

YOUR PROPULSION EXPERTS



PROPULSION AND AUTOMATION
FOR EFFICIENT FERRIES



FOR SAFE PASSAGE

In many regions, travel routes can be long with many destinations only accessible by water. Ferries play a key role in the transport infrastructure in these areas. Ferry operators offer daily connections to provide people with safe passage or to transport goods. Having reliable equipment is the basis for fulfilling these tasks on schedule.

This is where SCHOTTEL comes in, offering efficient and safe propulsion systems. SCHOTTEL Automation Systems and Marine Services can be used to exploit the further potential of individual vessels or even an entire fleet.



**SAFE TRANSPORT OF PASSENGERS,
CREW AND FREIGHT**



**RELIABLE MARINE
PROPULSION SOLUTIONS**

SCHOTTEL IN THE FERRY MARKET

1955

First ferry with
azimuth thruster

2.500+

Ferries worldwide with
SCHOTTEL propulsion
and manoeuvring systems

CO₂

SRE meets
high efficiency
requirement

HIGH QUALITY AND RELIABLE PROPULSION

YOUR MAIN PROPULSION OPTIONS



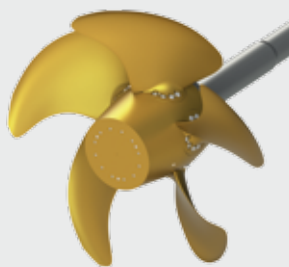
SCHOTTEL EcoPeller SRE

- Best values in drive efficiency and course stability
- Optimized for open seas and coastal operating conditions
- CP with full-feathering mode: alignment of propeller blades parallel to the flow to minimize drag resistance
- Versatile applications, especially suitable for medium to high speeds
- Exclusive features such as HTG, LeaCon
- Compatible with SCHOTTEL hybrid solutions (SYDRIVE-E and SYDRIVE-M)
- Outstanding comfort as LE-drive: extremely low vibration and noise level
- Various installation options



SCHOTTEL TwinPropeller STP

- Especially suitable for applications with limited propeller diameter
- Increased level of efficiency
- Reduced noise and vibration levels
- Numerous installation variants
- Minimal maintenance effort, long-term availability of spare parts as OEM
- Exclusive features: SCHOTTEL LeaCon sealing system or DuroVario clutch (optional)



SCHOTTEL ControllablePropeller SCP

- Maximum thrust at changing speeds and loads
- Reduced noise and vibration levels (particularly with 5-blade version)
- Full-feathering mode (optional)
- Minimal maintenance thanks to its robust design
- Hydrodynamically optimized hub available for fast vessels with high propeller load
- Easy access to hub for less servicing effort
- Complete propulsion package available with comprehensive equipment



SCHOTTEL PumpJet SPJ

- Azimuth jet thruster
- Installation flush with the vessel's hull, fully protected without projecting parts
- Ideal propulsion system for extreme shallow draught operation
- Maximum thrust with extremely compact design
- Reduced noise level
- Can be used as take-home system
- Features such as LeaCon or HTG (optional)
- SCHOTTEL CoaGrid for even more efficiency (optional)
- Elastic installation version ensuring reduction in noise and vibration levels while enhancing comfort (optional)



AUXILIARY PROPULSION



SCHOTTEL TransverseThruster STT

- Maximum thrust
- Compact design
- Less maintenance required due to its robust, high-quality design
- Features such as LeaCon or HTG (optional)
- Well installation for easy access to the propulsion unit (optional)
- Elastic installation version ensuring reduction in noise and vibration levels while enhancing comfort (optional)

DEMAND YOUR VESSEL'S FULL POTENTIAL

SCHOTTEL AUTOMATION SYSTEMS

The modular and highly standardized propulsion control system from SCHOTTEL reliably transmits the control instructions of the ship's crew to the propulsion unit. Every propulsion type as well as auxiliary units, clutches, gearboxes and motors are controlled.

Analogue, digital and serial interfaces are available to enable seamless and secure communication with peripheral systems on board. All elements of the

system from the sensors and actuators to the switch cabinets, the underlying software and the control desk components are developed, designed and manufactured by SCHOTTEL.

A wide range of control panels, indicators and control levers ensure that the high requirements in terms of ergonomics, safety and regulations are met in all applications.

