

# Dual Channel Heated Total Hydrocarbon Analyzer Model-20/2



The VIG Industries, Inc. Model-20/2 is a dual channel, microprocessor based, oven heated total hydrocarbon gas analyzer designed for high accuracy, sensitivity and stability. The Model-20/2 uses two flame ionization detectors (FIDs) for continuous measurement of two independent sample streams. 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 heads
- Two stage sample filters with exchangeable sintered stainless steel elements
- Teflon isolated detectors (FIDs)
- Automatic fuel shut off system
- Automatic flame-out indicators
- Adjustable alarm and oven settings
- Automatic ranging
- Precision 1% of full scale
- Fast response
- 19" rack/bench mount
- Choice of Hydrogen or Hydrogen/Helium fuel

## Options

- Automatic calibration
- Zero and calibration solenoids with software
- RS-232 interface
- Second concentration level alarms
- Internal combustion air supply
- Purge and internal cleaning system
- Dilution system
- User selectable fuel (H<sub>2</sub> or H<sub>2</sub>/He mixture)
- Range recognition relays
- Multi-point sequencer
- Sample shut-off

## Applications

- *Compliance Monitoring* - U.S. E.P.A. Method 25A
- *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*

## 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



**VIG INDUSTRIES, INC.**

## Standard Specifications

**Measuring Method** - 2 Oven Heated, Flame Ionization Detectors (FIDs)

**Measurement Range/Standard Ranges** - (4 Ranges per amplifier, 2 amplifiers 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** - Within 5 seconds 90% of final reading

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

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

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

**Weight** - 35 lbs to 45 lbs depending on options

**Oven Operating Temperature** - 300°F (Adjustable from 200°F to 400°F)

**Safety** - Flame-Out indicator lamp, flame-out alarm contacts 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)

**Current Outputs** - 4-20mA, Sourcing

**Flame-Out Alarms** - Normally open, low current relay contacts (Close on alarm, latching)

**Concentration 1 Alarms** - Normally open, low current relay contacts (Close 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 (Standard)

UHP Hydrogen/Helium Mixture @ 18psi incoming pressure (Optional)

**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

**Optional Gasses** - UHP zero grade air or nitrogen for units with dilution option @ 18psi  
incoming pressure

Oil/Water/Hydrocarbon free instrument air for cleaning options @ 50psi incoming pressure

**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.