

# OMS420

## IN - SITU O<sub>2</sub> / CO<sub>e</sub> MONITOR



since 1984®

**AIR** fair

EMISSION MONITORING SYSTEMS

IN-SITU real time analysis for  
Oxygen (O<sub>2</sub>) and combustibles (CO<sub>e</sub>)\*

O<sub>2</sub>

CO<sub>e</sub>

## IN - SITU O2 MONITOR

IN-SITU real time analysis

Oxygen (O2) and combustibles (COe)\*

### Measurement principle

Oxygen (O2) = ZrO2 zirconium dioxide

COe (combustibles) = heated solid electrolyte

\* total of flue gas combustibles

(CO + H2 + CxHy)

displayed as equivalent CO

### STANDARD FEATURES

- >> Clean combustion (low dust) with combustion temperatures up to max. 1,800 °F
- >> Die cast aluminum enclosure with electronics, keyboard, up-front display of O2 and COe
- >> Standard ANSI flange (other flanges e.g. DIN on request) Probe tube with Ø 2.4" and various lengths.
- >> Connector for back purge compressed air.
- >> Connecting tube with reference air inlet with small flange, Ø 3.9"
- >> Rugged industrial plug for power supply and data transfer (analog 4 ... 20 mA, digital RS 485)

### OMS 420 models



OMS420 - compact



OMS420RT



OMS420HT High Temp.



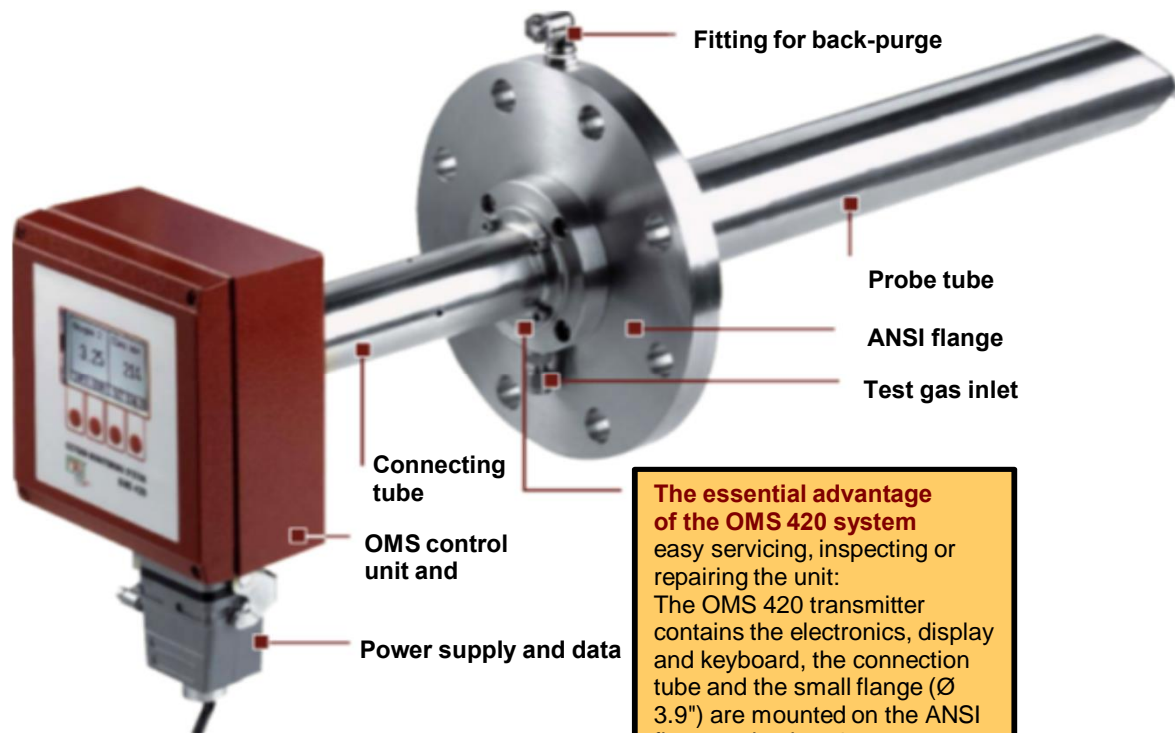
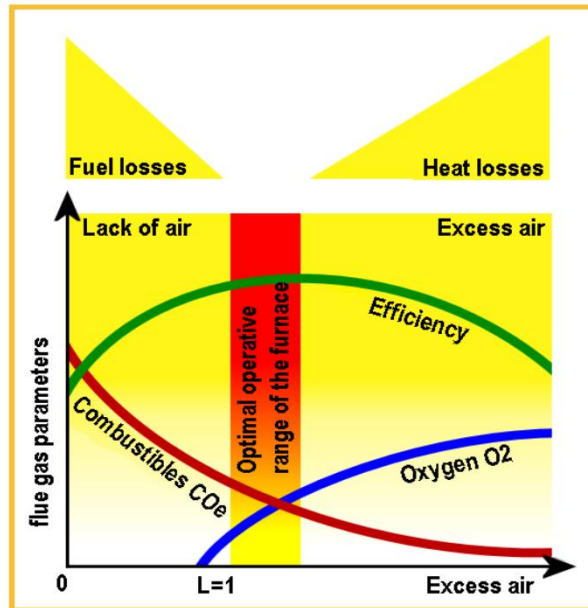
OMS 420-RT (remote display and control unit)