PROPULSION CONTROL SYSTEM

PropControl

- + RELIABLE** | In any situation, the instructions of the ship's command are quickly and safely translated into a response from the propulsion system
- + UNIVERSAL** | Control of all propulsion systems as well as auxiliary units, clutches, gearboxes and engines
- + COMFORT** | Ensuring the high requirements in terms of ergonomics, safety and regulations



SCHOTTEL MARINE SERVICES

Marine Services allow SCHOTTEL to offer intelligent solutions for remote access, data collection, data evaluation, condition monitoring and predictive maintenance. They also provide

remote assistance and hydrodynamic engineering services. This enables operators and owners to fully utilize the potential of their vessels.

DATA COLLECTION & TRANSFER SYSTEM

MariHub

- + CONNECTED** | Link equipment from ship to shore
- + ANYTIME** | 24/7 real-time data and insights
- + SECURE DATA** | Reliable and encrypted data transfer according to highest standards



IoT PLATFORM

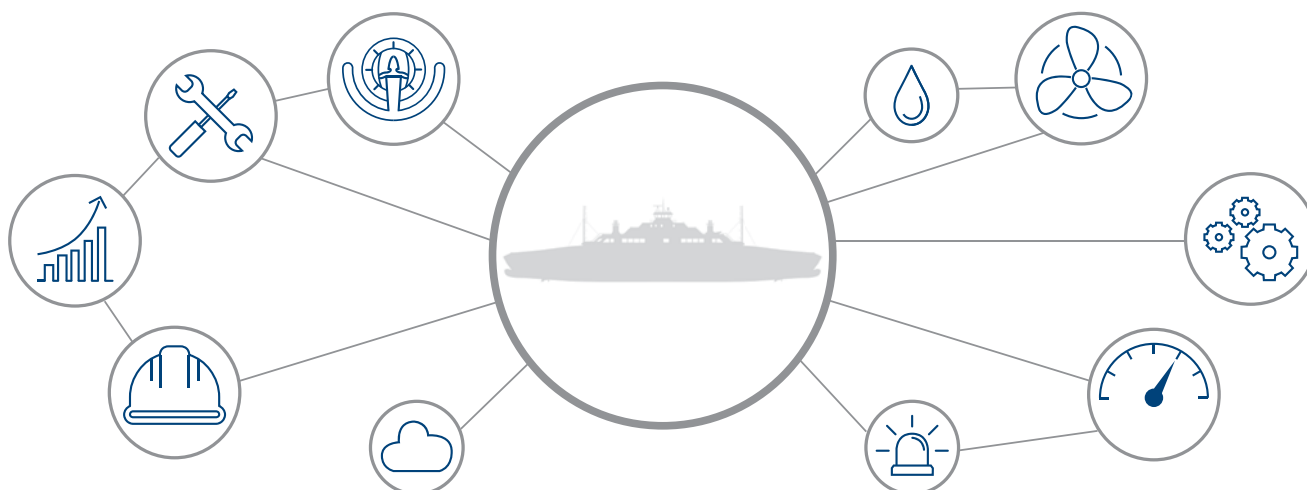
MariNet

- + COMPETITIVE** | Advantages due to higher awareness of the vessel's performance
- + ProCMS** | Propulsion condition monitoring service by SCHOTTEL expert
- + ProDATA** | Remote data service with historical and live data view

PROPULSION CONDITION MONITORING SERVICE

ProCMS

- + INCREASED UPTIME** | Due to condition-based equipment evaluation
- + QUICK RESPONSE** | Shortened process time for solving problems
- + PREDICTIVE** | Early failure detection to keep downtimes to a minimum



DOUBLE-ENDED FERRIES



Battery-Powered RoPax Ferry Husavik 2 x SRE 340 CP (900 kW each)



Shallow Water Ferry Bac 24 4 x SPJ 82 (196 kW each)



LNG-Powered RoPax Ferry Færøy 2 x SRE 560 CP (2700 kW each)

AFTER SALES SERVICE – DURING THE VESSELS LIFETIME

Delivering state-of-the-art propulsion and automation solutions is not enough for us. Thanks to decades of experience in the field

of propulsion technology, we are able to offer high-quality services tailored to your individual needs throughout the vessel's service life.



