageous for MCMV applications. In comparison to conventional concepts, the eVSP MIL genrally delivers quieter, more efficient and exceptionally precise propulsion for superior maneuverability, dynamic positioning, shock resistance, and mission capability. Plus: Full control from a single source with the modular Voith Control System (VCS), a customized control solution designed to enable precise, efficient and reliable operation of Voith marine propulsion systems.

Low noise and low magnetic signature

Permanent-magnet synchronous motor eliminates gearbox and shaft line losses, improves underwater acoustics and efficiency at all speeds, and enables a more compact and lightweight propulsion system.

Superior maneuverability

Integrated propulsion/steering/stabilization functionality for best-in-class maneuverability and precise minehunting operations. Optionally complemented by the smooth Voith Inline Thruster (VIT), a compact rim-driven propulsion system, in the bow.

Dynamic positioning (DP)

Fast and extremely precise thrust allocation for outstanding DP performance – in every situation and in all directions. Ideal for loading at sea as well as for helicopter or drone operations, and especially for deploying and retrieving underwater equipment used to counter mines.

Shock resistance

Full scale tests demonstrate high shock resistance and robustness. According to this, the propulsion system always remains fully operational and ensures reliable performance – even in demanding military environments, in rough weather conditions, and in case of emergency.

Mission capability

Integrated Voith Roll Stabilization (VRS) for improved seakeeping not only increases on-board comfort and safety – it also increases mission capability. Extremely effective across the entire speed range, from zero speed to full speed.

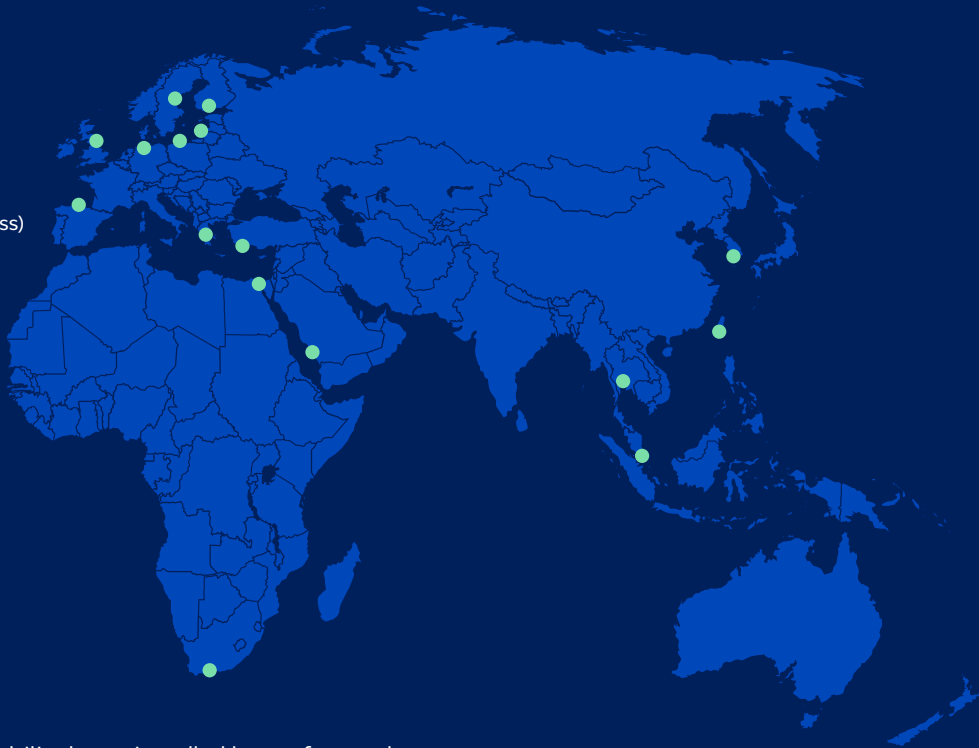
Plus: Full control

In addition, the modular Voith Control System (VCS) can be customized to the characteristics and requirements of the eVSP MIL. For full control from a single source, eliminating the need for complex interface integration.

Installed base

15 navies worldwide

- Royal Thai Navy (Lat Ya Class)
- Spanish Navy (Segura Class)
- Korean Navy (Kang-Keong Class, Yang-Yang Class)
- Singapore Navy (Bedok Class)
- Turkish Navy (Alanya Class)
- Royal Swedish Navy (Landsort Class)
- Royal British Navy (Sandown Class)
- Royal Saudi Navy (Al Jawf Class)
- Finnish Navy (Katanpää Class)
- Egyptian Navy (Osprey Class)
- Estonian Navy (Sandown Class)
- Greek Navy (Osprey Class)
- South African Navy
- Taiwanese Navy (Osprey Class)
- Polish Navy (Kormoran Class)



More than 90 minehunters

Actually, the VSP heritage offers proven reliability by an installed base of more than 90 minehunters across 15 navies worldwide that already trust in the perfect combination of propulsion, steering and roll stabilization in one integrated system.



