

ABYSS AFG Portable Flue Gas Analysers

Description - The **ABYSS Flue Gas NDIR** gas analyser series is specially designed for short term monitoring of up to 5 components in flue gas.

It is based on the **micro-flow type non-dispersive infrared (NDIR)** method for SO₂, NO, CO, CO₂ and O₂ is measured by **fuel cell method (ECD)**.

Applications - The standard applications are Boiler, furnace exhaust, emission gas and combustion efficiency monitoring, cement production line process and security, combustion and emission control, research or certification of Continuously Emission Monitoring System.

Highly durable to harsh process conditions - The **ABYSS Flue Gas** uses a single beam IR cell highly resistant to corrosive flue gases and harsh environments of operation. Its **light weight rugged enclosure** fitted LCD screen, safety filter and Stainless fittings enables efficient short term measurement of emissions, combustion and process gas.

Ankersmid - ABYSS analysers are built, calibrated and factory tested in Belgium and certified CE by Ankersmid Sampling BVBA.

Performance in Stack Testing



KEY FEATURES

- Proprietary infrared single beam Micro-Flow NDIR detectors
- Short term monitoring of 5 gases simultaneously
- Cross interference compensation
- RS 232 serial com port for real-time data download to external PC or laptop as text file, software included
- Rugged enclosure. Reliable and easy to operate with Side-mount built-in filter
- Built-in automatic excess air coefficient and combustion efficiency calculation
- Stainless steel connectors for gas inlet/outlet and zero air inlet ports
- Keyboard / LCD display interface for configuration & calibration
- Optional built-in Printer



Portable Emissions & Process Monitoring System

The use of the APS Portable sampling system and APP sampling probe in combination with the ABYSS AFG enables efficient source testing operations with automated sampling sequences, high performance gas conditioning and heated filtration features.



Specifications and instrument versions

	INTEGRATION	GAS	MODELS	APPLICATIONS
Dimensions	Rugged case unit 439x290x152mm wxhxd	SO2 - NO - CO - CO2 - O2	AFG900	CEMS
Weight	6.5kg	SO2 - NO - CO - O2	AFG800	CEMS
Flow	0.7 to 1.2 lpm	SO2 - NO - O2	AFG700	CEMS
Response time	< 10s (NDIR)	SO2 - NO	AFG600	CEMS
Warm- up time	5 min	SO2 - O2 or NO- O2	AFG500	CEMS & Process
Precision	Better than +/-1% relative	SO2 or NO	AFG400	CEMS & Process
Repeatability	Better than +/- 0.7% relative	CO - CO2 - O2	AFG300	Combustion
inlet pressure	2kPa - 50kPa	CO (ppm content) - O2	AFG200	Combustion
Number of ports	2 inlets as standards	CO (ppm content)	AFG100	Process
Output	RS232 / 4-20mA			
Power supply	240 VAC 50/60 Hz			
Operating conditions	Temp 0-50C Pressure 86-108kPa Humidity 5-85%			

GAS	TECHNOLOGY	RANGE (max/min)	PRECISION	RESOLUTION	REPEATABILITY
NO	NDIR	0-5000 / 0-200 PPM	≤±1% FS	1 PPM	≤±1% FS
CO	NDIR	0-5000 / 0-200 PPM	≤±1% FS	1 PPM	≤±1% FS
CO2	NDIR	0 - 25 %	≤±1% FS	0.01%	≤±1% FS
SO2	NDIR	0-5000 / 0-200 PPM	≤±1% FS	1 PPM	≤±1% FS
O2	ECD	0 - 25 %	≤±2% FS	0.01%	≤±1% FS