Everllence

PrimeServ

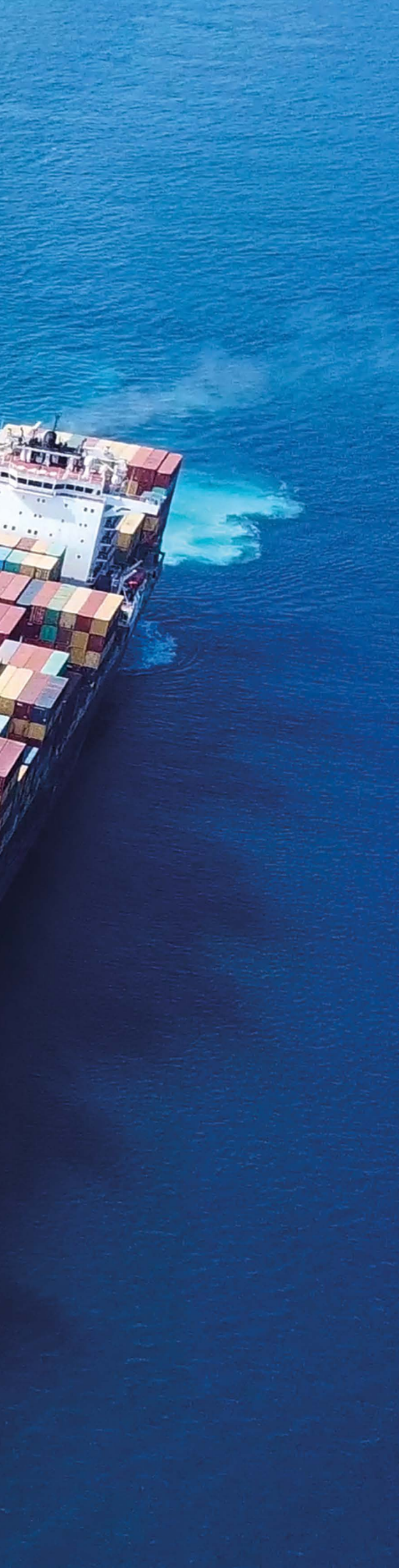
Retrofit & upgrade

Products services portfolio

Two-stroke engine solutions

Optimized **equipment**

Your partners for retrofit solutions



Reliability, enhanced efficiency and compliance with new environmental legislation are just a few of the benefits that our advanced retrofit solutions provide.

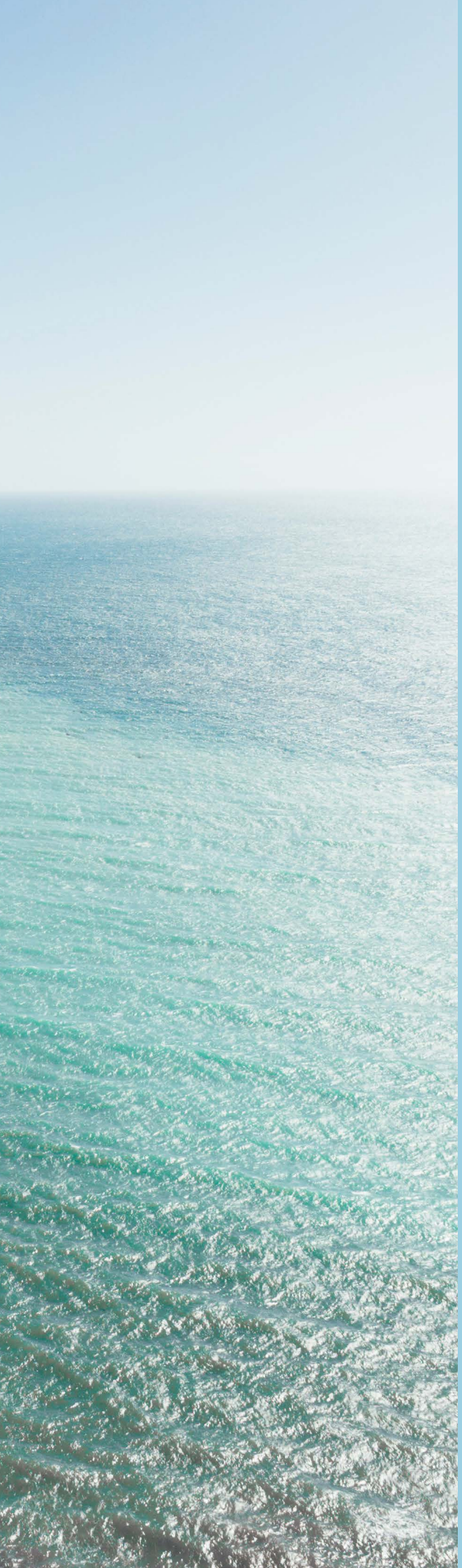
Keeping your equipment consistently up to date

Your existing two-stroke engines and control systems might be aging, but that does not mean they do not keep on delivering value. Our comprehensive, tailored retrofit solutions will keep your assets up to date through continuous development and modernization.

The Everllence PrimeServ retrofits and upgrades for Everllence two-stroke engines systems will help you improve efficiency, boost reliability and performance, save fuel and lubricating oil, while lowering maintenance costs and enabling a more flexible operation.

These retrofits and upgrades will also help you comply with increasingly stringent environmental regulations and help ensure your operations are on the road to energy transition and decarbonization. And they will benefit your employees by improving crew safety and making the equipment easier to operate.

So, whether you are looking to upgrade your existing two-stroke engine systems for improved reliability, fuel and lubricating oil savings, lower maintenance costs, or equipment upgrades, Everllence PrimeServ offers your vessels in service powerful retrofit solutions.



EcoCam

The EcoCam provides a variable cam profile with no mechanical modifications. It improves the combustion and lowers specific fuel oil consumption (SFOC) during slow steaming.

EcoCam increases the cylinder pressure by adjusting the closing time of the exhaust valves according to engine load. This leads to more efficient combustion and results in fuel savings within the load range.

The automatic control activates the EcoCam when the engine load is below 60% of maximum continuous rating (MCR), and switches it off below 10% and above 60% of MCR.

Flexible cam profile optimized for slow steaming
The EcoCam is a simple, low-cost, fuel-saving product for mechanical engines with an exhaust cam profile. The system facilitates slow steaming thanks to the variable cam profile, which does not require any mechanical modification of the camshaft. A solenoid valve drains the hydraulic oil from the exhaust actuator to reduce the pressure and close the exhaust valve. The tacho system governs the draining frequency.

Lower SFOC means lower emissions
Earlier closing of the exhaust valve increases the cylinder compression, which improves the combustion and lowers the fuel-oil consumption. Depending on the engine load profile, the EcoCam typically generates SFOC savings in the range of 2 to 6 g/kW.

A technical file amendment is not required as changes, if any, in the relative differences of Pcomp and Pmax will be insignificant.

The simple installation contributes to a high return on investment.

Please contact your Everllence PrimeServ office for more details.

Save fuel, reduce CO_2 and improve combustion

Key benefits
- Fuel savings between 2 and 6 g/kWh
- CO_2 reduction in proportion to fuel savings, contributing to improved Carbon Intensity Indicator (CII) rating and lower EU Emissions Trading System (ETS) costs
- Slow steaming with operational flexibility
- Easy installation
- High return on investment
- Easy to operate (automatic)
- Effective between 10% to 60% load
- No exchange of exhaust cam required

Scope of supply
- EcoCam unit consisting of:
  - Distributor block
  - Oil cylinder
  - Drain system
- Control system
- Operating panel

Applicable to
Everllence B&W S50/S60/S70 MC-C engines with a wide cam profile

EcoNozzle

The EcoNozzle is a redesigned fuel nozzle for S50 MC-C, Mk.7 and 8 engines. It improves the fuel spray pattern, which optimizes the combustion across all engine loads.

Combustion optimization is a key factor in reducing CO_2 emissions. Improving the combustion reduces fuel consumption leading to lower CO_2 emissions.

Decarbonization effect with a short payback period
The EcoNozzle upgrades the fuel spray pattern to improve the flame formation and the fuel propagation. These enhancements reduce fuel consumption and CO_2 emission, while keeping NO_x emissions within the regulatory limits.

The EcoNozzle leads to fuel savings in the range of 2–7 g/kWh depending on the engine load, which can reduce the payback period to just 3–5 months.

Statement of reduced Specific Fuel Oil Consumption (SFOC) for classification
The scope of supply will include an SFOC statement containing a table of SFOC reduction by engine load. This will be a part of the classification documentation to improve the requirements for Carbon Intensity Indicator (CII) rating, Fuel EU, EU Emissions Trading System (ETS) and other upcoming regulations.

Your vessel crew can install the EcoNozzle during a regular overhaul or in port when the engine is not running.

Technical File amendment included
Everllence licensees have run several test bed trials that document performance and emissions for class approval.

The tests established that the EcoNozzle meets the requirements in MARPOL Annex VI and the NO_x Technical Code 2008.

The EcoNozzle is a complete retrofit solution. In addition to new EcoNozzles and spindle guides, you will receive a new cleaning tool and an amendment to the Technical File.

Please contact your Everllence PrimeServ office for more details.

EcoNozzle

Preventive solution that improves cleanliness of the hydraulic oil

Key benefits

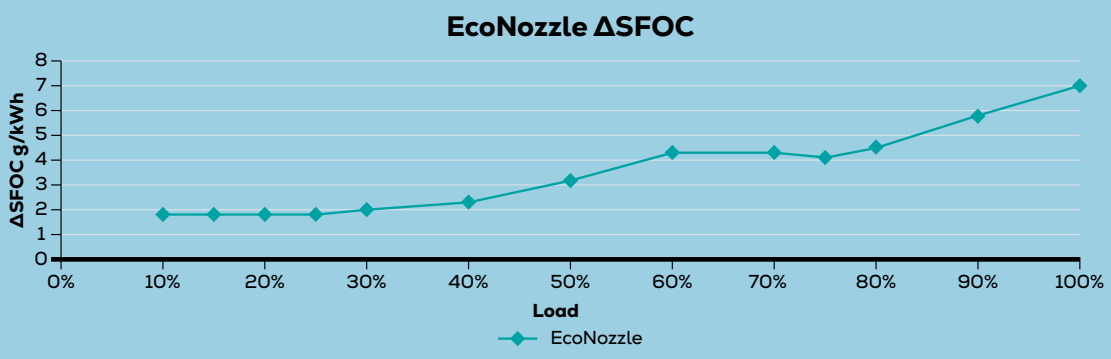
- Instant fuel savings in the entire load range – up to 7g/kWh at 100% load
- Easy installation – can be done by vessel crew
- High return on investment
- Full operational flexibility
- Lower CO_2 emission and NO_x emission within the regulatory limits
- Easy retrofit of original wear part
- Significant fuel savings
- A wise choice as an alternative to the previous fuel nozzle

Scope of supply

- Complete, new spindle guide with EcoNozzle
- New set of cleaning tools for the EcoNozzle
- Amendment to Technical File
- SFOC statement

Applicable to

Everllence B&W S50 MC-C Mk 7/8 engines



Engine Load

Flexible Turbocharger Cut-Out

The Flexible Turbocharger Cut-Out system disconnects one or more turbochargers during slow steaming (low-load operation) to reduce specific fuel oil consumption (SFOC) and consequently CO_2 emissions.

