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Find the *Gow-Mac Instrument 21-250* at our website: ***Click HERE***

GOW-MAC Gas Products

Product Specification

GOW-MAC Gas Leak Detector

Helps you find leaks quickly — without risk of contaminating your GC system

Using liquids to detect gas leaks can be poor economy — especially in a capillary GC system. Even a small amount of liquid leak detector that seeps into a fitting, or through the septum, can damage your column. The GOW-MAC Model 21-250 gas leak detector can easily and quickly pinpoint gas leaks too small to detect with soap solution.

The GOW-MAC gas leak detector operates on the same principle as a thermal conductivity detector. The instrument responds to any gas mixture that has a thermal conductivity value different from that of air. With an intrinsically high signal-to-noise ratio, amplification provides maximum usable sensitivity — helium leaks of 1×10^{-5} cc/sec and refrigerant leaks of 11×10^{-4} cc/sec are easily detected.

Easy to Operate

The GOW-MAC gas leak detector can be operated with little or no training. Turn it on, adjust the zero knob and probe for leaks. As the probe passes over a leak, a signal is registered on the meter and an audible tone is emitted.

The probe is designed to reach difficult and confined locations. In close areas where several connections are grouped together, the probe is small enough to pinpoint the exact problem location. A HIGH/LOW switch permits you to control sensitivity for very small leaks.

Laboratory Applications

Leaks are costly in any analytical system and can be dangerous in some. The GOW-MAC gas leak detector can be used with any gas-filled laboratory apparatus or instrument. Vacuum systems (glass or metal) can be checked for leaks by slightly pressurizing the system with a tracer gas, such as helium, and then probing for leaks. Below are listed the most common leak sources that can adversely affect gas chromatographic results:

Cylinder — Leaks at regulator connections can allow dangerous gases to escape into the laboratory atmosphere.

Regulator — The diaphragm is a potential leak source.

Fittings — Inlet tube fittings are a significant source of leaks due to vibrations in the lab and slight jarring of apparatus.

Injection port — Check septum leaks at the sample injection point. Gas sample valves and their connections can also be checked.

Column — Find leaks quickly under hot or cold conditions. No waiting for oven cool-down before checking. This assures no leaks at operating conditions.



912-0347

Specifications

Detector: Thermistor-actuated thermal conductivity cell
Visual Readout: Center zero meter, graduated -50 to +50
Circuitry: Solid state design incorporating quality components
Pump: Diaphragm type, 85V, 55 Hz generated by internal digital timer
Line Voltage: Internally selectable 115/230V, 50/60 Hz
Battery: Rechargeable lead/acid gel, 8V
Audio Output: Frequency changes with concentration; adjustable threshold and speaker volume
Range: High: x1; Low: x100
Dimensions: 27 x 21 x 9cm (10 3/4 x 8 1/4 x 3 5/8") (excluding handle)
Weight: 4.1kg (9lb) Shipping: 5.4kg (12 lb)

Sensitivity of GOW-MAC Leak Detectors*

Gas	cc/sec	feet³/year
Argon	1.0×10^{-4}	0.110
CO_2	1.1×10^{-4}	0.123
Fluorocarbons	1.1×10^{-4}	0.123
Helium	1.0×10^{-5}	0.012
H_2/He (40:60)	1.0×10^{-5}	0.012
Refrigerants	1.0×10^{-4}	0.123

*Minimum leak rate required for 10% of full-scale deflection.

NOTE: These GOW-MAC gas leak detectors are not intended for determining leaks of combustible gases. They are intended for nonspecific applications, to determine low level leaks of gases with thermal conductivity different from that of air. We recommend a combustible gas detector for monitoring combustible gases in possibly hazardous situations.

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994-0275

Miniature Gas Leak Detector

The GOW-MAC Model 21-050 Mini Gas Leak Detector is a light-weight, hand-held instrument designed to easily and quickly pinpoint gas leaks. Like the full-sized GOW-MAC unit, it eliminates the risk of contaminating your column or system with liquids. The mini detector weighs less than 1 pound (474 grams) and measures 3 1/4 x 1 13/16 x 5 1/4" (8 x 4.5 x 13cm). (For sensitivity levels, see the front side of this Product Specification.)

Benefits & Features

- Simple, one hand operation – turn on, zero, go – in less than 10 seconds.
- Fast response (less than 2 seconds).
- Pen-type Teflon®-lined probe reaches the tightest spaces.
- Detects by thermal conductivity differences. Two sensitivity ranges: x1, x100.
- Visual LED bar graph.
- Rechargeable Ni-Cd battery; charger included.

Contact our Technical Service Department (phone 800-359-3041 or 814-359-3041, FAX 814-359-5468) for expert answers to your questions.

Trademarks
GOW-MAC — GOW-MAC Instrument Co.
Teflon — E.I. du Pont de Nemours & Co., Inc.

Flowminder Flow Control Unit

Eliminates time-consuming adjustments when switching between operating and standby gas flow

It has long been established procedure to set gas chromatographs to standby conditions during non-working hours, such as nights and weekends.

The carrier gas in a gas chromatograph in standby conditions is reduced to a fraction of the flow-rate used in operating conditions. This requires the adjustment of automatic pressure regulators and needle valves in most cases and is very time consuming. Equal time is required for readjustment when establishing operating conditions in the morning.

Once set to an operating flow rate and a standby flow rate, the Flowminder will maintain either flow, precisely and reproducibly. The unit lets you select standby conditions (overnight or on weekends) and then re-establish the operating flow rate — with the flick of a switch — when you prepare to use the instrument.

To shut down to standby conditions, simply put the selector pressure switch to LOW position. The unit will reduce the pressure and hold it at the preset pressure. For normal operation, switch to HIGH, and the carrier gas is delivered to the gas chromatograph at operating pressure.

The system consists of a pressure reducer, a pneumatic switch, and a 100psi pressure gauge. It is constructed of brass and copper, housed in a metal case.

Specifications

Dimensions: 24 x 10 x 15cm (9 1/4 x 4 x 5 3/4")

Shipping Weight: 2.0kg (4.5 lb)

Ordering Information:

GOW-MAC Gas Leak Detector Model 21-250	**22409**
Mini Gas Leak Detector, 115VAC/60Hz	**22807**
Mini Gas Leak Detector, 230VAC/50Hz	**22808**
Carrying Case for Mini Detector	**22809**
Flowminder Flow Control Unit	**22542**

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