



ENGINE EMISSIONS MONITORING SYSTEM

# DATASHEET



# DATA IN BRIEF.

MariNOx™ is the world's first Type Approved (LR) on-board NO<sub>x</sub>, CO<sub>2</sub>, SO<sub>x</sub> & engine efficiency monitoring system providing the simplest solution for compliance with Annex VI of MARPOL, 'The NO<sub>x</sub> Technical Code' and MEPC.103(49). The system provides monitoring of exhaust gases and engine/ambient parameters to calculate NO<sub>x</sub> emissions and enables continuous optimisation of engine performance to deliver fuel savings of up to 4%, providing rapid return on investment.

- **PROVEN MAJOR FUEL SAVINGS**
- **TOTALISED EMISSIONS REPORTING FOR GREEN CHARTERERS - PROVE EMISSIONS REDUCTIONS**
- **FREEDOM TO OPERATE YOUR FLEET HOW YOU WANT TO - ADJUST ENGINE SETTINGS & USE NON-OEM SPARE PARTS**
- **FUTURE PROOF FOR FUTURE EMISSIONS LEGISLATION**
- **REAL-TIME EMISSIONS DATA REPORTING FUNCTION VIA SECURE WEB PORTAL**
- **PRE-PORT/ SECA ENTRY REPORTING**



## SYSTEM CAPABILITIES

<b>REPORTING CAPABILITIES</b>	<p><b>NO<sub>x</sub></b> Compliant with MARPOL Annex VI Reg. 13 Instantaneous specific NO<sub>x</sub> g/kWh Totalised mass NO<sub>x</sub> emissions kg/tonnes (ISO 14001 reporting) Automatic monthly NO<sub>x</sub> compliance tests during normal vessel operations Pre-configured for Tier I, Tier II and Tier III emission limits.</p> <hr/> <p><b>SO<sub>x</sub></b> Compliant with MARPOL Annex VI Reg. 14 (4) (b) i. SO<sub>2</sub>/CO<sub>2</sub> ratio ii. Fuel oil sulphur content (% w/w) iii. Totalised mass SO<sub>x</sub> emissions kg/tonnes.</p> <hr/> <p><b>CO<sub>2</sub></b> Instantaneous % totalised mass CO<sub>2</sub> emissions kg/tonnes CO<sub>2</sub> emission indexing in line with MEPC Circ. 471, e.g. g CO<sub>2</sub>/tonne nm' CO/CO<sub>2</sub> combustion efficiency ratio capability.</p>
<b>STANDARD ANALYSERS</b>	NO <sub>x</sub> , CO <sub>2</sub>
<b>OPTIONAL ANALYSERS</b>	SO <sub>x</sub> , CO, O <sub>2</sub> , NH <sub>3</sub> , Hydrocarbons & Particulate matter.
<b>ANCILLARY INPUTS</b>	Engine performance parameter sensors, ambient temperature, pressure & humidity sensors, as required by 'The NO <sub>x</sub> Technical Code (2008)'.
<b>SECURITY</b>	Date encryption to ensure tamperproof emissions reporting.
<b>ENVIRONMENTAL TESTING</b>	Certified to IACS E10 / LR ENV 2 / DNV Class A/B/BV spec Pt C, Ch 3, section 6.
<b>TYPE APPROVAL</b>	Lloyds Register, DNV & MCGA.
<b>SYSTEM DIAGNOSTICS</b>	Automated system condition monitoring with maintenance indicators.
<b>EMISSIONS REPORTING</b>	<b>DATALINK™</b> – Windows-based user emissions reporting software, displays multi-engine details and emissions values in a simple, user friendly format.
<b>ONLINE EMISSIONS REPORTING</b>	Utilising a secure Web portal for corporate access to individual vessel or full fleet reporting. Your secure Web access provides you with: vessel position; speed; direction data; instant emissions; cumulative emissions data; and sulphur in fuel reporting. Other data available on request.
<b>EMISSIONS CONTROL AREA (ECA) ALERTS</b>	Determines applicable emission limits based on geographical location, an provides an automatic alarm notification. Reports show emissions snapshot via Inmarsat 'D' by email, SMS, etc.
<b>ENGINE PERFORMANCE MANAGEMENT</b>	Integration facility with your engine performance management system to enhance engine optimisation capability.



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*"Winner of 2008 award for Protection of Marine and Atmospheric Environment."*