Speed reduction can pay off well in cost savings on fuel as well as lowering CO_2 emissions due to the relationship between speed, fuel consumption and emissions. However, the engines have been designed for optimal performance within specific parameters. Operating them outside these parameters will reduce the benefits of slow steaming.

Improved combustion without dependence on auxiliary blowers reduces CO_2
The Flexible Turbocharger Cut-Out increases the efficiency of the remaining turbochargers without depending on auxiliary blowers when slow steaming. This allows for significant savings in SFOC, and consequently CO_2 emissions, when the engines are running within the low load range.

Cutting out one or more turbochargers will return the operating levels of the remaining turbochargers to the usual parameters for optimal performance.

The activation of the Flexible Turbocharger Cut-Out system improves the scavenge air pressure significantly, optimizing the combustion and contributing to SFOC reductions at 4–6 g/kWh at low load. Moreover, this can reduce the heat load, especially on the exhaust valves.

The auxiliary blower activation will be moved to a lower load range to reduce the power consumption of the blowers.

Simple, cost-effective solution, widely used worldwide
The Flexible Turbocharger Cut-Out consists of two pneumatically operated swing gate valves – one at the turbine inlet and one at the compressor outlet of the turbocharger.

The Flexible Turbocharger Cut-Out has been very well received in the maritime world with more than 500 systems in operation worldwide.

Please contact your Everllence PrimeServ office for more details.

Turbocharger Cut-Out

Improved fuel oil consumption and slow steaming capabilities

Key benefits

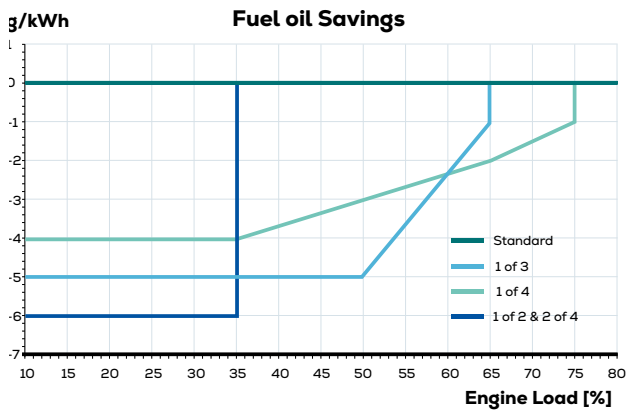
- Improved performance of the remaining turbochargers
- Improved combustion resulting in cleaner engine
- Fuel savings up to 6 g/kWh SFOC
- Potentially lower costs on fuel consumption for auxiliary blowers
- CO_2 reduction will help cutting carbon costs within the EU Emissions Trading System
- Short payback period
- High flexibility

Applicable to

All Everllence B&W MC/MC-C and ME/ME-C engines with two or more turbochargers

Scope of supply

- 2 x cut-out swing gate valves for the turbo-charger turbine and compressor sides
- Insulation for swing gate valves
- Pneumatic system to control the turbocharger cut-out swing gate valves
- Indicator panel for engine control room
- Amendment to Technical File and emission measurements if needed
- Engeneering package:
  - Engine feasibility calculations
  - Torsional Vibration Calculations (TVC)
  - Gas Harmonics Calculations (GHC)
- Sealing air modification if needed



Fuel oil savings [g/kWh]

Obtainable SFOC reduction when turbochargers are cut out

Load range	10-35% of MCR	10-66%	10-74% of MCR	10-35% of MCR
Turbochargers in total	2	3	4	4
Turbochargers cut out	1	1	1	2
SFOC reduction at 25% engine load	6 g/kWh	5 g/kWh	4 g/kWh	6 g/kWh

Load range in %

PMI VIT

Based on PMI sensors on each cylinder. Performance Measurement Indicator Variable Injection Timing (PMI VIT) automates the operation of the VIT system to facilitate reduction of fuel consumption.

New technology that has emerged in the last couple of decades has played a considerable role in the development of Everllence PrimeServ retrofit and upgrade products for MC engines. For instance the PMI VIT system, which uses PMI sensors and data about the actual cylinder pressure. PMI VIT automates the original mechanical or electronic VIT in the engine.

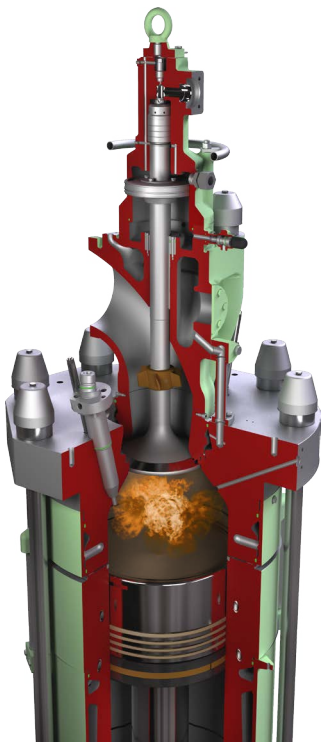
Better engine performance leads to reduction of SFOC and CO_2
PMI VIT optimizes the fuel injection timing via the electronic actuator on the VIT rack, based on pressure data from the PMI sensors. This increases the maximum cylinder pressure (Pmax) to improve the combustion, which can reduce the fuel consumption and, consequently, CO_2 emissions. The system displays various performance data on a screen, informing the crew of opportunities for additional engine tuning.

The engine tuning can lead to substantial fuel savings with service experience showing that you can typically reduce the specific fuel oil consumption (SFOC) by around 1–3 g/kWh compared with the mechanical VIT system. This is especially due to the added opportunities to optimize the engine performance. The actual obtainable fuel savings will depend on the condition of the engine.

The CO_2 reduction will help improve your Carbon Intensity Indicator (CII) rating, and it will help cut your carbon costs within the EU Emissions Trading System (ETS).

In addition, the tuning will minimize unnecessary wear on engine components, which will lower the maintenance costs.

Please contact your Everllence PrimeServ office for more details.



Optimize engine performance while saving fuel

Key benefits
- Saves a substantial amount of fuel
- Improves performance and engine efficiency
- Lowers engine maintenance costs and increases reliability
- Adjusts the engine automatically in response to ambient conditions and fuel properties
- Simplifies operability to ease the workload and eliminate time-consuming manual adjustment
- Diminishes the risk of human errors thanks to automatic parameter adjustment
- Reduces SFOC leading to CO_2 reduction, which helps to improve the CII rating and bring down EU ETS carbon costs
- Reduces carbon particle emission

Scope of supply
- PMI sensors
- PMI VIT offline kit – depending on bore size
- VIT system package – electronic or mechanical
- Angle encoder – single or double

Applicable to
All Everllence B&W 50-98 MC/MC-C engines with a VIT rack installed

EcoTorque

EcoTorque is a fuel pump governor control update developed to improve the condition of the cylinder liner and save fuel.

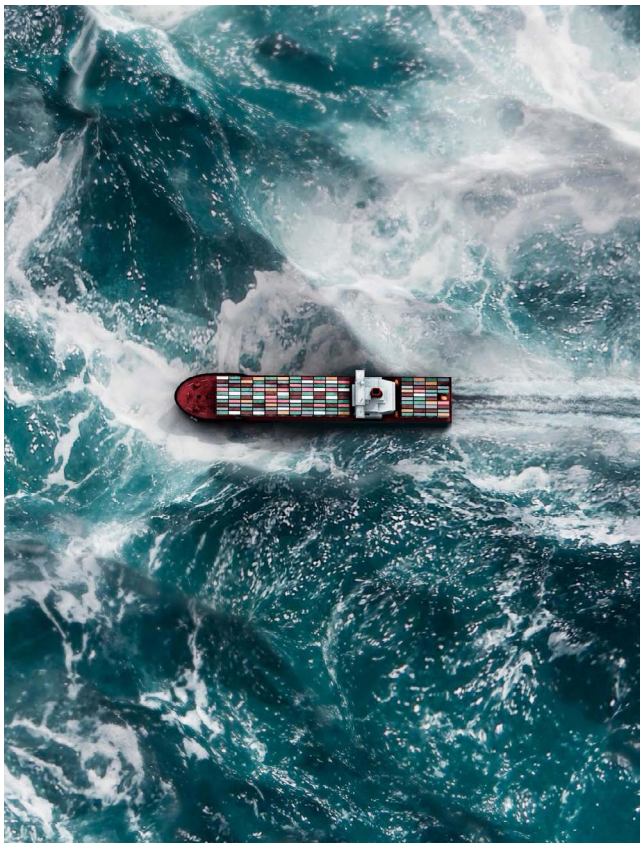
Without EcoTorque, the purpose of the fuel pump governor setting on ME engines is to keep revolutions per minute (rpm) steady. However, with steady rpm, the engine load will vary depending on external conditions such as changing weather conditions. This triggers a fluctuating fuel index as shown in the figure, which will increase the wear on the cylinder liners.

Longer time between overhaul of cylinder liners and piston rings
To avoid these fuel index fluctuations and to improve the cylinder liner condition, EcoTorque allows the engine speed to drift within a specified speed range based on the selected engine speed. This means that the fuel index will remain steady despite changing external conditions, which will prevent excessive strain on the engine.

Lower specific fuel oil consumption (SFOC)
The stabilized fuel index results in lower fuel consumption. Compared with "rpm mode", experience has shown that "EcoTorque mode" reduces the SFOC by approx. 1 g/kWh at the same vessel speed. This will also contribute to a positive impact on the Carbon Intensity Indicator (CII) rating and carbon costs in the EU Emissions Trading System (ETS).

Installation of EcoTorque consists in upgrading the software on the main operating panel (MOP). When installed, EcoTorque will automatically be active when the speed setting is at "Full" and above. "EcoTorque mode" will be displayed on the MOP.

Please contact your Everllence PrimeServ office for more details.



Stabilize fuel index and reduce fuel consumption

Key benefits

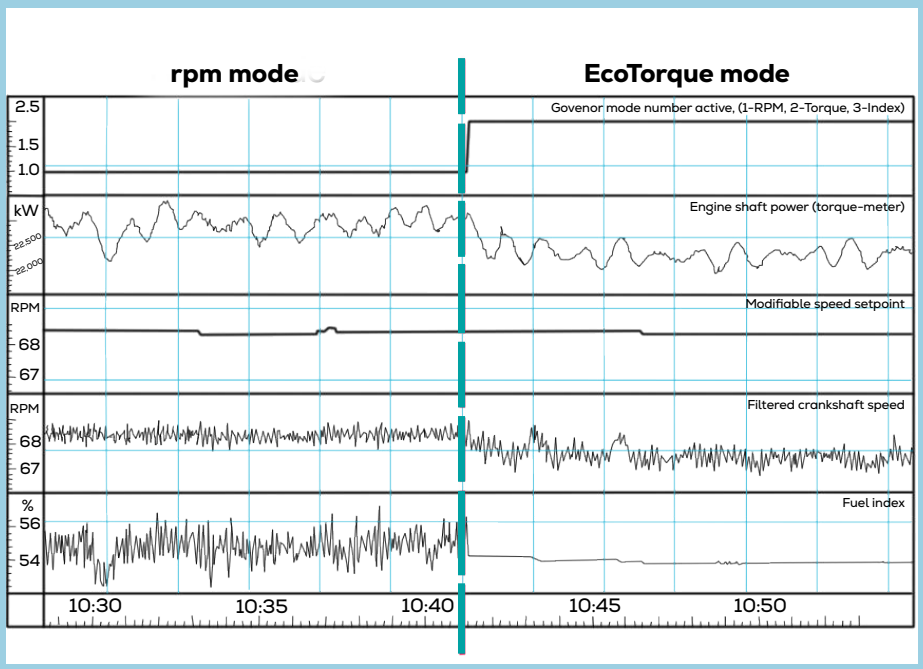
- Improved cylinder liner condition
- Smoother engine operation
- The effect of external conditions on engine operation is minimized
- Prolongs the time between overhauls for cylinder liners and piston rings
- Approx. 1 g/kWh lower SFOC than in “rpm mode”
- Easy installation – no attendance required by Everllence PrimeServ (installation with the parameter update tool (PUT))
- Great return on investment

Scope of supply

EcoTorque software, including PUT

Applicable to

All Everllence B&W ME/ME-C/ME-B engines with FPP propeller



Rpm mode vs. EcoTorque mode

PMI Auto-tuning

With Performance Measurement Indicator (PMI) Auto-tuning, Everllence PrimeServ reduces the specific fuel oil consumption (SFOC) and the CO_2 emissions. PMI Auto-tuning uses cylinder pressure sensors to tune the engine.

