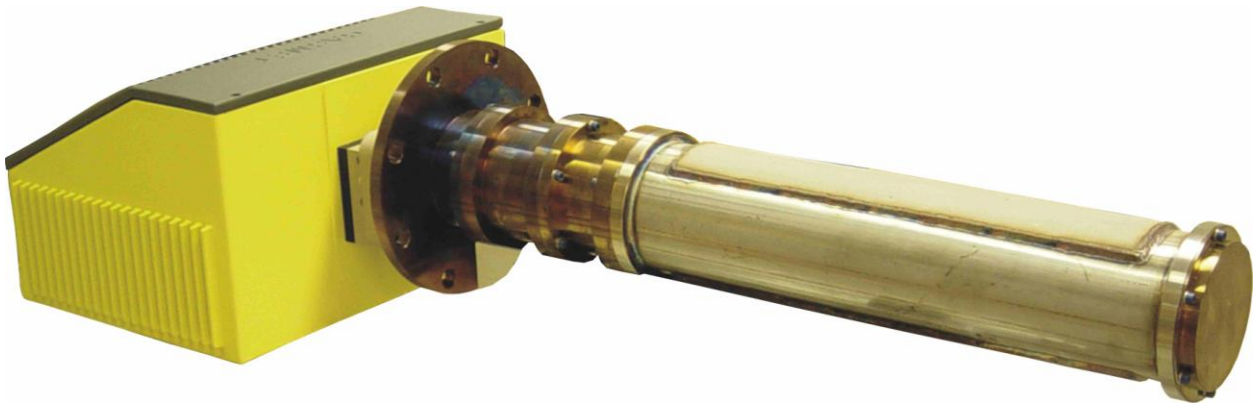


Gasmeter™ In-Situ



In-Situ Multicomponent FTIR Gas Analyser

GASMET FTIR In-Situ is an industrial multicomponent gas analysers for continuous monitoring applications. The GASMET In-Situ incorporates a Fourier Transform Infrared spectrometer, a sample cell which is directly inserted into the sample gas flow, and signal processing electronics. The analyser is fully equipped for fixed installations and it offers versatility and high performance for a wide range of applications.

In-Situ analyser is equipped with a control box providing gas and electrical connections, and an external computer unit. The computer employs the same Calcmeter user interface as an extractive GASMET CEMS.

The sample must be non-condensing and the upper limit for sample temperature is 250 °C. Sample cell absorption path length is 6.0 meters. Insertion depth of the sample probe is 736 mm and the flange diameter is 240 mm.

General parameters

Measuring principle:	Fourier Transform Infrared, FTIR
Performance:	Simultaneous analysis of up to 50 gas compounds
Response time, T₉₀:	Typically < 360 s, depending on the gas flow and measurement time
Operating temperature:	-30 – +40 °C, non condensing
Storage temperature:	-30 – +60 °C, non condensing
Power supply:	100-115 or 230 V / 50-60 Hz
Power consumption:	2200 W max., 500W continuous (with cell heating)
Instrument air:	4-7 bar pressure, dew point –20 °C, oil and dust free
Max. air consumption:	250 l/min for vortex cooling (cont.) 100 l/min for zero calibration/purge (15 minutes at 24 hour intervals)

Spectrometer

Resolution:	8 cm ⁻¹
Scan frequency:	10 scans / s
Detector:	Peltier cooled MCT
Source:	Ceramic SiC, at 1550 K
Beamsplitter:	ZnSe
Window material:	ZnSe
Wavenumber range:	900 - 4 200 cm ⁻¹

Sample Cell

Structure:	Multi-pass, fixed path length 6.0 m
Probe body material:	AISI 316 steel
Mirror material:	Rhodium coated aluminium
Mirror coating:	Reflective gold coating
Gaskets:	Viton® O-rings
Window material:	BaF ₂
Insertion depth	736 mm
Mounting flange	240 mm diameter
Temperature	250 °C
Gas filtration	Filter panels 2-7 µm

Measuring parameters

Zero point calibration:	24 hours, calibration with instrument air
Zero point drift:	< 2 % of measuring range per zero point calibration interval
Sensitivity drift:	none
Linearity deviation:	< 2 % of measuring range
Temperature drifts:	< 2 % of measuring range per 10 K temperature change
Pressure influence:	1 % change of measuring value for 1 % sample pressure change. Sample pressure changes are measured and compensated

Sample Gas Conditions

Gas temperature:	Up to 250 °C, non condensing
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Electrical Connectors & Electronics

Digital interface:	RS-232/422 cable for the analyser.
Power connection:	Terminal connectors for L + N + PE wires
A/D converter	Dynamic range 95 dB
Signal processor	32-bit floating point DSPs, 120 MFLOPS

Computer Unit

Analyzer is connected to an external computer via serial cable. The external computer controls the GASMET In-Situ analyzer. For I/O options, see Gasmeter Industrial Computer Data Sheet.

Minimum Configuration: 512 MB Memory, > 40 GB hard disk, > 2.4 GHz Intel Pentium IV Processor, Modem, Network card

Operating system:	Windows XP operating system
Software included:	Calcmeter for Windows
Watchdog support:	Included
Mouse:	Included
Keyboard:	Not Included
Display:	TFT display
Digital Interface	RS-232 cable to analyzer (<5m) RS-422 option up to 1000m
Remote control:	Built-in modem/network card and PC Anywhere support

Options

Adapters for flanges larger than 240 mm
RS-422/485 interface instead of RS-232 for longer distance, max 1 km.

Enclosure

Material:	Aluminium / Steel / Polyethylethylketone (PEEK)
Dimensions (mm):	1168 x 417 x 263 mm
Weight:	30 kg
CE - Label:	According to EMI guideline 89/336/EC

