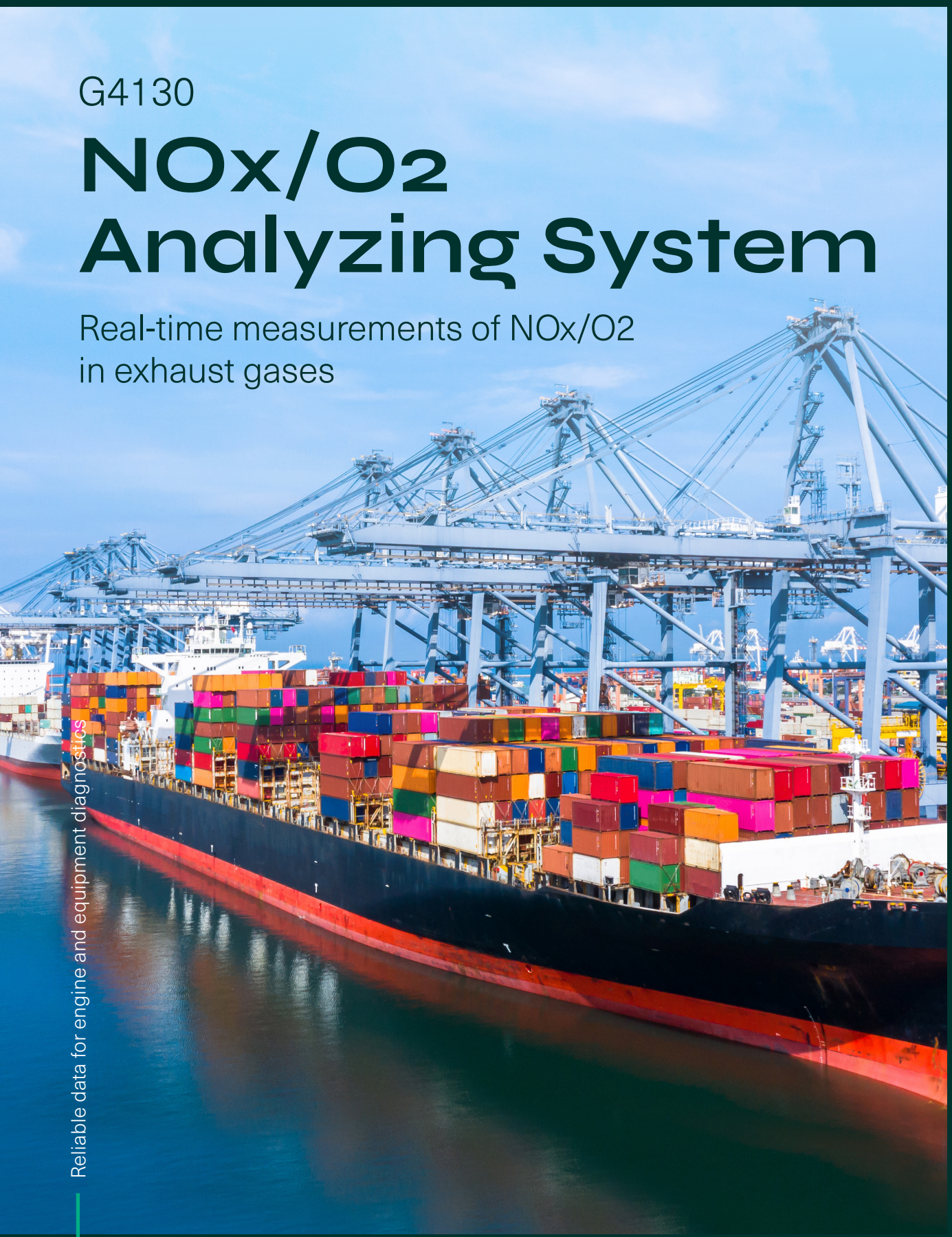
G4130

NOx/O2 Analyzing System

Real-time measurements of NOx/O2 in exhaust gases



Reliable data for engine and equipment diagnostics

Maritime

Green Instruments

The G4130 NOx/O2 Analyzing System is a simple and reliable system that provides precise NOx/O2 combustion data, helping vessels to comply with increasingly stringent emission regulations.

Compliance with environmental regulations

Key features

- Provides data for SCR/combustion optimization
- Documentation of compliance
- Simple installation and integration
- Low cost of ownership
- In-situ direct monitoring – fast response
- Reliable true wet measurement of NOx and O2 in exhaust gases
- No sample lines, sample systems or converters
- Graphic display – interface via touch screen
- Automatic backflushing for purging filter at probe head
- Analog outputs
- Global service and support

Reliable monitoring

The G4130 NOx/O2 Analyzing System is an in-situ gas analyzer that monitors NOx and O2 concentrations directly in exhaust gases. The system consists of the NOx/O2 analyzer, a sampling board, and a diffusion probe with a sensor for the precise monitoring of NOx and O2 levels. It provides reliable data for SCR/combustion optimization as well as data for regulatory environmental reporting requirements, thus helping to ensure environmental compliance. The system is simple to install and integrate on board vessels.