The main purpose of PMI Auto-tuning is to balance the engine and thereby reduce the SFOC, and consequently CO_2 emissions. But it also helps the crew to constantly monitor the real-time condition of each cylinder unit and find any abnormalities in time to minimize wear on engine components.

PMI Auto-tuning is an automated monitoring and tuning system for electronically controlled two-stroke Everllence engines (ME engines). Through a PMI sensor on each cylinder, the system measures the cylinder pressure (Pmax, Pcomp, and Pi) and tunes the engine accordingly. The tuning includes adjustment of fuel injection timing and exhaust valve opening. Various performance data are displayed on a screen, informing the crew of opportunities for additional engine tuning.

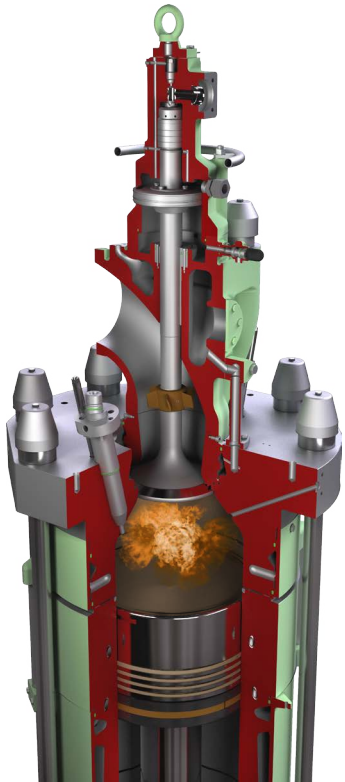
Better engine performance leading to reduction of SFOC and CO_2
PMI Auto-tuning enables automatic adjustment of the combustion pressure, resulting in an optimal combustion process to improve engine performance.

This engine tuning leads to substantial fuel savings with service experience showing that you can typically save around 2–4 g/kWh. This reduction in SFOC paves the way for a CO_2 reduction.

Lower CO_2 emissions help improve the CII rating and EU ETS carbon costs
The CO_2 reduction will help improve your Carbon Intensity Indicator (CII) rating, and it will help cut your carbon costs within the EU Emissions Trading System (ETS).

The scope of supply depends on the existing offline PMI installation.

Please contact your Everllence PrimeServ office for more details.



Improve engine performance and save fuel oil

Key benefits
- Fuel savings
- Improves performance and engine efficiency
- Lowers engine maintenance costs and increases the reliability
- Simplified operability eases workload and eliminates time-consuming manual adjustment
- Diminished risk of human errors thanks to automatic parameter adjustment
- Lowers risk of mechanical and thermal engine overload
- Reduces SFOC leading to CO_2 reduction and lower EU ETS carbon costs
- Reduces carbon particle emission
- Can be installed during normal service

Scope of supply
Cylinder sensors (Kistler), incl. new indicator cock. One for each cylinder.
- Cables, cylinder sensors to DAU

Data Acquisition Unit 12
- LAN connector module
- Scavenge air pressure transmitter
- LAN Hub (not applicable if purchased with EngineVault or other connectivity package)
- PMI Calibration Box
- Pressure Transducer for calibration
- Handle for pressure transducer
- Cables for calibration box
- Cable package

Applicable to
All Everllence B&W ME/ME-C/ME-B engines

PMI Adaptive Cylinder **Control (ACCo)**

With PMI Adaptive Cylinder Control, Everllence takes engine tuning to the next level. Using a new, patented algorithm, closed loop control ensures that each individual cylinder always operates at its optimal cylinder pressure. This gives you the best engine performance and lowest possible fuel consumption at all times.

The successor to PMI Auto-tuning, PMI Adaptive Cylinder Control is a fully automatic system that will constantly help you secure optimal engine tuning regardless of engine load, load range, load changes, and varying fuel calorific values.

The core of the system is the patented closed loop control algorithm, which monitors and controls the pressure rise, compression pressure and the mean indicated pressure for each cylinder. Using values from the engine's performance trial as reference, the algorithm adjusts the fuel index and exhaust valve operation of each cylinder for optimal performance.

With PMI Adaptive Cylinder Control, it is no longer necessary to enter the fuel's calorific value. The system continuously monitors each cylinder's pressure and automatically adjusts for any fluctuations or changes in the fuel.

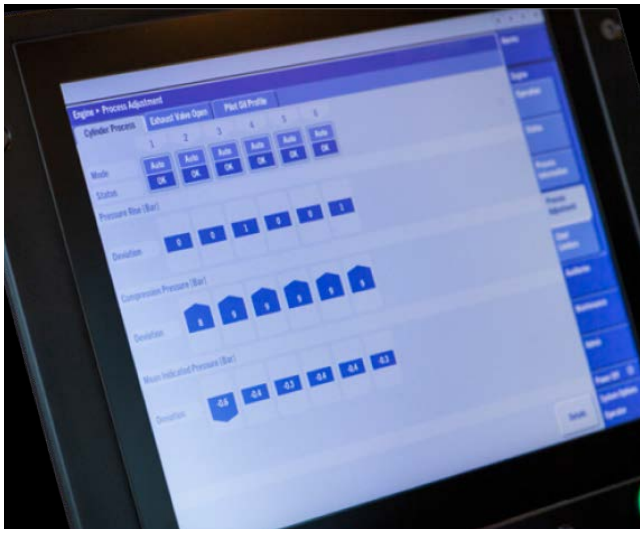
As a result, the PMI ACCo algorithm secure approximately 1 g/kWh in fuel savings. Additionally, service experiences show that Pmax deviations contribute about 0.25 g/kWh in savings per bar, creating potential for extra efficiency gains when deviations are minimized.

The reliability of the system has also improved: In the event that an individual PMI sensor should fail,the control for that specific cylinderwill switch to manual mode, while the remaining cylinders continue automatic operation unaffected.

Especially slow steaming vessels will see a major improvement with the new functionalities, as the system will automatically activate from 10% engine load.

Fully automatic and working in all load ranges, PMI Adaptive Cylinder Control makes engine tuning easier than ever and ensures that you do not miss out on the benefits.

Please contact your Everllence PrimeServ office for more details

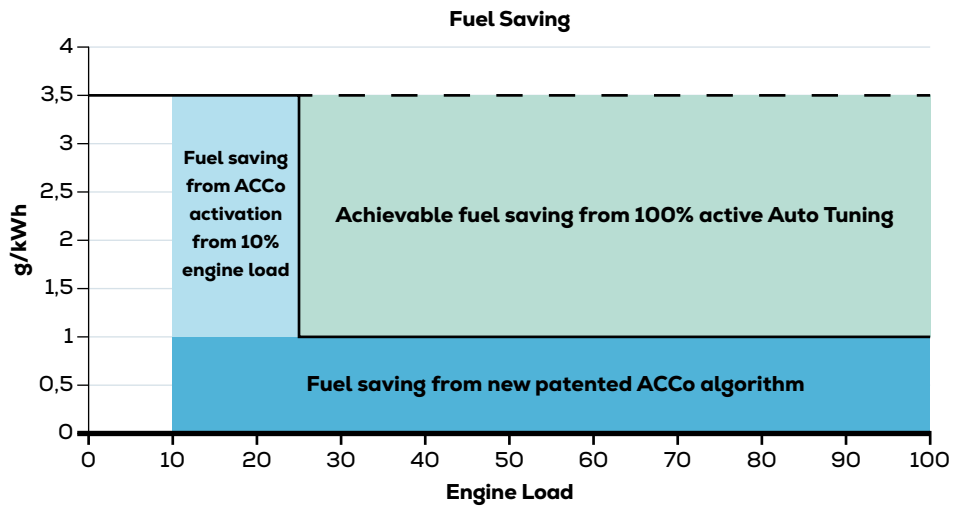


Lowest possible fuel consumption and improved engine performance at all times

Key benefits
- Fully automatic system
- Ensures lowest possible fuel consumption at all times
- Improved tuning of the engine
- Slow-steaming support
- Automatic adjustment for fuel variations
- Increased reliability
- Great return on investment

Scope of supply
PMI Adaptive Cylinder Control software

Applicable to
- All ME-C engines with Power Map
- ME-B engines with Power Map: 8.3, 8.5, 9.3, and 9.5



Fuel saving

EcoTuning

EcoTuning is a tailor-engineered part-load tuning that reduces the engine's fuel oil consumption significantly, supporting your in-service fleet's decarbonization.

In a time where shipowners and operators are challenged by increasing fuel costs and emission regulations such as the Carbon Intensity Indicator, the Emissions Trading System (EU ETS), and the FuelEU Maritime directives, EcoTuning offers a proven solution to save fuel oil and support the regulatory compliance of your fleet.

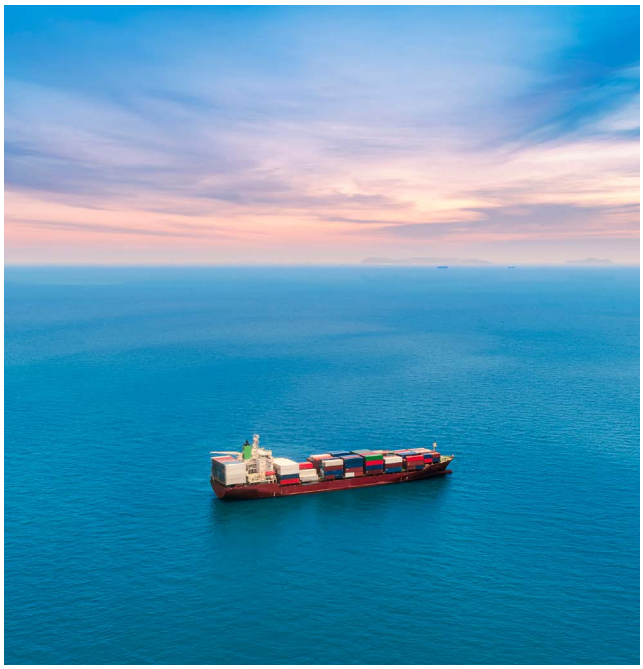
EcoTuning is a powerful retrofit part-load tuning, tailor-engineered for each individual engine system, and specifically designed for Everllence B&W two-stroke ME and ME-C engines. This engine tuning solution secures significant fuel oil savings, resulting in reduced CO_2 emissions and fuel costs.