Minehunter (Poland)



Minehunter (Republic of Korea)



Minehunter (Turkey)



Minehunter (Finland)



Minehunter (Sweden)

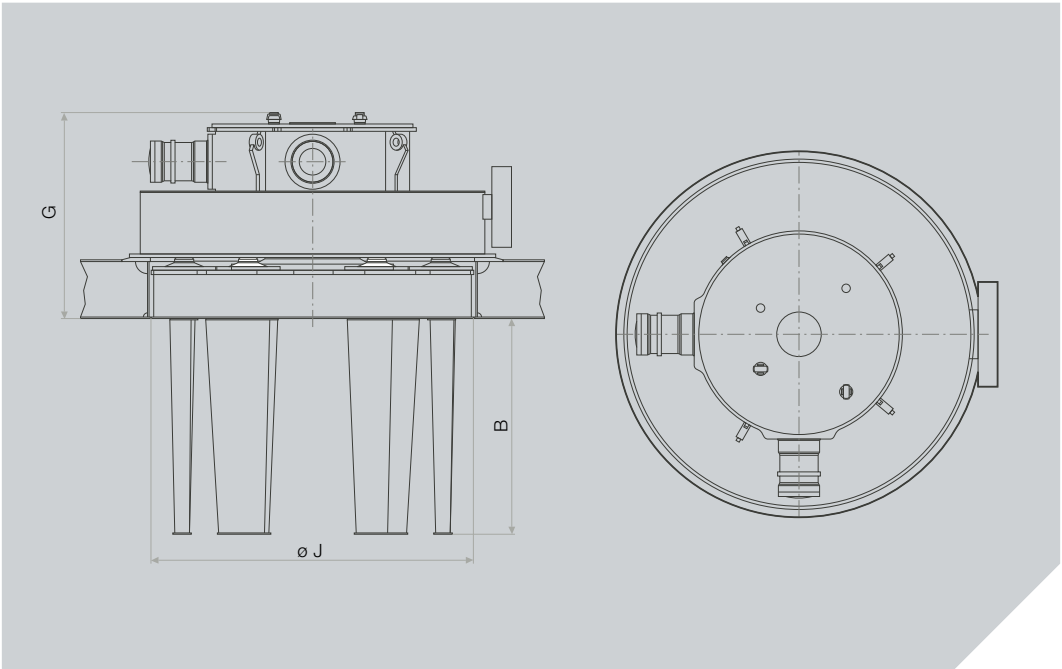


Minehunter (Egypt, Greece, Taiwan)

Technical data

Additional technical data of the eVSP MIL include 18+ knot capability, CFD-optimized blades, a 6-bladed rotor for smoother sailing and the elimination of gearbox and shaft line losses through the integrated permanent-magnet synchronous motor concept, as well as an efficiency gain of up to 12% in comparison to conventional concepts.

Principle dimensions (reference values) of electrical Voith Schneider Propellers (eVSP MIL)



Propeller size	21*	26*
Blade quantity	6	6
Propeller input power up to [kW]	1150	1950
Blade length B [mm]	1600 - 1750	2100 - 2300
Total height (propeller without blades) G [mm]	1980	2451
Rotor casing outside diameter J [mm]	2640	3225
Weight [t]	24	39

*Still under development › preliminary values, stiff and elastic mounting possible
Other sizes / power levels available on request

Voith Service

Being ahead makes the difference: As your trusted lifecycle partner, we offer customized service packages covering the entire lifecycle of the eVSP MIL. All to keep you one step ahead. With over 100 years of marine experience, Voith military customers are in good hands – both before and after the purchase.

Why use Voith Service?

01

Benefit from integrated expertise in development, engineering, production and service – all from a single source.

02

Rely on in-depth product knowledge and decades of experience to support reliable operation throughout the lifecycle.

03

A global network of service locations provides direct access to Voith expertise and helps ensure fast, efficient support.

04

Gain greater planning security with an experienced partner committed to supporting your propulsion system throughout its lifecycle.



Voith Group
St. Pöltener Str. 43
89522 Heidenheim, Germany

P +49 7321 370
marine@voith.com
voith.com

VOITH

QR-Code zur neuen eVSP
MIL-Website muss hier rechts
unten noch erstellt und
integriert werden.

