

# MANOX-CLD

madur NO<sub>x</sub> CONVERTER

www.madur.com



## CHARACTERISTIC

## FEATURES

## TECHNICAL DATA

## APPEARANCE

MANOX-CLD is a supplemental NO<sub>x</sub> analyser to madur's Photon NDIR analyser. It utilises chemiluminescence measurement technique and therefore is fully compliant with the reference method described in the norm EN14792.

MANOX-CLD in synch with Photon gas analyser and PGD-100 gas conditioner unit meet the European Committee for Standardization's current guidelines for determination of flue gases.

In order to provide full compliance with EU norms, also for the first generation of Photon analysers, MANOX-CLD can be equipped with paramagnetic O<sub>2</sub> sensor (to meet the norm EN14789).

# MANOX-CLD

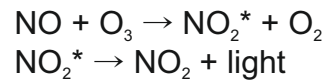
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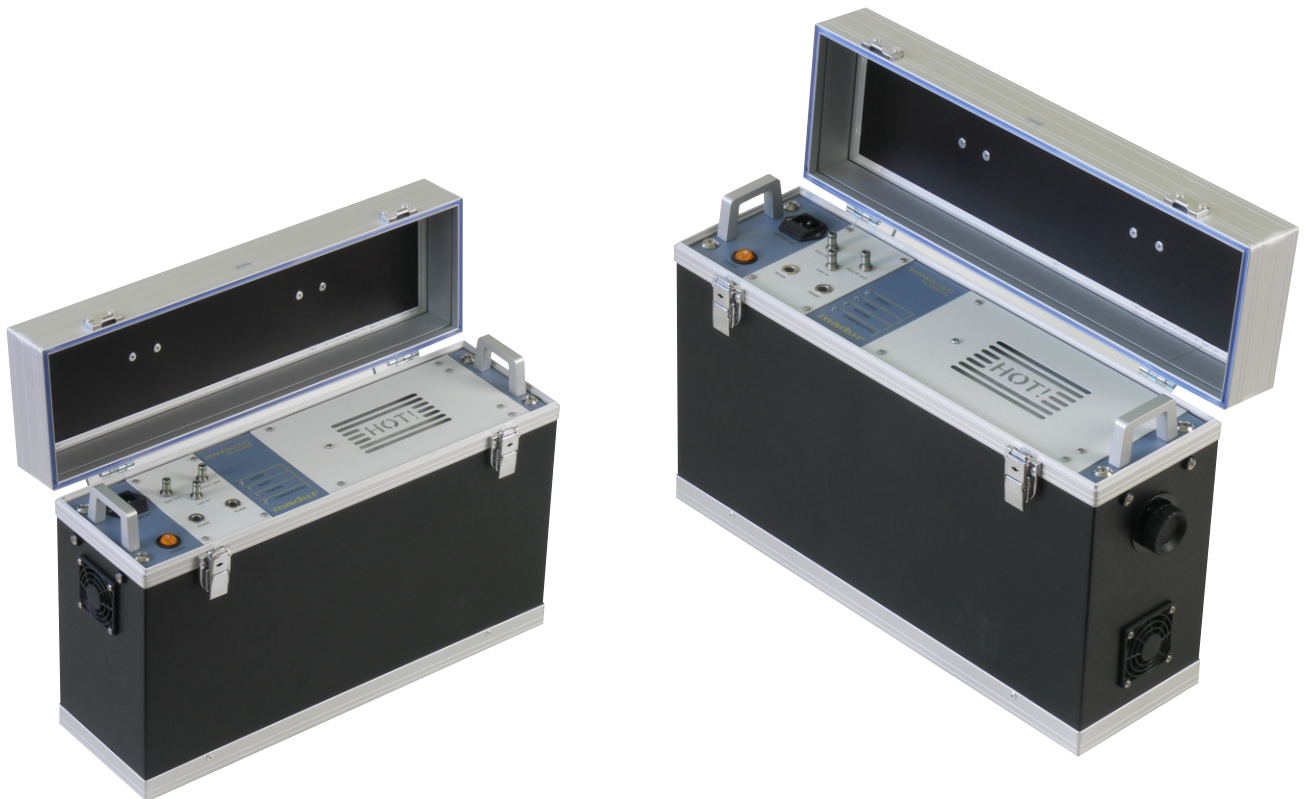
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MANOX-CLD for NO<sub>x</sub> measurement uses phenomenon of chemiluminescence - an emission of light as a result of chemical reaction: Nitric Oxide (NO) accompanied by Ozone (O<sub>3</sub>) oxidizes and as a result of this reaction creating high energy state Nitrogen Dioxide (NO<sub>2</sub><sup>\*</sup>). Those highly excited NO<sub>2</sub><sup>\*</sup> particles, in order to return to their normal state, emit energy in a form of light. MANOX-CLD measures those light flashes, converts them to electric signal, and send to Photon analyser where result is processed and presented to the user.



- MANOX-CLD key components:
  - Molybdenum converter for NO<sub>2</sub> to NO conversion
  - Ozone generator with Nafion® dryer for high efficiency O<sub>3</sub> generation
  - Chemiluminescence NO<sub>x</sub> sensor (reaction chamber)



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Dimensions (W * H * D)	500 mm * 340 mm * 150 mm
Weight	~8 kg
Casing material	Plywood covered with aluminium
Operating conditions	T: 0°C÷50°C RH: 5%÷90% (non-condensing)
Storing temperature	-20°C ÷ +55°C
Power supply input	115 or 230 VAC
Maximal power consumption	150 W
Protection grade	IP20
NO <sub>x</sub> to NO conversion efficiency	>95%
NO measuring method	CLD - chemiluminescence detection
Mesurement range	0÷100 ppm  or  0÷1000 ppm
Measurement resolution	0,1 ppm  or  1ppm
Measurement accuracy	±1 ppm abs. or 3% rel.  or  ±3 ppm abs. or 3% rel.
Detection level	0,5 ppm
Time (T90)	< 45 sec

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### FRONT PANEL