Using engineering calibration, EcoTuning increases engine efficiency. This is achieved through software-based fine-tuning of the maximum combustion pressure across the entire load range. As a result, the combustion pressure will match the load profile of your specific vessel.

EcoTuning provides an optimized engine performance layout and includes a NO_x recertification. As a result, the NO_x Technical File must be amended to ensure compliance across all relevant IMO NO_x regulations. And as the engineering analysis behind EcoTuning is based on correction factors, no sea trials or service tests are needed.

The EcoTuning, installation and commissioning process is easy. An update of the engine performance parameters is all that is needed, and there is no need for hardware component modifications or replacements. This means no operational downtime.

Ask your Everllence PrimeServ office for more details.



Optimizing your fleet's fuel savings and decarbonization

Key benefits

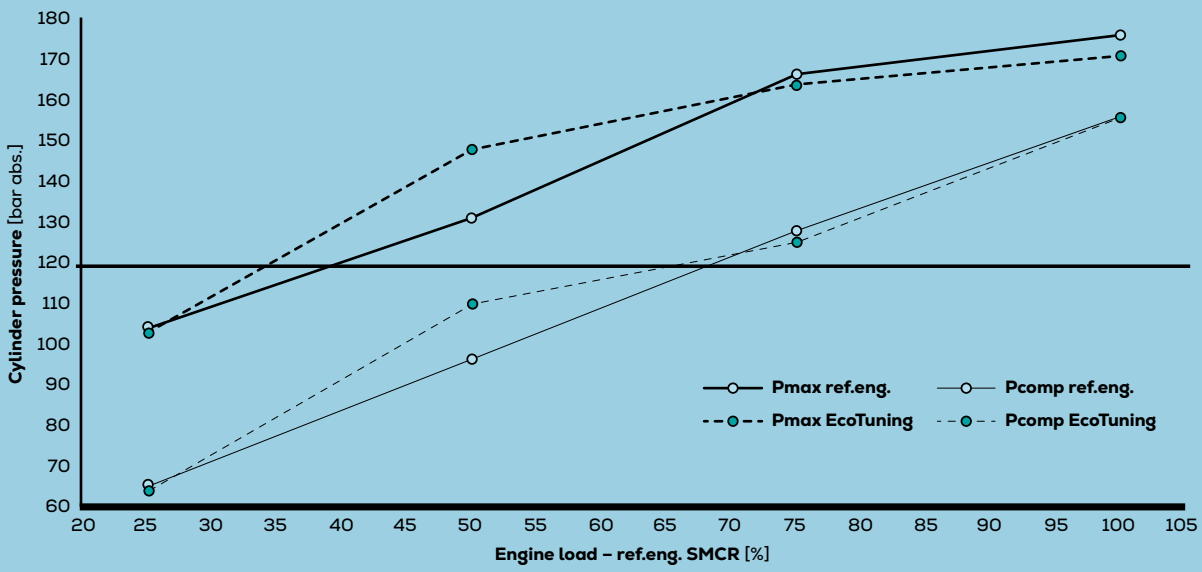
- Significant fuel oil savings up to 7 g/kwh, depending on the desired load profile
- Substantial emission reductions support higher Carbon Intensity Indicator ratings and stronger decarbonization regulatory compliance
- Simple installation with no operational downtime
- No requirement for sea trials or service tests
- EcoTuning can be updated if your vessel's operations pattern change, ensuring peak performance

Scope of supply

- The optimized performance layout for the engine
- An updated torsional vibration calculation for the engine
- Amendment of the IMO NO_x Technical File

Applicable to

- All Everllence B&W ME/ME-C engines
- EcoTuning is not applicable for vessels fitted with Turbocharger Cut-Out or vessels limited (EEXI) to a power below 75% MCR



EcoTuning cylinder pressure vs. engine load

Alpha **lubricator**

The Alpha Lubricator system reduces cylinder liner wear and optimizes the cylinder lube oil consumption. This solution is a complete overhaul of the cylinder lubrication system.

Substantial over-lubrication during slow steaming generates abrasive deposits on the piston crown and rings, which increases the risk of cylinder liner damage and results in suboptimal usage of the cylinder lube oil.

Precise lube oil dosage reduces cylinder liner wear and maintenance costs
The Alpha Lubrication system adjusts the cylinder lube oil feed rate according to engine load and fuel oil sulfur content.

The control unit of the Alpha Lubrication system optimizes the cylinder lube oil feed rate with an algorithm based on engine load. In addition to dosing the lube oil in proportion to the load and the sulfur content, the control unit ensures that the lubricators continue to inject an optimal lube oil dosage to provide adequate oil film and sufficient detergency.

The test results show that the Alpha Lubrication system reduces costs of cylinder lube oil and maintenance.

Please contact your Everllence PrimeServ office for more details.

Alpha Lubricator

Upgrade lubrication system to reduce cylinder liner wear and maintenance costs

Key benefits

- Optimized cylinder lube oil consumption at all loads
- Reduced cylinder liner wear and risk of scuffing
- Completely automated
- Lubrication parameters are easy to read and adjust if needed
- Improved non-return valves
- Reduced maintenance costs
- Lower particle emission

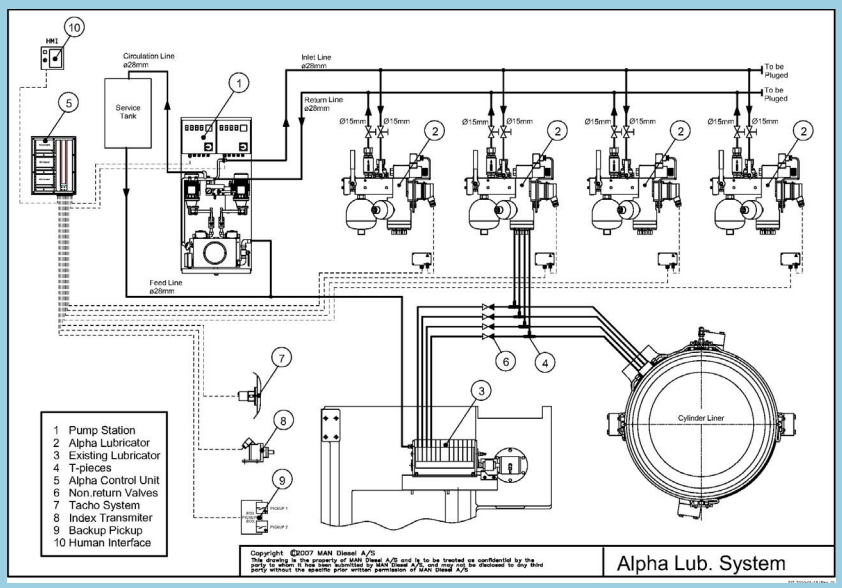
Scope of supply

Complete Alpha Lubrication system set, consisting of:

- Alpha Lubricator control units (Main Control Unit, Switch Board Unit, Back-up Control Unit)
- Lubricators
- Human machine interface (HMI) panel
- Booster pump unit
- Encoder
- Load transmitter
- Tacho pick-up sensors
- Non-return valves and pipe
- Installation accessories

Applicable to

All Everllence B&W MC/MC-C engines



Alpha Lubricator single system diagram

Alpha lubricator **MC upgrade**

The Alpha Lubricator MC upgrade reduces cylinder liner wear and optimizes the cylinder lube oil consumption. The upgrade can consist of complete lubricators or parts to optimize existing lubricators.

Substantial over-lubrication during slow steaming generates abrasive deposits on the piston crown and rings, which increases the risk of cylinder liner damage and results in suboptimal usage of the cylinder lube oil.

Precise lube oil dosage reduces cylinder liner wear and maintenance costs
The control unit of the Alpha Lubricator MC upgrade optimizes the cylinder lube oil feed rate with an algorithm based on engine load. In addition to dosing the lube oil in proportion to the fuel oil sulfur content and the engine load, the control unit ensures a minimum lube oil dosage to provide adequate oil film and sufficient detergency.

Optimization for slow steaming
The Alpha Lubricator MC upgrade optimizes the cylinder oil usage for slow steaming. It is based on the control unit software adopted in the MC engine design as of 2012, involving optimization of injection volume and frequency. Additionally, the upgrade includes smaller diameter injection plungers to reduce the amount of cylinder oil injected during slow steaming.

Please contact your Everllence PrimeServ office for more details.

Alpha Lubricator MC upgrade

Reduces cylinder liner wear and maintenance costs

Key benefits

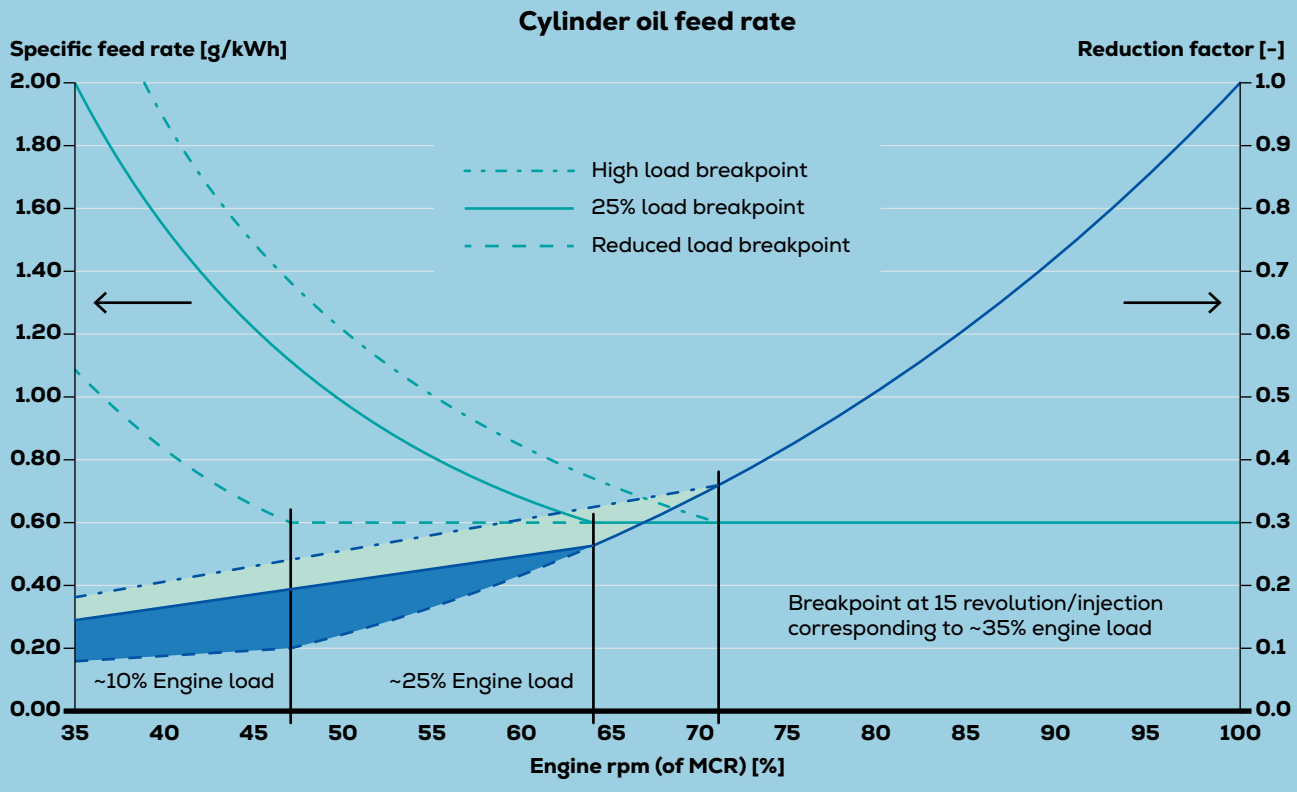
- More accurate lube oil feed rate control at all engine loads
- Minimizes over-lubrication at low load to reduce deposits and improve the cylinder condition
- Implements features from a more recent engine design
- Upgrade to the latest software version for improved functionality

Scope of supply

- Lubricator upgrade kit
- Main Control Unit (MCU)

Applicable to

All Everllence B&W MC/MC-C engines



Lubrication algorithm

Alpha lubricator **ME upgrade**

The Alpha Lubricator ME upgrade reduces cylinder liner wear and optimizes the cylinder lube oil consumption. The upgrade consists of plungers and a software update to optimize existing lubricators.

