

exail at a glance

80 YEARS OF EXPERIENCE	250+ MILLION EUROS OF TURNOVER	80% OF TURNOVER ACHIEVED ABROAD
1500+ EMPLOYEES	80 COUNTRIES SERVED WORLDWIDE	20% OF TURNOVER REINVESTED EACH YEAR IN R&D
30 NAVIES EQUIPPED	1000+ NAVAL PLATFORMS EQUIPPED	24/7 TECHNICAL SUPPORT

over 30
navies
around the
world



www.exail.com



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.

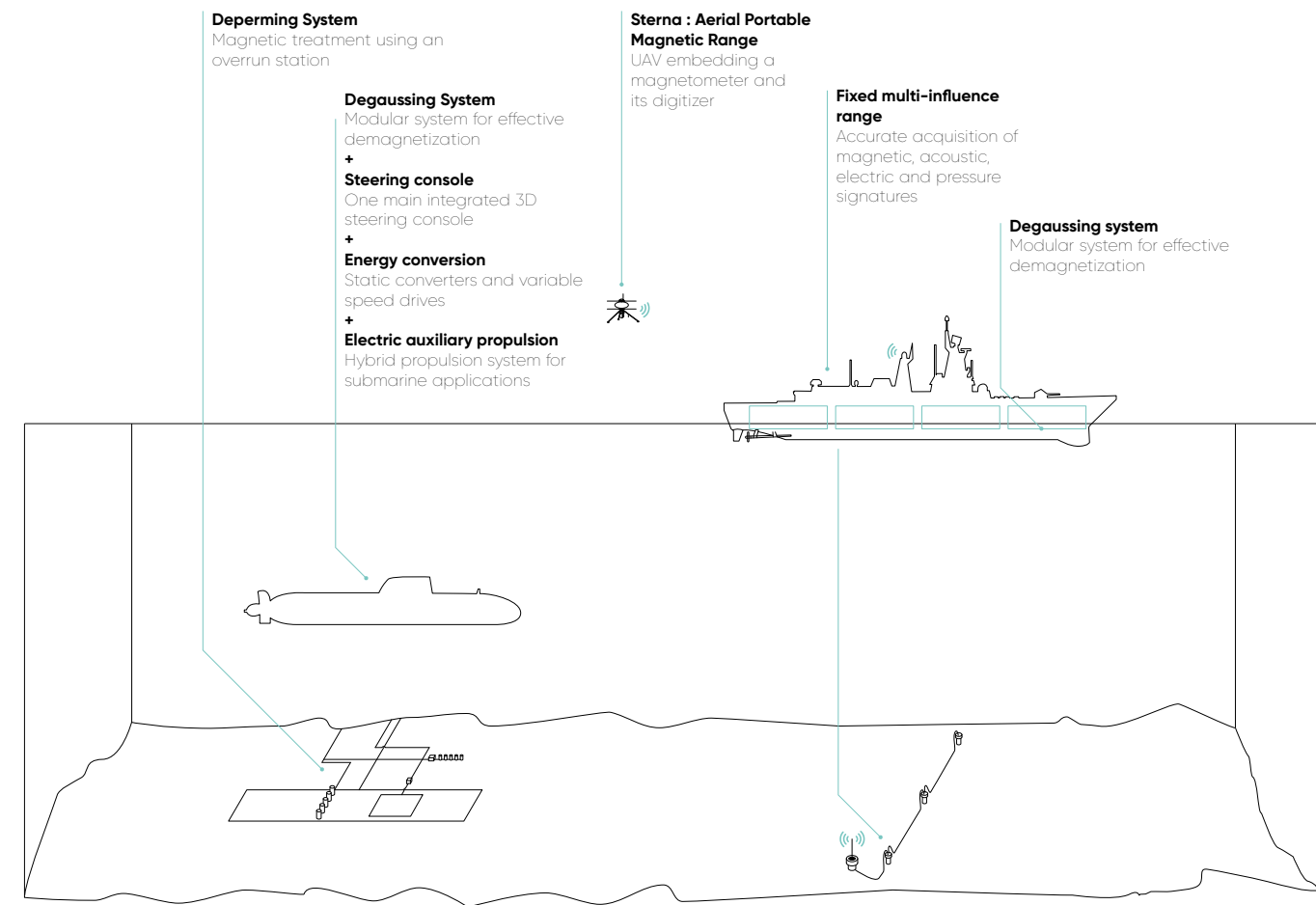
To keep ships undetected at sea, Exail provides systems for optimized acoustic and vibration control and a range of solutions for magnetic signature reduction. It also helps navies optimize the performance of on-board systems by providing high-performance, reliable, and long-lasting technologies, including energy converters, variable speed drives and auxiliary propulsion systems.

