

## 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.

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## Pulse Discharge Detector (PDHID)

*(For the Detection of Nitrogen & Argon)*

The GC PDHID analyzer is equipped with a uniquely designed pulse discharge detector utilizing a stable low power pulse electrical discharge via helium as a source of ionization. This analyzer is the ideal solution for the detection of trace amounts of **nitrogen & argon** impurities in He, Ar, O<sub>2</sub>, H<sub>2</sub>, N<sub>2</sub>, N<sub>2</sub>O & other specialty gases. Chromatographs are generated by the ionization of helium using high energy photons. Resultant electrons are accelerated to the collector electrode, where they are quantified as the detector output. This process integrated with Peak's proven platform delivers prompt and accurate results, while still maintaining a wide linear range.

### 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 Billion Level

### Fields of Application:

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



Contact us.

The Peak Performer 1 PDHID gas chromatograph (GC) can be optimized for your analytical needs in a variety of matrix gases. Typical applications are in process gas plants such as manufacturing of:

- Ar & N<sub>2</sub> in UHP gases
- H<sub>2</sub>, Ne, Kr, Xe & CH<sub>4</sub> in bulk gases

## Performance

Typical lower detection limits (in parts per billion)

Impurity	Matrix Gas	He	Ar	O <sub>2</sub>	H <sub>2</sub>	N <sub>2</sub>	N <sub>2</sub> O
N <sub>2</sub> : Nitrogen		10	10	10	10	N/A	10
Ar: Argon		5	N/A	10	10	5	*

\* Contact local representative for specific details

All performance specifications are based on fully optimized carrier matrix gas

## Accuracy

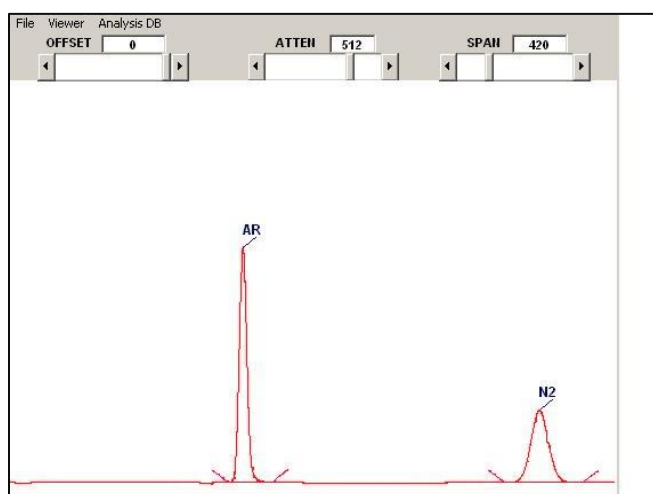
- + / - detection limit or 10 % of reading, whichever is higher

## Range

- 5000 : 1
- Examples:
- 2 ppb- 10 ppm w/ 1 mL sample loop
  - 5 ppb- 25 ppm w/ 200 uL 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 ~ 500 seconds (depending on application)

- Operating Temperature:

55 - 85 °F (13-30 °C)

- Gas Requirements:

Carrier Gas Supply: Cryogenic & Getter Purified Helium

Supply pressure 70- 110 psig with 5% stability

Total Flow: ~200sccm (plus ~50 cc per actuation)

- 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