Substantial over-lubrication during slow steaming generates abrasive deposits on the piston crown and rings, which increases the risk of cylinder liner damage and results in suboptimal usage of the cylinder lube oil.

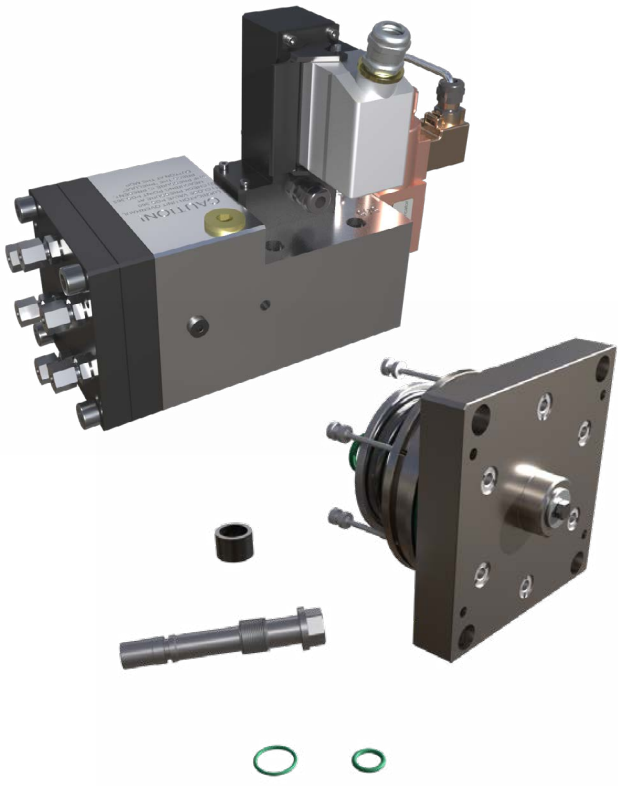
Reduces cylinder liner wear and maintenance costs
The Alpha Lubricator ME upgrade increases the cylinder lubrication frequency across all engine loads while reducing the cylinder oil volume injected with each stroke. The higher injection frequency ensures an adequate oil film to reduce the abrasion between cylinder liner and piston rings. Test results have shown that this reduces the iron content in the drain oil by up to 40%, in addition to optimizing the lube oil consumption.

New algorithm to optimize injection frequency and amount based on engine load
The injection frequency and amount are optimized with new software update that controls the injection based on the engine load. The latest engine control software or a parameter update delivers the algorithms needed to change the cylinder lubrication control.

New lubricator parts to reduce injection volume
A smaller plunger diameter and adjusted stroke length lower the volume of cylinder lube oil injected across all engine loads. The upgrade kit includes plungers with the smallest possible diameter for your specific engine.

The Alpha Lubricator ME upgrade will be adjusted to suit your specific needs for your vessel.

Please contact your Everllence PrimeServ office for more details.



Upgrade lubrication system to reduce cylinder liner wear and maintenance costs

Key benefits
- Reduced iron content in the drain oil
- More accurate lube oil feed rate control at all engine loads
- Minimizes over-lubrication at low load to reduce deposits and improve the cylinder condition
- Implements features from a more recent engine design
- Upgrade to the latest software version for improved functionality

Scope of supply
The standard ME upgrade kit consists of:
- Engine control system software version upgrade or parameter update
- Small diameter plungers
- Spacers – to adjust the stroke length
- Non-return valves

The ME upgrade kit can also include:
- Actuator piston, lubrication block, feedback sensors, accumulators depending on the existing installation

Scope of supply will differ depending on the engine configuration.

Applicable to
All Everllence B&W ME/ME-C/ME-B engines

ECS EasyDetect

ECS EasyDetect is an upgrade of the engine control system (ECS) power supply to facilitate troubleshooting and improve engine reliability.

The power for the ECS and the multi-purpose controllers (MPCs) on old Everllence B&W ME-C and ME-B engines comes from the same power supply. Consequently, testing insulation resistance from the ECS power circuit to ground to detect faulty components or cables is only possible on the shared power supply for all controllers and all components.

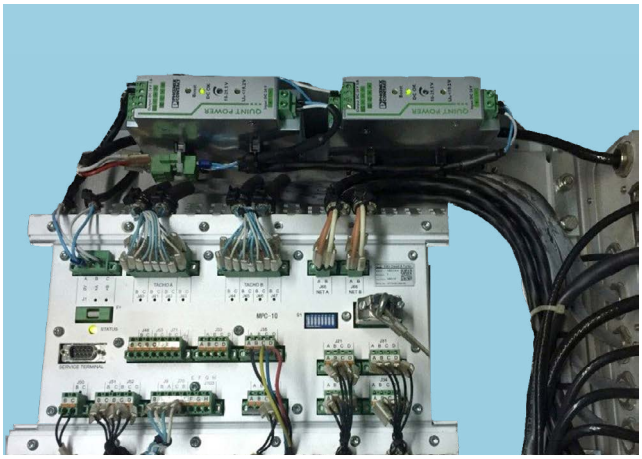
The insulation resistance tests cannot be performed on individual components or cables. Therefore, finding a defective component or cable is extremely time-consuming.

New Everllence B&W ME-C and ME-B engines have separate power supplies for each MPC. The control and diagnostic systems monitor the insulation resistance continuously, which makes troubleshooting much easier.

Focused troubleshooting with data logging to track events
With the installation of ECS EasyDetect, we will use galvanic isolators to separate the power to each MPC. This will prevent errors in one MPC from affecting other units. We will also update the ECS software and fit all controllers with modules monitoring the insulation resistance.

ECS EasyDetect ensures easy monitoring of the insulation resistance on each individual ECS controller by displaying it on the main operating panel (MOP) and logging it under engine diagnostics in the computer-controlled surveillance system (CoCoS). This ensures easy detection of any correlation with other events.

Please contact your Everllence PrimeServ office for more details.



Upgrade the engine control system and improve the reliability

Key benefits
- Online monitoring of the insulation level as well as noise pulse counts
- Easy troubleshooting in case of defective cables or loose connections
- Quick identification of defective components, such as sensors, cables or controllers
- Less engine downtime
- Peace of mind with quick and easy troubleshooting

Scope of supply
- Insulation detection modules
- Power supply units with galvanic isolation
- ECS software update as needed

Applicable to
All Everllence B&W ME/ME-C/ME-B engines

FIVA retrofit

Everllence PrimeServ offers the FIVA retrofit solution to convert existing CWAT electronic valves to Everllence electronic valves. This upgrade includes updated technology, increased component lifetime, and reduced maintenance costs.

FIVA, ELFI, and ELVA
The FIVA (fuel jnjection valve actuation), ELFI (electronic fuel injection) and ELVA (electronic valve actuation) valves are an essential part of the ME engine to ensure optimal running performance. The electronic valves are high-precision units which controls either the fuel injection, the exhaust valve actuation or both.

In this way, the electronic valves serve the same function on an electronically controlled ME engine as the camshaft on a mechanically controlled MC engine.

Curtiss-Wright electronic valves
Curtiss-Wright (CWAT) has ceased their production of electronic valves, so it is no longer possible to purchase new CWAT electronic valves.

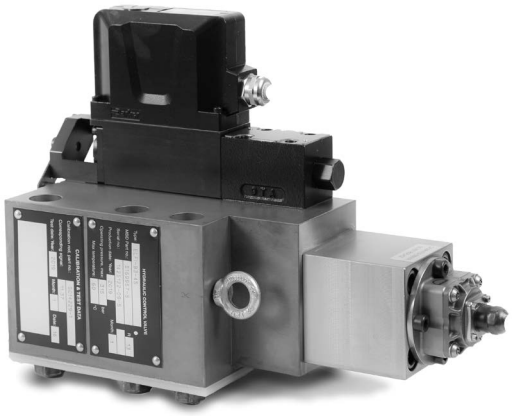
Everllence PrimeServ has stopped the overhauling support of CWAT electronic valves. Therefore, Everllence PrimeServ recommends a retrofit solution where we convert existing CWAT electronic valves to electronic valves.

Retrofit to electronic valves
Everllence PrimeServ offers and recommends a retrofit solution to electronic valves.

This is a long-term solution that includes the latest technology and ensures safety for the future as Everllence offers brand new electronic valves as well as overhauling of existing electronic valves.

Retrofit to FIVA is a standard solution while retrofit to ELFI and ELVA is a custom made solution to fit the HCU-blck.

Please contact your Everllence PrimeServ office for more details.



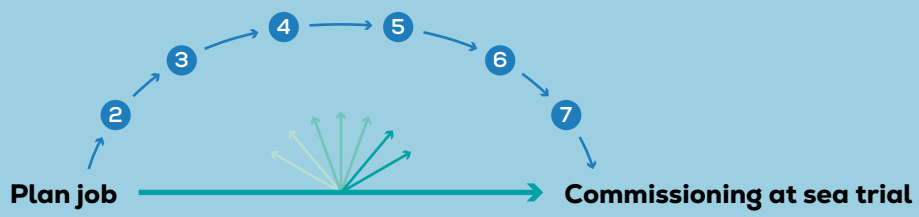
FIVA (fuel injection valve actuation)

Retrofit from Curtiss-Wright FIVA to FIVA

Key benefits
- Up-to-date technology and design
- Increased lifetime
- Factory overhaul
- FIVA spares guaranteed
- Worldwide service of FIVA valves
- Reduced maintenance costs

Scope of supply
- Complete FIVA valves including proportional valves and inductive sensor
- New cables to CCU including junction box between CCU and FIVA valve

Applicable to
All Everllence B&W ME/ME-C/ME-B engines



2. Remove old CWAT FIVA
3. Mounting of FIVA
4. Mounting of junction box
5. Cabling and connection of cables and sensor
6. Removal of excessive electronic parts
7. Updating of engine parameters and function test

Process FIVA Retrofit

Safety screen **filter**

Developed for Everllence B&W ME/ME-C and ME-B engines, the Safety screen filter protects against hydraulic oil impurities, ensuring uninterrupted valve operation and engine reliability.

