With a vast commercial marine experience, Wärtsilä can assist in the development of propulsion concepts for Naval auxiliaries utilising COTS equipment.

Wärtsilä offers a complete range of solutions covering 2-stroke and 4-stroke marine engines, gearboxes and controllable pitch propellers. These conventional propulsion solutions are supported by auxiliary generating sets for ships hotel power. Hybrid solutions with power take-in PTI electric motors and power take-off PTO generators are available to enhance operational efficiency. Wärtsilä offers integrated electrical propulsion solutions with the patented Low Loss Concept and complete power management and vessel management marine Automations systems.

Considerable research and development investments have placed Wärtsilä as a market leader capable of offering innovative technologies to boost energy efficiency and environmentally sound operation at sea.

Even though these measures may make a significant difference, now or sometime in the future, they are just the beginning. In addition to engine tuning by using a combination of superior propulsion solutions along with first class products and inventions, Wärtsilä can offer more than 30 different ways of making your vessel operate more efficiently.
Condition Based Maintenance for Optimized Performance

Condition Based Maintenance (CBM) offers a substantial cost advantage since it closely conforms to the operational availability requirements. CBM makes maintenance proactive, rather than reactive, by spotting fault sources and emerging operational trends well before any failure occurs.

The main aims are to:
- improve the time between overhauls,
- minimize planned and unplanned downtime,
- optimize engine performance,
- maximize installation safety and improve availability under all operating conditions.

At Wärtsilä, we have taken the development of CBM systems to a new level using remote online monitoring and analysis of the installation’s condition and system efficiency. Entering all this information into the CBM system enables us to accurately determine the actual overall condition of your system and ultimately the maintenance it needs. CBM monitors the equipment condition, analyses the measured data, calculates the optimal performance parameters for the same operating conditions, and predicts the future condition of your equipment.
Engines and Generating Sets
The guiding principles behind the design of Wärtsilä engines and generating sets are:
- Reliability and low maintenance costs
- High thermal efficiency and low emissions
- Modular construction and reduced parts count
- Ergonomic interfaces
- Minimised consumables
- Cylinder liner with anti polishing ring
- Extended time between overhauls (up to 24,000 hours between top overhauls)
- Common rail technology
- Emission compliant with IMO Tier II requirements

Seals & Bearings
We provide Tail Shaft Support Solutions - Our wide portfolio of products and services help vessel owners; maximise efficiency, reduce risk and promote environmental excellence throughout the complete vessel lifecycle.

Design simplicity provides maximum sealing system security
Leakage virtually eliminated and easily accommodates high & low frequency vibrations
Axial and radial movements also absorbed eliminating minor vessel build errors
ENVIROSAFE composite bearing materials with low wear down properties

Electrical & Automation
- Turnkey integrated system solutions covering power distribution and automation
- Detail engineering, electrical analysis and equipment for naval applications
- Power Generation, Drives, Electric Motors, Distribution, Automation and Integrated Bridge

Reduction Gears
- Modular and flexible design
- Compact and reliable
- Optimum propeller speed for any engine
- CP propeller combination
- Optional PTO/PTI solutions
- Optional built-in multiple plate type of clutch
- Combined oil system for gear and CP propeller

Controllable Pitch Propellers
- Tailor-made designs
  - Wake-adapted
  - High efficiency
  - Low noise
  - Low vibration level
  - No erosive cavitation
- Design based on mission profile
  - Reduction of fuel consumption
  - Optimized match of propeller with engine
  - Reduction of fuel consumption
  - Increased engine lifetime
## Naval Auxiliaries References

<table>
<thead>
<tr>
<th>Country</th>
<th>Type</th>
<th>Name</th>
<th>T Full Load</th>
<th>Speed</th>
<th>Wärtsilä products: equipment per shipset</th>
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<tbody>
<tr>
<td>Algeria</td>
<td>LPD</td>
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<td>6200</td>
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More information
More detailed information about Wärtsilä’s Solutions for Naval Auxiliaries can be found on our website [www.wartsila.com/navy](http://www.wartsila.com/navy)

**www.wartsila.com**

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