Display and control unit

## Save energy and fuel consumption Save millions \$ a year (in large power plants)

Combustion-optimization diagram:



### The essential advantage of the OMS 420 system

easy servicing, inspecting or repairing the unit:  
The OMS 420 transmitter contains the electronics, display and keyboard, the connection tube and the small flange (Ø 3.9") are mounted on the ANSI flange using just 4 screws. Simply loosen the 4 screws and change the transmitter in minutes  
... simple and economical replacement!

## TECHNICAL SPECIFICATIONS

DATA SUBJECT TO CHANGE WITHOUT NOTICE

Warm up time	min. 30 minutes
Measuring range	0.1 ... 25.0 % Vol.-% O <sub>2</sub> 0 ... 1,000 ppm CO <sub>e</sub> (option combustibles measurement)
Accuracy	O <sub>2</sub> : ±0.2 % or ± 5 % of reading, whichever is larger CO <sub>e</sub> : ±50 ppm or ±10 % of reading, whichever is larger
Flange	ANSI flange: Ø 230mm / probe tube: Ø 60mm, up to max. 13' (4.0 m) length or flange DN80 PN16
Flange	DN65 PN6 flange: Ø 216 mm / probe tube: Ø 60 mm up to max. 13' (4.0 m) length or flange DN80 PN16
Flange temperature	min. +160 °F ... max. +300 °F (condensation at the flange must be avoided)
Response time T90	<10 seconds
Analog outputs	2 x current loop 4 ... 20 mA, with galvanic isolation linearized for both 0 ... 25 % O <sub>2</sub> and 0 ... 1,000 ppm CO <sub>e</sub> (user definable settings in 0.5% steps are possible)
Digital output	galvanic isolated RS 485 ( with Modbus protocol)
Power supply	18 ... 24 Vdc (for model OMS 420), 90 ... 100 W 100 ... 240 Vac (for model OMS 420 RT and HT) max. 100 W
Power supply	18 ... 24 Vdc, 90 ... 100 W
Electronic of transmitter	with local microprocessor, display and 4 push-buttons
Calibration inlet	with test gas fitting for 6/4 mm tube cal. gas supplied manually or automatically by pneumatic unit PU 420
Back purge inlet	min. 87 PSI ... 116 PSI (6 ... 8 bar) compressed air with quick connector for 8 mm tube
Ambient temperature of electronics	-70 °F ... +130 °F
Enclosure	Die cast aluminum, 6.3" x 6.3" x 2.4" and probe tube, Ø 2"
Protection class	IP 65
Weight	7.7 lbs. (without probe and flange)

## OPTIONS

CO<sub>e</sub> measurement

PROBE TUBE AND SENSOR CHAMBER BLOW BACK SYSTEM. Compressed air is required!!

Blow back timing and duration are user definable. Recommended for applications with high particulates, such as coal-fired power plants.

Automatic calibration for span and offset, using pneumatic unit PU 420

Application with high temperatures up to approx. 3,100 °F with ceramic tube and ejector (model HT)

Remote control and display unit

(max. cable length = approx. 33' - model RT) for applications with ambient temperature >120 °F