



Committing to the future

testo 350-MARITIME

Portable Emission Analyzer with Type Approval by Germanischer Lloyd (GL)
for compliance with MARPOL 73/78 Annex VI, NOx Technical Code and MEPC.103(49)



O₂

CO

CO₂

NO_x

(SO₂)



Flue gas emissions from marine diesel engines

Fast and easy measurement for compliance with MARPOL Annex VI and NO_x Technical Code

The type approved testo 350-MARITIME is the first portable emission analyzer in the world developed for measurements of flue gas emissions subject to MARPOL Annex VI and the MEPC.103(49) guideline.

testo 350-MARITIME has the following type approval certificate:

Germanischer Lloyd (GL) type approval certificate No 59 488 – 08 HH
subject to MARPOL 73/78 Annex VI, NO_x Technical Code and
MEPC.103103(49)-guideline

Gas sampling is carried out using a special sampling probe which can be installed with the help of a flange. The certified and durable electrochemical gas sensors (ECS) provide a highly accurate and long-term stable determination of the concentration of the exhaust gas components O₂, CO und NO_x (NO + NO₂ separately). CO₂ is recorded using the certified IR measurement principle. In order to meet the tough conditions at sea, the complete exhaust gas analyzer is housed in a robust protective case.

The emission analyzer testo 350-MARITIME provides the following benefits:

- Easy fitting of the sampling probe
- Operational readiness – directly after switching-on
- Easy and fast replacement of gas sensors due to pre-calibrated “plug & play” gas sensors
 - high availability of testo 350-MARITIME
 - reduced cost of ownership
- Easy & comfortable transportation in the tough protection case with trolley function
- High reliability due to measuring operation inside the protection case

Emission analyzer
testo 350-MARITIME





The applications of testo 350-MARITIME at a glance

On-board verification survey subject to NO_x Technical Code

The testo 350-MARITIME can be used to measure the gaseous exhaust gas concentrations of O₂, CO, CO₂ and NO_x as one system component for the following procedures:

- On-board Direct Measurement and Monitoring method for periodical surveys and intermediate surveys
- On-board Simplified Measurement Method

for instance if any adjustment or modification has been carried out on an engine.

Inspection of NO_x limit values stipulated in MARPOL Annex VI

- for governmental NO_x control measurements on board

NO_x-measurement as verification in regions with local or national legislation

- e.g. proof of NO_x reduction measures subject to the NO_x Tax in Norway



Technical data testo 350-MARITIME

Parameter	Measuring range	Accuracy
°C, flue gas	-40 up to 1000°C	max. ±5 K
O ₂	0 to 25 Vol%	Meets and exceeds the requirements of NO _x Technical Code as Type approved by GL
CO	0 to 3000 ppm	
NO	0 to 3000 ppm	
NO ₂	0 to 500 ppm	
SO ₂	0 to 3000 ppm	
CO ₂ (IR)	0 to 40 Vol%	
P _{abs}	600 to 1150 hPa	±5 hPa at 22 °C ±10 hPa at -5°C up to 45°C

Storage temperature	-10°C up to 50°C
Operation temperature	5°C up to 50°C
Power supply	11 to 40 V DC or 110 to 230 V AC 50/60 Hz buffer battery NiMH 8.4V/4.5Ah
Electrical power consumption	max. 40 W
Max. positive pressure / flue gas	50 hPa
Max. negative pressure / flue gas	-200 hPa
Weight (system including case)	appr. 17 kg
Dimensions (case)	56.5 x 45.5 x 26.5 cm



Certificate No. 59 488 - 08 HH



The complete set in a handy trolley:



Emission analyzer testo 350-MARITIME fitted with: O₂, CO, CO₂-
(IR), NO and NO₂, gas preparation, integrated rechargeable
battery pack and measurement data memory

Control Unit testo 350-MARITIME

Connection cable (2 m) between analyzer and Control Unit

Flue gas sampling probe with probe shaft prefilter

Mounting flange for gas sampling probe

Robust protection case with trolley function

Cable with battery clamps and adapter for connection to
testo 350-MARITIME

Germanischer Lloyd (GL)-certificate no. 59 488 - 08 HH

Incl. on-site demonstration & hands-on training

Incl. individual application support on demand

Order No. 0563 3500

Optional:

Standard ambient climate probe (temperature and relative humidity)
Order.-Nr. 0636 9740

Connection cable to ambient climate probe, length 1.5 m
Order.-Nr. 0430 0143

* SO₂-measurement on request

Germanischer Lloyd (GL) - Certificate

Subject to change without notice.



Connections integrated in case



Practical trolley

For further information:

www.testo.com



All prices are net, and are subject to the
respective local taxes in the country of purchase
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