The safety screen filter is a 100 micron filter developed for Everllence B&W ME/ME-C and ME-B engines. The filter ensures continuous operation of the multi-way valves by protecting the proportional valve from contaminants in the hydraulic oil. With its updated universal design, the filter can be mounted across all multi-way valves.

Proper functionality of the proportional valve relies on clean hydraulic oil. This should be ensured by a 6-micron automatic back-flushing filter. However, if unsuspected large particles has entered the hydraulic system, e.g., from a maintenance job, these particles can cause the proportional valve to malfunction.

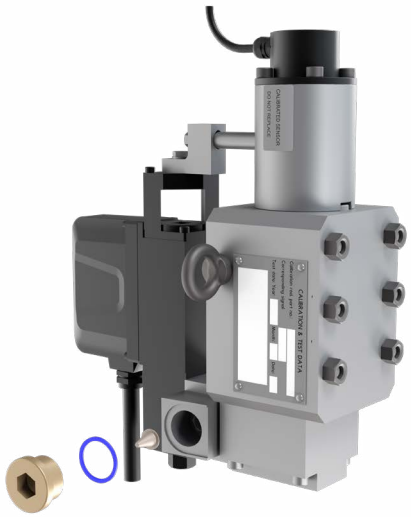
The safety screen filter protects the proportional valve against the large particles and thereby potentially prevent an unexpected cover lift.

Particles might interfere with the functionality of the proportional valve. This will result in a stop of the engine and dismantling of the proportional valve which could have been avoided with a safety screen filter.

The safety screen filter needs to be cleaned every 6000 hours or changed as a spare part when needed.

The safety screen filter is a conical redundancy filter placed between the proportional valves and the housing of the multi-way valves. It can be easily installed by the crew, and all necessary installation parts are included in the supply.

Please contact your Everllence PrimeServ office for more details.

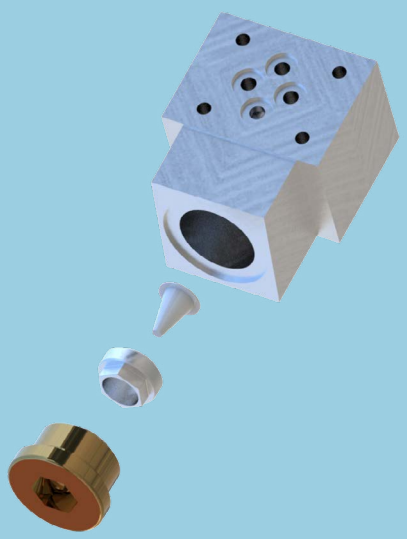


Enhanced engine safety with the 100-micron safety screen filter

Key benefits
- Protects the proportional valve against malfunction
- Reduces risk of cover lift
- Improves reliability
- Ensures safety for crew
- Easy installation by crew

Scope of supply
- New hydraulic filter block
- Nut, plug and packing set

Applicable to
All Everllence B&W ME, ME-B & ME-C engines.



Load **optimizer**

Load Optimizer is an engine control system (ECS) update that reduces the effects on cylinder liners and piston rings caused by engine load variations.

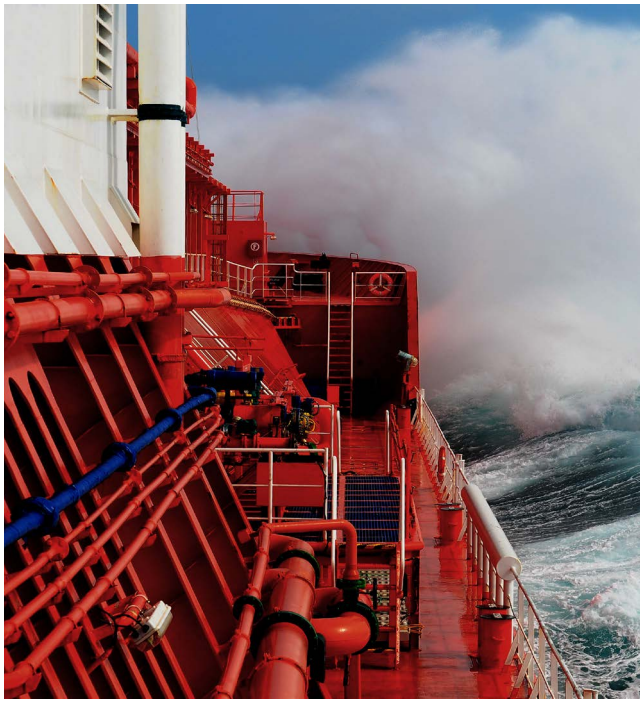
A rapid load increase on the engine can cause a sudden heat increase in the cylinders, leading to excessive wear of cylinder liners and piston rings. Moreover, the liners and the piston rings may be worn and need replacement sooner if load variations occur due to external conditions such as rudder movements, under-keel clearance variations, and adverse weather conditions.

Another reason for increased wear on liners and piston rings is a heavy running engine, for instance due to insufficient light running margin, marine growth on hull and propellers, or adverse weather conditions. This causes an increase in the difference between the combustion pressure and the maximum combustion pressure (Prise), leading to more contact pressure between piston rings and liner.

Reduces unplanned maintenance and replacement of parts

Load Optimizer will extend the duration of an increase from 80% load to 100% load by limiting the fuel index to diminish the heat load and protect cylinder liners and piston rings. Load Optimizer will also control the fluctuation of the fuel index when the engine runs above the maneuvering area, which will protect it against rapid load increases. In case of heavy running propellers, Load Optimizer will protect the engine by limiting the permissible prise. To benefit fully from Load Optimizer and reduce the fuel consumption, Load Optimizer can be combined with EcoTorque.

Please contact your Everllence PrimeServ office for more details.



Fully automatic system improving cylinder liner condition

Key benefits
- Improved cylinder liner condition and protection of piston rings
- Safe engine load-up
- Reduced risk of unplanned cylinder liner and piston ring replacement
- Fully automatic system
- Easy installation – no attendance required by Everllence PrimeServ (installation with the parameter update tool – PUT)

Scope of supply
Load optimizer software, including PUT.

Applicable to
All Everllence B&W ME-C engines 80 bore and larger – mark 9 and newer.

Super **fine filter**

The super fine filter is a separate filter that temporarily replaces the redundancy filter to improve the cleanliness of the hydraulic oil.

The lubricating and cooling oil systems supply oil to the complete hydraulic system, the moment compensator and the torsional vibration damper, unless the engine has a separate system for hydraulic oil.

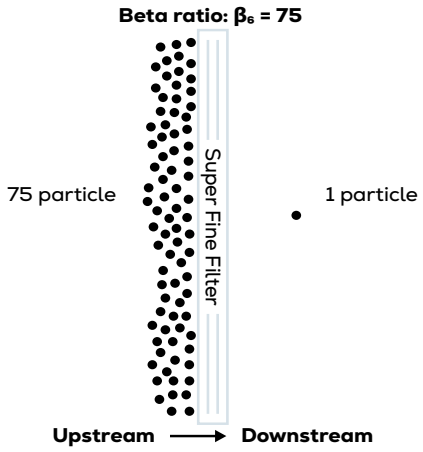
The ME engine consists of many expensive and fine-tolerance components, such as the hydraulic power supply, the FIVA and ELFI valves, the fuel booster, the exhaust actuator, etc. If the hydraulic oil is not sufficiently clean, the risk of damage to the engine components will be increased.

Cleaner hydraulic oil can lead to longer service life of engine components
The super fine filter improves the cleanliness of the hydraulic oil, and it helps to maintain the required oil cleanliness level for ME engines. The super fine filter is now part of the standard design for new ME engines.

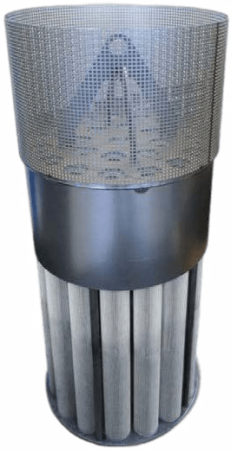
The super fine filter cartridges have an extremely good beta ratio of 75 particles sized 6 microns or more so only one out of 75 particles passes through, whereas the beta ratio of the standard auto-filter is 5 particles sized 6 microns or more so one out of six particles passes through. The actual filter efficiency of the super fine filter is 98.7%, compared with 80% for the auto-filter.

The super fine filter is very easy to insert as a temporary replacement for the redundancy filter. Using this filter once a month for 2 hours will reduce the risk of damage, which can result in extended service life of the engine components.

Please contact your Everllence PrimeServ office for more details.



Schematic diagram of beta ratio mode



Super fine filter

Preventive solution that improves cleanliness of the hydraulic oil

Key benefits
- Significantly reduced risk of damage to engine components and internal lubrication parts
- Improved cleanliness of hydraulic oil
- No need to install a separate hydraulic oil system
- Low-cost solution
- Easy to insert and remove

Scope of supply
- Super fine filter with cartridges mounted on a cartridge holder

Applicable to
All Everllence B&W ME/ME-C/ME-B engines with a specific filter type

Overridable power **limitation MC**

Overridable Power Limitation (OPL) is a retrofit solution designed to lower the energy efficiency index for existing ships (EEXI) by limiting the engine power of the existing fleet to comply with the IMO resolution MEPC 335 (76) adopted on 17 June 2021.

OPL is a measure to limit the main engine's maximum continuous rating (MCR), with the possibility to be overridden if the safety of the vessel is compromised. The OPL is a mechanical stopper device for limiting the fuel index. The solution is tamper proof, which includes that the OPL solution cannot be overriden via local control.

The OPL stopper is installed on the original fuel index stop and can be adjusted if full engine power is required. Once adjusted, the original fuel index stop is revealed and full engine power is available. The OPL stopper is secured and locked by a unique wire seal with a part number and IMO number. The wire seal can only be installed when the OPL stopper is secured in the correct position.

Please contact your Everllence PrimeServ office for more details.

Designed to comply with IMO standards by lowering the energy efficiency index

Key benefits

- Simple solution, fast and easy way to limit the power output of engines or un-limit the engine if additional power is needed and allowed
- No additional systems required
- Easy installation, can be done by service engineer during normal port stay
- OPL system can be activated on the first survey day in 2023

For Everllence B&W MC engines, the OPL solution allows easy release and secures the reset of power limitation with no risk of overload.