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.



**SHIP EQUIPMENT
& PROTECTION**

NAVAL EQUIPMENT & PROTECTION SOLUTIONS



EFFICIENT ENERGY MANAGEMENT SOLUTIONS

Static energy converters

Discreet, efficient 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
- Installed in hull ceiling, freeing floor space
- Ease of maintenance, long-term maintainability
- Advanced training
- Obsolescence management
- Sea-proven solution: in use by several navies

Variable speed drives

Providing optimum efficiency even at reduced power levels

- Compact, discreet
- Control synchronous and asynchronous motors
- Flexible: adaptable to customer specifications
- Meets stringent technical criteria
- On-board applications on DC network
- Designed to operate in the most restrictive conditions and harsh environments
- Configurable with PC
- Defect historization and Ethernet connectivity

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

Electrical auxiliary propulsion system

Compact, discreet, efficient systems for ship & submarines

- Very low acoustic levels: optimized discretion
- Very compact
- Shock resistant
- Highly efficient
- Optimized tactical performance: highly maneuverable
- Responsive
- Customizable
- Adaptable to submarines and surface vessels
- Navy standard compliant

SIGNATURE MANAGEMENT SOLUTIONS FOR SHIPS AND SUBMARINES

Fast and accurate acquisition and assessment of vulnerability

Deperming

Magnetic treatment using an overrun station

- 4-hour process instead of 2-3 weeks for traditional coil wrapping
- For both submarines and surface ships of any displacement
- No cable-wrapping operations
- No divers required
- Ship remains available

Degaussing

Modular system for effective demagnetization

- Installed during construction phase, this modular system is adaptable for a wide range of ships
- Robust industrial design with back-up functionalities
- Intuitive HMI
- Windows standard software suite

Fixed multi-influence range

Accurate acquisition of magnetic, acoustic, electric and pressure signatures

- Large number of sensors, 9-40 placed on seabed
- Selection of sensors according to measured influence
- Highly accurate measurement (ship position and fields)
- Standard definition and system scalable to customer request
- Real-time acquisition and visualization of data
- Data processing on COTS hardware and software elements

Sterna aerial portable magnetic range

A magnetometer and its digitizer embedded in a UAV

- Determines magnetic risks on the operational theater
- Only one hour of total operation: deployment and measurement
- Operated from the vessel: neither onshore station nor cable links
- Usable in shallow water as well as open sea
- Fully containerized, light and stand-alone solution
- Cost effective

SUBMARINE STEERING & DIVING CONSOLE

Efficient management of 3D motion

- Control of diving planes and rudder
- Adaptable to any submarine design
- One Operator Console
- Open, modular architecture
- High accuracy Autopilot Control
- Normal and back-up monitoring
- Redundancy design concept
- Ruggedized, heavy-duty build for harsh environments
- High availability of planes angle sensors based on 2/3 logical selection
- High-performance digital autopilot with automatic, manual and mixed control modes
- Autopilot control availability in case of loss of submarine navigation data (Use of internal INS)
- Surface Control function (RCMD)
- Steering Help function
- On-board training simulator function
- Sea-proven solution

Rudder Control & Monitoring Device

Control heading from sail, just using finger

