

# Heated Methane / NonMethane Hydrocarbon Analyzer (NMHC) Model-200/1



The VIG Industries, Inc. Model-200/1 is a microprocessor based, oven heated methane / nonmethane hydrocarbon gas analyzer designed for high accuracy, sensitivity and stability. The Model-200/1 uses a flame ionization detector (FID), and uses a GC Column for the separation of the methane and nonmethane components. A sample is fed to the analyzer via an internal heated pump. A portion of the sample is trapped and pushed through a column to separate the methane component. Any remaining sample in the column is back flushed through the column to obtain the nonmethane component. All components that come in contact with the sample through analysis are maintained in a temperature-controlled oven to prevent condensation, and to provide repeatable, reliable performance in the analysis of a wide variety of hydrocarbon concentrations in gaseous mixtures or in ambient air.

## Features

- Easy to use software
- Automatic start-up/ignition
- Heated sample pump head
- Two stage sample filter with exchangeable sintered stainless steel elements
- Teflon isolated detector (FID)
- Automatic fuel shut-off system
- Automatic flame-out indicator
- Adjustable alarm and oven settings
- Precision 1% of full scale
- 19" rack/bench mount

## Options

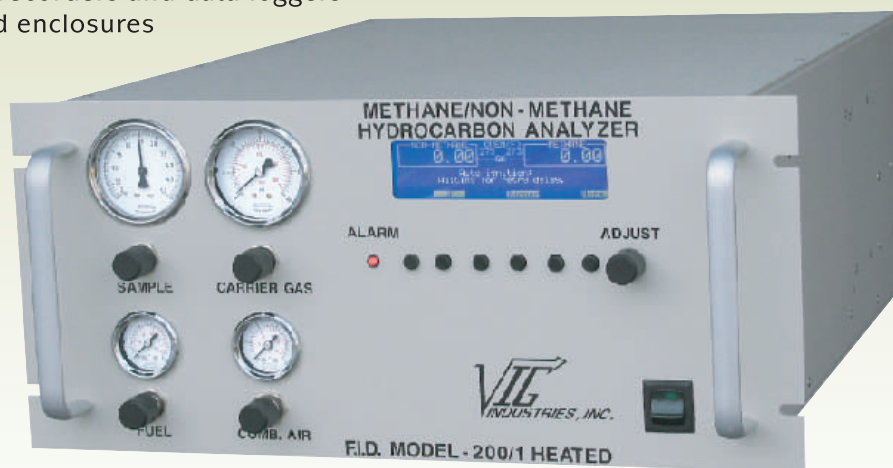
- 4-20mA output - no extra charge
- Zero and calibration solenoids with software
- RS-232 interface
- Internal combustion air supply

## Related Available Equipment

- Zero air generator (Reduces bottles)
- Hydrogen generator (Reduces bottles)
- Heated sample lines and controllers
- Strip chart recorders and data loggers
- NEMA rated enclosures

## Applications

- *Compliance Monitoring* - U.S. E.P.A. Method 18
- *Process Monitoring* - Continuous monitoring and alarm or control of: process gas streams utilizing organic solvents, crude oil, and other chemicals containing hydrocarbons.
- *Efficiency Monitoring* - Monitoring effluent of volatile organic compound (VOC) reduction equipment for environmental compliance, efficiency control of incinerators (Thermal or catalytic), scrubbers, carbon absorbers, and other abatement equipment, monitoring of catalytic converters, combustion and diesel engine efficiency.
- *Safety Monitoring* - Lower explosive limit (LEL) monitoring and/or control of ovens/dryers, fugitive emissions monitoring, personnel work area monitoring, leak detection of process equipment or solvent storage areas.
- *Stack Monitoring*



**VIG INDUSTRIES, INC.**

## Standard Specifications

**Measuring Method** - Oven Heated, Flame Ionization Detector (FID)

**Separation Method** - GC Column

**Measurement Range/Standard Ranges** - (4 Ranges per analyzer)

- 0-10, 0-100, 0-1000, 0-10000ppm (Lower detection limit 0.01ppm) or
- 0-100, 0-1000, 0-10000, 0-100000ppm (Lower detection limit 0.1ppm)
- Other ranges available upon request

**Zero & Span Noise** - Less than 0.2% of full scale

**Zero & Span Drift** - +/- 1% full scale per 24 hours

**Linearity** - Within 1% of full scale through all ranges

**Repeatability** - Within 1% of full scale through all ranges

**Stability** - Within 1% of full scale through all ranges

**Oxygen Synergism** - Within 1% of full scale within selected range

**Response Time**

- Methane - Approximately 40 seconds, updated every 3 minutes
- Nonmethane - Approximately 70 seconds, updated every 3 minutes

**Ambient Temperature** - From 50°F to 120°F

**Flow Rate** - 4 Liters/Minute (Standard) or 10 Liters/Minute (Upon request)

**Physical Dimensions** - 19" Front Panel, 16.75" Wide Chassis, 24" Deep Chassis, 27" Deep with fittings and handles, 9" High

**Weight** - 55 lbs to 65 lbs depending on options

**Oven Operating Temperature** - 275°F (Adjustable from 200°F to 300°F)

**Safety** - Flame-Out indicator lamp, flame out alarm contact on back panel, fuel shut-off, calibration and zero solenoid shut-off, Optional sample shut-off

**Voltage Outputs** - One of the following voltage outputs

- 0-10VDC (Standard), 0-1VDC or 0-5VDC (Optional - no extra charge)

**Flame-Out Alarm** - Normally open, low current relay contact (Closes on alarm, latching)

**Concentration Alarms** - Normally open, low current relay contact (Closes on alarm, latching)

**Ignition** - Automatic (Can be set to manual by operator from front panel)

**Glow Plugs** - Main and spare glow plugs installed (Selectable by switch on back panel)

**Warm-Up Time**

- Usable in approximately 45 minutes
- Stable in approximately 2 hours

**Display** - Graphic, backlit, 240W x 64H pixels, high contrast, wide viewing angle

## Operation Requirements

**Fuel** - UHP Hydrogen @ 18psi incoming pressure

**Combustion Air** - Oil/Water/Hydrocarbon free instrument air @ 18psi incoming pressure

**Zero Calibration Gas** - UHP Zero grade air or nitrogen @ 9psi incoming pressure

**Span Calibration Gas** - Known concentration of operator selected hydrocarbons balanced in either air or nitrogen @ 9psi incoming pressure (VIG recommends using a mixture of methane and propane balanced in air to save calibration time)

**Carrier Gas** - UHP nitrogen @ 30psi incoming pressure

**Compressed Air** - Oil/Water free air @ 50psi incoming pressure for column switching valve

**Power Requirements** - 115VAC @ 60Hz @ 720Watts or optional 220VAC @ 50Hz



## Warranty

All instruments sold by VIG Industries, Inc. are warranted for a period of one (1) year from date of purchase against defects in materials and workmanship. The seller warrants that the product supplied conforms to the specifications assigned thereto. There is no other warranty either expressed or implied. Seller liability is limited specifically to the cost or assigned value of the items sold. Service contracts are available after the warranty expires.