

Simplify regulatory **compliance** with an innovative CEMS analyzer

MES1002 is an innovative SO₂/CO₂ scrubber CEMS solution



Marine regulatory compliance calls for **reliable and compliant solutions**



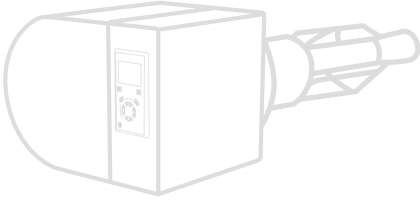
Best-in-class solution for safe performance

At Danfoss IXA we work together with all relevant class societies. This ensures that our products live up to the leading standards in the industry as well as ensuring the design quality.

As global shipping is heading towards a greener future, emissions regulations continue to become more and more strict. The marine industry relies on advanced and reliable CEMS solutions for regulatory compliance. In the challenging environment of Exhaust Gas Cleaning Systems (EGCS), also referred to as scrubbers, robust solutions are essential. MES 1002 is a SO₂/CO₂ scrubber CEMS solution that can withstand this harsh environment on board marine vessels.

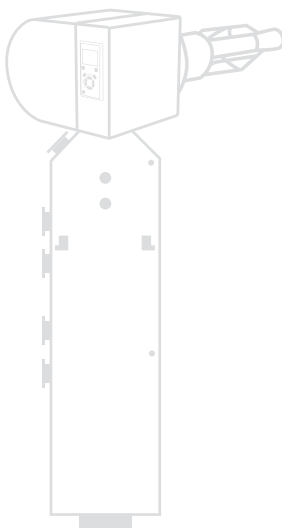


Comply with environmental regulations



With SO₂, CO₂ analyzer, MES 1002, you achieve best-in-class emission monitoring and documentation compliant with the global sulphur cap 2020.

This, combined with our emission monitoring application knowledge, enables you to stay in compliance with sulphur regulations in a reliable way.



Global sulphur cap 2020

In an effort to limit sulphur emissions, the International Maritime Organization (IMO) has established that vessels, as of January 1st 2020, are not allowed to burn fuel with a sulphur content above 0.5% worldwide.

Along with this, Emission Control Areas (ECA) have also been established, which limit sulphur emissions to 0.1% for ships operating in those areas. Emission regulations are consequently becoming more and more strict, and this calls for reliable solutions that ensure compliance.

Danfoss IXA specializes in emission monitoring solutions that provide fast and accurate measurements, which is vital in ensuring optimum use of the scrubber.

MES 1002

Where compliance meets innovation

MES 1002 SO₂ and CO₂ analyzer

The MES 1002 is designed to document the SO₂/CO₂ ratio in a scrubber application according to the specifications defined by the MEPC.259 (68) and MEPC.340(77). The MES 1002 is characterized by its very compact design and outstanding quality as it is designed specifically for maritime applications.

Key benefits

01

Compliance

MARPOL Compliance with MEPC.340(77) and MEPC.259(68)

02

Minimal maintenance

Benefit from a cost-effective solution. With simple and regular air filter elements replacement and probe/optics cleaning, ship owners gain low OPEX.

