

Heated Total Hydrocarbon Analyzer Model-20



The VIG Industries, Inc. Model-20 is a microprocessor based, oven heated total hydrocarbon gas analyzer designed for high accuracy, sensitivity and stability. The Model-20 uses a flame ionization detector (FID) for continuous measurement. 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
- PTFE isolated detector (FID)
- Automatic fuel shut off system
- Automatic flame-out indicator
- 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 alarm
- Internal combustion air supply
- Purge and internal cleaning system
- Dilution system
- User selectable fuel (H₂ or H₂/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 - Oven Heated, Flame Ionization Detector (FID)

Measurement Range/Standard Ranges - (4 Ranges per amplifier, one choice per analyzer)

- 0-10, 0-100, 0-1000, 0-10000ppm (lower detection limit 0.01ppm)
- 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" Front Panel, 16.75" Wide Chassis, 18" Deep Chassis, 21" 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 contact on back panel, fuel shut-off, calibration and zero solenoid shut-off, Optional sample shut-off

Voltage output - One of the following voltage outputs

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

Current output

- 4-20mA, Sourcing

Flame-out alarm

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

Concentration 1 alarm

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

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

Glow Plug - 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)

UPH Hydrogen/Helium Mixture @ 18psi incoming pressure (optional)

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

Zero Calibration Gas - 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 - Oil/Water/Hydrocarbon free instrument air or UHP 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 @ 600Watts



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.