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A number of our customers have recognized us as their preferred service supplier to ensure the availability and cost-efficient operation of their installations. They find they can leverage a variety of benefits by having their entire power system fully serviced by one global supplier.

Wärtsilä Services provides holistic, integrated service for our marine and power plant customers. To serve you better, we are continually broadening our range of solutions by adding products and services that further enhance the value of our one-stop-shop service and expanding our global network. We support your business, in-situ or from our numerous service centers around the globe, regardless of your equipment make.

We provide tailored efficiency solutions throughout the marine propulsion and power plant product lifecycle in the following lines:

- Engine Services
- Propulsion Services
- Boiler Services
- Electrical & Automation Services
- Operations & Management Services
- Training Services
- Environmental Services

- 70 COUNTRIES
- 160 LOCATIONS
- 11,000 SERVICES PEOPLE
- 7000 FIELD SERVICE FORCES
We can tackle everything from basic support with parts, manpower and technical support to full service agreements. The work can encompass installation and commissioning, performance optimization, upgrades, conversions, and environmental solutions. Service contracts can extend from parts and manpower all the way to long-term, comprehensive contracts that include performance and asset management agreements.

Wherever your installation is located, you’ll find a Wärtsilä Services center nearby. More than 11,000 dedicated professionals, operating in over 70 countries in 160 locations, are waiting for your call. We’re never too far away to help.

That’s not just service, that’s peace of mind – the security of knowing that your installation is covered by the world’s most experienced marine and power plant services company: Wärtsilä.
At Wärtsilä, we know engines. We know how to build them, we know how to care for them, we know how to upgrade them.

Wärtsilä Engine Services is a trusted partner to thousands of companies that depend on us for parts, support, and answers. These days, Wärtsilä is truly global. If an emergency arises, squads of Wärtsilä engineers can be mustered and dispatched in a matter of hours to the most remote and forbidding corners of the world, to help your company avoid the high costs of unexpected downtime. Whether you need repair, machining or reconditioning, or retrofitting and rebuilding, Wärtsilä provides service you can count on. Regardless of whether you have a Wärtsilä installation or another mark, we can help.

Lately, we’re also getting called in to help companies reduce their carbon footprint, because we have learned how to modify older engines in such a way that it can make them run even cleaner and more efficiently than when they were new.
BASIC SUPPORT
At Wärtsilä, we take basic support seriously. We know lives and livelihoods depend on the quality of our engine inspection and maintenance service. We provide full service throughout the product lifecycle for both marine and power plant customers. Our basic support offers you OEM spare parts, field and workshop services worldwide, advanced technical services and global training services.

WORKSHOP SERVICES
Wherever you operate, chances are good you’re not far away from a fully-equipped Wärtsilä workshop. From Cape Town, South Africa, to Vaasa, Finland, and from Los Angeles, USA, all the way to Busan, South Korea, our 80+ workshops are stocked with all the tools and systems they need to conduct complete overalls of engines, their components, and auxiliary systems, including turbochargers, governors and electronic controls. Most importantly, Wärtsilä workshops are manned by highly trained personnel with years of experience, including specialists who keep apprised of the latest results from our research test beds and the latest results in the field. Getting your servicing done in a Wärtsilä workshop cuts overhaul times and delivers guaranteed quality, reducing the risk of breakdown during operation.

PERFORMANCE OPTIMIZATION
A lot can happen over the 25 years of an engine’s lifetime. Fuel prices fluctuate, environmental regulations tighten, and business requirements evolve. That’s why you should let Wärtsilä check to see if your engine is still meeting the needs of your business. Often, we find that there is usually a way to enhance the value of your asset. Whether the recommended step is a conversion from fuel oil to gas or marine diesel to heavy fuel oil, efficiency-enhancing upgrades, or other environmentally-friendly modifications, we can help.

MANAGEMENT SUPPORT
We see service agreement as a long-term partnership to help you maximize the value of your installation. Wärtsilä offer service agreements that cover the entire engine lifecycle, from parts supply and daily assistance, inspection and maintenance, on-line support and remote operations, to a global asset management agreement. With a Wärtsilä service agreement, you can focus on what matters – the productivity of your investment.
When your business is on the ocean, you need all the partners you can get. No matter where your project takes you, or what kind of vessels or platforms you operate, Wärtsilä can provide the parts, repairs, and maintenance to keep your propulsion systems running strong.

We are the leading total service provider in propulsion. Our services knowledge centres in the Netherlands, Norway, the United Kingdom, and Japan, combined with our propulsion workshops and flying squads from our service network, offer global availability for our state-of-the-art solutions for any type of propulsion or shaft-sealing problem.

Our goal is to serve as your partner throughout the lifecycle of your propulsion system, from the first discussions of the design phase of a vessel to the end of its operational life. We do more than fix problems. We take responsibility.

That means not only being able to assist you when something goes wrong but helping you operate your propulsion better. We can keep you up to date on our latest advances in propeller and duct efficiency, giving you the information you need to keep your propulsion system cost-competitive even as it ages.

KNOWLEDGEABLE CRAFTSMEN

Although a propeller might push thousands of tons of cargo across thousands of nautical miles, it’s actually a vulnerable piece of equipment, easily damaged by underwater objects. To deal with the inevitable damage, we keep a team of expert propeller technicians on call at all times. They can carry out various metallurgical repairs, including welding, straightening, grinding, and polishing, for both Wärtsilä installations and those of other manufacturers anywhere in the world. Even underwater.

As a major propeller manufacturer, we’ve learned a lot about propellers over the years. In terms of fixed blade propellers, we’ve cast over 9000 propellers, ranging in size from one meter in diameter to 12 meters across, and weighing anywhere from a few hundred pounds to 140 tons. In the course of that manufacturing work, our research and service experience, we have developed state-of-the-art hydrodynamics of propeller design – knowledge and computer models that our craftsmen bring to every new job. Over the years, this work has translated not only into better propellers but modifications that can reduce the wear on the propeller and the
engine while improving the vessel’s overall efficiency by up to 15%. All this experience means we can improve almost every propeller, including those designed by another company. No matter where your ship is harboured, we can model its blade profile, apply modern design rationales and then implement a solution on site.

FLYING SQUADS
Wärtsilä has a worldwide team of class-approved welding technicians available to carry out propeller repairs and seals & bearings service on any OEM, at shipyards all over the world, supported by specialized tool cribs. These professionals can profile or straighten out distortions in a way that keeps propeller efficiency as high as possible, as well as perform any kind of seal or bearing repair or replacement, for both oil and water lubricated systems. Calling in one of our flying squads can help you reduce waiting time, operate independently of the shipyards, and cut your transportation time and costs.
UNDERWATER PROPELLER & SEAL REPAIRS

Fast as the flying squads are, we have an even faster group of specialists: our underwater repair squads. Our diving repairmen can do almost everything a technician can do on land: cold-straighten bent blades, remove damaged blade sections, exchange seals, calculate propeller mass balance, and establish hydrodynamic edge profiles - all in-situ, without having to pull your propeller out of the water. Also underwater exchange of complete tunnel thrusters and steerable thrusters does reduce the risk of unplanned periods of maintenance significantly. Yet even under such difficult conditions, repairs are all compliant with ISO standards, and supervised either by an experienced propeller repair specialist or a hydrodynamic propeller design department engineer.

UPGRADE FOR COST SAVINGS

Hiring Wärtsilä to look after your propulsion system saves you time and money. First, we can do much of this work whenever and wherever it’s convenient for you, regardless of the propeller manufacturer. Second, propeller technology has made tremendous advances in recent years. Simple blade-polishing and edge damage repair can shave up to 5% off the total fuel bill. Our engineers have also designed propeller modifications that are so much better they can actually improve a ship’s energy fuel efficiency by up to 15%, while at the same time reducing the vessel’s carbon footprint. By working with our engine services division, our engineers can find the optimum solution between the engine tuning and the propeller upgrade.

SEALS AND BEARINGS

Being the world’s leading supplier of marine engineered sealing systems, Wärtsilä Propulsion Services provides complete lifecycle solutions from parts, maintenance works such as seal-bonding to retrofit and upgrade solutions with non-polluting shaft seals.
At Wärtsilä, Boiler Services are a core expertise, not a sideline. We provide OEM spare parts, inspection services, situation evaluation, maintenance, repairs, engineering, re-designing, and upgrading of any boiler system. Our scope of services work on superheated boiler, auxiliary boiler, exhaust gas boiler and economizers, including pipe works, burner, control and the process system.

For example, we can replace boilers or ancillary burners, manufacture and manipulate tubes and fine tube elements. In our workshops, boiler or heat exchanger tubes can be manipulated into almost any configuration by bending or welding. Whatever your requirement, Wärtsilä Boiler Services can satisfy it.
INSPECTION SERVICE
We provide inspection service in order to determine the necessity and extent of repairs. Our inspection service is performed by engineers who are skilled boiler specialists. The service may include the use of highly sophisticated equipment, e.g. u-sonic, fibre endoscopes, magnetoflux etc. to detect and verify any defects. We have several examples of defects discovered by the use of the equipment have saved a considerable sum of money in future repairs. It assures as well that parts with defects not visible by the naked eye do not pose a risk to personnel or assets.

BOILER REPAIR
Depending on your vessel’s boiler equipment, it may be possible to carry out repairs at sea. Our boiler professionals are available on short notice and can meet a vessel anywhere in the world.

UPGRADE SOLUTIONS
Wärtsilä Boiler Services provides turnkey solutions for performance optimization, including redesign engineering and modifications to run the boiler in low sulphur fuel.

BURNER SERVICE
A well-serviced burner saves money and burns more cleanly. In order to operate a boiler plant as economical and environmentally friendly as possible a proper adjustment of the burner is essential. We have often found that once such adjustments are made, soot problems decline and the need for constant cleaning can be reduced. In fact, such adjustments can actually save the cost of a service engineer and contribute substantial operational savings.

Whether the required service is a simple repair, a tuning, or an advanced upgrade of the plant, we can help.
Every electrical and automation system in your installation exists for one purpose only: to keep your installation running smoothly. They must be absolutely reliable – lives and jobs depend on it. To keep your system functioning at its safest and most efficient, you need a partner you can rely on to make sure they work, every time. We’re that partner.

Wärtsilä Electrical and Automation Services offers all kinds of energy & efficiency improvements solutions, control & monitoring modernizations, power management and distribution upgrades and extensions, alarm and monitoring solutions and obsolescence management.

We also have segment specific solutions such as disaster recovery services, safety integrated systems (SIS), integrated automation systems (IAS) and bridge and navigation harmonization and upgrades for marine applications, terminal & refinery process control solutions for oil & gas businesses, and grid stability solutions and extensions & relocations for power plants.

**TURNKEY SOLUTIONS**
We provide turnkey solutions for marine, offshore and power plant, from engineering to installation. The scope of our services includes all the electrical and automation aspects of the installation regardless of manufacturer.

**WIDE EXPERTISE**
Ever hire people who know automation but don’t know your industry? That’s not a problem for us. We’re experts you won’t have to teach. We have deep expertise in a wide range of industries, including marine transportation, oil and gas, process management and gas transmission, power generation and cogeneration. When you hire us, you don’t just hire an expert at automation – you hire an expert in automation for your business.

**AVAILABILITY**
Many of the largest markets have a Wärtsilä Electrical & Automation service center nearby, including the USA, the United Kingdom, Norway, the Netherlands, France, the United Arab Emirates, China and Singapore. And if those workshops are too far way away, our automation experts will work with our global service network to deliver the service you need.
As climate change concerns mount, governments, investors, and consumers push increasingly for industries to reduce emissions. Often, this is far outside most companies’ skill sets, making compliance difficult to achieve. That’s why we launched Wärtsilä Environmental Services.

The Environmental Services leverages Wärtsilä’s deep understanding of industrial installation design criteria toward a new goal: reducing air and water emissions and minimising waste volumes.

Our approach is two folds: primary solutions that make the engine run as clean as possible, and secondary solutions that prevent the emissions from leaving the plant. The portfolio includes a range of products, solutions, and services aimed at both land-based power plants and ship installations.

For example, as part of the portfolio, Wärtsilä offers catalysts (SCR) that reduce nitrogen oxide (NOx) emissions, and scrubbers that remove sulphur oxides (SOx), both harmful emissions that can have detrimental effects on humans and nature. Wärtsilä can also offer complete water treatment systems for power plants (oily water) and marine applications (oily, bilge and ballast waters) that meet the most stringent standards. Also, we can handle various kinds of engine conversions, including conversions to lower sulphur fuel, and diesel conversions to gas. Finally, Wärtsilä offers various types of non-polluting shaft seals for all types of ship.

**FULL SUPPORT**

As with all our services, we tailor the degree of support we provide to meet your exact needs. Such packages include installations, engineering work, and maintenance. As with our other services too, it’s also a partnership: customers who need assistance in formulating a cost-effective environmental strategy can turn to our consultants for a detailed assessment of their environmental needs, risks and opportunities. By working with Wärtsilä, you move beyond merely reacting to new regulatory requirements as they arise to anticipating them – always the best strategy when it comes to meeting ever-tightening cycles of external governmental demands.
Wärtsilä Operations and Management Services does not just operate and manage marine propulsion systems and power plants. We reduce anxiety and risk. By entrusting your system to us, you can free yourself from many day-to-day operational concerns, confident that your asset is in expert hands and performing to the highest possible, sustainable standard – and leaving you to focus on where your attention can add the most value.

A Wärtsilä O&M agreement keeps you focused on your core business. With more than 10,000 MW under agreement, we have extensive experience managing all aspects of day-to-day operation, scheduled and unscheduled maintenance, administration, human resources and training, technical support, logistics management, and security.

An essential part of a Wärtsilä O&M agreement is adequate preparation before we make the plant operational. We recruit and train personnel, purchase safety stock and tools, establish an operational infrastructure, maintenance routines, and occupational health and safety procedures – all according to the best practices we have established in operating and maintaining more than 330 installations in over 50 countries, not to mention extensive know-how and experience of Wärtsilä’s global O&M team. It’s the only way we can guarantee performance – and a great way for you to reduce the operational business risk of your project.

Of course, not all such agreements are the same. Our service agreements portfolio can be tailored to your exact needs, from simple supply agreements to multiyear operational partnerships that span every facet of the operation:

**SUPPLY AGREEMENT**
With supply agreement status, you get access to our global parts distribution network, and the ability to order and receive spare parts 24/7, including reconditioned components, wherever your facility is located, and with the shortest possible lead time. We can also guarantee availability of a global network of trained and skilled service professionals with right tools and on board/on site manpower to assist them.

**TECHNICAL MANAGEMENT**
A technical management agreement includes inspections, expert assistance, monthly reporting as well as an exchange programme planning. We can also provide you with technical support and training through maintenance
planning, online condition monitoring and competence development programmes.

**MAINTENANCE AGREEMENT.**
A long-term service agreement covering all kinds of equipment in your installation. We provide fixed prices for inspection, technical support, spare parts and training. We may guarantee certain performances.

**ASSET MANAGEMENT**
More comprehensive than a maintenance agreement, an asset management agreement gives us the responsibility of optimizing performance and maximizing equipment life so you can concentrate on your core business. Our asset management agreements typically include the supply of required manpower, parts and knowledge required to take full responsibility for the operation of your plant. We take responsibility for unscheduled maintenance and breakdowns as well as give you performance guarantees. Not every business can stand behind its work the way we do, but after more than 15 years of operational management experience, we’re confident that a Wärtsilä management agreement is a proven and reliable investment both for us and our clients.
In today’s fast-paced business environment, there is little margin for error. To make sure that your assets are performing at their optimum, you need knowledgeable people. Wärtsilä Training Services offers tailored programs that deliver that expertise to your employees.

Through Wärtsilä Land & Sea Academy (WLSA), we teach the operation of engines, equipment, electrical systems, control systems, health and safety. Courses and programs of WLSA are delivered in a way that’s right for your organization, through on-board, on-site, or on-line training. Courses include hands-on training programs to simulator-based power plant or ships, taught by specialized teams of experienced engineers and former operators. If that’s not convenient, courses in WLSA’s growing e-learning offering are also available, taught either in real time or in self-contained modules that can be downloaded when the student is free.

As with Wärtsilä’s other services, the aim of Wärtsilä Training Services is to help you run your business better. Just as Wärtsilä parts, equipment, and maintenance services take the worry out of your power and propulsion concerns, Wärtsilä Training Services takes the anxiety out of training. When
you use our training services, you can feel confident that your employee is getting the best instruction possible. After all, who knows their way around power and propulsion better than Wärtsilä?

**A COMMITMENT TO QUALITY**

WLSA administration sets and monitors the high quality needed to satisfy international standards demanded for certification. Courses cover management, operation, maintenance, and safety issues for your marine or power plant personnel. With our focused training strategy, experienced teachers, and global network of training centers, WLSA delivers a thorough understanding of how to optimize the availability, reliability, and performance of your installations.