Scope of supply

- A mechanical stopper for limiting the fuel index
- Set of numbered seals
- Documentation
  - EPL report
  - Onboard Management Manual (OMM) template

Applicable to

All Everllence B&W MC/MC-C engines

Overridable Power **Limitation ME**

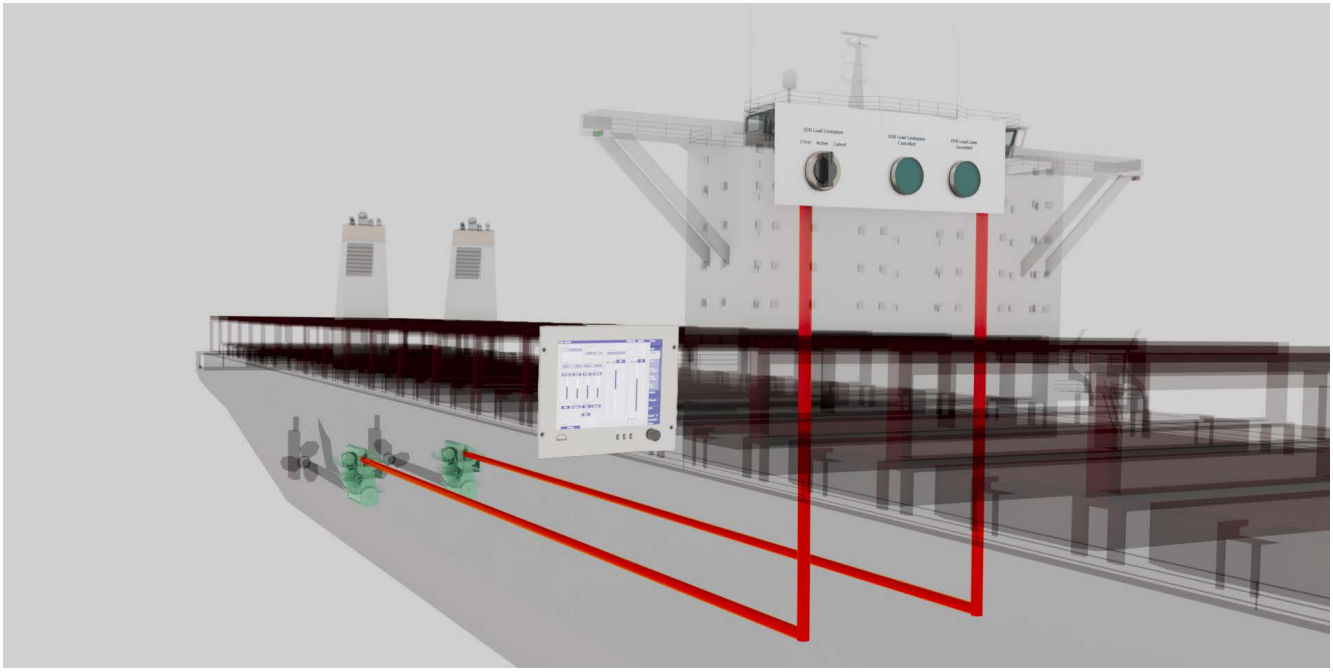
Overridable Power Limitation (OPL) is a retrofit solution designed to lower the energy efficiency index for existing ships (EEXI) by limiting the engine power of the existing fleet to comply with the IMO resolution MEPC 335 (76) adopted on 17 June 2021.

OPL for electronically controlled ME type engines is a solution that consists of software and hardware. The engine power is limited electronically by installing a new software and parameter file in the engine control system (ECS). The OPL is controlled via a remote operating panel consisting of a switch and control lamps installed either on the Bridge or in the engine control room.

OPL is a measure to limit the main engine's maximum continuous rating (MCR), with the possibility to be overridden if the safety of the vessel is compromised.

The ECS is constantly calculating the load of the engine, based on the engine speed, fuel index and cylinder pressures (if applicable). The fuel index will remain unlimited until the power limit is reached.

Please contact your Everllence PrimeServ office for more details.



Developed to comply with IMO standards by lowering the energy efficiency index

Key benefits

- Simple solution, fast and easy way to limit the power output of engines or un-limit the engine if additional power is needed and allowed
- No additional equipment needed
- Easy installation, can be done by service engineer during normal port stay

Scope of supply

- Hardware: Switch and control lamps, and additional electric accessories for installation.
- Software: New Software-release & Parameter File (SPAF)
- Documentation
  - EPL report
  - Onboard Management Manual (OMM) template

Applicable to

All Everllence B&W ME/ME-C/ME-B engines

Permanent power **limitation MC**

Permanent Power Limitation (PPL) is a retrofit solution designed to lower the energy efficiency index for existing ships (EEXI) by limiting the engine power to comply with the IMO resolution MEPC 335(76) adopted on 17 June 2021.

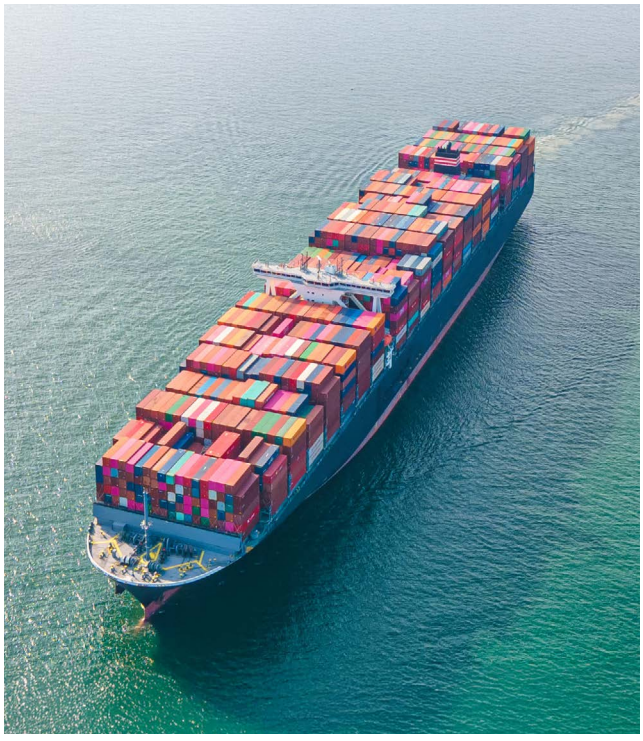
PPL is a wire seal that limits the engine power by restricting the fuel index to a pre-calculated set value. Implementing the EEXI PPL solution allows the vessel to use the 75% PME rule given in the EEXI regulations MEPC.333(76) 2.2.1. Please consult with your classification society in order to verify that a permanent power limitation can be used for the specific vessel.

When installing the wire seal, adaptation of the stop screw on board the vessel is necessary to match the limited fuel index from EPL report. A hole is drilled in the stop screw head where the seal is to be mounted. The wire seal is marked with a unique serial number and an TRUST marking for easy identification and verification. A surveyor can verify the PPL installation by the following means:

- Check serial number on seal
- Check actual limited index against calculated limited index in the EPL report

We recommend that you contact the engine control manufacturer on how to adjust the governor and ensure its correct performance.

Please contact your Everllence PrimeServ office for more details.



Simple and easy permanent power limitation solution for MC engines

Key benefits
- Simple solution – fast and easy way to limit the power output of MC engines
- No additional systems necessary, such as remote controls and logging devices

Scope of supply
- 1 TRUST-marked wire seal
- Drill
- Documentation
- EPL report

Applicable to
All Everllence B&W MC/MC-C engines

Permanent power **limitation ME**

Permanent Power Limitation (PPL) is a retrofit solution designed to lower the energy efficiency index for existing ships (EEXI) by limiting the engine power to comply with the IMO resolution MEPC 335(76) adopted on 17 June 2021.

PPL for electronically controlled ME type engines is a solution consisting of software. The engine power is limited electronically by installing a new software and parameter file in the engine control system (ECS).

PPL is a measure to limit the main engine's maximum continuous rating (MCR).

The ECS calculates the engine load continuously. The calculation is based on engine speed, fuel index, and cylinder pressure. The fuel index will remain unlimited until the power limit is reached.

Implementing the EEXI PPL solution allows the vessel to use the 75% PME rule given in the EEXI regulations MEPC.333(76) 2.2.1. Please consult with your classification society in order to verify that a permanent power limitation can be used for the specific vessel.

Please contact your Everllence PrimeServ office for more details.

Simple and easy permanent power limitation solution for MC engines

Key benefits

- Simple solution – fast and easy way to limit the engine power output
- No additional systems are necessary, such as remote controls and logging devices
- Easy installation – depending on the current ECS software version, as the installation can be done remotely or by an Everllence service engineer during a port stay

Scope of supply

- Software update (if necessary)
- EPL report

Applicable to

All Everllence B&W ME/ME-C engines

Slide **fuel valve**

This type of valve reduces the amount of waste product, gives better combustion properties and is a must-have for slow-steaming operation

The spray pattern of the fuel is further optimised leading to an improved and more complete combustion process. This results in less deposits throughout the gas ways and a reduction in overall emissions, such as HC, and particulate matter. The visible smoke level is also greatly reduced as a result of the improved combustion.

The need for maintenance is reduced with the cleaner gas ways, and testing procedures are simpler thanks to the improved design

Cleaner exhaust gas ways
The following photograph illustrates key benefits of retrofitting a slide fuel valve. The left side of the photo shows an exhaust valve bottom piece with substantial deposits caused by an incomplete combustion process. The right side of the photo shows the same valve seat after installation of a slide fuel valve. The photo was taken after 890 running hours with the new slide fuel valve. No additional cleaning or scraping was done when retrofitting the new type of fuel valve.

What is an Approved Method (AM) for Everllence B&W Engines
As slide fuel valves often reduce NO_x emissions, they are also used in the development of AMs. An AM is a method to document that it will bring an engine in compliance with the present Tier I NO_x limits.

An AM developed by Everllence comprises a slide fuel valve upgrade and documentation. An AM File (AMF) will be issued. The AMF is similar to a NO_x Technological FIle issued for engines built after 2000, but in a reduced format.

Please contact your Everllence PrimeServ office for more details.

Impact on exhaust valve seat with slide fuel valve before and after retrofitting

Slide fuel valve

Optimized low load performance, cleaner combustion, and less emission

Key benefits
- Improved low load performance
- Cleaner combustion chamber
- Cleaner exhaust gas pathways
- Less visible smoke formation
- Lower HC, and particulate emission
- Improved cylinder condition

Scope of supply
- Set of slide fuel valves
- Amendment to Technical File
- Adaptor unit for test rig
- Maintenance tools
- Modification tools (if required)

Applicable to
All Everllence B&W MC/MC-C engines

SO_x scrubber **engineering services**

SO_x scrubber engineering services comprises data and advice on how to comply with the regulations and maintain optimal engine performance when a SO_x scrubber is installed.

To continue using heavy fuel oil (HFO), the vessel must comply with the global IMO sulfur cap of 0.50%, which requires a SO_x scrubber to clean the exhaust gas. Before the installation it is necessary to have data on the exhaust gas, and, after the installation, to have data on the anticipated exhaust backpressure. You must also be able to prove that the engine still complies with the IMO NO_x Technical Code 2008 after the installation.

For that purpose, Everllence PrimeServ has created an engineering services package. The package includes two reports.

Exhaust gas data helps to find the best solution
Before the installation, first an exhaust gas evaluation report is needed to establish if a SO_x scrubber is the best choice and to provide the required data to the scrubber manufacturer.

In a second report, we will use backpressure data from the scrubber manufacturer to estimate if the turbocharger must be rematched.

Turbocharger evaluation is necessary
In some cases, turbocharger rematching is needed because the exhaust backpressure will exceed the maximum limit. Rematching the turbocharger is also recommended to ensure that the engine performance and the fuel consumption is still optimal.

To comply with the IMO NO_x Technical Code 2008, turbocharger rematching requires an amendment to the Technical File. As a part of the service package, Everllence PrimeServ will provide a Technical File amendment approved by a classification society.

Please contact your Everllence PrimeServ office for more details.

Service package on SO_x scrubber compliance and optimal performance

Key benefits
- Ensures optimal engine performance
- Avoids heat load issues on exhaust valve piston, cover, fuel nozzle, etc.
- Complies with the provisions of NO_x Technical Code 2008

Scope of supply
- Report with exhaust gas data
- Report with recommendation for turbocharger rematching
- Turbocharger rematching parts (if required)
- Amendment to Technical File (if required)

Applicable to
All Everllence B&W MC/MC-C and ME/ME-C engines

EngineVault

EngineVault combines powerful software and hardware components to ensure comprehensive firewall protection, application-layer protection, and much more, shielding the Everllence B&W ME engine network.

