

# **FuelMACS®**



Fuel & Energy Performance Management

- Vessel performance indicators
- Improved fuel efficiency
- Energy management
- ▶ Emission reduction
- ▶ Shore based analysis
- ▶ Applicable for dual-fuel solutions

## **FUELMACS®**

### FUEL PERFORMANCE MANAGEMENT

The FuelMACS® system is designed to support ship owners and operators in reducing fuel costs and emissions.

The system monitors a number of variables, and features an intuitive and easy to use interface for fuel performance management through KPI dashboards and system overviews. The system will use data from existing sensors onboard, and is suitable for retrofit.

Data for both instant and accumulated fuel consumption is provided, and can be reported per engine and for a specified period of time.

The FuelMACS® is a modular solution which includes useful tools such as efficiency parameters and on-shore analysis of fuel consumption.



#### Think lean and green

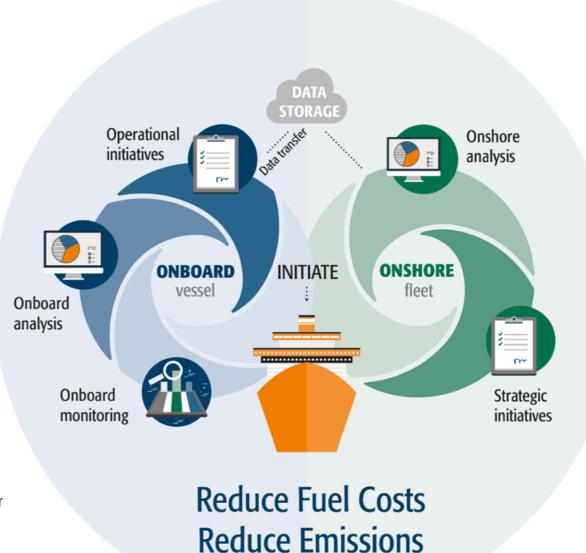
The FuelMACS® can increase revenues while supporting environmental goals through effective use of routing, decreased levels of non-value added time and effort, and reduced fuel costs and emission levels.

## Vessel performance

Vessel speed is monitored for calculation of fuel usage in litres per nautical mile.

## Engine performance

Data for engine power is monitored for calculation of the specific fuel consumption for each engine (g/kWh or normalised).



#### Shore based analysis

Transfer of data to shore allows the shore based operation to track a vessel or fleet, and analyse and compare the fuel performance of different vessels using customised reports and dashboards.

## Data transfer and storage

We use advanced telemetry to provide monitoring of systems on the ship, and ensure continuous real-time connection between vessels and back office for extracting, transforming and loading data.

### Hull performance

The hull performance management module measures shaft torque/power vs. speed, and can analyse the speed-loss over time.

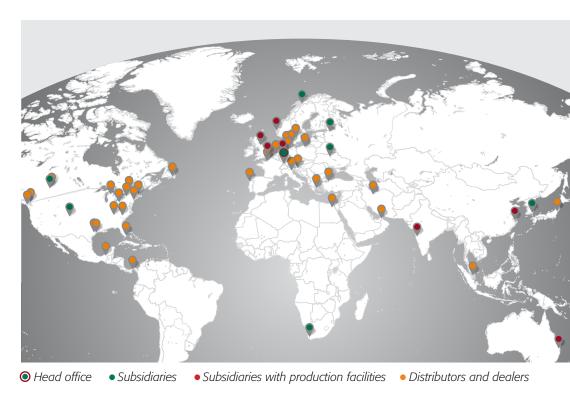
## HEINZMANN Group

Quality & Precision since 1897

The Group started in 1897 with
Heinzmann GmbH & Co. KG,
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HEINZMANN UK,
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The HEINZMANN Group operates numerous global subsidiaries, including eight production sites and an international distributor network.

Our product portfolio comprises engine management system solutions, as well as exhaust gas aftertreatment solutions, for industrial combustion engines and turbines. It also encompasses automation systems, primarily for the shipping industry.



### HEINZMANN AUTOMATION – Specialist in Marine Automation

We provide complete turnkey solutions for electronics, automation and control systems for merchant marine and navy vessels. With more than 30 years' experience as experts within the field of marine automation, we serve our customers by finding the best solution to meet their demands. We supply our own products, products from our partners, as well as a combination of both, with the overall target of optimizing the outcome of each specific project.

We have rebuilt automation systems on more than 60 vessels with great success. It is our highly skilled engineers who mainly drive this success, and they are ready to look into whatever challenges you might have.

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