

Product Data Sheet

# Model G-CEM4000 Flue Gas Analyser

## Multi-Species Flue Gas Analyser

The G-CEM4000 is a multi-species flue gas analyser, which uses Non-Dispersive Infrared Absorption (NDIR) technology. It provides high accuracy, low maintenance measurement of all the key combustion process emissions to atmosphere. Its performance can be verified automatically or manually on demand by the injection of zero and span protocol gases into the probe sample chamber.

The analyser utilises an in-situ diffusion probe. Flue gas diffuses into a sample cell at the end of the probe via an array of stainless steel sintered filters enabling measurements to be made, even in gas streams with very high dust loadings, without impairment of either accuracy or maintenance intervals.

- multi-species infrared absorption analyser
- up to seven gas species
- in-situ probe measurement
- high accuracy - low maintenance
- zero and span verification by protocol gases
- analogue and serial digital output
- integral gas temperature and pressure measurement for data normalisation

## Measurement Species

- |                 |                   |
|-----------------|-------------------|
| Sulphur Dioxide | Nitrogen Dioxide  |
| Nitric Oxide    | Carbon Dioxide    |
| Carbon Monoxide | Hydrogen Chloride |
| Methane         | Water Vapour      |

**MCERTS**  
certified product

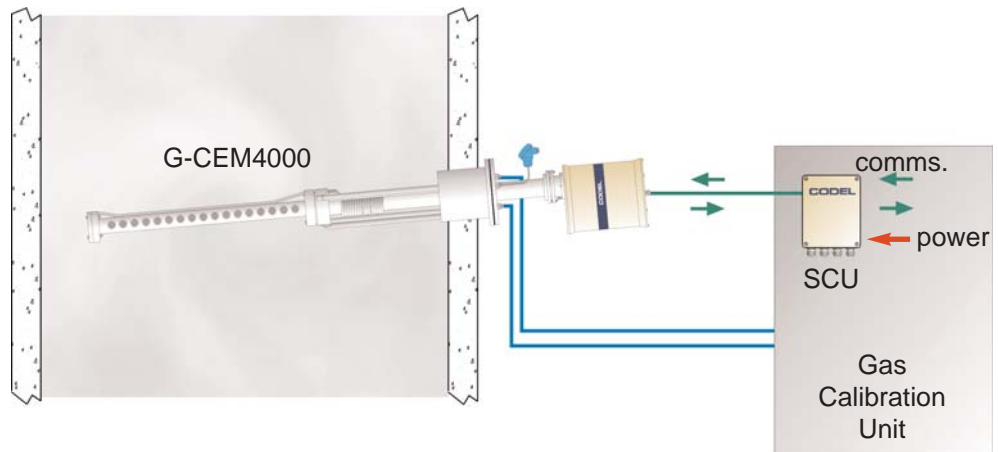
**sira**  
Certification Service

  
**UKAS**  
PRODUCT  
CERTIFICATION

011  
Sira MC 070098/00

  
**MCERTS**

Up to seven gas species can be monitored with a single analyser. Integral measurement of flue gas temperature and pressure allows full data normalisation to STP conditions.