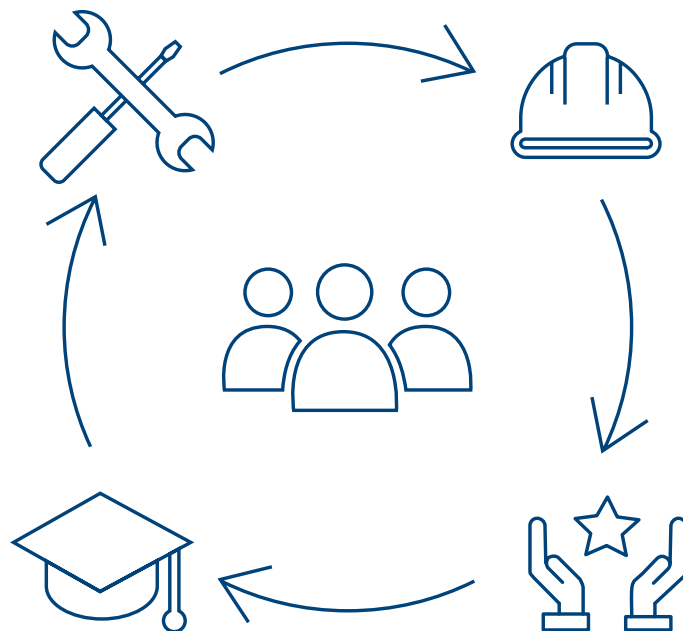
SPARE PARTS

- ▶ Fast delivery time thanks to global warehouse logistics
- ▶ Decades of documentation for clear identification of spare parts
- ▶ Production of almost all spare parts
- ▶ OEM warranty
- ▶ Original spare parts with all technical revisions known up to the time of manufacture



MAINTENANCE

- ▶ Globally standardized and proven high-quality service levels
- ▶ Preventive and predictive maintenance concepts
- ▶ Remote service support with augmented reality tools
- ▶ Vibration measurement with SCHOTTEL VibCheck
- ▶ More than 140 highly qualified service technicians worldwide



TRAINING

- ▶ Customer training courses in local language
- ▶ Courses on site or in one of 4 SCHOTTEL training centers (GER, USA, AUS, SGP)
- ▶ Permanent international knowledge transfer for service technicians



UPGRADES

- ▶ Increase of the shipowner's profit

UPGRADE LEVELS:

- ▶ Control systems
- ▶ Thrusters
- ▶ Systems for intelligent operative monitoring

BEHIND THE SCENES

Since the invention of the rudder propeller in the early 1950s, SCHOTTEL has acquired a wealth of expertise in the development, design and production of state-of-the-art marine propulsion and control systems.

Today, a team of more than 100 engineers develops propulsion systems and digital solutions, which are manufactured to the highest quality standards in our modern production facilities in Germany.

PROPULSION TECHNOLOGY – COMPETENCE IN CUSTOMIZED ENGINEERING

MECHANICAL DESIGN

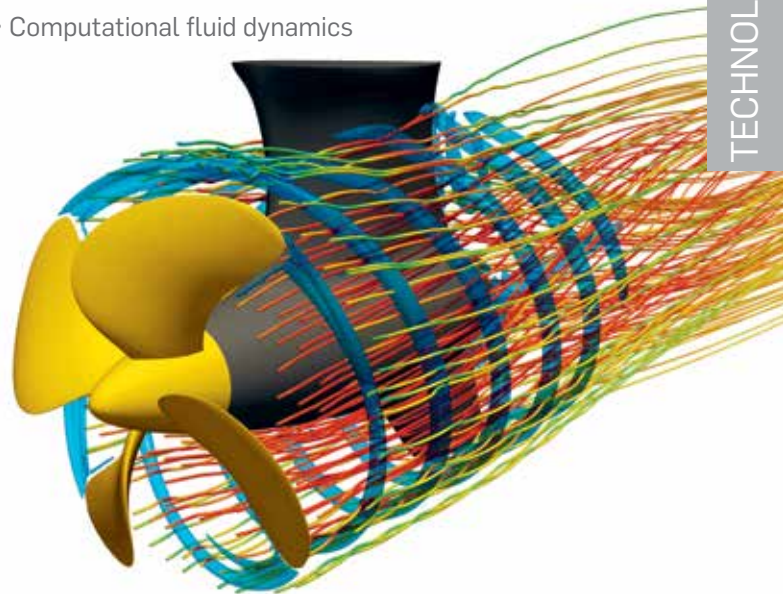
- Mechanical power transmission
- Structural mechanics
- Hydraulics & pneumatics
- Sealing technology