**A GLOBAL NETWORK**

Wärtsilä Land & Sea Academy campuses are located in Finland, Italy, The Netherlands, Sweden, Switzerland, India, Korea, Philippines, USA and Brazil. We educate over 10,000 students a year, giving the program a scale almost as large as many major universities. Wherever you operate, chances are good that you’re no more than a few hours’ flight away from some expert instruction at an ISO-certified center – or microseconds away from access to one of our online offerings.

**FLEXIBLE LEARNING SYSTEMS**

Hands-on instruction through both state-of-the-art simulators and actual machinery are both important parts of Wärtsilä’s instructional strategy. However, if a training centre is too far away or you would like to use Wärtsilä’s offerings with your own program, many courses are also available online, either in real-time, instructor-led classes or individualized, self-directed, computer-based training modules. We can even send instructors too you. Anywhere there is an internet connection, a student can start learning from any of our training centers or using e-learning, computer-based training (CBT), mobile/site solutions or we can send instructors to you. All kinds of options are possible, giving you the chance to outsource your training needs while designing a solution that reflects your philosophy and your priorities. Finally, unlike most schools, we’re also concerned about what happens after the final exam. If you wish, your HR or technical department can even monitor the achievements of your trainees online.
LIFECYCLE EFFICIENCY PRODUCTS
Lifecycle efficiency is nothing other than the continuous task of optimizing
the performance and operational availability of a power system. During its
lifecycle, a power system is tied to productivity and profitability demands.
So to us, services mean more than just providing a prompt supply of parts
or sending a maintenance specialist to fix a problem. It means taking
responsibility.

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<th>BASIC SUPPORT</th>
<th>Spare parts, tools and consumables</th>
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<tr>
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<td>Field service</td>
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<td></td>
<td>Technical support</td>
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</tbody>
</table>

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<tr>
<th>E-SOLUTIONS</th>
<th>Spares Online</th>
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<td>Bulletins Online</td>
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<td>E-learning</td>
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</table>


| WORKSHOPS                  | Workshops centers  
<table>
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<tr>
<th></th>
<th>Reconditioning services</th>
</tr>
</thead>
</table>
| PERFORMANCE OPTIMIZERS   | Upgrade solutions for 2-stroke engines  
|                          | Upgrade solutions for 4-stroke engines  
|                          | Upgrade solutions for propulsion  
|                          | Upgrade solutions for systems and equipments  
|                          | Upgrade solutions for control and monitoring  
|                          | Upgrade solutions for safety & reliability  
|                          | Gas & fuel conversions |
| ENVIRONMENTAL SOLUTIONS  | Emission measurements  
|                          | Emission monitoring  
|                          | Smoke reduction  
|                          | NOₓ, SOₓ and CO reduction  
|                          | Diesel to gas conversions  
|                          | Oily water separation systems  
|                          | Ballast water treatment |
| ASSET MANAGEMENT         | Supply agreement  
|                          | Technical agreement  
|                          | Maintenance agreement  
|                          | Asset management agreement |
| TRAINING                 | Wärtsilä product courses  
|                          | Navigation courses  
|                          | Resources management courses  
|                          | Tanker courses  
|                          | Cargo management courses  
|                          | Engineering courses  
|                          | Environmental courses  
|                          | Health and safety course  
|                          | Cadet program |
At Wärtsilä, we take basic support seriously. We provide full service throughout the product lifecycle for both marine and power plant customers. Our basic support offers OEM spare parts, field services and advanced technical services for all needs.

**SPARE PARTS, TOOLS AND CONSUMABLES**
We offer a full range of OEM spare parts, tools and consumables for Wärtsilä brands.

- Wärtsilä
- Sulzer
- DEUTZ marine engines
- Nohab Diesel
- Wärtsilä Diesel
- GMT
- Wichmann
- LIPS
- Japan Marine Technology
- Deep Sea Seals
- SACM
- Stork SW Diesel
- Moteurs Duvant Crepelle
- Nordberg
- Poyaud
- Bolnes
- Whessoe

We also supply parts from original equipment manufacturers suitable for engines, boilers, auxiliary systems, propulsors, electrical / control / automation and navigation systems.

- **1.2 MILLION LINES PER YEAR**
- **5000 LINES PER DAY**
- **1000 SHIPMENTS PER DAY**
FIELD SERVICE

International field service team
The reliability of our field service is based on a comprehensive knowledge of your installations and service history. Our global organization with 7000 field service professionals is available around the clock.

In situ machining
As specialists and experts in engine and propulsion systems, we are used to serving you on the spot by providing the necessary and qualified manpower to maintain or repair your equipment wherever it is located.

Technical manpower
We have a large range of competent manpower available; experts, supervisors & superintendents, mechanical and electrical engineers and technicians.

Mechanical, electrical and automation system audits
Field service experts evaluate the entire plant, including engines, equipment and systems.

Machinery dynamics, measurement & analysis
In certain cases vibration can damage expensive machinery components. We have the expertise and equipment to measure and analyse oscillations, vibrations and noise in propulsion systems.

TECHNICAL SUPPORT
Our prompt and accurate technical services perform:
- Installation performance evaluations
- Lubricating oil, emission and vibration analyses
- Investigations and wear analyses for parts
- Vibration measurements, calculations and analysis
- Material analyses
- Dynamic benchmarking and performance measurements
- In situ and online troubleshooting utilizing advanced multimedia and telecommunications techniques
- Predictive maintenance using Condition Based Monitoring (CBM) systems.
E-Solutions give added value to your business, you have access to information everywhere at anytime, should it be technical documentation, part availability or training cessions. All online services have a friendly interface and are highly interactive with in-built collaboration support for end-to-end transactions. They are based on individual agreements.

**SPARES ONLINE**
Spares Online gives you full control over ordering your parts and their delivery processes. Spares Online keeps track of all your installations and provides an updated view of the equipment installed in your plant. The parts selection and ordering are completely transparent. Part lists are supported by photos to facilitate identification. All your equipment information and history are available 24/7 online. Spares Online can be fully integrated with your procurement processes.

**BULLETINS ONLINE**
Bulletins Online is the most convenient way to access Service Bulletins valid for your Wärtsilä products. Bulletins Online provides engine-installation specific and general information concerning manuals, instructions, spare parts codes, and special information on operating principles/routines.
ELDOC ONLINE
Eldoc Online is the fastest way to the latest technical information for your Wärtsilä products. Eldoc Online lets you access interactive instructions, view spare parts illustrations and collect spare parts for ordering online.

REPORTS ONLINE
Reports Online gives customers access to the service reports valid for the Wärtsilä products they operate. Targeted areas of reports are CBM reports. The purpose of service reports is to provide access to related service reports made to specific installations.

E-LEARNING
Our advanced remote training systems, e-learning, virtual classroom and self-paced computer-based training enable you to access our extensive Learning Management System through the Internet.

E-learning reduces travel costs and provides around the clock access to training courses. Important formation updates can be delivered to a large scale audience at short notice.

All e-learning courses are accessible through our Human Capital Development and Management System (HCDMS) which makes it possible to manage all forms of learning. Complete training catalogues, employee training charts, certification history and training reports can be retrieved from one central location.
WORKSHOP CENTERS
Our 80+ fully owned workshops are staffed with highly trained personnel with years of experience in service. They are equipped with all dedicated work machines; specialists are at hand and there are close links with the engineering department and most of the necessary spare parts in stock and works according to classification rules. An overhaul in Wärtsilä workshop cuts back overhaul times and gives guaranteed quality, reducing the risk of breakdown during operation. If needed, we will take care of the logistic chain between your installation and our service centres. We can also provide exchange component pool.

Our workshop carries out all types of maintenance, repair work, upgrades or modifications on:
- Engines, 2-stroke and 4-stroke
- Equipment, heat exchanger, separators, damper, turbocharger, pumps etc.
- Propulsion systems
- Control and electrical systems
- Ship service centers (in specific locations)
- Component reconditioning

In our ship service centres we carry out all types of maintenance and repair work on propulsion systems, including general and metallurgical repairs, upgrades and hull modifications, and the service of control and electrical systems.

RECONDITIONING SERVICES
Reconditioning is an ideal way to enable your installation to continue operating profitably while meeting new regulations and future requirements. With our Reconditioning services, you will be able to achieve the maximum service life for your components with minimized maintenance cost without compromising safety or reliability. With the application of the latest technology, expertise and design, we provide full quality and warranty for all reconditioned components; you will regain full functionality, helping you to exceed your operational targets.

Our worldwide Wärtsilä reconditioning network with production facilities in Canada, China, Italy, the Netherlands, Dubai and Singapore supply reconditioned engine components for all low- and medium-speed engine brands.
A wide variety of exchange components is available in all units, which enables you to take a reconditioned part on board while your vessel is berthed and return the old part to the nearest reconditioning centre without extra cost.

Main components for low-speed engines include:
- Cylinder covers
- Piston crowns
- Piston rods
- Exhaust valves
- Exhaust valve seats

Main components for medium-speed engines include:
- Cylinder covers
- Pistons
- Connecting rods

Reconditioning of components for multiple brand low- and medium-speed engines
- Piston crowns, piston skirts, cylinder covers
- Exhaust valves, spindles, seats and cages
- Connecting rods and piston rods
- Rebabbitting of white metal bearings
Our upgrade solutions maximize equipment performance and operational efficiency throughout the installation’s life and bring aging power systems up to today’s technical standards.

**UPGRADE SOLUTIONS FOR 2-STROKE ENGINES**

<table>
<thead>
<tr>
<th>PRODUCTS</th>
<th>ENGINE TYPES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>UPGRADE KIT SLOW STEAMING</strong>&lt;br&gt;The kit both extend the optimized and reliable load range of the engine for continuous low load operation and gives a major reduction in brake specific fuel oil consumption in the low load range. In opposite to permanent de-rating, the engine can operate at any time up to its full installed power for full sea speed.</td>
<td>RTA series&lt;br&gt;RT-flex series</td>
</tr>
<tr>
<td><strong>RETROFIT PULSE LUBRICATING SYSTEM</strong>&lt;br&gt;A system that allows the engine to operate with reduced cylinder lubricating oil feed rates compared with the existing accumulator system. It distributes cylinder lubricating oil between the piston rings thanks to the fully flexible precise timing.</td>
<td>RTA series&lt;br&gt;RT-flex series</td>
</tr>
<tr>
<td><strong>PISTON RUNNING PERFORMANCE MONITOR MAPEX-PR</strong>&lt;br&gt;MAPEX-PR monitors the piston-running performance during engine operation. By monitoring cylinder and engine cooling temperatures, it detects high friction and helps prevent liner / piston scuffing.</td>
<td>RTA series&lt;br&gt;RT-flex series</td>
</tr>
<tr>
<td><strong>PISTON ROD GLAND PACKAGE</strong>&lt;br&gt;The piston rod gland stabilizes the lubrication oil quality, reduces leakage within the gland box and decreases piston rod and scraper ring wear, resulting in more effective scraping and reduction of system oil consumption. The package performance is best achieved by applying hardened piston rods (new or reconditioned).</td>
<td>Sulzer RTA 84C/84CU&lt;br&gt;Sulzer RTA-2 series&lt;br&gt;Sulzer RTA-8 series&lt;br&gt;Sulzer RTA-U series</td>
</tr>
</tbody>
</table>
# Upgrade Solutions for 4-Stroke Engines

## Products

| Anti-Polishing Ring (APR) | Nohab F10/F20/F30  
|                          | Sulzer Z40/ZA/ZAS  
|                          | Wärtsilä 25/25SG  
|                          | Wärtsilä Vasa 22  
|                          | Wärtsilä Vasa 32  
|                          | SACM UD30         
|                          | Sulzer S20        
|                          | Sulzer A25        
|                          | Wärtsilä 38A      
|                          | TM410             
|                          | TM620             
|                          | Deutz 628         |  

| Charge Air Cooler Cleaning System | Wärtsilä 25/25SG  
|                                  | Wärtsilä 32        
|                                  | Wärtsilä 38        
|                                  | Wärtsilä 46        
|                                  | Stork SW280        |  

| Marine Head Connecting Rod      | Stork TM410        |  

| Connecting Rod Modification Package | Nohab F10/F20/F30  
|                                     |                  |  

| New Fuel Pumps                    | Nohab F10/F20/F30  
|                                     |                  |  

---

**Anti-Polishing Ring (APR)**

The most effective way of avoiding cylinder liner polishing, increasing cylinder component lifetime and reducing lube oil consumption.

**Charge Air Cooler Cleaning System**

Deposits on the charge air cooler(s), coming from dirt in the outside air, will inevitably decrease performance. This cleaning system cleans the charge air cooler(s) in situ, during engine operation.

**Marine Head Connecting Rod**

Improves the reliability as well as the time between maintenance. Two versions are available: for inline cylinder configuration and for V-type cylinder configuration.

**Connecting Rod Modification Package**

Optimize your Wärtsilä Nohab F20 or F30 engine for higher speed and output with new connecting rods.

**New Fuel Pumps**

Replacement of fuel injection pumps will reduce the fuel consumption. The new jacketed fuel injection pipes meet the SOLAS safety rules valid from 1 July 2003.
<table>
<thead>
<tr>
<th>PRODUCTS</th>
<th>ENGINE TYPES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>HIGH-PRESSURE FUEL INJECTION PUMP (WX-TYPE)</strong>&lt;br&gt;The newly designed HP Fuel Injection Pump WXtype decreases specific fuel oil consumption, allows higher admissible injection pressure and has an improved delivery valve and extended TBO (plunger).</td>
<td>Stork SW280</td>
</tr>
<tr>
<td><strong>FUEL OIL PULSATION SYSTEM</strong>&lt;br&gt;The new pulsation damper system utilises a nitrogen filled metal bellow to moderate pulsations in the fuel system. Upgrading to this system is a straightforward procedure. Fuel pipes are replaced with a ready built package which includes the pulsation dampers, all required piping and protective shields.</td>
<td>Wärtsilä 46</td>
</tr>
<tr>
<td><strong>OPEN CHAMBER PISTON</strong>&lt;br&gt;The open chamber piston increases the operational lifetime and reduces smoke.</td>
<td>SACM UD45 / UD30</td>
</tr>
<tr>
<td><strong>WATER SEPARATOR</strong>&lt;br&gt;The newly designed water separator eliminates water carry-over from the scavenge air cooler into the combustion chamber.</td>
<td>Sulzer ZA40S</td>
</tr>
<tr>
<td><strong>PROACTIVE HT VALVE SYSTEM</strong>&lt;br&gt;The proactive HT valve is thus a significant improvement in terms of temperature management, enabling a stable, overall temperature according to the engine.</td>
<td>All engines</td>
</tr>
<tr>
<td><strong>HIGH TEMPERATURE COOLING WATER FILTERING SYSTEM</strong>&lt;br&gt;Protect the engine from damages caused by dirty remained inside the cooling water circuits after maintenances.</td>
<td>Sulzer Z, ZA, ZAS</td>
</tr>
<tr>
<td><strong>CLEANING DEVICE WÄRTSILÄ 18V38A TURBOCHARGERS</strong>&lt;br&gt;Cleaning device with dosing unit to clean the turbine side of VTR454 turbochargers on engines running on HFO during operation.</td>
<td>Wärtsilä 18V38A</td>
</tr>
<tr>
<td>PRODUCTS</td>
<td>ENGINE TYPES</td>
</tr>
<tr>
<td>---------------------------------------------------------------</td>
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</tr>
<tr>
<td><strong>AUTOMATED TURBOCHARGER WASHING</strong></td>
<td>Wärtsilä Vasa 32</td>
</tr>
<tr>
<td>Fully automated turbocharger washing eliminates the need for manual timing of the washing sequence and the operating of valves.</td>
<td>Wärtsilä 32</td>
</tr>
<tr>
<td></td>
<td>Wärtsilä 46</td>
</tr>
<tr>
<td><strong>TURBOCHARGER UPGRAADING</strong></td>
<td>Wärtsilä 200</td>
</tr>
<tr>
<td>This twin-turbocharging configuration has a quicker response time to sudden load changes. The turbocharger overhaul is also extended from 6000 to 12,000 hours.</td>
<td></td>
</tr>
<tr>
<td><strong>TURBOCHARGER CLEANING CONVERSION, FLOW METER</strong></td>
<td>Wärtsilä Vasa 32</td>
</tr>
<tr>
<td>Replacing of the existing water pressure regulating valve with a flow monitoring dosing unit for cleaning of the turbocharger - turbine side.</td>
<td></td>
</tr>
<tr>
<td><strong>PORTABLE TURNING GEAR</strong></td>
<td>Wärtsilä 200, 220</td>
</tr>
<tr>
<td>Tool to make an easy maintenance with a reduced downtime.</td>
<td></td>
</tr>
<tr>
<td><strong>POWER UPGRADE</strong></td>
<td>Sulzer ZAS</td>
</tr>
<tr>
<td>The power upgrade package increases the output to 720 kW per cylinder.</td>
<td></td>
</tr>
<tr>
<td><strong>PERFORMANCE UPGRADE</strong></td>
<td>Wärtsilä 34SG A, B/B2 platform</td>
</tr>
<tr>
<td>By applying a complete Power &amp; Efficiency upgrade the power output of a B/B2 platform based 34SG engine can be increased with up to 5%, while improving engine efficiency by 1%.</td>
<td>Wärtsilä 32DF/DFc</td>
</tr>
<tr>
<td>Power output of an A platform based 34SG engine can be increased with up to 10 % while improving engine efficiency with up to 1.5 %.</td>
<td></td>
</tr>
<tr>
<td>By applying a power upgrade package, the power output of derated Wärtsilä 32DF and DFc engines will increase with up to 10%.</td>
<td></td>
</tr>
<tr>
<td><strong>SINGLE PIPE EXHAUST SYSTEM (SPEX)</strong></td>
<td>Stork 16SW280</td>
</tr>
<tr>
<td>New design making various improvements to reduce the vibrations and improve the overall stiffness.</td>
<td></td>
</tr>
<tr>
<td>PRODUCTS</td>
<td>ENGINE TYPES</td>
</tr>
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</tr>
<tr>
<td><strong>PISTON INNER LUBRICATION SYSTEM</strong>&lt;br&gt;This system is less sensitive to disturbances. It lowers the lube oil consumption and reduces wear on cylinder components. This upgrade is applicable to Sulzer ZAS engines originally equipped with an external lubrication system.</td>
<td>Sulzer ZAS</td>
</tr>
<tr>
<td><strong>REDUCTION LUBRICATING OIL CONSUMPTION</strong>&lt;br&gt;New lubrication oil package for the TM410C that cuts lubricating oil consumption more than half.</td>
<td>TM410C</td>
</tr>
<tr>
<td><strong>FUEL SAVING PACKAGE</strong>&lt;br&gt;Reducing the specific fuel consumption up to 2% (4 g/kWh).</td>
<td>Wärtsilä 38A/A2 – power plant applications</td>
</tr>
<tr>
<td><strong>EXTERNAL PREHEATING MODULE</strong>&lt;br&gt;This new module reduce overhaul time, Improve accessibility and reduce level of vibrations.</td>
<td>Wärtsilä 200, 220</td>
</tr>
</tbody>
</table>
## UPGRADE SOLUTIONS FOR PROPULSION