03

Easy installation

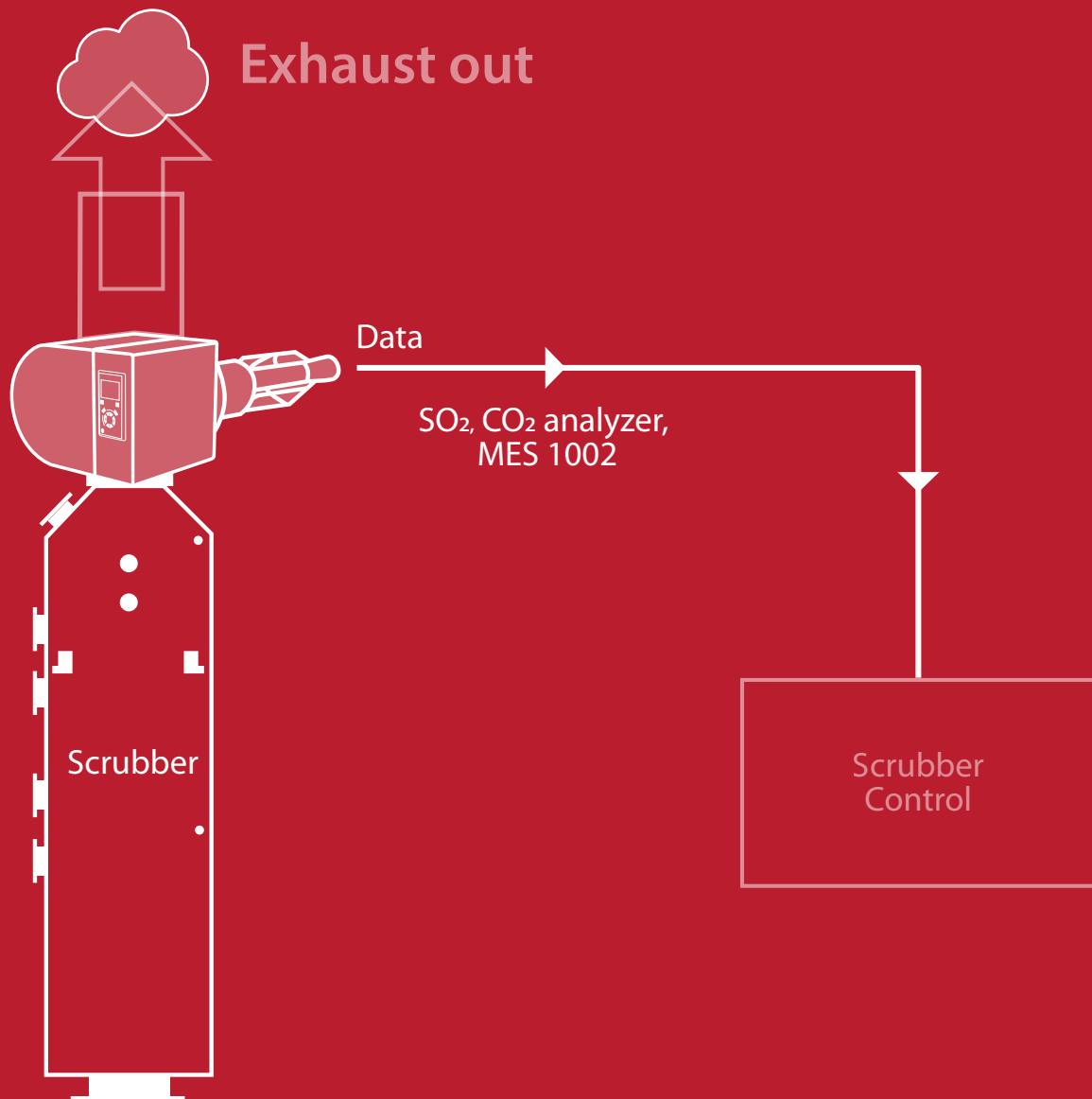
Single-unit setup with minimal configuration requiring only power, air and data.

24 months replacement program – no need for onboard technicians or span gasses.

Dimensions	W922 x H375 x D284 (mm)
Weight	35 kg
Probe materials	Inconel
Mounting location	After Scrubber



SO₂/CO₂ analyzer, MES 1002 for scrubber application



The MES 1002 offers the following specifications:

- CO₂ range: 0 – 15%
- SO₂ range: 0 – 200 ppm
- Modbus TCP/IP, RS-422 for GPS
- 24 VDC, < 60W

The MES 1002 is based on an optical measurement principle using two light sources and two detectors; one set for each gas. UV light is used for measuring SO₂ and IR light is used for measuring CO₂. The analyzer measures in-situ and offers accurate and reliable measurements. All measurements are stored internally for at least 18 months. The probe is made from Inconel which can withstand an environment of sulfuric acid.

Cost-efficient performance with innovative solutions

The MES 1002 is a cost-effective CEMS solution for scrubber.

