OMS420

IN - SITU O2 / COe MONITOR

IN-SITU real time analysis for
Oxygen (O2) and combustibles (COe)*

O_2 COe

DIAMOND SCIENTIFIC
www.DiamondSci.com
321-223-7500

OMS420

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.

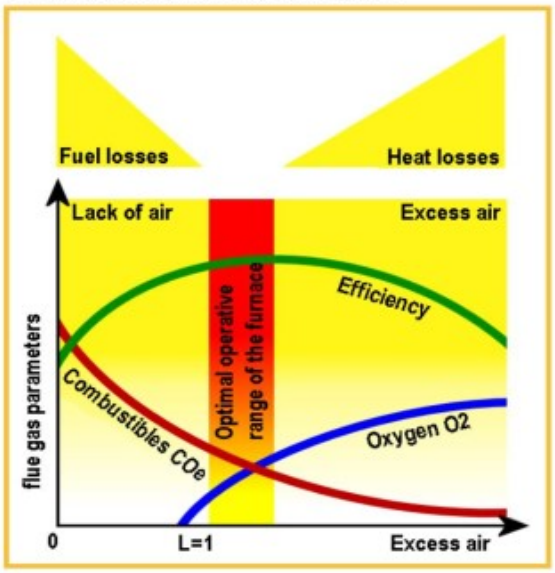
OMS 420-RT (remote display and control unit)

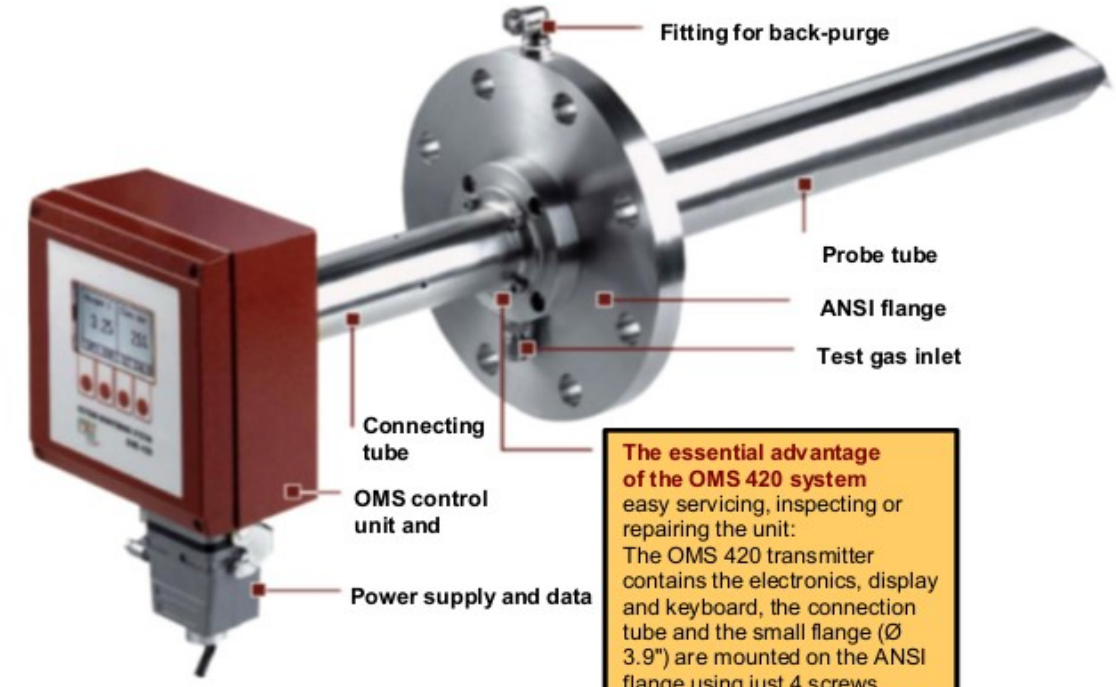
Display and control unit

OMS420

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!

OMS420

TECHNICAL SPECIFICATIONS

DATA SUBJECT TO CHANGE WITHOUT NOTICE

Warm up time	min. 30 minutes
Measuring range	0.1 ... 25.0 % Vol.-% O2 0 ... 1,000 ppm COe (option combustibles measurement)
Accuracy	O2: ±0.2 % or ± 5 % of reading, whichever is larger COe: ±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 % O2 and 0 ... 1,000 ppm COe (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

COe 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