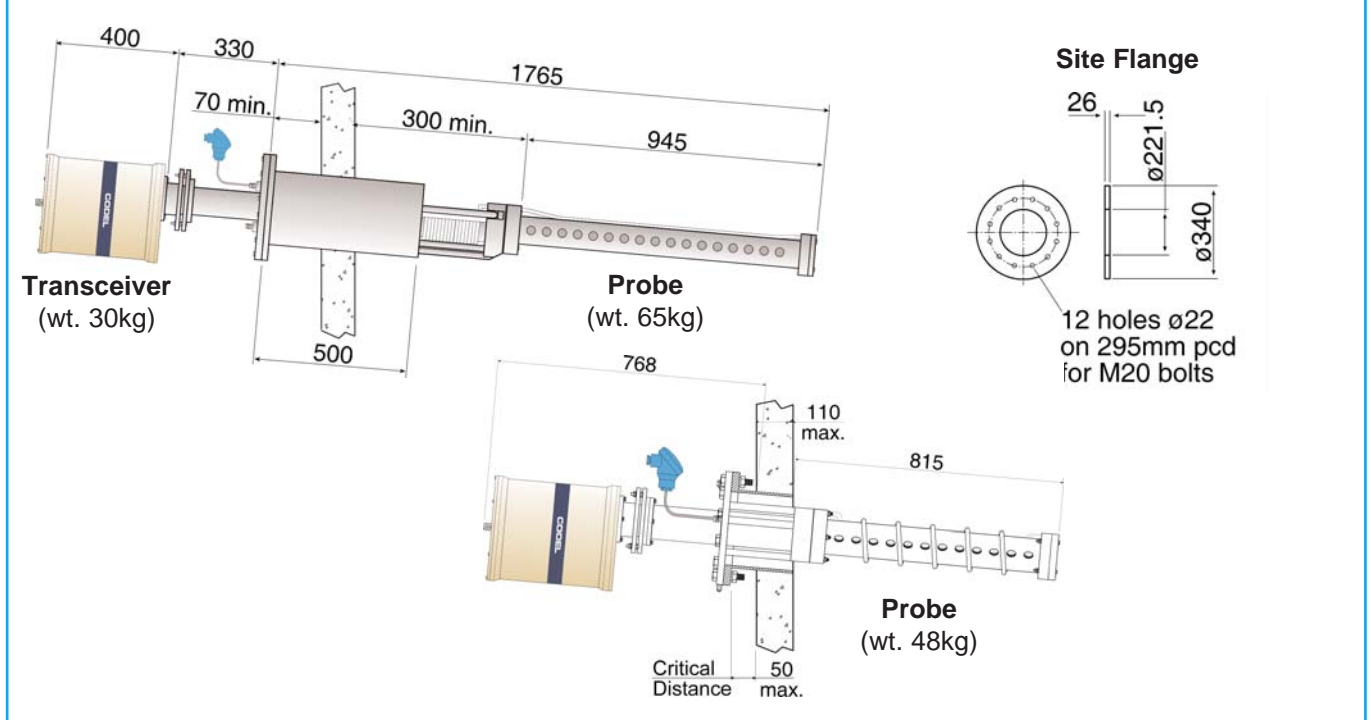


**Total Solutions - Total Confidence**

*SmartCem*



## Overall Unit Dimensions



## Specification

### Analyser

Measurement Units - ppm or % by volume  
 - mg/m<sup>3</sup> (measured)  
 - mg/Nm<sup>3</sup> (normalised)

Averaging - selectable in the range 10sec - 1hr

Accuracy - all channels +/-2%

Flue Gas Temperature - dewpoint to 400°C

Probe Detail - length - 2m  
 - diffusion cell - 1m folded beam

Construction - probe - 316L stainless steel  
 - analyser - epoxy-coated aluminium to IP68

Ambient Temperature Range - -20°C to +50°C

Power Input - 98 to 264V AC, 600W

Purge Requirements - compressed air clean & dry to -20°C, 2 lit/sec

### Compliances

MCERTS - certified for SO<sub>2</sub>, NO<sub>2</sub>, NO, CO & H<sub>2</sub>O

EMC - 89/336/EEC directive compliant

Low Voltage - 73/23/EEC directive compliant

## Analyser Parameters

Species	Range	Zero/Span Drift Rate	Linearity	Repeatability	Response Time
SO <sub>2</sub>	3000ppm*	) *up 50000ppm by special arrangement	<2%	<2% span	200sec
NO <sub>2</sub>	3000ppm				
NO	3000ppm				
CO <sub>2</sub>	25%	) 2% span/month			
CO	3000ppm				
HCl	1000ppm				
CH <sub>4</sub>	3000ppm				
H <sub>2</sub> O	25%				

SmartCem

### Distributor :

CODEL International Ltd.  
 Station Building, Station Road  
 Bakewell, Derbyshire DE45 1GE  
 England

Tel: +44 (0) 1629 814 351  
 Fax: +44 (0) 8700 566 307  
 e-mail: sales@codel.co.uk  
 web site: www.codel.co.uk