<table>
<thead>
<tr>
<th>PRODUCTS</th>
<th>PROPULSION TYPES</th>
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</thead>
<tbody>
<tr>
<td><strong>PROPULSION IMPROVEMENT FOR FUEL SAVING.</strong></td>
<td>All propulsion systems</td>
</tr>
<tr>
<td>• From 2% to 4% improvement by propeller polishing and/or repair of edge damage</td>
<td></td>
</tr>
<tr>
<td>• Up to 5% improvement on fuel by a modern design propeller</td>
<td></td>
</tr>
<tr>
<td>• Up to 10% improvement by a modern design propeller with increased diameter and low speed</td>
<td></td>
</tr>
<tr>
<td>• Up to 15% improvement by conversion of an open propeller to a ducted propeller</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TRAILLING EDGE ADJUSTMENT FOR HEAVY RUNNING PROPELLER</th>
<th>All propulsion systems</th>
</tr>
</thead>
<tbody>
<tr>
<td>Modification of the blade design is done to cure heavy running propellers.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>REDUCTION GEARBOX SERVICE PACKAGE</th>
<th>All reduction gearboxes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main overhaul of the gear box at 64,000 running hours, intend to ensure problem-free service for the next 64,000 running hours.</td>
<td></td>
</tr>
</tbody>
</table>


### PRODUCTS

**FUEL AND LUBE OIL MOBILE LABORATORY**
Analyzing the quality of bunkered fuel oil before it is taken into use is important. An alternative is to use our mobile test equipment.

**HEAT EXCHANGER CLEANING SYSTEM**
The heat exchanger cleaner concept is based on the environmentally friendly Energy Cleaner™ concentrate – a pure natural product based on fruit acids.

**AIR AND DIRT SEPARATOR WÄRTSILÄ SPIROVENT**
Air and dirt separation in high-temperature cooling water systems with better performance (up to 50 times more removal capacity), lower operational costs and optimized prevention against corrosion and cavitations.

**OIL MIST SEPARATOR**
The oil mist separator removes more than 98% of the oil mist from the engine’s crankcase ventilation gas without any impact on the crankcase pressure level.

### SYSTEMS

- Fuel and Lub oil system
- Heat exchanger
- Water system
- Air system
# Upgrade Solutions for Control and Monitoring

## Products

<table>
<thead>
<tr>
<th>Product Type</th>
<th>Installation Types</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Wärtsilä Alarm Call System (WACS)</strong>&lt;br&gt;While in port, ships need constant watching. Utilizing the mobile phone system, WACS keeps your ship under constant attention. And if it needs you, it just calls you.</td>
<td>All alarm and control system</td>
</tr>
<tr>
<td><strong>Electronic Pressure Indicator</strong>&lt;br&gt;The electronic pressure indicator will review the current state of your engine by recording the cylinder pressure at the cylinder every minute. This information is then transferred to a computer for review.</td>
<td>Stork SW280</td>
</tr>
<tr>
<td><strong>Modernized Governor and Control System</strong>&lt;br&gt;The engine safety, availability and performance can be radically improved with a modernized governor and control system.</td>
<td>Nohab F10 / F20 / F30&lt;br&gt;Wärtsilä 25</td>
</tr>
<tr>
<td><strong>Thermo-Couple Sensor Cabling</strong>&lt;br&gt;New thermocouple sensor cabling with better accuracy, optimal measuring signal by avoiding interference, no operational maintenance of connectors. For cylinder heads and cylinder liners and, for V-engines, also for main bearings.</td>
<td>Wärtsilä 38A</td>
</tr>
<tr>
<td><strong>Portable Combustion Monitoring System</strong>&lt;br&gt;This portable cylinder pressure test unit is a computerized tool for combustion pressure measurement on 4-stroke gas engines. The cylinder pressure data is used together with the knock detection software, as a tool for optimizing engine combustion.</td>
<td>Wärtsilä Vasa 32DF&lt;br&gt;Wärtsilä 34SG&lt;br&gt;Wärtsilä 50DF</td>
</tr>
<tr>
<td><strong>WECSPLOERER Software Tools</strong>&lt;br&gt;WECSPLOERER™ allows tuning engine performance, to troubleshoot and perform tests on engine. The tool is tailored for the concerned installation and is password protected at user level.</td>
<td>Engines equipped with: WEC 3000&lt;br&gt;WEC 7000&lt;br&gt;WEC 7500&lt;br&gt;WEC 8000&lt;br&gt;UNIC control system</td>
</tr>
</tbody>
</table>
## PRODUCTS

<table>
<thead>
<tr>
<th>CONTROL COMMAND SYSTEM UPGRADE</th>
<th>INSTALLATION TYPES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase reliability and control possibility by using latest proven technology when after being in use for years, the elements of a control command system wear out and age as well as spare parts becoming obsolete and scarce.</td>
<td>All engine types All propulsion systems All boiler systems All turbine systems</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>OVERSPEED &amp; RPM CONTROL UPGRADE</th>
<th>INSTALLATION TYPES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upgrade of older mechanical overspeed device and RPM indicator with a control cabinet and electronic pick-up.</td>
<td>Wichmann AX</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>POWER MONITORING UNIT</th>
<th>INSTALLATION TYPES</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Power Monitoring Unit is used for a great number of various tasks in power plants, industries and electrical utilities. PMU gives access to local information as well as remote monitoring of low and medium voltage switchgears.</td>
<td>All power systems</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>STEAM TURBINE OVERSPEED TRIP TEST DEVICE</th>
<th>INSTALLATION TYPES</th>
</tr>
</thead>
<tbody>
<tr>
<td>This device is designed to safely bring a steam turbine up to trip speed in a Controlled Manner in order to test the turbine trip system.</td>
<td>Woodward TG Governors on Steam Turbines</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LNG MANAGER</th>
<th>INSTALLATION TYPES</th>
</tr>
</thead>
<tbody>
<tr>
<td>All process data of a LNG terminal can be linked back to our PC-based, redundant, control, engineering and configuration platform, LNG Manager®, or can be directly linked to the site’s DCS. In instances where the LNG tank gauging instruments are being linked directly to the site’s DCS system, configuration and maintenance tasks are handled through a portable PC, called LNG System Maintenance Supervisor.</td>
<td>LNG Terminal</td>
</tr>
<tr>
<td>PRODUCTS</td>
<td>INSTALLATION TYPES</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td><strong>LNG MASTER</strong></td>
<td>LNG Terminal</td>
</tr>
<tr>
<td>Stratification and roll-over predictive software. In combination with our Total LNG Storage tank Instrumentation Solution®, all in-tank conditions, specifically stratifications, can be simulated and/or monitored in real time, be compared to earlier LNG behavior predictions, allowing operators sufficient time and means to create the optimum settings from a safety as well as economical perspective.</td>
<td></td>
</tr>
<tr>
<td><strong>LNG EXPERT</strong></td>
<td>LNG Terminal</td>
</tr>
<tr>
<td>The latest evolution in LNG storage tank management is LNG EXPERT, a on-line and fully automatic roll-over predictive and alarming software. Based on LNG MASTER, it provides the user with a watchdog that monitors all site’s components that impact and influence the formation and evolution of LNG stratification. It continuously monitors all data and calculates the expected evolution of the stratification, if any. In case it foresees a certain stratification, in any of the tanks linked to the DCS to evolve in to a roll over situation, it automatically generates an alarm, leaving sufficient time to the operators to take corrective action. As such LNG EXPERT meets all requirements as put forward in the European directives SEVESO II.</td>
<td></td>
</tr>
</tbody>
</table>
UPGRADE SOLUTIONS FOR SAFETY AND RELIABILITY

Health & Safety is attracting increasing interest. It is especially important for installations where personnel are not continuously present in the engine room.

Wärtsilä is continuously working with state-of-the-art technology to optimize the performance of its installations. This applies not only to efficiency and emissions but also to safety and reliability. Improved material properties, modern production processes and a new concept design all help to ensure greater performance at a lower cost than in the past.

Growing awareness of safety is also evident in international legislation and recommendations, where safety standards apply to both new and existing installations. Power systems already in operation can benefit from the latest technology, because new solutions are often available as retrofit packages.
<table>
<thead>
<tr>
<th>PRODUCTS</th>
<th>ENGINE TYPES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EFFECTIVE VOLTAGE CONTROL</strong>&lt;br&gt;Short circuits and failures in the external electrical systems can damage the monitoring and control system of the engine. Expensive downtime can be avoided with the aid of a DC/DC converter and a transient protection diode.</td>
<td>All engine types</td>
</tr>
<tr>
<td><strong>SAFEGUARD YOUR ENGINE WITH STEEL SPRINGS</strong>&lt;br&gt;Standard D-type rubber elements between frame and base are subject to ageing and eventual collapse. Therefore, rubber elements should be changed for the more sturdy steel springs.</td>
<td>Nohab F10 / F20 / F30&lt;br&gt;Wärtsilä 25&lt;br&gt;Wärtsilä 25SG&lt;br&gt;Wärtsilä 46</td>
</tr>
<tr>
<td><strong>METAL PARTICLE DETECTOR (MPD)</strong>&lt;br&gt;The MPD is an inexpensive and easy-to-install safety device that reacts instantaneously by detecting the tiniest metal chip present in the engine lubricating oil.</td>
<td>Wärtsilä 200 / 220SG&lt;br&gt;Wärtsilä 25 / 25SG</td>
</tr>
<tr>
<td><strong>MONITORING OF WATER CONTENTS IN OIL</strong>&lt;br&gt;A system for continuously monitoring of water activity in the lubrication oil system during normal operation.</td>
<td>All engine types</td>
</tr>
<tr>
<td><strong>MAIN BEARING TEMPERATURE MONITORING</strong>&lt;br&gt;Improved prevention of major damages by monitoring the main bearing temperature.</td>
<td>Stork SW280&lt;br&gt;TM410</td>
</tr>
<tr>
<td><strong>WIRELESS MONITORING OF CONNECTING ROD BEARING TEMPERATURES</strong>&lt;br&gt;Avoid damage to the big-end bearings and journals. This temperature monitoring system secures crankshaft and connecting rod lifetime.</td>
<td>Wärtsilä Vasa 32, 32LN, 32GD, 32LNGD&lt;br&gt;Wärtsilä 32DF, 34SG, 46, 46GD, 50DF&lt;br&gt;Wärtsilä Nohab F20, F30&lt;br&gt;Wärtsilä 25, 25SG, 25DF&lt;br&gt;Sulzer ZA40S, ZA, Z40/48&lt;br&gt;Wärtsilä 38A, F240, Stork SW280, TM410, TM620&lt;br&gt;Deutz D628</td>
</tr>
<tr>
<td><strong>FLEXIBLE ENGINE MOUNTING WÄRTSILÄ 38A</strong>&lt;br&gt;Flexible mounting reduces vibrations and subsequent noise which in return results in better comfort.</td>
<td>Wärtsilä 18V38A power plant applications</td>
</tr>
</tbody>
</table>
Safety of life at sea (SOLAS) regulation products

SOLAS regulations contain requirements for jacketed high-pressure fuel lines, the screening of joints and flanges for low-pressure piping, and the insulation of hot surfaces.

In the event of a leakage in the engine room, their purpose is to prevent fuel and lubricating oil from being sprayed directly onto any hot surface and causing a fire in the engine room.

Depending on the engine type, specific and focused retrofit solutions are available for older Wärtsilä engines and engines manufactured under licence.

Three main categories of solutions can be:
- Retrofit solution for high-pressure fuel lines / injection pipes for preventing fuel leakage from injection line
- Retrofit solutions for low-pressure oil pipes, protecting possible points of failure and preventing oil spray or leakages
- Solutions for protecting hot surfaces, preventing contact between flammable liquids and surfaces with temperatures above 220 °C.
<table>
<thead>
<tr>
<th>PRODUCTS</th>
<th>ENGINE TYPES</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOLAS AUDIT</td>
<td>All engine types</td>
</tr>
<tr>
<td>HOT SURFACE PROTECTION WITH INSULATION BOX AND PADS</td>
<td>Wärtsilä 32</td>
</tr>
<tr>
<td></td>
<td>Sulzer A25</td>
</tr>
<tr>
<td></td>
<td>Sulzer S20</td>
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<tr>
<td></td>
<td>Nohab F10/F20/F30</td>
</tr>
<tr>
<td></td>
<td>Wärtsilä 25</td>
</tr>
<tr>
<td>SAFER RUNNING WITH JACKETED FUEL INJECTION PIPES</td>
<td>Nohab F10/F20/F30</td>
</tr>
<tr>
<td></td>
<td>Wärtsilä 25</td>
</tr>
<tr>
<td></td>
<td>Wärtsilä 200</td>
</tr>
<tr>
<td>SOLAS SCREENING TAPE</td>
<td>All engine types</td>
</tr>
<tr>
<td>Screening tape for low-pressure fuel and lube oil pipes</td>
<td>Sulzer A/S</td>
</tr>
<tr>
<td>exposed to a hot surface or to an air intake.</td>
<td>Sulzer RD</td>
</tr>
<tr>
<td>The screening tape is a complement to hot-box insulation.</td>
<td>Sulzer RL</td>
</tr>
<tr>
<td></td>
<td>Sulzer RND</td>
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<tr>
<td></td>
<td>Sulzer RND-M</td>
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<tr>
<td></td>
<td>Sulzer RTA-8 series</td>
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<tr>
<td></td>
<td>Z40 / ZA / ZAS</td>
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<td></td>
<td>GMT 230</td>
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<td>GMT 320</td>
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<td>GMT 420</td>
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<td>Wichmann 28</td>
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<td>Wichmann AX</td>
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<td></td>
<td>Wärtsilä 25</td>
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<tr>
<td></td>
<td>Nohab F20/30</td>
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</tbody>
</table>
# GAS & FUEL CONVERSIONS

<table>
<thead>
<tr>
<th>PRODUCTS</th>
<th>ENGINE TYPES</th>
</tr>
</thead>
<tbody>
<tr>
<td>GAS CONVERSION (GD)</td>
<td>Wärtsilä Vasa 32</td>
</tr>
<tr>
<td></td>
<td>Wärtsilä 32LN</td>
</tr>
<tr>
<td></td>
<td>Wärtsilä 38A</td>
</tr>
<tr>
<td></td>
<td>Wärtsilä 46</td>
</tr>
<tr>
<td>Diesel engine conversion to natural gas operation. Benefits include high efficiency and very low emissions. Diesel operation still possible with unchanged performance.</td>
<td></td>
</tr>
<tr>
<td>GAS CONVERSION (SG)</td>
<td>Wärtsilä Vasa 32</td>
</tr>
<tr>
<td></td>
<td>Wärtsilä 32</td>
</tr>
<tr>
<td></td>
<td>Wärtsilä 32LN</td>
</tr>
<tr>
<td>Conversion of Wärtsilä VASA 32 and 32LN to Wärtsilä 34SG specification makes it possible to utilize the benefits of low-pressure natural gas. The converted engine offers the same benefits as the factory made Wärtsilä 34SG: high efficiency, low NOx emissions, lean-burn, state-of-the-art design.</td>
<td></td>
</tr>
<tr>
<td>DUAL-FUEL CONVERSION (DF)</td>
<td>Wärtsilä 25</td>
</tr>
<tr>
<td></td>
<td>Wärtsilä Vasa 32</td>
</tr>
<tr>
<td></td>
<td>Wärtsilä 32LN</td>
</tr>
<tr>
<td></td>
<td>Wärtsilä 46</td>
</tr>
<tr>
<td></td>
<td>Nohab F30</td>
</tr>
<tr>
<td>Conversion to dual-fuel operation makes it possible to utilize the benefits of natural gas with only 1% LFO pilot fuel (for Wärtsilä 25 5% LFO pilot fuel).</td>
<td></td>
</tr>
<tr>
<td>FUEL CONVERSION</td>
<td>Specific per engine type</td>
</tr>
<tr>
<td>Many of the diesel engines can run on both LFO and HFO. If you only use one type of fuel, we are able to re-engineer your installation so that it can run on either or both of them for financial reasons (HFO) or environmental requirements (LFO).</td>
<td></td>
</tr>
</tbody>
</table>
GLOBAL CONCERN FOR A CLEANER ENVIRONMENT IS A FACT OF LIFE, AFFECTING INDIVIDUALS, COMMERCE AND INDUSTRY.

