

YOUR PROPULSION EXPERTS



PROPULSION AND AUTOMATION
FOR CAPABLE DREDGERS



FOR DEMANDING TASKS

Dredgers are used in the areas of land reclamation, civil and maritime construction. Reliability and efficiency are key requirements in this respect. No matter whether an island is being backfilled or a deep water harbour dredged, steerable propulsion units are in high demand for these applications. Even under adverse conditions, they keep vessels in position and enable precise manoeuvring.

Decades of experience in this field enable SCHOTTEL to optimally meet the specific requirements of main and auxiliary propulsion units. SCHOTTEL Automation Systems and Marine Services can be used to exploit the further potential of individual vessels or even an entire fleet.

+ GERMAN
ENGINEERING

+ ROBUST
PROPULSION UNITS

+ CARE FOR UNDERWATER LIFE,
MINIMIZE THE ENVIRONMENTAL IMPACT

+ WORLDWIDE SERVICE
AND SUPPORT

+ EXCELLENT CAPABILITY IN
POSITIONING AND MANOEUVRABILITY

SCHOTTEL IN THE DREDGER MARKET

191.5 m

Largest dredger fitted with a rudder propeller

70+ years

Expertise in the development and production of propulsion systems



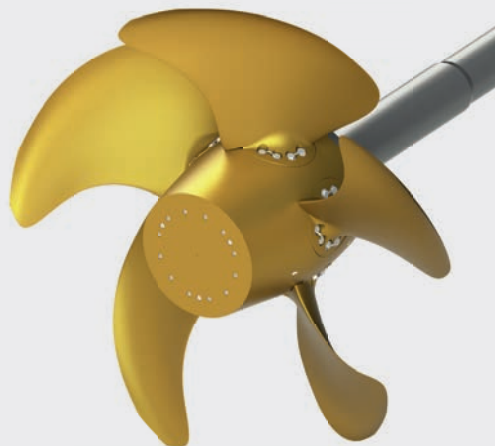
Service stations worldwide

HIGH QUALITY AND RELIABLE PROPULSION

YOUR MAIN PROPULSION OPTIONS

SCHOTTEL Controllable Propeller SCP

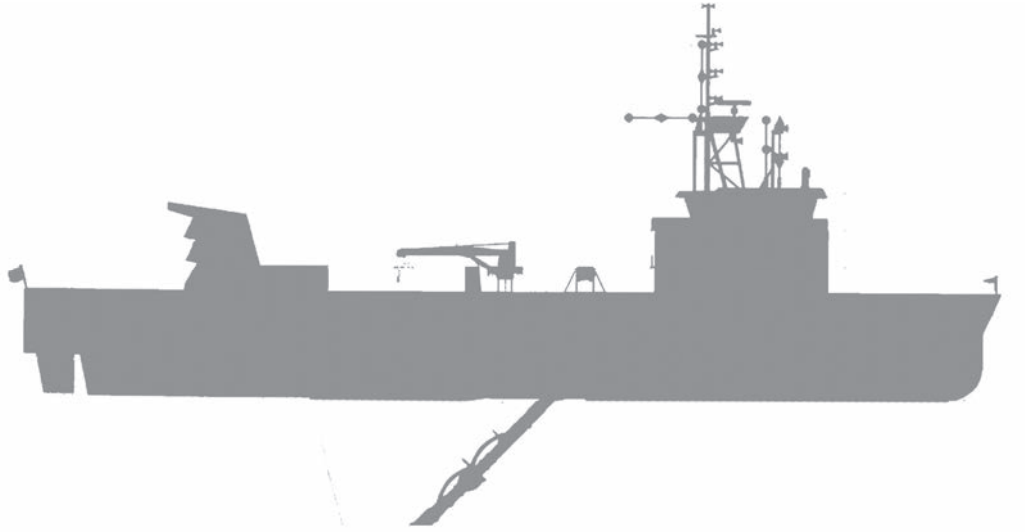
- Maximum thrust at changing speeds and loads
- Reduced noise and vibration levels (particularly with 5-blade version)
- Full-feathering mode (optional)
- Minimal maintenance thanks to its robust design
- Hydrodynamically optimized hub available for fast vessels with high propeller load
- Easy access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



SCHOTTEL Rudder Propeller SRP

- Optimum efficiency for maximum manoeuvrability
- High propulsion efficiency: lower operating costs and lower emissions
- Precision positioning in DP operation
- Exclusive features such as ProAnode, HTG, highly efficient nozzles, LeaCon or DuroVario
- A whole range of configuration options enabling adaptation to diverse ship designs and individual requirements
- Minimal maintenance effort, long-term availability of spare parts as OEM
- Compatible with SCHOTTEL hybrid solutions (SYDRIVE-E and SYDRIVE-M)





AUXILIARY PROPULSION



SCHOTTEL PumpJet SPJ

- Azimuth jet thruster
- Installation flush with the vessel's hull, fully protected without projecting parts
- Ideal propulsion system for very 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)



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)

EXCLUSIVE ADVANTAGES OF SCHOTTEL

In addition to developing new products and services, SCHOTTEL works continuously to optimize existing systems. Special features ensure that customers worldwide benefit from state-of-the-art solutions.

