

GASMET Dx -4015



Multicomponent FT -IR Gas Analyzer

GASMET ON -SITE SERIES includes portable multicomponent gas analyzers for demanding applications. The GASMET Dx -4015 incorporates a Fourier Transform Infrared, FT -IR spectrometer, a temperature controlled sample cell, sample pump, and signal processing electronics. The analyzer offers versatility and high performance for all users.

The GASMET Dx -4015 is designed for on site measurements. It is an ideal tool to measure components of interest in ambient conditions. The sample cell can be heated up to 50 °C. Sample cell absorption path length is selected according to the application.

The GASMET Dx -4015 allows simple calibration using only single component calibration gases. The user can easily configure the analyzer for a new set of compounds.

General parameters

Measuring principle:	Fourier Transform Infrared, FT -IR
Performance:	simultaneous analysis of up to 50 gas compounds
Response time, T ₉₀ :	typically < 120 s, depending on the gas flow and measurement time
Operating temperature:	short term 20 ± 20°C long term 15 - 25°C non condensing
Storage temperature:	-20 - 60°C, non condensing
Power supply:	100-115 or 230 V / 50 -60 Hz or 12 VDC
Power consumption:	300 W

Spectrometer

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

Sample Cell

Structure:	Multi-pass, fixed path length 9.8 m
Material:	100 % gold coated aluminium
Mirrors:	fixed, protected gold coating
Volume:	1.07 l
Connectors:	Swagelok 6 mm or 1/4"
Gaskets:	Viton® O-rings
Temperature:	50 °C
Valve:	Automatic Solenoid
Window material:	AR coated ZnSe

Measuring parameters

Zero point calibration:	24 hours, calibration with nitrogen (4.0 or higher N ₂ recommended)
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. Ambient pressure changes measured and compensated

Electrical Connectors:

Digital Interface:	9-pole D-Connector for RS-232 Dx-4010 is connected to an external computer via RS-232C cable. The external computer controls the GASMET.
Power connection:	Standard plug CEE-22

Gas Inlet and Outlet Conditions

Gas temperature:	non-condensing, the sample gas temperature should be the same as the sample cell temperature
Flow rate:	120 - 600 l per hour
Gas filtration:	filtration of particulates (2µ) required
Sample gas pressure:	ambient
Sample pump:	internal, for ambient air only

Electronics

A/D Converter:	dynamic range 95 dB
Signal Processor:	32-bit floating point DSP 120 MFLOPS speed

Analysis Software (external PC, not included)

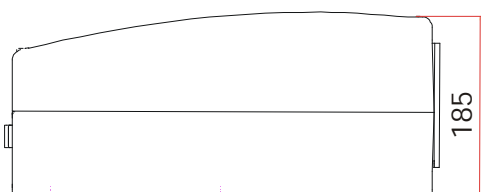
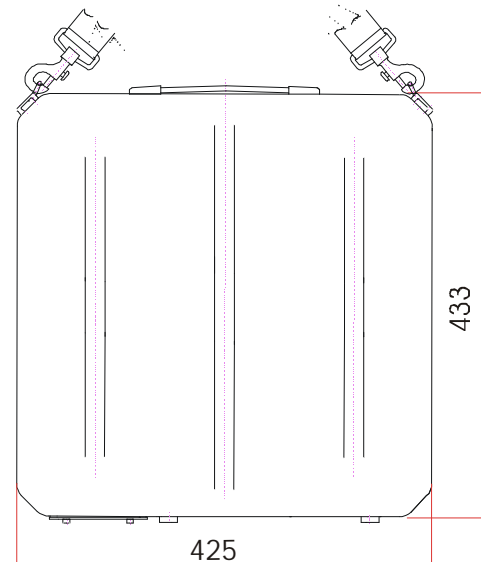
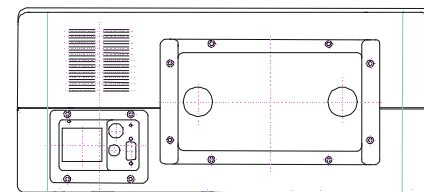
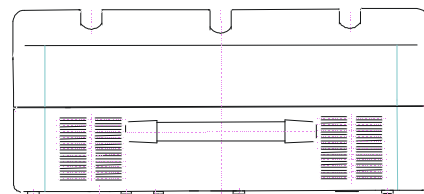
Operating system:	Windows 98, 2000, NT, XP
Analysis software:	CALCMET for Windows

Options

Sample Cell:	Multi-pass, fixed path length 1.2m, 2.5 m, 5.0 m
Analog Signals (ext PC):	PCMCIA card for 8 analog inputs
Sample cell gaskets:	Teflon® coated Viton® or Kaltrez®
Power supply cables:	12V cables with battery clips or cigarette lighter connector
Trolley:	Wheeled cart for the analyzer and laptop computer
Valve:	Manual Swagelok

Enclosure

Material:	Aluminium
Dimensions (mm):	433 * 185 * 425
Weight:	16 kg
CE - Label:	according to EMI guideline 89/336/EC



Technical specifications are subject to change without notice.