



exail

NAVAL EQUIPMENT

EXAIL, A GLOBAL PARTNER IN NAVAL EQUIPMENT AND PROTECTION

Exail, known globally for its specialized equipment for ships and submarines, develops integrated solutions for magnetic protection and energy management, as well as for submarine steering control. All its equipment is designed to meet the highest technical specifications and military requirements.

Today, Exail equips and supports navies around the world with its international standard-compliant technologies, allowing crews to remain focused on their mission in safe conditions.

exail at a glance

80

YEARS OF
EXPERIENCE

320+

MILLION EUROS
OF TURNOVER

80%

OF TURNOVER
ACHIEVED ABROAD

1850+

EMPLOYEES

80

COUNTRIES SERVED
WORLDWIDE

20%

OF TURNOVER
REINVESTED
EACH YEAR IN R&D

50+

NAVIES
EQUIPPED

1000+

NAVAL PLATFORMS
EQUIPPED

24/7

TECHNICAL
SUPPORT

SEA-PROVEN NAVAL EQUIPMENT SOLUTIONS FOR SHIPS AND SUBMARINES

ADVANCED TECHNOLOGIES FOR STEALTH AND PERFORMANCE OPTIMIZATION AT SEA

Exail provides advanced solutions for magnetic signature reduction, helping keep ships and submarines undetected. We support navies by providing high-performance, reliable, and durable technologies, including energy converters, variable speed drives, and auxiliary propulsion systems, to enhance the performance of on-board systems.

Electrical auxiliary propulsion

Hybrid propulsion system

Energy conversion

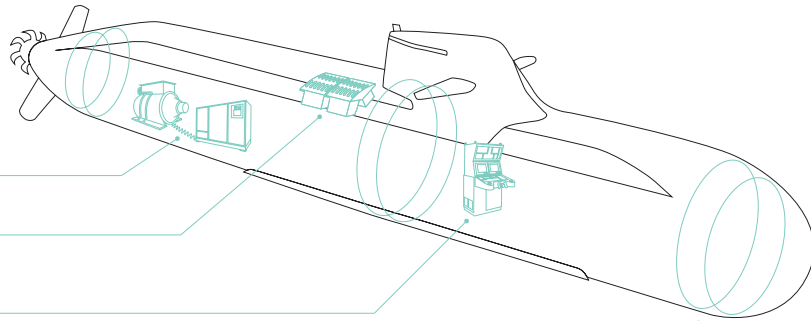
Static converters and variable drives

Steering console

One main integrated
3D steering console

Degaussing system

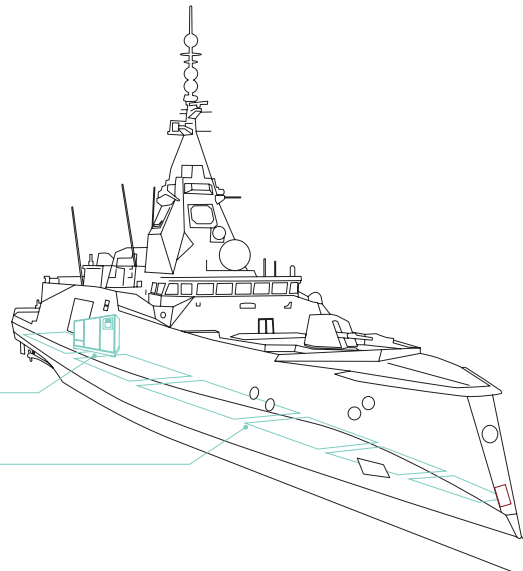
Modular system for
effective demagnetization



Auxiliary/power conversion for propulsion

Degaussing system

Modular system for
effective demagnetization



ADVANCED ENERGY MANAGEMENT SOLUTIONS

EFFICIENT AND DISCREET SYSTEMS EVEN IN THE MOST RESTRICTIVE AND HARSH CONDITIONS

Our advanced naval systems deliver high performance with compact, quiet designs that excel in the toughest environments. The static energy converters, variable speed drives, and electrical auxiliary propulsion systems ensure reliability, efficiency, and adaptability, meeting the strictest naval standards for submarines and ships.

Static energy converters for submarines

- New generation, lightweight and compact
- Cooling system no longer required thanks to SIC technology: high performance even in high temperature environments
- Optimization of energy system efficiency
- Noise and vibration reduction for improved discretion
- Plug-and-play installation
- Ergonomic design, user-friendly HMI
- Ease of maintenance, long-term maintainability
- Advanced training
- Obsolescence management
- Sea-proven solution: equipped several navies

Electrical auxiliary propulsion system for ships & submarines

- Very low acoustic levels: optimized discretion
- Compact design
- Shock resistant
- High efficiency
- Optimized tactical performance: highly maneuverable
- Responsive
- Customizable
- Adaptable to submarines and surface vessels
- Navy standards compliant

Variable speed drives

- Compact, discreet
- Control synchronous and asynchronous motors
- Adaptable to customer specifications
- Optimum efficiency even at reduced power levels
- On-board applications on DC network

Unlike traditional speed drives, a single model can be used for several applications, further improving efficiency.