Many regulations, both global and local, have already been set to control levels of smoke, particulates, NO\textsubscript{X}, SO\textsubscript{X} and other pollutants. EPA Environmental Protection Agency legislation is one example of how limits on particulates and NO\textsubscript{X} have changed over the years: between 1988 and 2010 the requirements for emissions reduction will rise more than 95%.

Regulations are expected to continue to become stricter in the future. Wärtsilä is continuously looking for and developing new technologies to meet these requirements, to ensure environmentally sound operation in terms of low emissions, low environmental impact and sustainability.

The new technology is provided as standard on new equipment and can often be retrofitted on older ones.

Many measures are available as primary solutions (equipment tuning and upgrade) and secondary solutions (after treatment emission reduction equipment such as catalytic reducer and scrubber).
EMISSION MEASUREMENT
Wärtsilä offers a system for emission measurements which meets local and international regulations such as the IMO Annex VI of Marpol 73/78 regulations for the prevention of air pollution from ships. This code demands certified equipment, accurate calibrations, correct measurement procedures and skilled personnel.

The measurements are carried out accordance with the technical code for a number of different load conditions corresponding to the application category. For correct NOx calculation the following inputs are needed:

- Engine speed and torque
- Fuel consumption
- Temperatures of the ambient air, charge air and cooling water
- Pressure and humidity of the ambient air
- Exhaust composition with regard to NOx, O2, CO2, CO and HC.

EMISSION MONITORING
Continuous emission monitoring provides on-line data on the environmental performance of the installation. The purpose of the monitoring can be to comply with legislative requirements, reporting for trading purposes, as well as process control of emission control systems such as SCR. A wide range of monitoring systems is available on the market including systems based on in-situ or extrative type analyzers as well as parametric emission monitoring.

For the lifetime performance of the monitoring system it is crucial to choose the optimal system considering a wide range of parameters. Wärtsilä will integrate the optimal technical solution into the plant or ship system, considering the purpose of the monitoring as well as the specific features of the installation. Among parameters to consider are the purpose of the monitoring, emission components to be monitored and their concentrations, engine type, operating profile as well O&M considerations. In addition to seamless integration of existing systems, Wärtsilä has developed an emission monitoring module tailored for cost efficient monitoring of emissions in multiengine installations operating on HFO.
<table>
<thead>
<tr>
<th>PRODUCTS</th>
<th>ENGINE TYPES</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONTINUOUS EMISSION MONITORING</td>
<td>All engine types</td>
</tr>
<tr>
<td>Emission monitoring packages tailored to client needs.</td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>MULTI ENGINE MONITORING MODULE</td>
<td>All engine types</td>
</tr>
<tr>
<td>Emission monitoring module where multiple engines are monitored by a single set of in-situ type analyzers. Provides cost efficient monitoring of emissions in multiengine installations operating on HFO.</td>
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<tr>
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</tr>
<tr>
<td>PARAMETRIC EMISSION MONITORING</td>
<td>All 4-stroke Wärtsilä diesel engines</td>
</tr>
<tr>
<td>Emissions monitoring based on sophisticated calculations of emission utilizing data such as engine parameters, fuel composition and ambient conditions.</td>
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</tbody>
</table>

**Documentation for Engine International Air Pollution Prevention (EIAPP) compliance**

The International Convention for the Prevention of Pollution from Ships issued by IMO (Marpol 73/78) and the application for the IAPP (International Air Pollution Prevention) certificate also require that diesel engines on board comply with the rules on NO\textsubscript{X} emissions (EIAPP certificate).

We can support you with the necessary documentation, a Record Book of Engine Parameters, technical files, etc. as well as the required IMO part codification for the engines manufactured by us. If necessary, we can also conduct emission measurements and give advice on how to reach the desired emission levels.
SMOKE REDUCTION

The need for operation with non-visible smoke has grown in recent years. Local regulations and restrictions on smoke emission have been imposed in certain geographical areas. Alaska, which sets duties and fees for vessels sailing in the region during the summer season, is the most significant example at present. An increasing number of similar measures can be expected in the future.

Various equipment is available to improve part-load performance, such as bypass, waste gate, and variable valve timing, depending on the engine type.

<table>
<thead>
<tr>
<th>PRODUCTS ENGINE TYPES</th>
</tr>
</thead>
<tbody>
<tr>
<td>VARIABLE INLET VALVE CLOSING</td>
</tr>
<tr>
<td>Variable inlet valve closing is the latest solution developed by Wärtsilä for reducing the smoke emissions close to 50% off at low load.</td>
</tr>
</tbody>
</table>

NOX, SOX AND CO REDUCTION

The entry into force of stringent environmental regulations and application of corresponding taxes tied to NOX and SOX emission levels for both ships and power plants make the installation of NOX and SOX abatement systems or upgrades economaly feasible.

Primary and secondary methods for NOX reduction

A primary NOX reduction method means that conversions are made directly to the diesel engine. Our NOX conversion packages range from engine modifications up to and including a saturation system for combustion air.

The Wärtsilä Low NOX solutions combine various engine modifications designed to obtain low NOX values, the purpose being to find the ideal combination of compression ratio, injection timing and injection rate. The Wärtsilä Low NOX concept is developed to find the best possible trade-off between NOX reduction and fuel consumption. In most Wärtsilä engine types will the Low NOX upgrade not only generate lower NOX emissions but also not affected, or even improved, fuel consumption.
Secondary methods for reducing NO\textsubscript{X} include Selective Catalytic Reduction (SCR). The combined silencer and SCR unit developed by Wärtsilä is an ideal package for retrofitting projects.

You may contact us at \texttt{NOX@wartsila.com} to know more about NO\textsubscript{X} reduction solutions.

**Primary and secondary methods for SO\textsubscript{X} reduction**

A SO\textsubscript{X} reduction cannot be achieved with the primary method on the engine.

The solution is to burn low sulphur fuel instead, Wärtsilä engines being already designed and optimized to run on fuels with any sulphur content. We can offer engine checks and modifications, as well as tank and system modifications on board ships expected to operate inside and outside sulphur emission controlled areas.

Secondary method for reducing SO\textsubscript{X} is about installing exhaust gas cleaning system commonly known as scrubber. Scrubbers may use sea water or different chemicals such as limestone (CaCO\textsubscript{3}), sodium hydroxide (NaOH) and ammonia (NH\textsubscript{4}OH), depending on the case. Land base applications usually scrub exhaust gas with a limestone or sodium hydroxide scrubber.

Wärtsilä Scrubber system for marine application is being installed on a tanker and was IMO certified in 2009. It uses fresh water and sodium hydroxide additives: this configuration offers the best control of efficiency (not dependant from seawater alkalinity), allows effluent to be kept onboard in port and estuaries and has the lowest energy consumption as the water flow is clearly smaller than in seawater scrubbers. Let us help you in the selection, design and installation of the best system suited to your installation and economic challenges.

You may contact us at \texttt{SOX@wartsila.com}.
LOW NOₓ CONVERSION PACKAGE

The Low NOₓ conversion combines various engine modifications designed to obtain low NOₓ values. The modifications set the ideal combination of compression ratio, injection timing and injection rate.

<table>
<thead>
<tr>
<th>PRODUCTS ENGINE TYPES</th>
</tr>
</thead>
<tbody>
<tr>
<td>SACM UD30</td>
</tr>
<tr>
<td>Wärtsilä 20</td>
</tr>
<tr>
<td>Nohab F20/F30</td>
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<tr>
<td>Wärtsilä 25</td>
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<tr>
<td>Wichmann 28</td>
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<tr>
<td>Wichmann AX/AXA/AXAG</td>
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<tr>
<td>Wärtsilä 26</td>
</tr>
<tr>
<td>Wärtsilä Vasa 32</td>
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<tr>
<td>Wärtsilä 38</td>
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<tr>
<td>Sulzer Z40S</td>
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<tr>
<td>Wärtsilä 46</td>
</tr>
</tbody>
</table>

IMO TIER I UPGRADE SOLUTIONS

The solutions focus on NOₓ emission reduction below the IMO Tier I NOx limits for 2-stroke engines built between 1.1.1990 and 31.12.1999. Depending on engine type and rating, the solution will consist of injection timing related modifications or a combination of injection timing and compression ratio related modifications. The solutions will be commercially available for most engine types, when they are registered with IMO as certified Approved Method. The regulation for engines built 1990-1999 will be in force as of 01.07.2010.

<table>
<thead>
<tr>
<th>ENGINE TYPES</th>
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</thead>
<tbody>
<tr>
<td>Specific per engine type</td>
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</tbody>
</table>

SELECTIVE CATALYTIC REDUCTION (SCR)

SCR is currently the most efficient method of NOₓ reduction. The SCR method reduces NOₓ emissions by 85-95%. Hence, it is easy to reach NOₓ level of 2g/kWh or lower, which complies with the most stringent emission limits.

<table>
<thead>
<tr>
<th>ENGINE TYPES</th>
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<tbody>
<tr>
<td>All engine types</td>
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<tr>
<td>All boiler types</td>
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<tr>
<td>PRODUCTS</td>
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<tr>
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</tr>
<tr>
<td><strong>LOW SULPHUR FUEL CONVERSION PACKAGE FOR SECAS</strong></td>
</tr>
<tr>
<td>A modification package that will enable low sulphur fuel operation for marine installations in SECA areas so they are compliant with Marpol Annex VI requirements (SOX emissions).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FRESH WATER SCRUBBER (FWS)</th>
<th>All Wärtsilä and non-Wärtsilä engine brands</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fresh water scrubbers are currently the cheapest way to reduce your sulphur emission, while being always in control of your efficiency, effluent and having the lower CO₂ signature compare to alternative mean of compliance. It’s also the only technology enabling the holding of effluent on board while at port.</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>WÄRTSILÄ IOXI</th>
<th>All Wärtsilä and non-Wärtsilä gas engine brands</th>
</tr>
</thead>
<tbody>
<tr>
<td>Integrated Oxidation catalyst (IOXI) is a compact, cost efficient product that is applicable for moderate carbon monoxide and formaldehyde reduction of gas engines. Equipped with IOXI system, the engine can be benchmarked to emission requirements, (for instance, the German TA LUFT).</td>
<td></td>
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</table>
**DIESEL TO GAS CONVERSIONS**

A gas engine has 80% lower NO\textsubscript{X} emission levels than an HFO engine and about 20% lower CO\textsubscript{2} emissions too.

Conversion of an HFO (Heavy Fuel Oil) or MFO (Marine Diesel Oil) installation to operate on natural gas offers many benefits and is becoming more attractive in many areas.

**Changes to engines and plant systems**

- Engine conversion consists mainly of installing a gas fuel system on the engine.
- Plant conversion consists of modifications to gas handling systems and the control system.

Conversion means that the existing HFO or MDO operated engine is changed to gas-diesel. Gas-diesel is based on the diesel cycle, which means that engine modification is limited to the injection equipment and control systems.

Conversion of Wärtsilä VASA 32 and 32LN engines to the Wärtsilä 34SG specification makes it possible to utilize the benefits of low-pressure natural gas. A converted engine offers the same benefits as the factory-built Wärtsilä 34SG: high efficiency, low NO\textsubscript{X} emissions, and lean-burn, state-of-the-art design.

Wärtsilä 25, Wärtsilä Vasa 32, Wärtsilä 32 LN and Wärtsilä 46 engines can now be converted to dual-fuel (DF) engines and are then able to operate on natural gas. Natural gas operation is becoming more attractive all around the world, and for many installations the only restriction for conversion to gas is its limited availability. However, gas distribution systems are continually being expanded and it is anticipated that the use of natural gas in many industries, including power generation, will increase rapidly. See also Gas & fuel conversions.
OILY WATER SEPARATION SYSTEMS

Wärtsilä offers complete oily water separation systems of the Wärtsilä Senitec product range for power plants and marine applications. The Wärtsilä Senitec M and P Series guarantee a maximum oil content in the effluent of 5, 10 or 15 ppm depending on configuration. Actual oil content during continuous running is normally below 1 ppm.

Oily water treatment systems for power plants

Wärtsilä Senitec P750 and P2100 units are specifically designed to meet high demands for efficient oily water treatment whilst being easy to operate and maintain. The units are very flexible and can handle a wide range of oil and slop/sludge compositions. With the Biosys system running in series, the resulting water effluent can be safely discharged without additional treatment.

Benefits:
- Low maintenance cost
- Safe
- High capacity
- Built-in stainless steel
- PLC controlled
- High dry solids
- Low operating costs
- Low space requirements

Sludge and bilge water cleaning for marine

The Wärtsilä Senitec M-Series treatment system ensures that oil from sludge and bilge water does not end up in nature. Wärtsilä Senitec M 1000 and M 2500 system gives the operator effective control and peace of mind over all bilge and sludge media as well as over any discharges made into the sea. Wärtsilä Senitec M-series is approved according to IMO resolution MPEC 107(49) and has passed US Coast Guard certification. The heart of the system is a groundbreaking separator technology which has been rigorously tested. Today, the Wärtsilä Senitec M-series is the most complete sludge and bilge treatment unit on the market as it is unique in offering the lowest oil content (5 ppm guaranteed, 1 ppm in all case studies), sustainably, with the highest Dry Solid ratio for its treatment residues (8-10% as opposed to 1% currently observed).
Benefits:

- Approved according to IMO resolution MPEC 107(49)
- US Coast Guard approved
- Separates oil and emulsions effectively
- Results sustainably below legislative requirements
- Reduces sludge / bilge disposal need
- Smaller harbour fees
- Less maintenance
- Ease of operation frees up time for other tasks
- Built in modules for easy installation onboard
- Can handle 0-100% oil
- Works in low and high temperature range
- Not sensitive to soot or cleaning chemicals
- Fully stainless steel housing – long lasting quality
- Fouling of sludge tank can be avoided by separate discharge of solids

BALLAST WATER TREATMENT

Changing regulations in the marine industry have driven the need for new ballast water treatment products. Ballast water is used to stabilize vessels when not fully loaded: water is taken in when a ship unloads cargo, and released when it is loaded again. Water that is taken in at one port is often released at another, which can result in the introduction of non-indigenous organisms into fragile ecosystems. Untreated ballast water has been an issue of serious public concern during recent years.

According to the Global Ballast Water Convention adopted by IMO in 2004, vessels built prior to 2009 will need to install a certified ballast water treatment (BWT) system by 2014 or 2016, depending on the ballast water capacity of the vessel. Since 2009, all new vessels are required to install a BWT system. For the convention to come into full force, it must be ratified by 30 countries representing 35 per cent of the global fleet's dead weight tonnage. Currently 22 countries representing 23 per cent of the world’s dead weight tonnage have ratified, and full ratification is expected to occur in 2011.