The MES 1002 analyzer is a compact single in-situ unit with a lightweight design, saving space and simplifying installation and maintenance. The analyzer is designed for easy installation by vessel crew.



One solution provider of emission monitoring

Danfoss IXA is one solution provider of emission monitoring.

This covers monitoring and gathering of all emission data to be used for compliance, control, documentation, and optimization of processes in various applications throughout the engine room. This is done through platforms provided by the Danfoss IXA product portfolio.

All Danfoss IXA products together provide you with the best solution for emission monitoring that is easy to install, operate and maintain.

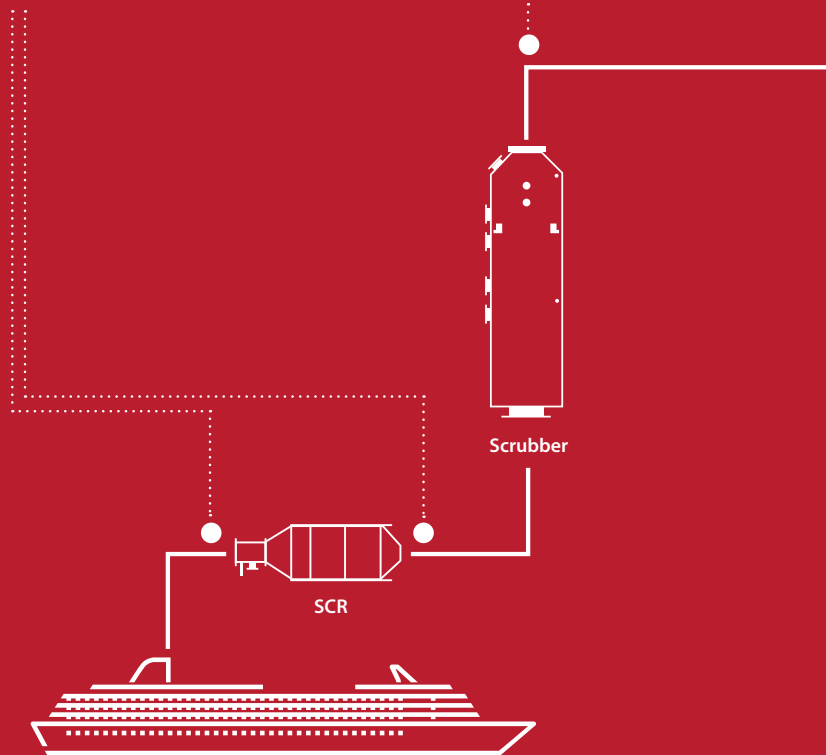
Danfoss IXA is world class provider of emission monitoring solutions.



MES 1001 MARPOL
NOx SO2 NH3 Analyzer



MES 1002
SO2/CO2 Analyzer



← Scan QR code

Discover more about
MES 1002 on our website



MES 1002 Measurement ranges

SO ₂	0 – 200 ppm
CO ₂	0 – 15%

One solution provider of emission monitoring in the maritime industry

Danfoss IXA A/S, part of the Danfoss Group, is a leading player in certified marine emission monitoring solutions. We develop innovative analyzers and systems that precisely and continuously measure climate parameters and environmentally harmful gases, providing documentation of regulatory compliance and essential input for energy optimization.



MES 1001
NO_x, SO₂ and NH₃ analyzer



MES 1001 MARPOL
NO_x, SO₂ and NH₃ analyzer



MES 1001 Ammonia
NH₃, NO_x analyzer



MES 1002
SO₂, CO₂ analyzer

Engineering a more sustainable shipping industry

Maritime expertise across divisions

To serve the marine industry in the best possible way, several Danfoss divisions bring a particular range of technical know-how and benefits on board. On their own, each division is at the forefront of its field with industry-leading insight and innovation. Working together, the Danfoss divisions form a comprehensive array of components that help major ships around the world ashore safely and on-time.

Maritime Products with High Standards

Danfoss IXA's products are designed for the maritime environment and comply with industry standards. Thorough testing and third-party approvals ensure high technical standards.

Further information available
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