Power Converter Products
For Naval, Aviation and Land Applications
The inverter was designed for the submarine class U212A to convert the main 300-600 VDC on board into 3 x 120 VAC/60 Hz with an output power of 45 kVA and 3 x 120 VAC/400 Hz, with an output power of 20 kVA. Both outputs supply the submarine subsystem.

Power electronics are water cooled with an additional forced air emergency cooling option.

Model: 3037, 3038

Today, advanced electronic power supply equipment supports critical systems such as data processing, navigation, communication, control and monitoring systems almost everywhere in the world – on land, at sea and in the air. A reliable and precise electrical source is crucial to ensuring equipment operation and can often make the difference in a life or death situation.

Our engineering experts have more than a 1,000 years of experience between them and are trusted by our customers to take designs from initial concept through to production as well as provide “through-life” support.

Our know-how ranges from the smallest matchbox sized DC/DC-converters to containerized high power shore supplies for submarines. We design, develop and manufacture power conversion products for the military as well as for commercial applications in industrial, aviation and rail.

Our strength is applying our versatile competence and experience to solve power supply problems for the benefit of our customers.
Model: 4079 Converter UPS System
3-phase, 440 VAC/60 Hz to 3 x 115 VAC/60Hz
The efficient and compact converter / UPS system is designed for use on front line Naval combatants.
It converts and maintains power on essential equipment for up to 2 minutes at 100% load with a total 36 kW battery capacity.
The lead batteries are hermetically sealed and with 10 years lifetime.

Today’s surface vessel generator sets mainly provide 440 V, 60 Hz, 3-phase power as a primary shipboard power supply.

The storage batteries of a modern submarine supply a DC voltage from 250 V up to 900 V as the primary power source.

Static power conversion equipment transforms, converts and conditions these different electrical power sources to meet the power requirements of the vessel for many sophisticated and demanding loads, such as command and control systems, radar, sonar, weapons and motors.

Our products consists of state-of-the-art static power conversion equipment of the latest available technology.

Static converters for naval applications comply with MIL-STD-1399 whilst meeting the size and weight restrictions imposed by narrow shipboard passageways and hatches.

The converters feature modular construction and parallel operation of more units with accurate load sharing.

Electronics are housed in stainless steel frame cabinets and shock mounts according to the requirements of naval ships.

For decades 21 Navies worldwide have relied on our power products which are modular in design, with high efficiency and low lifecycle cost.

Worldwide aftersales support for 20 years is guaranteed by Wärtsilä.

Our offering ranges from standard products to full customer specified power products for surface vessels and submarines.
The lightweight 28 VDC/125 A transformer rectifier unit has been custom designed for the SAAB multi-role fighter aircraft Gripen. The TRU fulfills exceptional reliability demands and meets all environmental requirements of common military standards for airborne equipment. The TRU supplies onboard electronic systems of the aircraft.

Power conversion products, such as AC to DC converters, frequency converters, and DC to AC inverters are major components in almost every aircraft today. All the power supplies currently in production have passed flight certification and through the years have achieved a solid reputation for high quality. The airborne product line includes a series of transformer rectifier units – TRUs – ranging from 20 to 300 A for the MRCA “Tornado”, the Swedish fighter JAS 39 “Gripen”, the “Tiger” helicopter, Indian AEW&C and others.

The purpose is the conversion of the aircraft prime power source of 115 V/200 V, 3 phases, 400 Hz to 28 VDC power. The TRUs have been developed for extreme environmental conditions, minimum space and weight requirements and maximum reliability. We can offer a wide range of solutions for military and commercial aircraft. From the largest mobile ground power supply to the smallest lighting converter, we support our products from the design stage, through the qualification process and the service use.
Model: 5034, STV-LIE
Model: 9023, PDB (power distribution box)
Both units were custom designed and qualified for the Tiger multi-combat helicopter. Germany, France, Spain and Australia are operating the helicopter which has been proved during several international tasks. The STV-LIE supplies the onboard weapon system and the power distribution box features various functions and is part of the Trigat weapon system.