Wärtsilä is presently productifying a Ballast Water Treatment system based on UV treatment technology. The new system is expected to be released during autumn 2010.
ASSET MANAGEMENT

The Service agreements are designed to be tailored to your exact needs, letting you choose from different levels of partnership, or a day-to-day business relationship.

SUPPLY AGREEMENT
We ensure 24/7 global logistics of spare parts with shortest lead time. We also guarantee availability to a global network of trained and skilled service professionals with right tools and on board/on site manpower supply. Our supply agreements cover global component drops for reconditioning as well as online services.

TECHNICAL MANAGEMENT
Our technical management agreements include regular inspections, expert assistance, monthly reporting as well as an exchange programme for and reconditioning of spare parts. We can also provide you with technical support and training through maintenance planning, online condition monitoring and training agreements.
Lay-up services agreement
Reduced transportation demand, increasing overcapacity and low freight and charter rates have become a major concern in marine industry. The laying-up of ships is one option available to ship owners for meeting these challenges. The proper management of deactivation and re-activation of the vessel machinery, and proper care during the lay-up, is key to ensure the multi-million euro asset is kept operational. Wärtsilä offers expert services for the lay-up of ships, packaged into tailor made and comprehensive lay-up agreements. Wärtsilä has the expertise for ship machineries and assures ship owners that the job is carried out with care. Taking the most of its multiple centers of expertise in 2-stroke & 4-stroke engines, propulsion lines, electrical & automation equipment and boiler systems, Wärtsilä has packaged comprehensive sets of services to manage hot and cold vessel lay-ups at optimal cost. Our lay-up service agreements are scalable to include de-activation, re-activation, lay-up inspections and/ or watch crew during lay-up. Wärtsilä expert crews are mobilized and dispatched locally where the vessels are being laid-up. The service package is an all-in-one agreement covering a selection of equipment, for either de-activation, re-activation, lay-up inspections or all.

MAINTENANCE AGREEMENT
A long-term service agreement covering all kinds of equipment for your installation. We can provide fixed prices for inspection, technical support, spare parts, labour and training. We might guarantee certain performances.

ASSET MANAGEMENT AGREEMENT
We focus on optimizing performance and maximizing equipment life so you can concentrate on your core business. Our asset management services cover the supply of required manpower, parts and knowledge required to take full responsibility for the operation of your installation. We take responsibility for unscheduled maintenance and breakdowns as well as we give your performance guarantees. With global references, our asset management services provide proven performance and reliability.
More than ever, owners and operators need to ensure that their personnel are trained to optimize the operational capabilities.

Specialist skills enhancement training can play a vital role in developing the workforce in order to realize the full potential of the ship/plant. The training programme ought to address the skill enhancement needs of all personnel from managers to employees, captains to cooks, mechanics and electricians.

Case studies have shown that well planned and implemented training reduces operating and maintenance costs many times over.

Wärtsilä’s training programmes are especially designed to fit the customer in question. It is not just a matter of selecting a course ‘off the shelf’ in the hope that it will be suitable for the customer. The programme is developed in close cooperation with the customers in order to meet their business goals. As the drive towards increased profits and higher efficiencies gets keener, companies are realizing the value of ‘skills enhancement’ training. The concrete results of Wärtsilä’s courses are measurable in terms of significant cost savings.

The training needs to be relevant to the customer’s long-term business plans and it also needs to be continuous. The individual course structures are well thought out and planned so that the courses complement each other and progress systematically. The content of the courses continues to advance and focus on new questions, problems and requirements. Courses can be performed in situ or in our dedicated training centres in Finland, Italy, The Netherlands, Sweden, Switzerland, India, Korea, Philippines, USA and Brazil.
<table>
<thead>
<tr>
<th>COURSES TYPE</th>
<th>COURSES SPECIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>WÄRTSILÄ PRODUCT COURSES (4-STROKE)</td>
<td>Engine basic&lt;br&gt;Engine operation basic&lt;br&gt;Engine practical&lt;br&gt;Engine operation&lt;br&gt;Engine operation advanced&lt;br&gt;Engine follow-up&lt;br&gt;Engine operation and practical advanced&lt;br&gt;Engine Deutz practical basic&lt;br&gt;Engine practical basic</td>
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<td>WÄRTSILÄ PRODUCT COURSES (2-STROKE)</td>
<td>Engine RT-flex basic&lt;br&gt;Engine RT-flex operation advanced&lt;br&gt;Engine RT-flex practical advanced&lt;br&gt;Engine RT-flex practical and operation advanced&lt;br&gt;Engine RTA basic&lt;br&gt;Engine RTA practical and operation advanced&lt;br&gt;Engine RTA operation advanced&lt;br&gt;Engine RTA practical advanced&lt;br&gt;Retrofit Pulse Lubrication System (RPLS) practical and operation advanced</td>
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<tr>
<td>WÄRTSILÄ PRODUCT COURSES (PROPULSION)</td>
<td>Controllable Pitch Propeller (CPP)&lt;br&gt;Steerable Thrusters (STT)&lt;br&gt;Transverse Thrusters (TT)&lt;br&gt;Waterjets (WJ)&lt;br&gt;Controllable pitch propeller control system, LMP/FDT (Lips micro processor, field diagnostic and tuning)&lt;br&gt;Ship Power Systems, Introduction (SPS-I)&lt;br&gt;Propulsion training shipyards</td>
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<tr>
<td>WÄRTSILÄ PRODUCT COURSES (CONTROL, AUTOMATION, ELECTRICAL)</td>
<td>Wärtsilä Engine Control System WECS 2000&lt;br&gt;Wärtsilä Engine Control System WECS 3000&lt;br&gt;Wärtsilä Engine Control System WECS 7000&lt;br&gt;Wärtsilä Engine Control System WECS 7500&lt;br&gt;Wärtsilä Engine Control System WECS 8000&lt;br&gt;Wärtsilä Unified Controls (UNIC C1,C2,C3)&lt;br&gt;Universal Control System 400&lt;br&gt;Local Control System (LCS)</td>
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<tr>
<td>WÄRTSILÄ PRODUCT COURSES (POWER PLANT)</td>
<td>Power Plant introduction&lt;br&gt;Power Plant operation and maintenance&lt;br&gt;Power Plant electrification&lt;br&gt;Power Plant maintenance&lt;br&gt;Power Plant management&lt;br&gt;Power Plant operation at site</td>
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<tr>
<td>COURSES TYPE</td>
<td>COURSES SPECIFICATION</td>
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<td>PRODUCT COURSES (OTHERS)</td>
<td>Operator training oily water treatment Senitec M- and P-series</td>
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<tr>
<td>NAVIGATION COURSES</td>
<td>Basic ice navigation Bridge team management with MRM Full mission training Ship handling and maritime resource management Simulator training in critical situations Tug boat handling Electronic display and information system Ship handling course Ship handling refresher Ship simulator and bridge teamwork</td>
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<tr>
<td>RESOURCE MANAGEMENT COURSES</td>
<td>Maritime resource management Bridge team training</td>
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<tr>
<td>TANKER COURSES</td>
<td>Liquefied natural gas cargo handling simulator Liquefied natural gas familiarization course Liquefied petroleum gas cargo handling simulator Tank atmosphere control and gas measurement General tanker familiarization Specialized training for oil tankers Liquid chemical cargo handling simulator course Liquid cargo handling simulator course Gas measuring course Wall washing Specialized training for liquefied gas tankers Specialized training for chemical tankers Crude oil washing and inert gas system</td>
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<tr>
<td>CARGO MANAGEMENT COURSES</td>
<td>Hazmat/IMDG course Ship stability, trim and cargo handling course</td>
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<td>MAIN ENGINE COURSES</td>
<td>Main engine 4-stroke medium-speed training High-speed main engine training course Main engine 2-stroke engine course LNG steam turbine propulsion plant course Engine performance course Engine room performance evaluation and troubleshooting course Engine room (4-stroke configuration) technical knowledge for ship</td>
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<td>COURSES TYPE</td>
<td>COURSES SPECIFICATION</td>
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<tr>
<td>ENGINEERING COURSES</td>
<td>Refrigeration and air conditioning</td>
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<td>Steam and boiler plant</td>
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<td>Diesel engine governor course</td>
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<td>Alfa Laval separator course</td>
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<td>Marine plant operation training course</td>
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<td>Turbocharger course</td>
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<td>Hydraulics and pneumatics</td>
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<td>Mechanical workshop practical basic</td>
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<td>Welding practical basic</td>
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<td>CONTROL, AUTOMATION AND ELECTRICAL</td>
<td>Instrumentation and automation</td>
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<tr>
<td>COURSES</td>
<td>Automation &amp; sensor techniques practical</td>
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<td>Marine high voltage</td>
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<td>Control system regolateurs Europa operation and practical advanced</td>
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<td></td>
<td>Control system Woodward operation and practical advanced</td>
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<td></td>
<td>Basic PLC course</td>
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<td>Practical electricity for marine engineers</td>
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<tr>
<td>ENVIRONMENTAL COURSES</td>
<td>Oil discharge monitoring and control system</td>
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<tr>
<td></td>
<td>Ship waste and marine pollution management</td>
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<tr>
<td></td>
<td>Marine Pollution 73/78 Annex 1</td>
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<td>Marine Pollution 73/78 Annex 2</td>
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<tr>
<td>HEALTH AND SAFETY COURSE</td>
<td>Basic safety training course</td>
</tr>
<tr>
<td>CADET PROGRAM</td>
<td>Structured training program for cadets</td>
</tr>
</tbody>
</table>
CONTACT INFORMATION

ARGENTINA

WÄRTSILÄ ARGENTINA S.A.  
GMT: ................................................................................................................... -3

SERVICES OFFICE BUENOS AIRES
Tronador 963
C1427CRS Buenos Aires
24hrs phone Service .................................................................9 11 4577 8906
24hrs phone Spare Parts .................................................................9 11 5605 7715
Switchboard ...........................................................................11 4555 1331
Fax ......................................................................................11 4555 0099

AUSTRALIA

WÄRTSILÄ AUSTRALIA PTY LTD.  
GMT: ............................................................................................................... +10

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48 Huntingwood Drive
N.S.W. 2148 Huntingwood
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Switchboard .................................................................2 9672 8200
Fax ................................................................................2 9672 8585
Fax Spare parts .................................................................2 8209 4911

WÄRTSILÄ AUSTRALIA PTY LTD.
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SERVICES OFFICE PERTH
19 Alacrity Place
WA 6166 Henderson
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WA 6965 Henderson
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Fax ................................................................................8 9410 1811
AZERBAIJAN +994

WÄRTSILÄ AZERBAIJAN LLC  WAZ

GMT: .................................................................................................................. +4

SERVICES OFFICE BAKU
Salyan Highway 22
AZ1023 Baku
24hrs phone ................................................................. 50 250 4662
Switchboard ............................................................... 12 545 9141
Direct phone Sales ...................................................... 12 545 9155
Fax ........................................................................... 12 545 9145

BANGLADESH +880

WÄRTSILÄ BANGLADESH LTD.  WKBD

GMT: .................................................................................................................. +6

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1213 Dhaka
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24hrs phone ............................................................. 17 1140 1975
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Fax ........................................................................... 2 883 6978

BRAZIL +55

WÄRTSILÄ BRASIL LTDA.  WBR

Rua São Luiz Gonzaga, 354 - São Cristóvão
20910-060 Rio de Janeiro

WÄRTSILÄ BRASIL LTDA.  WBR

GMT: .................................................................................................................. -3

INFOGLOBO POWER PLANT, O&M AND SERVICES OFFICE RIO DE JANEIRO
Rodovia Washington Luiz, 3.000 - Vila São Luiz
25085-000 Rio de Janeiro
Switchboard ............................................................. 21 2534 9589
Fax ........................................................................... 21 2534 9588
BRAZIL

WÄRTSILÄ BRASIL LTDA. WBR

GMT: ................................................................................................................... -3

PETROLINA POWER PLANT, O&M AND SERVICES OFFICE PETROLINA
Perímetro Irrigado Senador Nilo Coelho, s/no. Lotes Agri FS 644/645 N2 - Zona Rural
56304-000 Petrolina
Switchboard ................................................................. 87 3867 6000
Fax ................................................................. 87 3867 3324

WÄRTSILÄ BRASIL LTDA. WBR

PORTO VELHO POWER PLANT, O&M AND SERVICE OFFICE PORTO VELHO
(RONDÔNIA)
BR 364 Km 7,5 Sentido Cuiabá
78900-000 Porto Velho
Switchboard ................................................................. 69 3325 7805

WÄRTSILÄ BRASIL LTDA. WBR

GMT: ................................................................................................................... -4

SERVICES OFFICE & WORKSHOP MANAUS
Rua Acará, 12 - Distrito Industrial
69075-030 Manaus
24hrs phone ..............................................+55 92 8802-5525/+55 92 8802-5661
Switchboard ................................................................. 92 3614 1000
Fax ................................................................. 92 3614 1001

WÄRTSILÄ BRASIL LTDA. WBR

GMT: ................................................................................................................... -3

SERVICES OFFICE AND WORKSHOP RIO DE JANEIRO
Rua São Luiz Gonzaga, 354 - São Cristóvão
20910-060 Rio de Janeiro
24hrs phone Sulzer products .............................................. 21 3077 7919
Switchboard ................................................................. 21 3878 8900
Fax ................................................................. 21 3878 8901
Fax Service ................................................................. 21 3878 8908
Fax Service Sales ................................................................. 21 3878 8905
BRAZIL +55

WÄRTSLÄ BRASIL LTDA. WBR

GMT: .................................................................................................................. -3

TERMOCABO POWER PLANT, O&M AND SERVICES OFFICE TERMOCABO
Av. Refibras, 238 - Parte, Distrito Industrial de Cabo
54505-000 Cabo de Santo Agostinho
Switchboard ..........................................................81 2137 5250
Fax ..........................................................81 2137 5251

CAMEROON +237

WÄRTSLÄ CENTRAL AFRICA WCM

GMT: ................................................................................................................. +1

SERVICES OFFICE CAMEROON
Ex-Immeuble Socar, Batiment C, 3e Etage
Douala
Direct phone ..................................................33 43 28 76
Fax ..................................................33 43 28 77

CANADA +1

WÄRTSLÄ CANADA INC. WCA

GMT: ................................................................................................................... -4

SERVICES OFFICE HALIFAX NOVA SCOTIA
164 Akerley Boulevard, Dartmouth
B3B 1Z5 Halifax
24hrs phone ..................................................902 468 1264
Switchboard ..................................................902 468 1264
Fax ..................................................902 468 1265
Web .................................................. www.wartsila.ca
Toll Free (works only in Canada & USA) ..................................................800 468 1264

WÄRTSLÄ CANADA INC. WCA

GMT: .................................................................................................................. -5

SERVICES OFFICE MONTRÉAL QUÉBEC
4420, Garand Street
H4R 2A3 Montréal
Switchboard ..................................................514 335 3150
Fax ..................................................514 745 2930
WÄRTSILÄ CANADA INC. WCA

GMT: .................................................................................................................. -3,5

SERVICES OFFICE ST. JOHN’S NEWFOUNDLAND
27 Sagona Avenue, Mount Pearl
A1N 4P8 St. John’s
Switchboard .......................................................................................... 709 747 4600
Fax .................................................................................................. 709 747 4486
Web ................................................................................................... www.wartsila.ca

WÄRTSILÄ CANADA INC. WCA

GMT: .................................................................................................................. -8

SERVICES OFFICE VANCOUVER BRITISH COLUMBIA
1771 Savage Road, Richmond
V6V 1R1 Vancouver
24hrs phone .......................................................................................... 604 244 8181
Switchboard .......................................................................................... 604 244 8181
Fax .................................................................................................. 604 244 1181
Web ................................................................................................... www.wartsila.ca

WÄRTSILÄ CANADA INC. WCA

GMT: .................................................................................................................. -8

SERVICES OFFICE VICTORIA BRITISH COLUMBIA
104-455 Banga Place
V8Z 6X5 Victoria
Switchboard .......................................................................................... 250 360 1557
Fax .................................................................................................. 250 360 1561
Web ................................................................................................... www.wartsila.ca
WÄRTSILÄ CHILE LTD.  WCL
VALPARAÍSO
SERVICES OFFICE ANTOFAGASTA
Avda. Edmundo Perez Zujovic 5554, Local 3
Antofagasta
Direct phone .................................................................55 268723
Fax ...............................................................55 268343

WÄRTSILÄ CHILE LTD.  WCL
GMT: .................................................................................. -4
SERVICES OFFICE TALCAHUANO
Autopista 5980
Talcahuano
24hrs phone .............................................................9 97451 753
Switchboard ..........................................................41 2421 561
Fax ..............................................................41 2420 229