EngineVault gives you robust protection of your main engine network from online and physical cyberattacks. Unique in the industry, it combines state-of-the-art software and hardware to provide firewall protection, comprehensive whitelisting and application-layer protection that seals off your engine network from virtually any threat – including on-board attacks via compromised USB flash drives and other physical media.

Arm your vessel with EngineVault, and you can rest assured that your engine network is fully protected – even as you benefit from Everllence connected engine technologies and ensure compliance with IMO requirements.

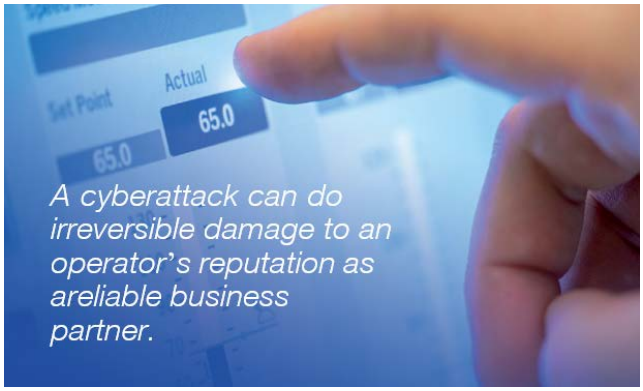
Three critical components
EngineVault protection involves three main security components:

- Full network hardening via port protection, encryption of all data received and transmitted, and advanced network segment segregation
- Critical hardware protection via the latest state-of-the-art main operating panels for the engine control and management systems
- Cutting-edge application-layer protection and extensivewhitelisting that only allows
- Everllence-certified software on your engine network

If an attack should succeed despite the above measures, EngineVault can immediate return your engine network to its last known safe state.

The solution includes a complete new hardened engine network as well as an upgrade of your Engine Control System to the latest version for your engine type. In addition, EngineVault prepares your engine network for Everllence's Remote Update Services and remote installation of selected retrofit upgrades in the future.

Please contact your Everllence PrimeServ office for more details.



Shield your ME engine network against cybersecurity attacks

Key benefits
- Uniquely effective protection against cybercrimes
- Lower risk of service disruptions and off-hire periods
- Greater safety for crews, and protection of physical assets
- Compliance with regulations and IMO requirements
- Peace of mind – ensure business continuity and protect your reputation

Scope of supply
- Managed Switch
  - Segregates network segments

- mGuard
  - Encrypts all data sent/received from the closed engine network
  - Controls data to be exchanged securely between systems

- EMS-MOP
  - Processes raw engine data for diagnostics and control use
  - Automatic Recovery function
  - Hardened image, whitelisting application

- EC-MOP
  - Latest engine control system
  - Automatic Recovery function
  - Hardened image, whitelisting application

Applicable to
All Everllence B&W ME/ME-C/ME-B engines

Product overview

Retrofit & upgrade

Benefits	EcoCam	EcoNozzle	Flexible Turbocharger Cut-Out	PMI VIT	EcoTorque	PMI Autotuning
Save fuel oil	✓	✓	✓	✓	✓	✓
Slow steaming	✓	✓	✓		✓	
Save lubricating oil				✓	✓	✓
Flexible operation	✓	✓	✓	✓	✓	✓
Reduce emissions	✓	✓	✓	✓	✓	✓
Reduce maintenance				✓	✓	✓
Increase TBO				✓	✓	✓
Improve performance	✓	✓	✓	✓	✓	✓
Improve safety				✓	✓	✓
Applicable for						
MC/MC-C	✓	✓	✓	✓		
ME/ME-C			✓		✓	✓
ME-B					✓	✓
All engine types						

Decarbonization
Increase your vessel's sustainability profile, save fuel oil, and support your decarbonization compliance.

	PMI Adaptive Cylinder Control	EcoTuning	Alpha Lubricator	Alpha Lubricator MC upgrade	Alpha Lubricator ME upgrade	ECS EasyDetect	FIVA retrofit
	✓	✓					
	✓		✓	✓	✓		
			✓	✓	✓		
	✓		✓	✓	✓		✓
	✓	✓				✓	
	✓		✓	✓	✓		✓
	✓		✓		✓		
	✓	✓	✓		✓		
	✓						

			✓	✓			
	✓	✓			✓	✓	✓
	✓				✓	✓	✓

Operational efficiency
Improve your efficiency and reliability by optimizing lube oil consumption, maintenance, and legacy management.

Product overview

Retrofit & upgrade

Benefits	Safety screen filter	Load Optimizer	Super fine filter	Overridable Power Limitation MC	Overridable Power Limitation ME	Permanent Power Limitation MC
Save fuel oil				✓	✓	✓
Slow steaming						
Save lubricating oil						
Flexible operation		✓				
Reduce emissions	✓		✓	✓	✓	✓
Reduce maintenance		✓	✓			
Increase TBO	✓	✓				
Improve performance	✓	✓				
Improve safety		✓				
Applicable for						
MC/MC-C				✓		✓
ME/ME-C	✓	✓	✓		✓	
ME-B	✓		✓		✓	
All engine types						

Safety improvement
Optimize crew and vessel safety, including operational stability.

Regulatory compliance

C	Permanent Power Limitation ME	Slide fuel valve	SO_x scrubber engineering service	EngineVault
	✓	✓	✓	
		✓		
		✓		
		✓		✓
	✓	✓	✓	
		✓	✓	✓
		✓	✓	
		✓		
		✓		

		✓	✓	
	✓		✓	✓
				✓

Retrofit solutions

Upgrade your fleet's competitiveness with powerful retrofits

From mechanical and digital upgrades to comprehensive dual-fuel conversions, we specialize in advanced retrofits and upgrades for your vessels.

Keep your engine systems and equipment competitive
Our portfolio of upgrade products and tailored retrofit solutions offers a vast selection of innovative options to optimize your fleet's reliability, efficiency, decarbonization, safety, and compliance. This supports your operation's competitiveness in an ever-evolving market with increasing environmental standards.

In addition to our two-stroke retrofit engine solutions, our portfolio includes:

- **Four-Stroke Propulsion & CP Propeller Solutions:** High power and increased efficiency for mechanical and electric propulsion. Maintains fuel flexibility, compliance with environmental standards, and reliable performance.
- **Four-Stroke GenSet Solutions:** Reliable, compact power for auxiliary and main power supply in diesel-electric propulsion. Maintains operational efficiency, meets regulatory requirements, and saves space.
- **Dual-Fuel Retrofit Conversions:** Significantly optimizes engine emissions, fuel oil consumption, and the decarbonization profile by converting to dual-fuel systems.This complete retrofit conversion enhances environmental compliance and operational flexibility, allowing switching between traditional fuel oils and e-fuels.

For more information, please visit our website to explore our retrofit brochures or contact us to learn more.

Everllence PrimeServ

Dual fuel conversion

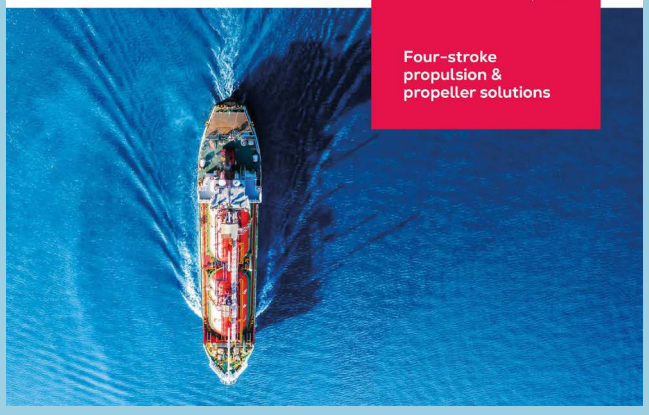
For marine systems with two-stroke applications

Everllence PrimeServ

Retrofit **& upgrade**

Products services portfolio

Four-stroke propulsion & propeller solutions



Everllence PrimeServ

Retrofit **& upgrade**

Products services portfolio

Four-stroke GenSet solutions

Everllence PrimeServ

Retrofit **& upgrade**

Products services portfolio

Two-stroke engine solutions

PrimeServ
Service with passion

Everllence PrimeServ is the dedicated Everllence service brand. Via a network of over 100 service centers worldwide, Everllence PrimeServ provides 24/7 service across the globe. Our range of services includes technical support, consulting and OEM spares, as well as maintenance, repair and comprehensive individualized service plans.

24

hours a day

365

days a year

Everllence

SULZER TURBO

Paxman

BABCOCK BORSIG

B&W MOTOR

Mirrlees Blackstone

HOLEBY GENERATING SETS

S.E.M.T. PIELSTICK

Alpha PROPULSION SYSTEMS

Ruston

HH

B+V Industrietechnik

Everllence and legacy brands
Everllence PrimeServ is our brand name for high-quality aftersales support for the entire Everllence product portfolio. Through refinements to our products and repair techniques, we ensure and enhance our technological leadership and technical expertise as an original equipment manufacturer (OEM) for the brands united under Everllence.

Everllence PrimeServ's aim is to provide

- Prompt delivery of high-demand OEM spare parts within 24 hours
- Fast, reliable and competent customer support
- Individually tailored O&M contracts
- Ongoing training and qualification of operators and maintenance staff
- Global service, 24 hours a day, 365 days a year
- Diagnosis and troubleshooting with our high-performance online service

Worldwide service

We offer retrofitting and upgrade services to bring engines and turbochargers already in service up to the very latest standards of performance and efficiency.

100

Services centers worldwide

Represented in all key markets and major ports, with a network of more than 100 service centers, and with skilled field service managers at the ready to provide first-class technical support, Everllence PrimeServ is fully primed to provide 24/7 service, wherever you are. In power plants, marine engines & systems and turbomachinery, offering reliable technical support when you need it most, our service solutions include OEM spare parts, engine and machinery maintenance and repairs, customized service agreements, and individual consulting.

For existing equipment, our holistic retrofit and modernization solutions keep your engines or turbochargers up-to-date and at optimal levels of reliability, availability, and economic efficiency. Through cutting-edge digital technology we are able to enhance performance and minimize downtimes, while our remote connections enable live data analysis, ensuring quick, and effective solutions. Everllence PrimeServ Academies provide expert training courses around the world, developing the operational and maintenance skills required.

For more information please visit
www.everllence.com/services

Everllence

Everllence PrimeServ
2450 Copenhagen, Denmark
P + 45 33 85 11 00
retrofit2s@everllence.com
www.everllence.com

MAN Energy Solutions SE has been renamed to Everllence SE and its products are being rebranded from “MAN” and/or “MAN Energy Solutions” to “Everllence”. As this is an ongoing process, any reference to “MAN” and/or “MAN Energy Solutions” is actually a reference to “Everllence”.
All data provided in this document is non-binding. This data serves informational purposes only and is not guaranteed in any way. Depending on the subsequent specific indivdual projects, the relevant data may be subject to changes and will be assessed and determined individually for each project. This will depend on the particular characteristics of each individual project, especially specific site and operational conditions.

EVR 000255EN-R1-250600, GKM-CPH