Tiger helicopter
Scope of supply: PDB and multiple DC/DC supply of the Trigat weapon systems

10 VA Mini Frequency Converter, Model: 4074A
This lightweight solid-state miniature frequency converter is one of our latest developments for commercial aviation industries which is qualified at Airbus. It is used for razor outlets in the A350 and A380.
The technical specification for the converter is applicable also for the A320, A330 and A340 families. The unit converts aircraft primary AC power of 115 volt, 360-800 Hz into 115 and 230 volt, 60 Hz. It is located in the lavatory and in the cabin and crew rest compartments.

Airbus A350 - EUROATLAS
Scope of supply: Frequency inverter 4074A
Model: **AN/VVS-502**

A new generation of driver night sight periscope designed for main battle tanks and other military vehicles.

The periscope combines a thermal camera with an image intensifier camera of the latest generation.

The image of the both sensors is directly displayed to the driver in real-time.

It is a passive system which makes it impossible to detect compared to active systems.

Fast installation in the same place of the mirror periscope for day operation without any modification of the vehicle is possible.

Behind every advanced weapon system there is an equally advanced electrical system. Consider the capabilities of today’s land-based weapons and mobile command links.

Whether in the firing line or in a C3I role, such technology does not simply “plug-in”.

If mission objectives are to be met, highly reliable, precisely engineered electrical power is a necessity. Matching one electrical system to another system is where Wärtsilä can help to create “The Power Behind the Power”.

The Wärtsilä product line of rugged military power supplies for ground applications ranges from matchbox sized DC/DC converters to heavy-weight mobile land based power supplies and night sight products.

Many of the these products have proved their extraordinary dependability and efficiency under extreme operating conditions and over long periods in the field.

The Wärtsilä driver night sight periscopes are used on various type of military vehicles and tanks worldwide and meet the US-Army MIL-specification.

For the Leopard tank we supplied >3,500 of 400 Hz converter and driver night sight periscopes. Various Fox and Leguan are equipped with our driver sight periscope.

The latest periscope generation combines a thermal + image intensifier camera. The driver night sight periscope is an ideal choice for combat and safety upgrades.

One of the most advanced systems which is compatible with NATO and other military vehicles.
Custom Specific Developments for Various Applications

Capabilities:
- Customer specified power products for demanding and mission critical applications
- Technical support during customer’s design phase
- Comprehensive technical and commercial offering
- Product design planning, design review and design verification
- In-house production
- Production control, monitoring and continuous improvement process
- Worldwide installation and aftersales support
- ILS (Integrated logistic support)
- Worldwide aftersales service and support.

QM System
The EUROATLAS quality management system is approved and certified by the authorities as stated below to be in compliance with the Quality Management System Standards:

Integrated Logistic Support
Our ILS department ensures coordination, interconnection, integration and networking of logistic support in compliance with applicable standards. Under this approach all data originate from a common data pool and are linked to respective manuals, spare parts lists, reliability analyses, etc., thus ensuring an essential network for all the sub-disciplines of ILS, e.g. spare parts management, operation and maintenance.

The common goal of all EUROATLAS ILS activities is ensuring a maximum availability of the system that is to be supported. The field of work and responsibility of our ILS department is the provision of all instructions, specifications, information and documentation required by customers (end-users) to complete all the tasks (operation, maintenance, repair) related to the lifecycle management (sustainment, life expectancy and renewal) of a technical system.

Our ILS Services Comprise:
- Customized documentation for end-users and training
- Reliability, maintainability and safety engineering
- Optimized provision of spare part support
Wärtsilä is a global leader in complete lifecycle power solutions for the marine and energy markets. By emphasising technological innovation and total efficiency, Wärtsilä maximises the environmental and economic performance of the vessels and power plants of its customers.