DEGAUSSING SOLUTION FOR SHIPS AND SUBMARINES

FAST AND ACCURATE ACQUISITION AND ASSESSMENT OF VULNERABILITY

Exail is recognized for its abilities to reach magnetic signature values according to NATO standards applying optimized onboard power consumption. The degaussing system is designed to drastically reduce the magnetic signature of a wide range of vessels and submarines. It aims at reducing the risk of a detection by a magnetic sensor such as underwater mines.

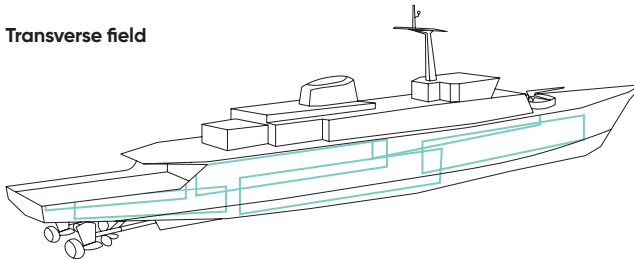
Degaussing system features and capabilities

- Modular system adaptable for a wide range of ships and submarines
- Capability to design custom degaussing coils
- Robust industrial design with backup functionalities
- Centralized or decentralized installation options
- Intuitive Man Machine Interface

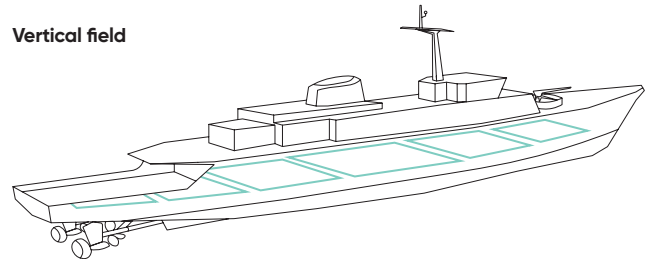
Operational system features and services

- Power amplifiers of 5 or 10 kW, usable in cabinet or individually
- Alarm and diagnostics displayed on the Man Machine Interface for simplified maintenance
- Available services: commissioning, training, simulation tools, spares, warranty extension, etc.

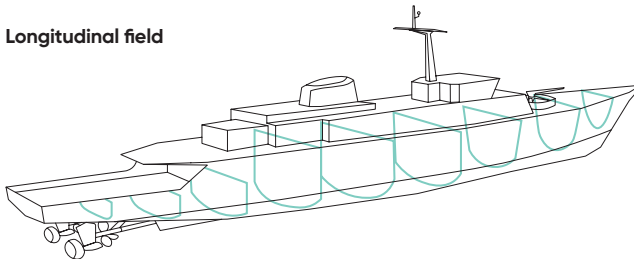
Transverse field



Vertical field



Longitudinal field



SUBMARINE STEERING AND DIVING CONSOLE

EFFICIENT, ADAPTABLE AND RELIABLE 3D MOTION CONTROL

Exail sea-proven steering and diving console offers advanced control of submarine diving planes and rudder with a focus on reliability and ease of operation. Requiring only one operator, it ensures optimal performance in harsh environments, with built-in redundancy for safety.

Features

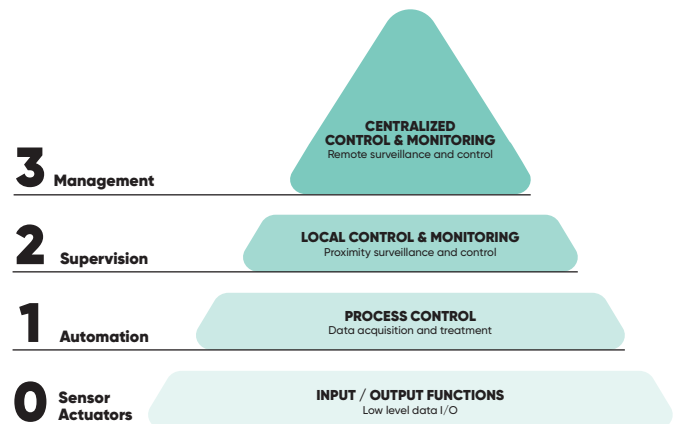
- Control of diving planes and rudder
- Adaptable to any submarine design
- Only one operator required
- Open, modular architecture
- Integrates silent piloting laws
- Normal and back-up monitoring
- Redundancy design concept
- Ruggedized, heavy-duty build for harsh environments
- MAD risk analysis and reduction
- High-performance digital autopilot with automatic, manual and mixed control modes
- Decision-making support tool
- On-board training simulator
- Sea-proven solution

Opsys system: advanced intelligence for steering and diving

The Opsys system serves as the intelligent backbone of the steering and diving console, designed to meet customer needs through advanced applications that deliver high performance and reliability.

The Opsys system is sea-proven and designed for flexibility, featuring:

- Modularity and easy customization
- Real time calculator
- High modularity of components
- Redundancy features
- Qualified to be used in unmanned machinery spaces



Opsys' customizable software provides a solution spanning from lower operational to strategic levels, ensuring customer needs are met at every stage. Its flexibility allows efficient control, monitoring, and seamless integration from raw data collection to centralized decision-making.

**serving
50+ navies
around
the world**



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