



cosa+xentaur

# COSA 9700

## Wobbe Index / Calorific Value / CARI



### Applications

- Waste Fuel Gases
- Bio-gas
- Flare stack monitoring
- Turbine control
- Combustion optimization
- Gas blending
- Steel Industry

### Features

- High Precision ( $\pm 0.4\%$  of reading)
- Fast Response ( $T_{90} < 5$  sec for WI and CV)
- Large Measurement Range
- Residual Oxygen Method (No Flame) with optional measurement of oxygen in sample stream
- High Temperature Furnace ( $1050^{\circ}\text{C}$ )
- Low Maintenance
- Small Dimensions
- Outdoor Installation without further enclosure

The Cosa 9700 is a fast response calorimeter for the on-line monitoring of Wobbe Index (WI), Combustion Air Requirement Index (CARI) and Heating Value (HV). The COSA 9700 is based on the Residual Oxygen Method (ROM), thus avoiding the use of a flame. The analyzer is immune to ambient temperature fluctuations and can be installed outdoors or in harsh environments. The high furnace temperature of  $1050^{\circ}\text{C}$ , converts all sulfur constituents into  $\text{SO}_2$ , thus eliminating corrosion issues with the exhaust gas. Optionally, the oxygen concentration in the sample can be measured continuously and the residual oxygen is offset accordingly. Further options include simultaneous measurements of sulfur and hydrogen concentrations.

## SPECIFICATIONS:

### Analyzer Performance:

Model: ..... COSA 9700

Sample Gas: ..... Natural gas, fuel gas, refinery gases, biogas etc.

Range (WI): ..... 0-2730 BTU/SCF (0-108 MJ/Nm<sup>3</sup>),  
Span 1150 BTU/SCF (45.3 MJ/Nm<sup>3</sup>)  
(selectable)  
CARI: 0-20, span 0-10)

Accuracy (WI): ..... ±0.4% of reading for natural gas  
±2.0% of reading for Raffinerie-Gas  
and gases with large variations of  
constituents

Repeatability ..... ±0.7 BTU/SCF, (27.6 kJ)

Drift ..... 0.4 BTU/SCF, (15.7 kJ/Nm<sup>3</sup>/24 H)

Response Time ..... T90 < 5 Seconds (WI und HV)

Ambient Temperature ..... Standard: -40°C to +60° C

Outputs ..... 2 x isolated 4-20mA with  
programmable span  
TCP/IP Webservice  
Modbus 232/485  
Backlit LCD screen Malfunction  
relay

Specific Gravity (optional) ... Range: ..... 0.2-2.2 rD  
Accuracy: ..... ±0.1% of reading

### Utilities:

Power supply ..... 110 VAC, 50/60 Hz or  
220 VAC, 50/60 Hz

Power consumption ..... 430 VA maximum

Instrument Air ..... Analyzer:  
20 SCFH at 42 PSIG (0.53 Nm<sup>3</sup>h at  
1.4 bar)  
Z-purge:  
40 SCFH at 80 PSIG (1.06 Nm<sup>3</sup>h at  
5.5 bar)

Sample flow: ..... 2 SCFH at 28 PSIG (950 ccm/min at  
2 bar)

### Installation:

Mounting ..... SS Frame

Dimensions ..... 19.63" x 71" x 18.07" / Free  
Standing (496 x 1803 x 459 mm)

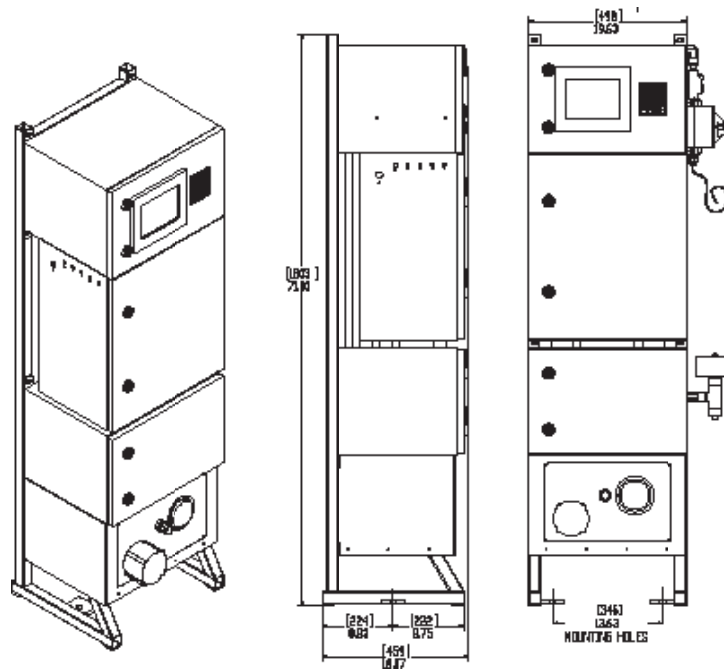
Weight ..... 110 lbs (50 kg)

Weatherproof Protection: ..... IP66 (NEMA 4X)

Hazardous Area Classification ..... Designed for  
installation in:  
..... Class 1 Division 2 Groups A, B, C and  
D (Z-purge)  
..... Class 1 Division 1 Groups A, B, C  
and D (X-purge)

Certifications ..... Ex ib px II T6 Gb Ta=+5C to 45C,  
IP66, II 2G, FM11ATEX0006X,  
IECex. FMG 16.0030X

## DIMENSIONS:



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