

About Us:

Peak Labs is a world leader in design and manufacturing of process gas chromatographs (GC). We provide simple, innovative, complete solutions for trace to percent level analysis. Our analyzers are equipped with a unique design, which allows our customers to accurately measure trace gas to part per trillion levels, while maintaining a wide linear range. Peak Labs practical experience and ability for customization to suit your application needs makes us your analytical partner, not just your supplier.

Contact:

Ph: (650) 691-1267
 Fax: (650) 691-1047
 2330 Old Middlefield Way,
 Ste. 10, Mountain View, CA
 94043

www.peaklaboratories.com

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Flame Ionization Detector (FID):

(For the Detection of Hydrocarbon Impurities)

The GC FID uses a highly sensitive flame ionization detector, which is integrated with Peak's unique design specifically for the process application in UHP gases. C-H bonds are ionized and "collected" via a voltage grid within the detector. This produces an electronic signal proportional to the number of ions, otherwise known as concentrations, within the sample onto easy to read multi-interface LCD screen. The FID is used to measure trace amounts of **hydrocarbon and carbon dioxide** impurities in N₂, Ar, He, O₂, H₂, N₂O, Air & other specialty gases. These measurements are made down to part per trillion levels, while offering a wide linear range for simple, accurate data.

Features:

- Backlit, User Friendly Touchscreen (LCD)
- Multiple Communication Protocols
- Visual Chromatogram and Numerical Results
- Excel Compatible Data
- Accurate, Effective and Reliable Design
- On-board Integration with Rerun Capability



Benefits:

- Continuous Monitoring
- Custom Solutions for your Processing Needs
- Quick, Reliable Global Support and Training
- Lower Total Cost of Ownership
- Offers Simple and Accurate Measurements, down to the Part Per Trillion Level

Fields of Application:

- Air Separation Plants
- Regulatory Air Monitoring
- Government & University Research Institutes
- Quality Assurance / Control
- Semiconductor Plants
- Purifier Manufacturers
- Process Control
- Medical Research Labs



Contact us.

The Peak Performer 1 FID gas chromatograph (GC) can be optimized for your analytical needs in a variety of matrix gases. Typical applications are provided below:

- CH₄, CO₂, NMHC (non-methane hydrocarbons) in UHP bulk process gases
- CH₄ production in bio-reactors
- Atmospheric CH₄ and NMHC / THC analysis

Performance

Typical lower detection limits (in parts per trillion)

| Impurity | Matrix Gas | N ₂ , Ar, He | O ₂ | Air | H ₂ |
|----------------------------------|------------|-------------------------|----------------|-----|----------------|
| CH ₄ : Methane | | 500 | 500 | 500 | 500 |
| CO: Carbon Monoxide | | * | * | * | 5 ppb |
| CO ₂ : Carbon Dioxide | | 800 | 800 | N/A | 800 |
| NMHC | | 800 | 800 | 800 | 800 |

* Contact local representative for specific details

All performance specifications are based on fully optimized PP1 FID with 5 cc sample loop on continuous analysis.

Unless specified, carrier gas is purified nitrogen

FID fuel gases are UHP grade < 1000 ppb impurities

Accuracy

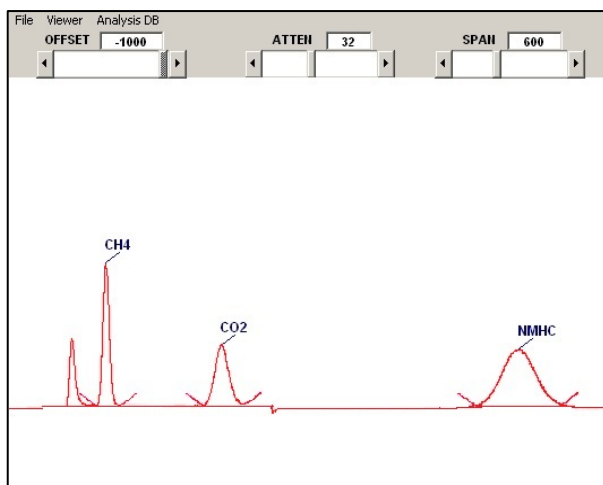
- + / - detection limit or 10 % of reading, whichever is higher

Range

- 10000 : 1
- Examples:
- < 1 ppb- 10 ppm w/ 5 mL sample loop
 - < 5 ppb- 50 ppm w/ 1 mL sample loop

Dimensions / Electrical

- 27" L x 17" W x 7" H
- 25 lbs.
- 115 VAC, 50 – 60 Hz / 220 VAC, 50-60 Hz
- 1.5 amp maximum



Operation

- Run time ~ 400 seconds (depending on application)
- Operating Temperature: 55 - 85 °F (13 - 30 °C)
- Gas Supply Requirements:
 - Carrier: Getter Purified Nitrogen
 - Supply pressure 70 – 110 psig with 5% stability
- FID H₂:
 - 99.999% pure or purified < 1000 ppb impurities
 - Supply pressure 25 – 45 psig with 5% stability
- FID Air:
 - 99.999% pure or purified < 1000 ppb impurities
 - Supply pressure 5 – 45 psig with 5% stability
- Data Collection / Communication:
 - 0-1 VDC Analog Outputs
 - RS232, RS485 Serial Communication
 - Data Archive / Viewer / Trend Log/ Raw
 - Detector Signal

Options:

- On Column Syringe Injector Adapter
- Dual Sample Stream
- 4-20 mA Output