



# CEMS FOR MARINE EXHAUST

**Exhaust gas emissions from ships are subject to international, national, and regulations defined by the International Maritime Organization (IMO). ShipCEMS COMPACT is your guarantee of documented compliance.**

The ShipCEMS product series is designed to monitor and report emissions, contributing to local and global environmental challenges.

ShipCEMS COMPACT comprises all-in-one cabinet and can be customised to individual requirements, covering all types of exhaust systems, fuel types and exhaust gas cleaning systems.

ShipCEMS COMPACT can be installed on any vessel type and can be configured to measure a wide variety of chemical components.

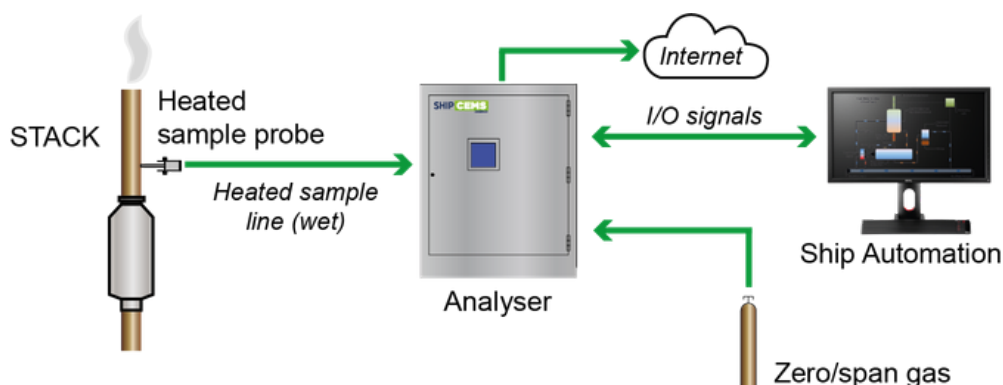


**SHIP** **CEMS**  
**COMPACT**

## Applications:

- Direct measurement
- Exhaust Gas Cleaning System
- Carbon capture
- Methane slip
- EU ETS Compliance
- Continuous monitoring of SO<sub>2</sub> and CO<sub>2</sub>
- Raw gas monitoring of SO<sub>2</sub>, NO<sub>x</sub>, CO, CO<sub>2</sub>, O<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, NH<sub>3</sub>
- Extractive measuring technology for demanding applications
- Rugged design for marine environment and operations
- Continuous operation with automatic analyzer calibration
- Low-cost maintenance, long service lifetime
- Measures on a dry basis
- Remote operation via ShipCEMS Connect





## Technical specifications

### Measuring range

- SO<sub>2</sub>: 0–200/0–250 ppm
- CO<sub>2</sub>: 0–10/0–15 mol%
- NO: 0–2000 ppm
- CO: 0–2000 ppm
- CH<sub>4</sub>: 0–10000 ppm
- N<sub>2</sub>O: 0–200 ppm
- NH<sub>3</sub>: 0–500 ppm

### Streams

- 1–8 engines

### Measuring principles

- IR spectroscopy

### Verification gas requirements

- 80% of component range
- N<sub>2</sub> (balance)
- Consumption: 5L/min (only during calibration)

### Zero gas requirements

- Nitrogen or instrument air according to ISO8573-1:2010 (4.3.4)
- Consumption: 5L/min (only during calibration)

### Analyser Cabinet

- Dimension: 1100 x 800 x 350 mm (including cooler)
- Weight: 130 kg

### Heated sample probe:

- Weight: 10 kg
- Flange diameter:
- **DIN flange:**
  - DN65 / PN6
  - DN65 / PN10/16
- **JIS flange:**
  - 10K / DN65
  - others on request

### Heated sample line

- Diameter: Ø40 mm
- Flexible design
- Length: 5–25 m
- Cut on site

### Ingress protection

- Cabinet: IP44
- Sample probe: IP54

### Ambient temperature

5–55 °C

### Type approval

According MEPC 268(59)  
DNV  
LR  
ABS  
CCS  
Others on request

### Materials

Cabinets: SS316L  
Tubing: PFA/PTFE  
Fittings: SS316

### Power requirements

120–230 VAC

### Power consumption

- Analyser cabinet: 1600 W
- Sample probe: 500 W

### Communication

- Modbus
- Profibus
- Analog / Digital

*Please note that datasheet specifications are subject to change without prior notice!*