

NOVA

Dependable Gas Analysis Solutions



5000 SERIES

PORTABLE FLUE GAS ANALYZER FOR ANY COMBINATION OF O₂, CO, CO₂, NO, NO₂, SO₂, AND STACK TEMPERATURE

APPLICATIONS

Analysis of oxygen (O₂), carbon monoxide (CO), carbon dioxide (CO₂), oxides of nitrogen (NO & NO₂) and sulfur dioxide (SO₂) emissions. For checking combustion efficiency, burner & control performance, and detection of air infiltration on furnaces, heaters and boilers. May be used in commercial, industrial and residential settings.

FEATURES

- Rugged design that is easy to use
- Fast warm-up and accurate response
- Digital readouts with switchable backlight
- Built-in sample pump
- Rechargeable battery operation
- Active condensate removal
- Long-life electrochemical sensors for O₂, CO, NO, NO₂, and SO₂
- CO₂ actually measured by infrared detector - not calculated
- Rapid reading recovery on CO, NO, NO₂, or SO₂ 'overdose'
- Use on flue gas from any fuel
- Pays for itself in months through fuel savings

OPTIONS

- Stack temperature probe and readout
- High temperature sampling probe
- Detachable/portable data logger
- Digital Platform to support the following options:
 - Calculated values e.g. combustion efficiency, O₂ normalization, excess air, unit conversion ppm to mg/m³ for ppm gases measured
 - RS-232 or RS-485 output and software
 - Touch-screen display
 - Built-in printer



5006 Series with analog platform

5006 Series with digital platform

Optional Ice Bath Precooler



CALIBRATION

- Ambient air for O₂ span and CO, CO₂, NO, NO₂, and SO₂ zero
- On analyzed gas mixtures of CO and CO₂ in nitrogen, NO & NO₂ in nitrogen, and SO₂ in nitrogen for span (also zeroes O₂)

NOVA ANALYTICAL SYSTEMS

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DESCRIPTION

The Nova 5000 Series Portable Flue Gas analyzer has been designed for accuracy, reliability, ease of use and ease of service, providing a detailed analysis of flue gas composition. The 5000 uses customer replaceable sensors which respond quickly to the O₂, CO, CO₂, NO, NO₂, and SO₂ present in the flue gas sample. The O₂ sensor life expectancy is typically 3-4 years. The CO, NO, NO₂, and SO₂ sensor life is typically 2-3 years. The infrared CO₂ sensor should not need to be replaced under normal conditions of use. Depending on model, the detected gases may be displayed on separate LCD meters or a single touchscreen display.

A rechargeable 'gel cell' battery provides enough power for about 4-5 hours of continuous operation and the analyzer can be used while it is being recharged. A red LED tells when to recharge and a green LED verifies that it is receiving recharging power. The Model 5000 series case is rugged, dust and water resistant when closed. A built-in printer, which also shows date and time, is optionally available. A detachable datalogger is also available which can be uploaded to a PC.

MODELS

- 5001-A: O₂ only
- 5001-B: CO only
- 5001-C: CO₂ only
- 5001-D: NO only
- 5002-A: O₂ & CO
- 5003-A: O₂, CO, & NO
- 5003-B: O₂, CO₂, & CO
- 5004-A: O₂, CO₂, CO, & NO
- 5004-B: O₂, CO, NO, & SO₂
- 5005-A: O₂, CO₂, CO, NO, & SO₂
- 5006: O₂, CO₂, CO, NO, NO₂, & SO₂
- Stack temperature, NO, NO₂, SO₂, CO₂, may be separately added to any model

SPECIFICATIONS

Nova reserves the right to specification changes which may occur with advances in design without prior notice.

Description		
Gases Measured:	Customer replaceable electrochemical O ₂ , CO, SO ₂ , NO, & NO ₂ sensors Solid state infrared detector for CO ₂	
Ranges Available:	0-25.0% O ₂ 0-20.0% CO ₂ 0-200 up to 0-9999 PPM CO 0-200 up to 0-5000 PPM NO	0-200 up to 0-800 PPM NO ₂ 0-200 up to 0-2000 PPM SO ₂ 32-1800°F (0-1000 °C) net stack temperature
Resolution:	0.1% on percent ranges; 1 PPM on PPM ranges; 1°F (1°C) stack temperature	
Accuracy and Repeatability:	± 1% for O ₂ and CO ₂ , ±10 PPM for all other gases	
Drift:	< 2% full scale per 8 hours of continuous operation	
Response Time (T-90):	< 30 seconds for 90% of O ₂ , CO, CO ₂ and SO ₂ , < 60 seconds for 90% NO and NO ₂	
Ambient Temperature Ranges:	32° to 122°F (0 to 50°C)	
Linearity:	±1% of full scale for each gas measured	
Size and Weight:	Approx. 14" W x 10½" D x 6" H (35 x 27 x 15 cm) @ 12 lbs (5.5 kgs)	
Power:	12V battery operation. 115VAC 60Hz for recharging (220VAC 50Hz available)	
Output Options:	4-20 mA or 0-1V for each gas measured; RS232 or RS485, printer, & data logger	

UNIQUE APPLICATIONS

All Nova analyzers are built using proven technologies and techniques. If this product does not suit your application, please contact Nova at 1-800-295-3771. In many cases, we are able to build an analyzer specific to your needs.



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