Every square meter of space on your vessel is precious — which is why Wärtsilä Hamworthy fully integrated pump room systems are renowned as some of the most compact in the world.

Highest quality of materials and engineering, coupled with over 50 years of expertise create systems with the highest reliability and lowest total cost of ownership.

We have extensive experience with shuttle tankers where efficient offloading is particularly important, and pump room systems for tanker conversions to FPSO or FSO that may include deck mounted cargo booster pumps. Monitor and control your processes automatically or manually from cargo control room, engine control room, at the bridge, or locally from engine room near the drivers. Our control systems utilize latest innovations in electric signal, PLC based controls.

Whatever you need from your pump room system, talk to Wärtsilä.

Typical scope of supply:
- Cargo pumps
- Ballast pumps
- Drivers – steam, electric or diesel-based
- Steam condensers
- Stripping systems
- Stripping pump
- Tank cleaning pump
- Bilge pump
- Transmission/deck seal units
- Valves/actuators
- Control and monitoring systems
**PUMP ROOM SYSTEM - KEY COMPONENTS**

**CB CARGO AND CRUDE OIL WASHING (COW) PUMPS**
- Crude oil and oil products pumped at nominal heads, capacities from 400 to 6500 m³/h in vertical or horizontal orientations.
- Exceptionally compact design, multiple nozzle configurations.
- Trouble-free operation - carefully balanced rotary elements, pumps with double seals, barrier fluid and leakage detection.

**CA BALLAST PUMPS**
- Sea water pumped at nominal heads, capacities from 400 to 6500 m³/h in vertical or horizontal orientations.
- Compact semi axial flow design for large capacities at lower heads, multiple nozzle configurations.

**GAS TIGHT POWER TRANSMISSIONS**
TV and TH transmissions designed for maximum safety and reliability. Built-in flexibility to compensate for structural variations. Gas-tight sealing units protect engine room from hazardous gasses.

**DRIVERS**
Located in the engine room – horizontal or vertical orientation of steam turbines, electric motors or direct diesel engine drives.

**STRIPPING PUMPS**
Electrically driven screw type for stripping pipelines, cargo pumps and separators.

**THE CONTROL SYSTEM**
PLC based all electric control system for control and monitoring of all functions required for the scope within our system supplied.
- We also provide remote valve control system solutions where all cargo and ballast valves with actuators are included in addition to the required hydraulic power pack and solenoid rack.
- Our control system can integrate optional functions like load calculator and level gauging system upon request.

**VOYAGE EMISSIONS RECOVERY (VER)**
The latest innovations for emission recovery of hydrocarbons during voyages can be provided as an integrated option to your pump room system at modest additional cost.
- Measurement and analysis indicate that 0.085% of cargo boils-off during every week of sailing in warm waters. This gas is usually lost to venting during sailing, but the VER system captures these boil-off gases and returns them to the bottom of the cargo tanks where they are diffused into the cargo. This can represent a saving of 200-300 tons of cargo for a 150000 dwt tanker on a sailing from the Persian Gulf to Europe or the USA. The VER system option therefore offers significant economic and environmental benefits over a standard pump room system.
AN UNRIVALLED MIX OF ADVANTAGES

MULTIPLE ARRANGEMENT OPTIONS
Electrically driven VSD/VFD operated horizontal and vertical installations. Steam turbine driven horizontal and vertical installations. Direct diesel driven horizontal or vertical installations. Direct dual function diesel driven horizontal installation where diesel engine also acts as the generator set.

AUTOMATED CONTROL SYSTEM
Smooth operation of cargo handling.

EXCEPTIONALLY EASY MAINTENANCE
All wearing parts easily accessible, can be replaced without gas freeing the vessel. Maintenance-friendly cargo control systems.

HIGH GRADE MATERIALS
Including nodular cast iron / stainless steel / Ni-Al-bronze / Duplex and Super Duplex.

DESIGNED FOR ULTIMATE RELIABILITY
Robust construction, pumps designed for high efficiency and fully reliable performance.

COMPLETE THROUGH LIFE SUPPORT
A worldwide network of service centres in over 70 countries to provide operational security and fast support.

STRIPPING SYSTEM SCHEMATIC

STRIPPING SYSTEMS
PA Priming and capacity regulating system convert any centrifugal pump into a self-primed unit for optimal discharge capacity and stripping performances to reduce total discharge time to an absolute minimum.

Air/gas separators with built-in strainers, Vacuum pump units, Capacity regulating valves and the latest within PLC based all electric control units.
EXPERIENCE AND RECENT SUCCESSES

CARMEN KNUTSEN
Scope of supply: 3 x steam turbine driven cargo pumps with a total unloading capacity of 12,000 m³/h including our unique stripping and capacity regulating system + 2 x electrically driven ballast pumps, all cast in superior Ni-Al-Bronze material at our own foundry.
Shipowner............. Knutsen OAS Shipping
Shipyard.................... HHI, South Korea

FPSO P63 FOR THE PAPA TERRA FIELD
Scope of supply: a cargo pump room system with deck mounted booster stations, firewater pump system consisting of two mechanical hydraulic skids and one mechanical skid, and a cargo offloading system and four large pumps making up the sea-water lift package.
Shipowner.................... BW Offshore
Shipyard.................... Cosco Dalian, China

YANGTZE PEARL
Scope of supply: 3 x steam turbine driven cargo pumps in superior Ni-Al-Bronze material with capacity of 5500 m³/h against 150 mlc, 2 x ballast pumps, 1 stripping pump, automatic stripping and capacity regulating system including hydraulic actuated valves and solenoid rack, PLC based electric state of the art control and monitoring system.
Shipowner..................... Nanjing Tanker Co
Shipyard...................... Bohai Shipyard, China

SERVICES

Wärtsilä supports its customers throughout the lifecycle of their installations by optimizing efficiency and performance. We offer expertise, proximity and responsiveness for all our customers in the most environmentally sound way.

Our Services & Support solutions range from basic support, installation and commissioning, performance optimization, upgrades and conversions to service projects and agreements focusing on overall equipment performance and asset management.

We deliver aftersales support through our network of service centres in over 70 countries worldwide.