WÄRTSILÄ CHILE LTD.  WCL
GMT: .................................................................................. -4
SERVICES OFFICE VALPARAÍSO
Av. Brasil 2076
Valparaíso
24hrs phone .............................................................9 93278 644
Switchboard ..........................................................32 2570 600
Fax ..............................................................32 2570 601

CHINA  +852
WÄRTSILÄ CHINA LTD. (HONG KONG)
GMT: .................................................................................. +8
SERVICES OFFICE & WORKSHOP
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Hong Kong
Switchboard .................................................................2528 6605
Fax ..............................................................2529 6672
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GMT: +86

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201201 Shanghai
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Fax: 21 5858 9331

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GMT: +86

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201201 Shanghai
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SERVICES OFFICE JIANGSU
No. 5 Zhongyuan Road, Nantong
226006 Jiangsu
Direct phone: 513 850 56701
Fax: 513 835 20392
e-mail: total@cosco-shipyard.com

WÄRTSILÄ SERVICES (SHANGHAI) CO., LTD. (NANSHA BRANCH)
SERVICES OFFICE
No. 1-11A, Section B of Nansha Auto Park, Xin Guang 3rd Road, Pearl River Management District, Nansha Development
511462 Guangzhou
Direct phone: 20 3905 6288
Fax: 20 3905 6299
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SERVICES
Office 1102 Swissôtel, No. 21 Wu Hui Road, Zhongshan District
116001 Dalian
Direct phone .................................................................411 8230 9819
Fax .................................................................411 8230 9829

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SHANHAIGUAN SHIPYARD SERVICE STATION

SERVICES OFFICE
No. 1, Shipyard Road, Economic and Technical Development Zone
066206 Qinhuangdao
Direct phone .................................................................335 5088 536
Fax .................................................................335 5088 536

WÄRTSILÄ QIYAO DIESEL COMPANY LTD. (SHANGHAI)

SHANGHAI OFFICE
No. 2988, Jiangshan Rd, Lingang, Nanhui District
201306 Shanghai
Direct phone .................................................................21 6828 4688
Fax .................................................................21 6828 4149

WÄRTSILÄ SERVICES (SHANGHAI) CO., LTD.
ZHOUshan SERVICE STATION

ZHOUshan OFFICE
No. 23, East 1 Road, Zhoushan Shipping Commodity Exchange Market
316021 Zhoushan
Direct phone .................................................................580 2085 670
Fax .................................................................580 2085 650
COLOMBIA

WÄRTSILÄ COLOMBIA S.A. WCO

GMT: ..........................................................-5

CARACOLITO POWER PLANT, O&M SERVICES
Km. 3 vía Buenos Aires - Payandé. Planta Caracolito
Ibagué
Switchboard ..........................................................8 2 70 9170
Fax ..........................................................8 2 70 9176

SERVICES OFFICE BOGOTÁ
Calle 98 # 69-64, La Floresta
Bogotá
Switchboard ........................................624 4448
Switchboard ........................................1 643 2150
Fax ................................................1 253 6006
Web ................................................www.wartsila.com/colombia

CYPRUS

WÄRTSILÄ CYPRUS WCY

GMT: ..........................................................+2

SERVICES OFFICE LIMASSOL
Lordos Central Court No. 1,
6th FloorCorner Arch. Makarios III Ave. & A. Sioukri Str.
CY-3105 Limassol
P.O. Box 52471
CY-4064 Limassol
24hrs phone ....................................................25 812 194
Switchboard ....................................................25 313 761
Fax .........................................................25 812 195
e-mail ....................................................cyprus@wartsila.com
WÄRTSILÄ DANMARK A/S

GMT: +1

MAIN OFFICE HIRTSHALS
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DK-9850 Hirtshals
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Hirtshals
24hrs phone ................................................................. 99 569 908
Switchboard ............................................................... 99 569 956
Fax Administration / Spare parts ................................... 98 943 920
Fax Propeller & Shaft .................................................... 98 945 253
Fax Service Sales .......................................................... 98 943 920
Fax Workshop / Field Service ....................................... 98 945 253
ISDN ........................................................................ 98 946 480

SERVICES OFFICE AALBORG
Indkildevej 2B
DK-9210 Aalborg SØ
Switchboard ............................................................... 96 400 900
Fax ............................................................................. 98 562 469
Web ........................................................................... www.wartsila.com

SERVICES OFFICE COPENHAGEN
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DK-1553 Copenhagen V
Switchboard ............................................................... 3345 4133
Fax ............................................................................. 3345 4130

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Lejrevej 7
DK-9230 Svenstrup
24hrs phone ................................................................. 96 372 000
Direct phone ............................................................... 96 372 000
DOMINICAN REPUBLIC
+1

WÄRTSILÄ DOMINICANA C. POR A. WDO

GMT: .......................................................... -4

SERVICES OFFICE SANTO DOMINGO
Autopista Duarte Km. 13½, Urbanizacion Alameda
Santo Domingo
24hrs phone ................................................. 809 564 7184
Switchboard ................................................ 809 564 7184
Fax ................................................................. 809 372 7968

ECUADOR
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WÄRTSILÄ ECUADOR S.A. WEC

GMT: ........................................................... -5

SERVICES OFFICE QUITO
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Quito
24hrs phone Service ..................................... 99 461 298
24hrs phone Spare parts ................................. 99 461 281
Switchboard .................................................. 2 2811 215
Fax ................................................................. 2 3280 758

EGYPT
+20

WÄRTSILÄ EGYPT POWER LTD. WEG

SERVICES OFFICE CAIRO
5 A, El Hassan Street, Out of El Moushier Ahmed Ismail, Masaken Sheraton
Cairo
Switchboard .................................................. 2 226 759 78

WÄRTSILÄ INSTALLATIONS AND CONSTRUCTIONS WIC

SERVICES OFFICE CAIRO
5 A, El Hassan Street, Out of El Moushier Ahmed Ismail, Masaken Sheraton
Cairo
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Switchboard .................................................. 2 226 759 78
Fax ................................................................. 2 226 759 78
WÄRTSILÄ BLRT ESTONIA OU
WEE

ESTONIA +372

GMT: .................................................................+2

SERVICES OFFICE TALLINN
Kopli 103
11712 Tallinn
N/A
11712 Tallinn
24hrs phone ..............................................................510 4571
24hrs phone ..............................................................565 4442
24hrs phone (rus) ........................................................502 7904
Switchboard ..............................................................610 2241
Fax .................................................................301 100
E-mail ..............................................................info@faroeyard.fo
Web ..............................................................www.faroeyard.fo

FAROE ISLANDS +298

TORSHAVNAR SKIPASMIDJA

TORSHAVNAR SKIPASMIDJA
J.C. Svabosgøta 31
FO-110 Tórshavn
P.O.Box 65
FO-110 Tórshavn

SERVICES SALES REPRESENTATIVE OFFICE
J.C. Svabosgøta 31
FO-110 Torshavn
P.O. Box 65
FO-110 Torshavn
Switchboard ..............................................................301 100
Fax .................................................................301 101
E-mail ..............................................................info@faroeyard.fo
Web ..............................................................www.faroeyard.fo
WÄRTSILÄ FINLAND OY

GMT: ................................................................................................................. +2

SERVICES OFFICE TURKU
Stålarminkatu 45
FI-20810 Turku
P.O. Box 50
FI-20811 Turku

24hrs phone ................................................................. 10 709 090
Switchboard ................................................................. 10 709 0000
Direct phone Conference room ................................. 10 709 3415
Direct phone Service Sales Support, Spare Part Coordinations Team ....... 10 709 1506
Fax Business Control .................................................. 10 709 3595
Fax Customer Assistance Centre .................................. 10 709 3279
Fax Field Service ....................................................... 10 709 3455
Fax Parts ................................................................. 10 709 3435
Fax Service Network Finland, Field Service, Turku ............ 10 709 3455
Fax Service Network Finland, Turku ............................. 10 709 3033
Fax Service Sales Support, Middle East & South Asia ............. 10 709 3410
Fax Service Sales Support, Parts Coordination Team ............ 10 709 3179
Fax Service Sales Support, South Europe & Africa ................. 10 709 3410
Fax Technical Service Wärtsilä 46/50DF .......................... 10 709 3279
Fax Wärtsilä Land & Sea Academy ............................... 10 709 3595
ISDN Conference room ............................................... 10 709 1736
FINLAND +358

WÄRTSILÄ CORPORATION W-S

GMT: +2

SERVICES HELSINKI
John Stenbergin ranta 2
FI-00530 Helsinki
P.O. Box 196
FI-00531 Helsinki
Switchboard 10 709 0000
Fax 10 709 5700
Web www.wartsila.com

SERVICES TURKU
Stålarminkatu 45
FI-20810 Turku
P.O. Box 50
FI-20811 Turku
Switchboard 10 709 0000
Fax 10 709 3411
Web www.wartsila.com/service

SERVICES VAASA
Kauppapuistikko 15
FI-65100 Vaasa
Switchboard 10 709 0000
Fax 10 709 2422
Web www.wartsila.com/service
WÄRTSILÄ FRANCE S.A.S.  WFR

GMT: .................................................................................................................. +1

MAIN OFFICE MULHOUSE
1, rue de la Fonderie
FR-68054 Mulhouse
P.O. Box 1210
Mulhouse
24hrs phone ........................................................................................................147 897 748
Switchboard ........................................................................................................389 666 868
Fax Service ........................................................................................................389 666 830

SERVICES OFFICE GENNEVILLIERS
22 Fulgence Bienvenüe
FR-92238 Gennevilliers
24hrs phone ........................................................................................................147 897 748
Switchboard ........................................................................................................141 218 420
Fax .......................................................................................................................141 218 429

SERVICES OFFICE MARSEILLE
Enceinte portuaire - Porte 4 - Site CIMM
FR-13344 Marseille
Cedex 15
Marseille
24hrs phone ........................................................................................................147 897 748
Switchboard ........................................................................................................491 039 920
Fax .......................................................................................................................491 039 921

SERVICES OFFICE SURGERES
La Combe
FR-17700 Surgeres
B.P. 1213
F-17700 Surgeres
24hrs phone ........................................................................................................147 897 748
Switchboard ........................................................................................................546 30 31 32
Fax .......................................................................................................................546 07 35 37
FRANCE

WHESSOE S.A.

GMT: .................................................................+1

SERVICES OFFICE CALAIS
119, Rue de Bitche
FR-62100 Calais
Direct phone .................................................................3 2196 4993
Fax .................................................................3 2134 3612
e-mail .................................................................contact@whessoe.fr

WÄRTSILÄ AUTOMATION SERVICES FRANCE S.A.S.

AUTOMATION
54, Rue Demidoff
FR-76600 Le Havre
Direct phone .................................................................235 24 09 05
Fax .................................................................235 25 35 59

FRENCH POLYNESIA

POLY-DIESEL

GMT: .................................................................- 10

SERVICES SALES REPRESENTATIVE OFFICE
Zi Punaruu Voie E
Tahiti
P.O.Box 380589
98718 Tahiti
Direct phone .................................................................505 275
Fax .................................................................435 396
e-mail .................................................................poly@poly.pf
Web .................................................................http://www.poly-diesel.pf/
GABON +241

WÄRTSILÄ WEST AFRICA, LIBREVILLE WWA

GMT: .................................................................+1

SERVICES OFFICE
Enceinte Enelec - Route d’Owendo
Libreville
P.O. Box 10322
Libreville
Switchboard ..........................................................70 40 07
Fax .................................................................70 40 07

GERMANY +49

WÄRTSILÄ DEUTSCHLAND GMBH WDE

GMT: .................................................................+1

DEUTZ ENGINE SERVICES
Schlenzigstrasse 6
D-21107 Hamburg
24hrs phone .................................................................175 221 0365
Direct phone ...............................................................40 75190-0
Fax .................................................................40 75190-194
e-mail ................................................................. hamburg@wartsila.com
Web ................................................................. www.wartsila.com/germany

DEUTZ MARINE SERVICES
Hannoversche Strasse 8 b
D-26384 Wilhelmshaven
Direct phone ..............................................................4421 993474
Fax .................................................................4421 993473
e-mail ................................................................. hamburg@wartsila.com
Web ................................................................. www.wartsila.com/germany

ELECTRICAL & AUTOMATION SERVICES
Georgswerder Bogen 7
D-21109 Hamburg
Direct phone ..............................................................40 75 49 66 0
Fax .................................................................40 75 49 66 24
e-mail ................................................................. info@christophel.de
WÄRTSILÄ DEUTSCHLAND GMBH

GMT: +1

INJECTION SERVICES
Schlenzigstrasse 6
D-21107 Hamburg
Direct phone: 40 75190-0
Fax: 40 75190-101
e-mail: hamburg@wartsila.com
Web: www.wartsila.com/germany

PROPULSION SERVICES
Rheinmühlenstrasse 7
D-68159 Mannheim
Direct phone: 62 110 2004
Fax: 62 110 2144
e-mail: hamburg@wartsila.com
Web: www.wartsila.com/germany

PROPULSION/CIPS SERVICES
Werftstrasse 6
D-47053 Duisburg
Direct phone: 203 667652
Fax: 203 7297468
e-mail: hamburg@wartsila.com
Web: www.wartsila.com/germany

SERVICES OFFICE HAMBURG
Schlenzigstrasse 6
D-21107 Hamburg
24hrs phone: 172 515 8611
24hrs phone: 170 187 4068
Direct phone: 40 75190-0
Fax: 40 75190-190
Fax Field Service: 40 75190-192
Fax Propulsion: 40 75190-196
Fax Spare Parts: 40 75190-193
Fax Spare Parts Sales 2-stroke: 40 75190-198
Fax Spare Parts Sales 4-stroke: 40 75190-199
Fax Technical Service & Indirect Purchasing: 40 75190-194
Fax Workshop: 40 75190-195
e-mail: hamburg@wartsila.com
Web: www.wartsila.com/germany
GREECE +30

WÄRTSILÄ GREECE S.A. WGR
GMT: +2

SERVICES OFFICE PIRAEUS
25, Akti Miaouli
GR-18535 Piraeus
P.O. Box 86011
18503 Piraeus
24hrs phone: 694 459 4562
Switchboard: 210 413 5450
Fax: 210 411 7902

WORKSHOP MANDRA
Loutsas Str. 50
GR 19600 Mandra
24hrs phone: 694 459 4562
Direct phone: 210 555 3050
Fax: 210 555 3059

GUATEMALA +502

WÄRTSILÄ GUATEMALA S.A. WGT
GMT: -6

SERVICES OFFICE GUATEMALA
Km. 19.5, Carretera al Pacífico, Parque Empresarial Naciones Unidas, Office No. 5
1064 Guatemala City
Apto. Postal 30 "H"
01011 Guatemala City
24hrs phone: 5204 7756
Switchboard: 2384 9600
Fax Sales: 2384 9610
Fax Service: 2384 9620

GUINEA +224

WÄRTSILÄ WEST AFRICA GUINÉE

SERVICES OFFICE
Cité chemin de fer, Immeuble Labé 1er étage
BP 504 Conakry
Direct phone: 30 43 47 97
Fax: 30 43 47 97
HUNGARY +36

WÄRTSILÄ HUNGARY KFT. WHU
GMT: .................................................................................................................+1

SERVICES OFFICE HUNGARY
Gyár u. 2.
H-2040 Budaörs
Pf. 43
H-2058 Budaörs
24hrs phone ..........................................................30 743 2701
Switchboard ............................................................23 532 127
Fax ........................................................................23 532 128

ICELAND +354

VÉLAR OG SKIP EHF. SIS
GMT: ...............................................................................................................GMT

SERVICES SALES REPRESENTATIVE
Hólmaslóð 4
IS-101 Reykjavik
24hrs phone ..........................................................896 1277
24hrs phone ..........................................................892 7713
24hrs phone ..........................................................892 0037
Direct phone ..........................................................562 0095
Fax ........................................................................562 1095
WÄRTSILÄ INDIA LTD.