ELECTRICAL ENGINEERING

- Automation
- Power electronics
- Assistance systems

HYDRODYNAMICS

- Propeller design
- Model testing
- Computational fluid dynamics



+ GERMAN
ENGINEERING

+ CUSTOMER-ORIENTED DEVELOPMENT
WITH EXPERIENCED IN-HOUSE R&D

+ MANUFACTURING FACILITIES FOR
STATE-OF-THE-ART PROPULSION SOLUTIONS

YOUR QUALITY BENEFITS

- Ongoing certification process
- Quality controls during production
- Standardized FAT procedure
- Close dialogue with our suppliers

WE KNOW WHAT MOVES SHIPS



Tugs



Offshore Vessels



Fishing Vessels



Yachts



Dredgers



Push Boats

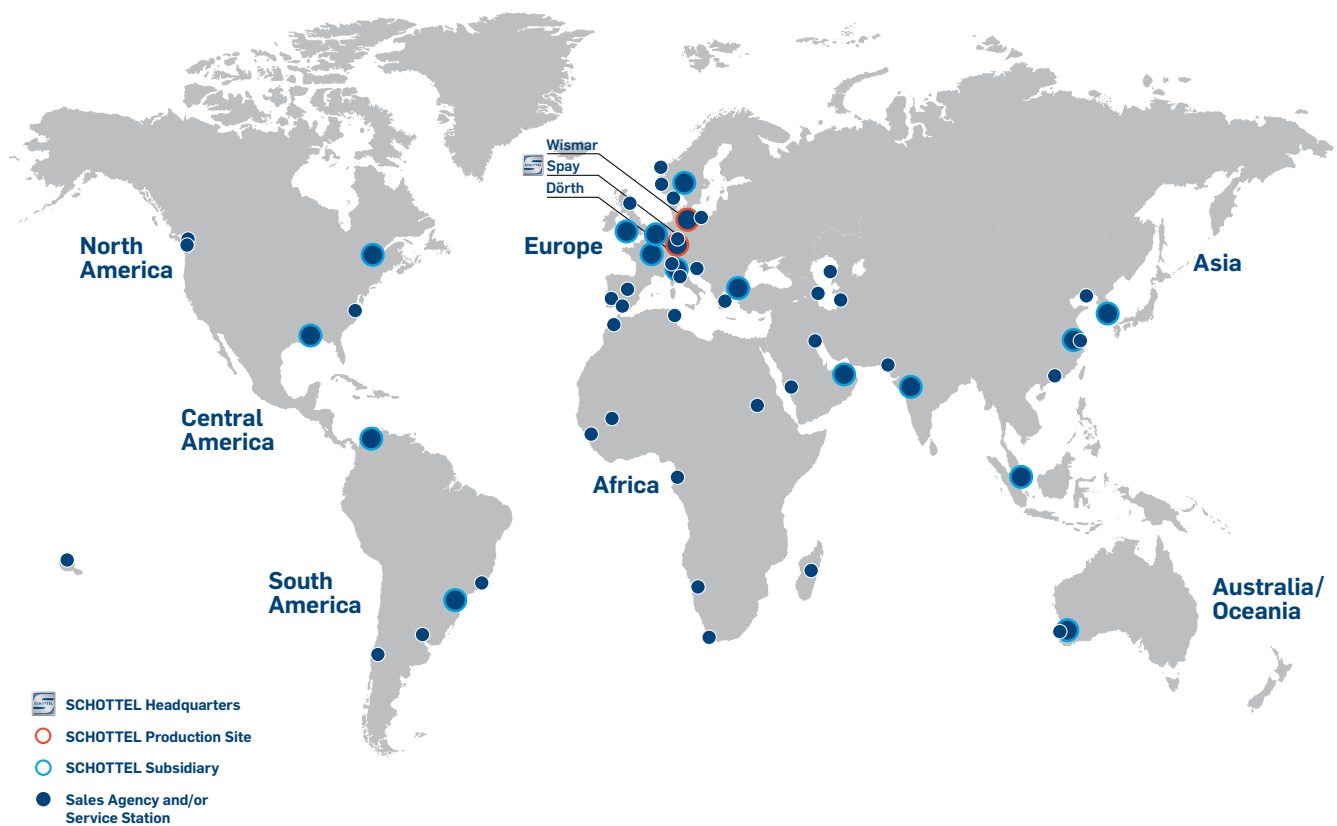


Naval Vessels

... and many more vessel types

✉ Please contact sales@schottel.de for information about your next new build or conversion project.

SCHOTTEL Worldwide



Your local partner