ProAnode



Improved corrosion protection

- + Longer protection for the propulsion unit
- + No flow disruption
- + Resulting in fuel savings
- + Lower operating costs
- + Patented

LeaCon

- ▶ Reliable seal monitoring system
- ▶ Certified by DNV-GL
- ▶ Safe protection against contamination of the seawater
- ▶ Complies with the VGP regulations of the US-American Environmental Protection Agency (EPA)
- ▶ No need to use bio oils (EAL)

HTG

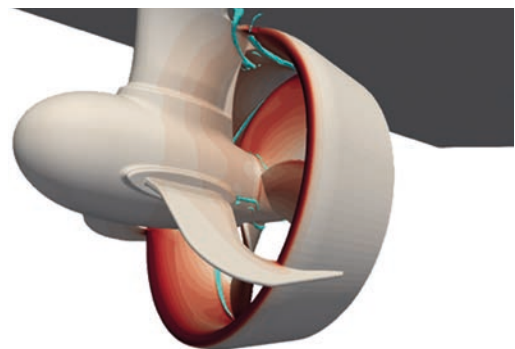
SCHOTTEL's self-developed High Torque Gear (HTG) extends the service life of the gearbox, resulting in significant reliability gains. State-of-the-art milling and calculation methods are used to achieve shapes that enable a highly efficient, robust and safe gearbox with ideal gear geometry.

Customers appreciate the high degree of reliability and minimized gearbox damage. The gearbox is designed in such a way that the risk of flank fracture or scuffing is considerably reduced. This increases the service life and reliability and reduces servicing costs.

CruiseDuct

The SDC40 sets standards in terms of compact design and free sailing efficiency, thus also reducing operating costs compared to nozzles from other manufacturers. The high-performance nozzle is also characterized by optimally designed propeller geometries and outstanding performance features.

The nozzle has a particularly small outer diameter. This enables it to be optimally adapted to a wide range of ship designs and applications. At the same time, the high-performance nozzle is also suitable for conversions and upgrades with limited installation space. The SDC40 excels with the highest free sailing efficiency in transit at higher speeds. In addition, a higher maximum speed can be achieved.



EXCELLENT CAPABILITY IN POSITIONING AND MANOEUVRABILITY



Cutter Suction Dredger Willem van Rubroek 2 x SRP 610 R (3000 kW each), 1 x STT 4 (1200 kW)

CUSTOMER FEEDBACK

“The first SCHOTTEL units were installed on our vessels in the late 1970s. Since then, we have gained a great deal of experience together with regard to the operation of the propulsion systems under the very demanding conditions of our vessels. If necessary, we can contact the experts directly. We highly appreciate such close and direct communication channels. SCHOTTEL differs from other market players through its decades of experience and the fact that its systems are developed and produced in Germany.”

Fleet Unit Manager Filip Vivile, Jan De Nul Group



Trailing Suction Hopper Dredger Ocean Traverse Nord 2 x SRP 260 (746 kW each), 1 x STT 170 (224 kW)



Trailing Suction Hopper Dredger Bonny River 2 x SCP 1294 (8000 kW each), 2 x STT 3 (750 kW each), 1 x STT 5 (1500 kW)



Trailing Suction Hopper Dredger Tommy Norton 2 x SRP 330 (447 kW each)



Trailing Suction Hopper Dredger Sebastiano Caboto 2 x SRP 1010 (1000 kW each)



www.SCHOTTEL.com

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.



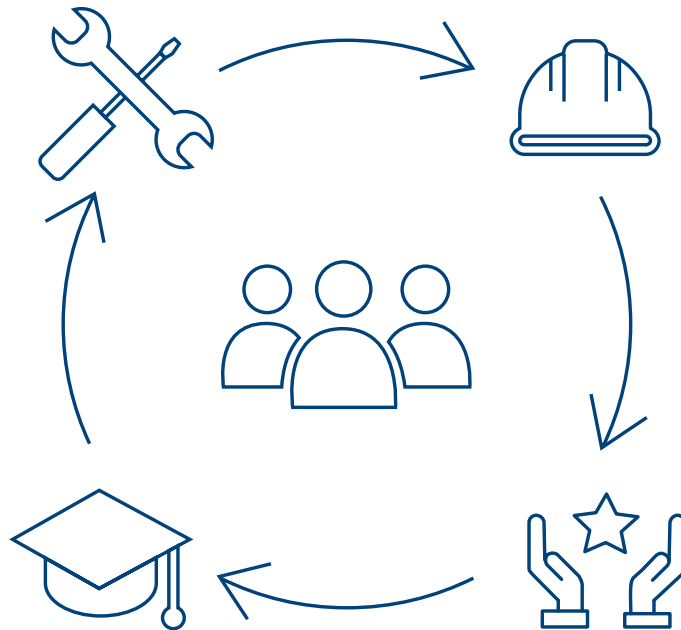
SPARE PARTS

- ▶ 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.