MANUFACTURING, EOU
Gate No. 1, Opp. Govt Rest House, Mumbai - Pune Road, Shilphata
410 203 Khopoli
Direct phone ....................................................................................02192 262896
Fax .................................................................................................02192 263314

MARINE SERVICES WORKSHOP
Paradip Port Trust, PO - Paradip Port, Orissa
754 142 Paradip
Direct phone .................................................................................06722 222 047/222 125
Fax .................................................................................................06722 222 025

MARINE SERVICES WORKSHOP
Plot No. 3, Auto Industrial Nagar Village - Vadlapudi, Mandal Gajuwaka, Industrial
Development Area, D, Block
530 012 Visakhapatnam
Direct phone .....................................................................................891 645 7771
Fax .................................................................................................891 270 0210

SERVICES OFFICE CHENNAI
Laxmi Chambers, 30, Anna Salai, Saidapet
600 015 Chennai
Direct phone .....................................................................................44 2230 1080 to 88
Fax .................................................................................................44 2230 0477
Fax Operations & Maintenance ...........................................................44 2230 1089

SERVICES OFFICE KOLKATA
Camac Tower, 3rd Floor, Camac Street
700 016 Kolkata (Calcutta)
Switchboard .....................................................................................33 2229 5115
Switchboard .....................................................................................33 2229 9602
Switchboard .....................................................................................33 2226 9567
Direct phone .....................................................................................33 2217 2320
Fax .................................................................................................33 2249 7535

SERVICES OFFICE MANGALORE
B-Wing, 6th Floor, Rama Bhavan Complex, Kodiabail
575 003 Mangalore
Direct phone .....................................................................................824 2441 722
Switchboard No. 2..............................................................................824 2444 577
Fax .................................................................................................824 2443 556
WÄRTSILÄ INDIA LTD. WIN

GMT: .................................................................+5:30

SERVICES OFFICE NAVI MUMBAI
48, Neco Chambers, Sector-11, C B D Belapur
400 614 Navi Mumbai Registered Office
Direct phone ......................................................... 22 2757 5361/71
Switchboard No. 2 ................................................. 22 2757 5371
Fax Finance ............................................................ 22 2757 5178
Fax Operations & Maintenance ......................... 22 2757 5370
Fax Power Plants .................................................. 22 2757 5177
Fax Service and Operations & Maintenance .......... 22 2757 5176 - 78

SERVICES OFFICE NOIDA
Plot A-98, Sector 5, Noida, Dist. Gautam Budh Nagar
201 301 Noida
Direct phone .......................................................... 120 419 2000
Switchboard ............................................................. 120 244 5101
Fax ........................................................................... 120 419 2199

SERVICES OFFICE SECUNDERABAD
Flat # 301, Oxford Plaza, S.D. Road
500 003 Secunderabad
Direct phone .......................................................... 40 2771 5383
Fax ........................................................................... 40 2771 5377

SERVICES WORKSHOP
Gate No.1, Opp.Govt Rest House, Mumbai - Pune Road, Shilphata
410 203 Khopoli
Direct phone ......................................................... 02192 262896
Fax ........................................................................... 02192 263314

SPARE PARTS STORES KHOPOLI
Gate No.2, Opp. Govt Rest House, Mumbai - Pune Road, Shilphata
410 203 Khopoli
Direct phone ......................................................... 02192 262186/87
Switchboard No. 2 .................................................. 02192 262896
Fax ........................................................................... 02192 262692

WÄRTSILÄ LAND AND SEA ACADEMY
Gate No. 1, Opp. Govt Rest House, Mumbai - Pune Road, Shilphata
410 203 Khopoli
Direct phone .......................................................... +91 02192- 262895/ 263314
Direct phone .......................................................... 02192 262896
Fax ........................................................................... 02192 263314
<table>
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<tr>
<th>Country</th>
<th>Phone Code</th>
<th>Company Name</th>
<th>Main Office Address</th>
<th>Main Office Phone</th>
<th>Main Office Switchboard</th>
<th>Main Office Fax</th>
<th>Office Fax No. 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ireland</td>
<td>+353</td>
<td>Wärtsilä Ireland Ltd. WIE</td>
<td>54 Broomhill Drive, Tallaght, IE-24 Dublin</td>
<td>1 462 6700</td>
<td>1 462 6700</td>
<td>1 462 6722</td>
<td></td>
</tr>
</tbody>
</table>
ITALY

WÄRTSILÄ ITALIA S.P.A.

FIELD SERVICE OFFICE CIVITAVECCHIA
C/o Centro Polifunzionale "Il Saraceno" Via Prato del Turco
IT-00053 Civitavecchia
Switchboard .................................................................076 636 6392
Fax .................................................................076 636 6393

FIELD SERVICE OFFICE LIVORNO
Via delle Cateratte, 94
IT-57100 Livorno
Switchboard .................................................................0586 896 522
Fax .................................................................0586 882 071

FIELD SERVICE OFFICE MESSINA
C/O R.F.I. - Direzione Movimento Navigazione, Via S. Raineri - Zona Falcata
IT-98122 Messina
Switchboard .................................................................090 670 040
Fax .................................................................090 710 546

FIELD SERVICE OFFICE NAPOLI
Calata Porta di Massa
IT-80133 Napoli
24hrs phone V. di Gennaro........................................335 784 1217
Switchboard .................................................................081 552 7530
Switchboard Warehouse ........................................081 552 7390
Fax Service .................................................................081 552 7680
Fax Warehouse .................................................................081 552 7168

FIELD SERVICE OFFICE PALERMO
Zona Demaniale Marittima, Banchina Puntone, C/o Varco Santa Lucia
IT-90100 Palermo
Switchboard .................................................................091 322 442
Fax .................................................................091 322 443

GENOVA SERVICES CENTRE
Via al Molo Giano
IT-16128 Genova
Switchboard .................................................................010 599 5800
Fax .................................................................010 247 2341
WÄRTSILÄ ITALIA S.P.A.  WIT

GMT: .................................................................................................................+1

OFFICE & WORKSHOP GENOVA
Via dei Pescatori
IT-16128 Genova
24hrs phone Field Service ................................................................. 335 716 7678
Switchboard ..................................................................................... 010 247 9904
Fax ........................................................................................................ 010 254 1599
Fax Administration ........................................................................ 010 275 9155
Fax Service Sales ............................................................................ 010 275 8013
Fax Ship Power ................................................................................ 010 254 3902
Fax Spare Parts ............................................................................... 010 251 1531
Fax Warranty & Field Service ..................................................... 010 275 8587

SERVICES MAIN OFFICE TRIESTE
Bagnoli della Rosandra, 334, San Dorligo della Valle
IT-34018 Trieste
24hrs phone ..................................................................................... 335 784 1217
Switchboard ..................................................................................... 040 319 5000
Fax Service ......................................................................................... 040 319 5647

WORKSHOP TARANTO
Circummarpiccolo 9000
IT-74100 Taranto
Switchboard ..................................................................................... 099 453 5060
Fax ........................................................................................................ 099 453 5066
JAPAN +81

WÄRTSILÄ JAPAN LTD. WJP

GMT: ................................................................................................................. +9

MAIN OFFICE TOKYO
NTC Bldg 5F, 1-11-2 Kyobashi, Chuo-ku
104-0031 Tokyo
Switchboard ....................................................................................... 3 5159 8700
Fax .................................................................................................... 3 5159 8710

SERVICES OFFICE KOBE
6-7-2 Minatojima, Chuo-ku
650-0045 Kobe
24hrs phone ..................................................................................... 90 1913 0474
Direct phone ....................................................................................... 78 304 7514
Switchboard ....................................................................................... 78 304 7501
Switchboard Field Service .................................................................. 78 304 7514
Switchboard Spare Parts .................................................................. 78 304 7517
Fax .................................................................................................... 78 303 6171

KENYA +254

WÄRTSILÄ EASTERN AFRICA LTD. WEA

GMT: ................................................................................................................. +3

SERVICES OFFICE NAIROBI
House of Vanguard, Fuji Plaza, "5th Floor" Chiromo Road, Westlands
Nairobi
P.O. Box 66782
00800 Nairobi
24hrs phone ..................................................................................... 733 609 279
24hrs phone ..................................................................................... 733 609 284
Switchboard ....................................................................................... 20 444 7988
Switchboard No. 2 ........................................................................ 20 444 7989
Switchboard No. 3 ........................................................................ 722 209 570
Switchboard No. 4 ........................................................................ 20 444 6985
Switchboard No. 6 ........................................................................ 20 445 0140
Switchboard No. 7 ........................................................................ 733 950 343
Fax Administration ........................................................................ 20 444 6719
Fax Service ..................................................................................... 20 444 7102
e-mail ................................................................................ info.wea@wartsila.com
KOREA +82

WÄRTSILÄ KOREA LTD. WKR
GMT: ................................................................. +9

ASIA SPARE PARTS CENTRE
Taenam Holdings LTD., 1705-1 Songjung-dong Gangseo-gu
618-820 Busan
Direct phone .................................................................51 710 9400
Fax .................................................................51 710 9401

EOMGUNG MAIN OFFICE
651-16, Eomgung-Dong, Sasang-gu
617-831 Busan
24hrs phone .................................................................17 546 0202
Switchboard .................................................................51 329 0500
Fax .................................................................51 324 4348

INCHEON BRANCH OFFICE
173-407, Gajwa-dong, Seo-gu
404-811 Incheon
Direct phone .................................................................32 710 1400
Fax .................................................................32 710 1401

WÄRTSILÄ LAND & SEA ACADEMY
1178-3, Jisa-dong, Gangseo-gu
618-230 Busan
Direct phone .................................................................51 832 9900
Fax .................................................................51 832 9901

WÄRTSILÄ-HYUNDAI ENGINE COMPANY LTD. WHEC

WÄRTSILÄ-HYUNDAI ENGINE COMPANY
Daebul Industrial Complex, Block 5, Nabuli 611-29, Samho-eup
526-891 Yeongam-gun
Direct phone .................................................................61 983 1000
Fax .................................................................61 983 1110
LITHUANIA +370

WÄRTSILÄ BLRT LITHUANIA WLT
GMT: +2

SERVICE OFFICE
Minijos Str. 180
LT-93269 Klaipeda
24hrs phone: 614 971 67
24hrs phone: 614 292 30
Direct phone: 46 483 761
Fax: 46 483 762

MADAGASCAR +261

WÄRTSILÄ SOUTH AFRICA (PTY) LTD. WZA
GMT: +2

MADAGASCAR BRANCH OFFICE
Caldwell Business Suites, 2nd Floor Wartsila South Africa, Madagascar Branch,
Immeuble Assist Ivandry
101 Antananarivo
Direct phone: 20 224 3267
Fax: 20 224 3270

MALAYSIA +60

WÄRTSILÄ MALAYSIA SDN. BHD. WMY
GMT: +8

SERVICES OFFICE KUALA LUMPUR
Suite C-10-05, Plaza Mont Kiara, No. 2, Jalan 1/70C
50480 Kuala Lumpur
24hrs phone: +65 9835 8200
Switchboard: 3 6203 5072
Fax: 3 6203 5073
MEXICO +52

WÄRTSILÄ DE MEXICO S.A. DE C.V. WMX

GMT: ................................................................. -6

SERVICES OFFICE VERACRUZ
Calle Laurel lote 32 esquina Arrayanes, Cd. Industrial Bruno Pagliai Tejeria
CP 91697 Veracruz
24hrs phone ...................................................... 229 155 3299
Switchboard ...................................................... 229 155 3299
Fax ................................................................. 229 155 3298

MOROCCO +212

SOCIÉTÉ SALVA SMA

GMT: ................................................................. GMT

SERVICES SALES REPRESENTATIVE OFFICE
Ancien Port de Pêche
Agadir
24hrs phone ...................................................... 5 6758 2641
Direct phone ...................................................... 5 2884 3627/28
Fax ................................................................. 5 2884 3629
e-mail .............................................................. salvaport@menara.ma

SERVICES SALES REPRESENTATIVE OFFICE
93 Boulevard de la Résistance
20300 Casablanca
Direct phone ...................................................... 5 2230 4038
Fax ................................................................. 5 2230 6675
e-mail .............................................................. info@salvamaroc.com
Web ................................................................. http://www.salvamaroc.com/Pagesaw/con_aw.html

NAMIBIA +264

WÄRTSILÄ SOUTH AFRICA (PTY) LTD. WZA

GMT: ................................................................. GMT

NAMIBIA BRANCH OFFICE
No: 8 Grand Avenue, Industrial Area
Walvis Bay
P.O.Box 3018
Walvis Bay
Direct phone ...................................................... 64 203 998
Fax ................................................................. 64 200 534
WÄRTSILÄ NETHERLANDS B.V. WNL

GMT: .................................................................+1

SERVICES OFFICE GIESSENDAM
Rivierdijk 559
NL-3371 EC Hardinxveld Giessendam
Direct phone .............................................................184 614 617
Fax ................................................................................184 616 411

SERVICES ZWOLLE
Hanzelaan 95
NL-8000GB Zwolle
P.O. Box 10608
Zwolle
24hrs phone Service Sales ..................................................38 425 3253
Switchboard ......................................................................38 425 3253
Fax ....................................................................................38 425 3538
Fax Field Service ........................................................……38 425 3471
Fax Logistics ........................................................................38 425 3290
Fax Service Product Development .........................................38 425 3391
Fax Service Sales Africa & Middle East .................................38 425 3308
Fax Service Sales Americas ...................................................38 425 3457
Fax Service Sales Europe, Africa ..........................................38 425 3397
Fax Service Sales Middle East, Asia / Sales Support ................38 425 3813
Telex .................................................................................42115 swdz nl

TRAINING CENTRE
Altenaweg 18
NL-5145 PC Waalwijk
Direct phone .................................................................416 388 115
NETHERLANDS  +31

WÄRTSILÄ SWITZERLAND LTD (MOERDIJK)  WCH

GMT: .................................................................................................................+1

LOGISTIC CENTRE MOERDIJK
Vlasweg 6, Harbourno M142
NL-4782 PW Moerdijk
P.O. Box 5007
4780 KA Moerdijk
24hrs phone ........................................................................................................651 802 667
Direct phone .................................................................................................168 388 770
Fax .............................................................................................................168 388 779

NEW ZEALAND  +64

WÄRTSILÄ AUSTRALIA PTY LTD.  WAU

GMT: .................................................................................................................+12

NEW ZEALAND BRANCH
HMSNZ Dockyard, Queens Parade, Devonport
0624 Auckland
P.O. Box 32903, Devonport
0744 Auckland
Direct phone .................................................................................................9 445 3495
WÄRTSILÄ NORWAY AS
WNO

GMT: +1

SERVICE SALES BERGEN
Skoltegrunnskaien 2
N-5003 Bergen
Direct phone: 53 42 25 00
Fax: 53 42 25 01

SERVICE SALES OSLO
Stenersgate 2
N-0184 Oslo
P.O.Box 8905, Youngstorget
N-0028 Oslo
Direct phone: 53 42 25 00
Fax: 53 42 25 01

SERVICES OFFICE RUBBESTADNESET
Rubbestadsneset
N-5420 Rubbestadneset
24hrs phone Service: 53 422 500
Switchboard: 53 422 500
Fax: 53 422 501
e-mail: spares.wno@wartsila.com
Web: www.wartsila.com/norway

SERVICES OFFICE STORD
Verftsveien 115
N-5411 Stord
P.O. Box 684
N-5404 Stord
Direct phone: 5342 2500
Fax: 5342 2501

WÄRTSILÄ NORWAY ÅLESUND ASA
Maritime Service, Tonningsgate 11
N-6006 Ålesund
Direct phone: 70 10 23 40
Fax: 53 42 25 01
PAKISTAN

WÄRTSILÄ PAKISTAN (PVT) LTD. WPK

GMT: +5

SERVICES OFFICE KARACHI
Plot No F-8, KDA Scheme No.1, Tipu Sultan Road
Karachi
24hrs phone .......................................................... 300 826 9014
Direct phone .......................................................... 21 3437 5830
Fax .......................................................... 21 3437 5821

SERVICES OFFICE LAHORE
16 km Raiwind Road
Lahore
P.O. Box 10104
Lahore
24hrs phone .......................................................... 301 829 6311
Switchboard .......................................................... 42 3541 8846
Fax .......................................................... 42 3541 9833

PANAMA

WÄRTSILÄ PANAMA, S.A.

