

NOVA

Dependable Gas Analysis Solutions

309 SERIES

PORTABLE FLUE GAS ANALYZER FOR CARBON DIOXIDE & OXYGEN



APPLICATIONS

Analysis of oxygen (O_2) and carbon dioxide (CO_2). For checking combustion efficiency, and burner & control performance of furnaces, heaters and boilers in commercial, industrial, and residential applications.

FEATURES

- Solid state infrared detector for CO_2
- Long-life electrochemical sensor for O_2
- Rugged design that is easy to operate and maintain
- Fast warm-up and response
- Digital readout meter with backlight
- Continuous condensate removal
- Rechargeable battery operation
- Stainless steel probe with sample hose
- Built-in sample pump, filter, and flowmeter
- Weatherproof (WP) cabinet with clear Lexan cover

OPTIONS

- Recorder outputs of 0-1V or 4-20 mA
- Sample pre-cooler for hot samples
- Special sampling probes
- Stack temperature readout (309T)
- Suitcase (K) style cabinet available
- CO_2 and O_2 alarms with LED
- Detachable/portable datalogger

CALIBRATION

- Air for CO_2 zero and O_2 span.
- Analyzed calibration gas for CO_2 span and O_2 zero.



Weatherproof (WP) Enclosure



Suitcase (K) Enclosure



Optional Precooler
for hot or wet
sample gases

NOVA ANALYTICAL SYSTEMS

www.nova-gas.com

DESCRIPTION

The Nova 309 Series Portable Flue Gas Analyzers have been designed for accuracy, reliability, and ease of use and service. The 309 uses a long life electrochemical O₂ sensor and a solid state infra red CO₂ detector, both of which respond quickly to O₂ and CO₂ present in the flue gas sample.

In operation, a built-in sample pump draws in the flue gas sample through the S.S. probe, 12 ft sample hose, condensate removal filter, secondary filter and flow meter then on to the O₂ sensor and CO₂ detector. The detected gases are displayed on separate LCD digital meters which have a switchable backlight for use in dark areas.

The 309 can optionally indicate stack temperature (Model 309-T; 0-1800F or 0-1000C) for doing fuel efficiency calculations. The temperature sensor is built into the sampling probe. Efficiency charts for each fuel are provided.

A rechargeable battery provides enough power for about 8 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 recharger is included.

SPECIFICATIONS

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

Description	
Method of Detection:	NDIR infrared detector for CO ₂ ; long life electrochemical O ₂ sensor
Ranges Available:	0-20.0% CO ₂ ; 0-25.0% O ₂ (other ranges available)
Resolution:	0.1% CO ₂ ; 0.1% O ₂
Accuracy and Repeatability:	Within ± 2% full scale
Drift:	Within 1% full scale per 8 hours of continuous operation
Response Time (T-90):	O ₂ less than 10 seconds; CO ₂ less than 30-40 seconds to T-90
Ambient Temperature Range:	40° to 120°F (4° to 49°C)
Linearity:	1.0% of full scale
Size and Weight:	WP style - approx. 11½" L x 8" W x 7¼" H @ 8 lbs (29 x 20 x 18 cm @ 3.6 kg) K style - approx. 14" L x 10½" W x 6" H @ 12 lbs (36 x 27 x 15 cm @ 5.5 kg)
Power:	115VAC 60 Hz for recharging (other voltages available)
Output Options:	4-20 mA or 0-1 VDC

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.



NOVA ANALYTICAL SYSTEMS
A UNIT OF TENOVA GOODFELLOW INC.

IN USA:
1925 Pine Avenue • Niagara Falls, NY • 14301
Tel: 1-800-295-3771 • 716.285.0418 • Fax: 716.282.2937
IN CANADA:
270 Sherman Avenue North • Hamilton, ON • L8L 6N5
Tel: 905.545.2003 • Fax: 905.545.4248
email: sales@nova-gas.com
websales@nova-gas.com



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