The diffusion probe

The diffusion probe on the NOx/O2 analyzer ensures that the gas is diffused to the measuring chamber. This makes it suitable for most marine applications. The simple design also ensures minimal maintenance.

Simple operation

The G4130 NOx/O2 Analyzing System uses a zirconium dioxide sensor with multiple diffusion cells. It is small and robust, placed directly in the probe head, and operates reliably in harsh and tough marine environments.

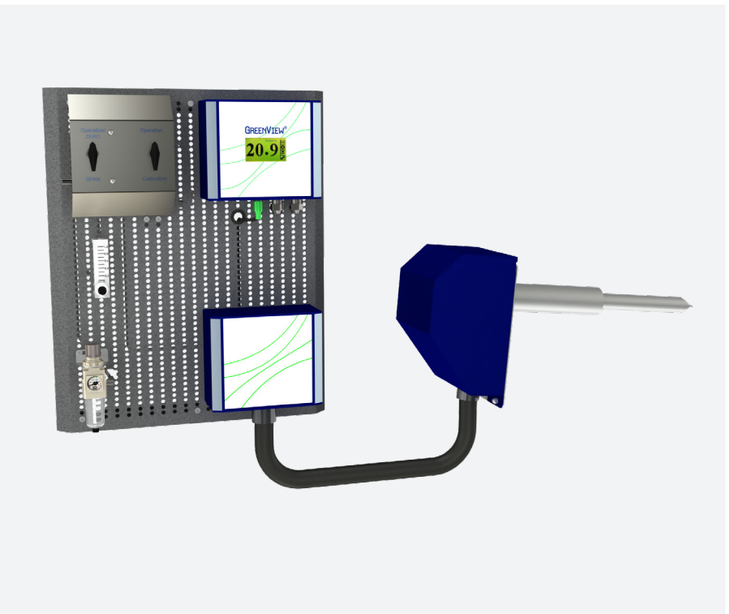
In other words, the system can be installed on the stack without special protection, only requiring a small filter. The sensor technology allows measurements on wet basis at high temperatures, and it avoids the disadvantages of sample lines, sample systems, and converters. An extra advantage of the G4130 NOx/O2 analyzing system is the interface via touchscreen, making it extremely user-friendly for the crew.

Constant optimization

Using the G4130 NOx/O2 Analyzing System in combination with an emissions abatement system such as a selective catalytic reduction (SCR) or exhaust gas recirculation system (EGR) will allow constant optimization of fuel combustion, urea injection, and other operating parameters. Real-time emission data provided by the NOx analyzer is crucial for engine and equipment diagnostics.

Low maintenance costs

The simple design of the analyzing system means it is cost-effective to install, operate and maintain. A complete system includes an automatic backflushing probe that is connected to the sampling board. Automatic backflushing of the probe



head keeps it clean from loose soot and dust. The period between each backflush depends on the actual flue gas and the amount of contamination on the filter.

Service and support

The design of the G4130 NOx/O2 Analyzing System ensures low cost of ownership. The system requires occasional cleaning using a soft damp cloth on the touch screen. It has consumable parts that can easily be replaced by the crew. In the event that assistance is needed regarding replacement of e.g. consumables or retrofit to a new system, Green Instruments provides full service and support to ensure optimal operation throughout the entire product lifetime.

Certificates

CE DNV BUREAU VERITAS

Specifications – G4130

ANALYZER

Power supply

Standard	100 – 230 VAC, 50/60 Hz, 24 VDC
Power consumption	40 VA per analyzer
Ambient temperature	0 – 55 °C

Measurement

Measurement range	NOx: 0 – 1500 ppm / O2: 0 – 21 %

Communication

Output signal	2 x 4 – 20 mA – range selectable Default: NOx: 0 – 2000 ppm / O2: 0 – 25 %
Max load signal	600 Ω / 24 VDC
Alarm relays	Volt free, 24 VDC/DC, 5 A

Material/enclosure

Digital display	71 x 39 mm touch screen with trend graph display
Enclosure	IP 67

Dimensions

Dimensions	170 x 200 x 90 mm

ANALYZING BOARD DIMENSIONS

Dimensions / weight	600 x 500 x 140 mm / approx. 10 kg (without packaging)
Span NOx gas connection	6/4 mm tubing – max 1 bar
Air supply filter regulator	1/8 BSP connection – max 1 bar
Air supply quality	Instrument air quality according to ISO 8573-1

Diffusion probe

Sensor technology	Zirconia type sensor
Sample temperature	0 – 500 °C
Probe insert length	208 – 338 mm For duct diameters 235 – 2800 mm
Mounting type	Welding socket size OD: 70 mm L: 190 mm or thread size: 1½ BSP
Air supply connection for backflushing and calibration	6/4 tubing
Calibration gas flow	Approx. 0.5 – 1 l/min
Dimensions	Short: 285 x 180 x 475 mm Long: 285 x 180 x 600 mm Weight: Approx. 6 kg (without packaging)

Umbilical cord

Length	3 m
Tubing	28 mm nylon conduit

Specifications subject to changes without notice

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