SERVICES OFFICE
Corozal Oeste, Edificio 402, Castle Loop, Corregimiento de Ancón
Balboa
P.O.Box 0843-01160
Balboa
24hrs phone .......................................................... 6676 9826
Direct phone .......................................................... 317 4100
Fax .......................................................... 317 6794
e-mail .......................................................... panama@wartsila.com
PAPUA NEW GUINEA  +675

WÄRTSILÄ PNG PTY LTD.  WAU

GMT: .................................................................................................................. +10

SERVICES OFFICE PAPUA NEW GUINEA
Porebada Road NCD
Motukea Island
P.O. Box 379, Port Moresby, NCD
Motukea Island
Direct phone ............................................................................................................ 321 8160
Fax ...................................................................................................................... 321 8169

PERU  +51

WÄRTSILÄ PERU S.A.C.  WPE

GMT: .................................................................................................................. -5

SERVICES OFFICE LIMA
Pasaje Martir Olaya 129, Centro Empresarial Jose Pardo, Torre A, Piso 11, Oficina
1101, Miraflores
18 Lima
24hrs phone ............................................................................................................ 1 99970 1281
Switchboard ......................................................................................................... 1 241 7030
Fax ...................................................................................................................... 1 444 6867
WÄRTSILÄ PHILIPPINES INC.  
GMT: +8

SERVICES OFFICE LAGUNA
No. 6 Diode Street, Light Industry and Science Park, Bo. Diezmo, Cabuyao
4025 Laguna
24hrs phone 918 910 8392
Switchboard 49 543 0382
Switchboard No. 2 2 843 7301
Switchboard No. 3 2 6001 0476
Switchboard No. 4 2 6001 0477
Fax 49 543 0381
Fax No. 2 2 843 7305
Web www.wartsila.com/philippines

WÄRTSILÄ LAND & SEA ACADEMY, INC.  
WÄRTSILÄ LAND & SEA ACADEMY, SUBIC BAY
Bldg. 2082 & 2083 Corregidor Highway, Naval Magazine Area, Subic Bay Freeport
Zone 2222
Subic Bay
Switchboard 47 252 6402
Switchboard No. 2 47 252 6483
Switchboard No. 3 47 252 2592
Switchboard No. 4 47 252 8749
Fax 47 252 6482
Web www.wartsila.com

WÄRTSILÄ POLSKA SP. Z O.O.  
GMT: +1

BRANCH OFFICE GDANSK
Ul. Twarda 12
80-871 Gdansk
Switchboard 58 345 2344
Fax 58 341 6744

SERVICES OFFICE WARSZAWA
Ul. Jakuba Kubickiego 13
PL-02-954 Warsaw
24hrs phone 604 137 495
Switchboard 22 550 6172
Fax 22 550 6173
PORTUGAL  

WÄRTSILÄ PORTUGAL, LDA.  

WPT  

GMT: .......................................................................................................................... GMT

SERVICES OFFICE MAIA  
Zona Industrial da Maia I, Sector X, Lote 362, 363  
PT-4471-909 Maia  
P.O. Box 1415  
PT-4471-909 Maia  

24hrs phone Electrical Field Service: .......................................................... 93 723 1644  
24hrs phone Mechanical Field Service: ................................................... 93 723 1643  
Switchboard Field Service: ...................................................................... 22 943 9722  
Switchboard Spare Parts & Service Sales: ............................................ 22 943 9721  
Switchboard Switchboard: ....................................................................... 22 943 9720  
Fax: .............................................................................................................. 22 943 9729  
e-mail: ........................................................................................................... portugal@wartsila.com

ENERGETUS INSTALACOES INDUSTRIAIS SA  

SULZER REPRESENTATIVE OFFICE (ONLY FOR SULZER ENGINES)  
Rua Castilho 1-6  
PT-1250-066 Lisbon  
Direct phone: ................................................................................................. 21 351 2900  
Web: ............................................................................................................. http://www.energetus.com

PUERTO RICO  

WÄRTSILÄ CARIBBEAN INC.  

WPR  

GMT: ...................................................................................................................... -4

SERVICES OFFICE CAROLINA  
Road 887 Km 0.6, Street A Lot 5, Industrial Park Julio N. Matos  
PR 00987 Carolina  
P.O. Box 7039  
PR 00986-7039 Carolina  

24hrs phone: ...................................................................................................... 787 605 0512  
Switchboard: .................................................................................................... 787 701 2288  
Fax: ..................................................................................................................... 787 701 2211
WÄRTSILÄ VOSTOK LLC

GMT: +3

SERVICES OFFICE MOSCOW
Sechenovsky Per.6 Build. 3, 1st Floor
1109034 Moscow
Switchboard: 495 937 75 89
Fax: 495 937 75 90

SERVICES OFFICE ST. PETERSBURG
Shvedsky pereulok 2
191186 St. Petersburg
Switchboard: 812 448 3248
Fax: 812 448 3241

WÄRTSILÄ VOSTOK LLC

GMT: +10

SERVICES OFFICE VLADIVOSTOK
Utkinskaya St 9
690091 Vladivostok
Switchboard: 4232 401 600
Fax: 4232 432 004

WÄRTSILÄ MURMANSK WORKSHOP
Entrance 8, Murmansk Marine Fishing Port
183001 Murmansk
Direct phone: 921 708 05 81
Fax: 8152 637 520
WÄRTSILÄ POWER CONTRACTING CO. LTD.  WPCSA

GMT: .................................................................+3

EASTERN PROVINCE OFFICE
22nd Street off Al-Yarmook Street (Opposite Carrefour, Rashid Mall), Oyla District
31952 Al Khobar
P.O Box 76769
31952 Al Khobar
Switchboard .................................................................3 897 8465
Fax ..................................................................................3 896 5147

JEDDAH OFFICE
Khalid Ibn Al Waleed Street
21451 Jeddah
P.O Box 2132
21451 Jeddah
24hrs phone .................................................................2 651 9001
Switchboard .................................................................2 651 9001
Fax ..................................................................................2 650 3882

BIAD UNITED MARINE & POWER EQUIPMENT CO. LTD.  BUMP

GMT: .................................................................+3

SERVICES SALES REPRESENTATIVE OFFICE
Khalid Bin Walid Street
21472 Jeddah
P.O. Box 781
21472 Jeddah
Switchboard .................................................................2650 3252
Fax ..................................................................................2650 3882
WÄRTSILÄ WEST AFRICA S.A.  WWA
GMT: +0

SERVICES OFFICE
Immeuble Clairafrique, 5ème étage, 1 Place de l’Indépendance, angle rue Malenfant,
BP: 21 861
Dakar-Ponty
Direct phone .............................................................33 889 5959
Direct phone Workshop ...........................................842 8510
Fax .................................................................33 821 6255
e-mail .............................................................. wartsilawa@sentoo.sn
Web .............................................................www.wartsila.com/senegal
WÄRTSILÄ SOUTH AFRICA (PTY) LTD.

GMT: +2

MAIN OFFICE CAPE TOWN
20 Dorsetshire street
7405 Cape Town
P.O. Box 356
7420 Cape Town
24hrs phone: 83 658 6789
Switchboard: 21 511 1230
Fax: 21 511 1412
e-mail: wartcape@iafrica.com

SERVICES OFFICE DURBAN
14 Hopson Ave
4001 Durban
P.O. Box 1167, Westville
3630 Durban
24hrs phone: 83 265 6395
Switchboard: 31 202 0513
Fax: 31 202 0742
e-mail: wartdbn@iafrica.com
SRI LANKA +94

WÄRTSILÄ LANKA (PVT) LTD WLK
GMT: .................................................................+5.30

SERVICES OFFICE COLOMBO
No: 77 Negombo Road
Wattala
Switchboard ..........................................................112 980 907
Fax .................................................................114 816 422
e-mail .........................................................wlk.service@wartsila.com

SWEDEN +46

WÄRTSILÄ SWEDEN AB WSE
GMT: ....................................................................+1

BECKHOLMEN
Beckholmsbron, Beckholmen
SE-115 21 Stockholm
Direct phone ....................................................31 744 4600

SERVICES MAIN OFFICE GÖTEBORG
Delivery address: Anders Carlssons gata 4 Visiting address: Götaverksgatan 10
SE-417 55 Göteborg
P.O. Box 8006
SE-402 77 Göteborg
24hrs phone (PC) ........................................31 744 4850
24hrs phone Service Network Field Service ................................706 690 291
Switchboard ..................................................31 744 4600
Fax .................................................................31 744 4670
Fax Field Service ........................................31 744 4630
Fax Finance ....................................................31 744 4781
Fax Service Sales Support ..........................31 744 4727
Fax Service Sales Sweden ..........................31 744 4807
Fax Training ................................................31 744 4721
Fax Workshop .............................................31 744 4630
Web ..................................................................www.wartsila.com
WÄRTSILÄ SWITZERLAND LTD.  WCH

GMT: .................................................................................................................+1

DIESEL TECHNOLOGY CENTRE
DTC Building 650, Sulzer Allee 19/Sulzer Industriepark
CH-8404 Oberwinterthur
Switchboard ..............................................................52 262 49 22

MAIN OFFICE WINTERTHUR
Zürcherstrasse 12,
Visiting address: Schützenstrasse (opposite side of Neuwiesen Center)
CH-8401 Winterthur
P.O. Box 414
CH-8401 Winterthur
24hrs phone Field Service ..............................................................79 255 6880
24hrs phone Operation Support ..........................................................52 262 8010
24hrs phone Spare Parts ..............................................................79 671 8767
24hrs phone Warehouse ..............................................................52 262 2717
Switchboard ..............................................................52 262 4922
Fax ..............................................................52 262 0717
Fax Parts Sales ..............................................................52 262 0722/23
Fax Technical Service/Training ..............................................................52 262 0731
TAIWAN +886

WÄRTSILÄ TAIWAN LTD. WTW

GMT: .................................................................................................................+8

SERVICES OFFICE TAIPEI
4F., No. 68, Sec. 2, Zhongshan N. Road, Zhongshan District
Taipei City
24hrs phone ................................................................. 912 121 035
Switchboard ................................................................. 2 2522 2239
Fax ................................................................. 2 2522 2550

WORKSHOP KAOHSIUNG
No. 212-3 Xinsheng Road
806 Kaohsiung
Switchboard ................................................................. 7 821 2274
Fax ................................................................. 7 821 4459

TUNISIA +74

3MI STN

SERVICES SALES REPRESENTATIVE OFFICE
Nouveau Port de Peche
3065 Sfax-Port
P.O Box 24
3065 Sfax-Port
Switchboard ................................................................. 74 497 275 - 321
Fax ................................................................. 74 497 005
e-mail ................................................................. t-chtara@3mi.com.tn
TURKEY

WÄRTSILÄ ENPA DIS TICARET A.S. WTR

GMT: ................................................................................................................. +2

TUZLA SERVICES OFFICE & WORKSHOP
Aydintepe Mah. E-5 Karayolu Üzeri, No : 14 Bahar Is Merkezi A Blok
34947 Tuzla Istanbul
24hrs phone ................................................................. 533 695 0577
Switchboard .............................................................. 216 494 5050
Fax ............................................................... 216 494 5048
Web ................................................................. www.wartsila.com/turkey

WORKSHOP ALIAGA
Aliaga Organize Sanayi Bölgesi, Necati Atil Akkan Bulvari No: 8/1
35800 Aliaga Izmir
Direct phone ................................................................. 232 621 5130
Fax ............................................................... 232 621 5131

UKRAINE

WÄRTSILÄ UKRAINE LLC WUA

GMT: ................................................................................................................. +2

SERVICES OFFICE UKRAINE
Office 303 Marine Plaza, 1-A, Mitna Square
65026 Odessa (Ukraine)
Direct phone ................................................................. 48 785 8570
Fax ............................................................... 48 785 8571

UNITED ARAB EMIRATES

WÄRTSILÄ L.L.C WAE

SERVICES OFFICE DUBAI
DIP Plot 597-572, Dubai Investment Park 2
Dubai
P.O.Box 32785
Dubai
24hrs phone ................................................................. 50 550 8402
Direct phone ................................................................. 4 885 7222
Fax ............................................................... 4 885 7020
e-mail ................................................................. wartsila@emirates.net.ae
Web ................................................................. www.wartsila.com
UNITED KINGDOM

WÄRTSILÄ UK LTD.

GMT: ................................................................................................. GMT

WÄRTSILÄ UK LTD
30, Brunel Way
PO15 5SD Segensworth

SEALS & BEARINGS FACTORY
4 Marples Way
PO9 1NX Havant
Switchboard ................................................................. 239 240 01 21
Fax ................................................................. 239 249 24 70

SERVICE OFFICE GLASGOW (PROPULSION SERVICES)
Cartside Avenue, Inchinnan, Renfrew
PA4 9RX Glasgow
Switchboard ................................................................. 141 812 2888
Fax ................................................................. 141 812 2999

SERVICES OFFICE ABERDEEN (ENGINE SERVICES)
11a Peterseat Drive, Altens Industrial Estate
AB12 3HT Aberdeen
24hrs phone Parts ................................................................. 7775 807 119
24hrs phone Service ................................................................. 7775 807 172
Switchboard ................................................................. 1224 871 166
Fax ................................................................. 1224 871 188

SERVICES OFFICE MONTROSE (AUTOMATION)
Harbour Building, South Quay
DD10 9SL Montrose
24hrs phone ................................................................. 1674 678429
Direct phone ................................................................. 1674 678429
Fax ................................................................. 1674 648447

SERVICES OFFICE SEGENSWORTH (ENGINE SERVICES)
30, Brunel Way
PO15 5SD Segensworth
24hrs phone Service ................................................................. 7775 807 100
24hrs phone Spare Parts ................................................................. 7775 807 119
Switchboard ................................................................. 1489 550 050
Fax ................................................................. 1489 550 055
Fax Service ................................................................. 1489 550 075
Fax Spare Parts ................................................................. 1489 550 065
UNITED KINGDOM

WHESOHE TOTAL AUTOMATION LTD

GMT:  ............................................................................................................... GMT

SERVICES OFFICE DURHAM
No. 28 Northfield way, Aycliffe Industrial Estate
DL5 6UF Newton Aycliffe
Direct phone .................................................................1325 327 299
Fax .................................................................1325 310 808
e-mail ................................................... info@whessoe-europe.co.uk

USA

WÄRTSILÄ NORTH AMERICA, INC.

GMT:  ..................................................................................................................-6

MAIN OFFICE NORTH AMERICA
16330 Air Center Boulevard
TX 77032 Houston
24hrs phone ......................................................877 927 8745
Switchboard ........................................................281 233 6200
Fax .................................................................281 233 6233
Web .............................................................. www.wartsila.com/usa

SERVICES ANNAPOLIS
900 Bestgate Road, Suite 400
MD 21401 Annapolis
Switchboard ......................................................410 573 2100
Fax .................................................................410 573 2200

WÄRTSILÄ NORTH AMERICA, INC.

GMT:  ..................................................................................................................-5

SERVICES FT. LAUDERDALE
2900 SW 42nd Street
FL 33312 Ft. Lauderdale
24hrs phone ......................................................877 927 8745
Switchboard ......................................................954 327 4700
Fax Service ........................................................954 327 4773
Web .............................................................. www.wartsila.com/usa
WÄRTSILÄ NORTH AMERICA, INC. WUS

GMT: ................................................................. -8

SERVICES LONG BEACH
2140 Technology Place
CA 90810 Long Beach
24hrs phone ..................................................877 927 8745
Switchboard ..............................................562 495 8484
Fax .......................................................562 495 8430
Web .............................................................. www.wartsila.com/usa

WÄRTSILÄ NORTH AMERICA, INC. WUS

GMT: ................................................................. -6

SERVICES NEW ORLEANS
819 Central Avenue
LA 70121 New Orleans
24hrs phone ..................................................877 927 8745
Switchboard ..............................................504 733 2500
Fax .......................................................504 734 7730
Web .............................................................. www.wartsila.com/usa

SERVICES ODESSA
12828 W. Interstate-20 E
TX 79765 Odessa (USA)
24hrs phone ..................................................877 927 8745
Switchboard ..............................................432 563 4302
Fax .......................................................432 563 4719

WÄRTSILÄ NORTH AMERICA, INC. WUS

GMT: ................................................................. -8

SERVICES SEATTLE
6306 215th Street SW, Suite #3
WA 98043 Seattle
24hrs phone ..................................................877 927 8745
Switchboard ..............................................425 640 8280
Fax .......................................................425 640 5162
Web .............................................................. www.wartsila.com/usa
VENezuela  

Wärtsilä Venezuela C.A.  

GMT: ..............................................................................................................-4

Services Office Cabimas  
Avenida Andrés Bell No 445, del Caserío Ambrosio,  
Cabimas  
24hrs phone .................................................................................................412 443 2222
Direct phone .................................................................................................264 635 2005

Services Office Valencia  
Zona Industrial II,  
Av Branger,  
Centro Comercial e Industrial "Arturo Michelena",  
Local No. 13,  
2010 Valencia  
Apartado Postal No. 218  
Valencia  
24hrs phone Service .....................................................................................412 443 2222
24hrs phone Spare Parts ...............................................................................412 443 0444
Switchboard ................................................................................................241 838 4659
Fax ..............................................................................................................241 838 8443

Viетnam  

Wärtsilä Vietnam Co., Ltd.  

GMT: ..............................................................................................................+7

Main Office Ho Chi Minh City  
346 Ben Van Don Street, Ward 1, Dist 4  
Ho Chi Minh City  
24hrs phone ..................................................................................................9 1756 9360
Switchboard .................................................................................................8 3945 0814
Switchboard .................................................................................................8 3945 0815
Switchboard .................................................................................................8 3945 0816
Fax ..............................................................................................................8 3945 0950
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. Wärtsilä is listed on the NASDAQ OMX Helsinki, Finland.