70+ years

Expertise in the development and production of propulsion systems



>10

Product series in our portfolio



50 to 30,000kW

Power range



500+

Propeller designs per year



39,000m²

Production area

PROPULSION TECHNOLOGY – COMPETENCE IN CUSTOMIZED ENGINEERING

MECHANICAL DESIGN

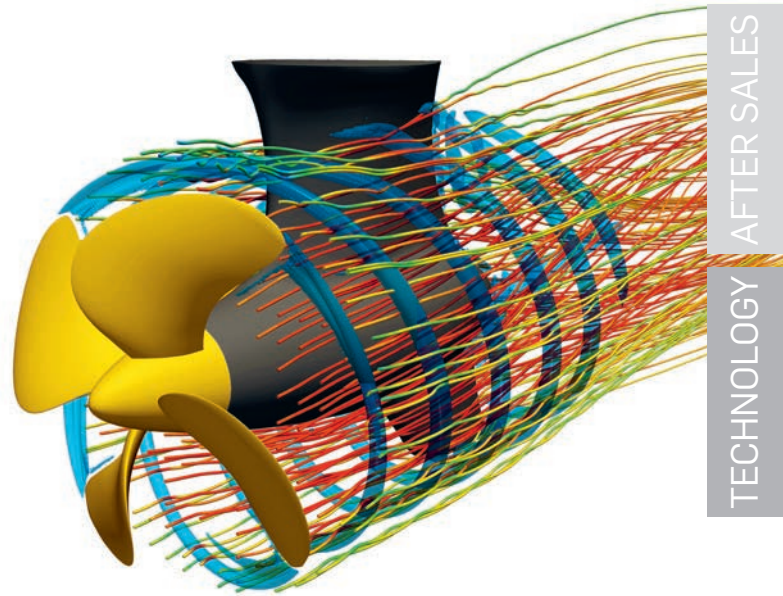
- Mechanical power transmission
- Structural mechanics
- Hydraulics & pneumatics
- Sealing technology

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

+ SUSTAINABLE 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

Ferries

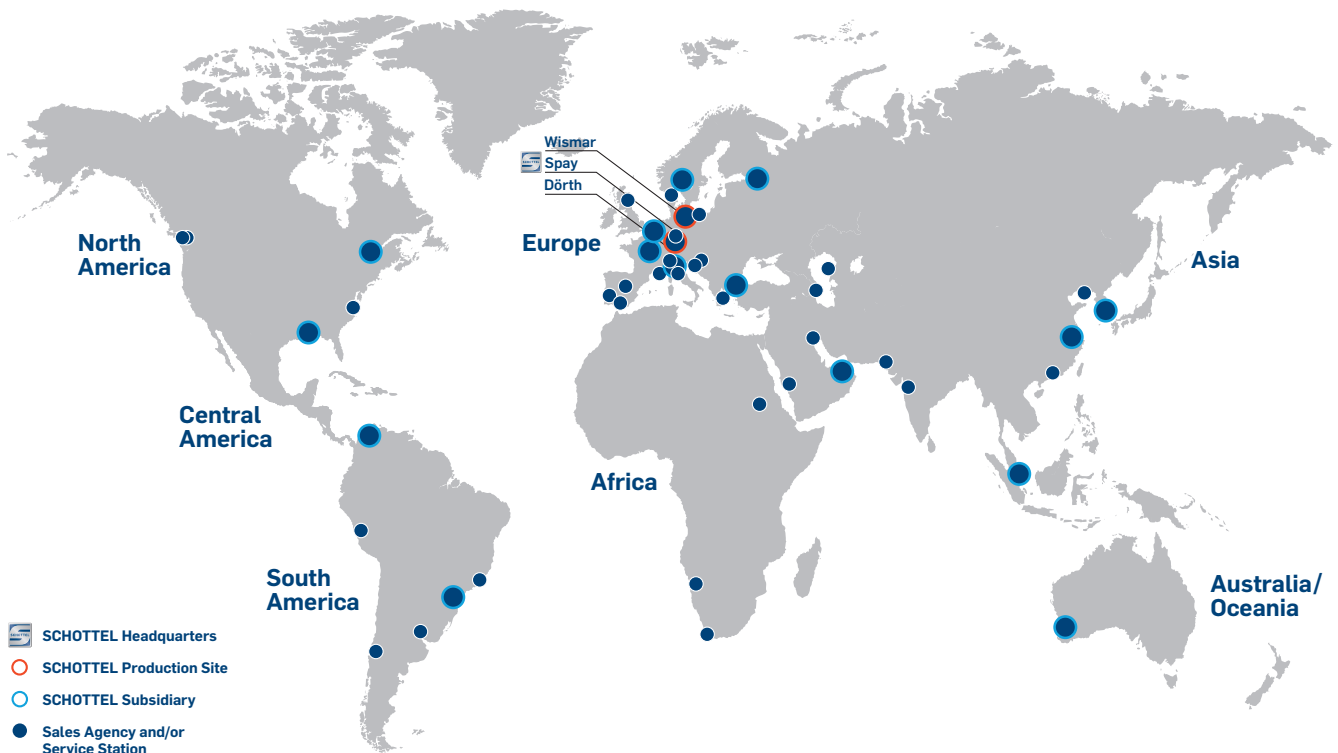
Push Boats

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