



Incorporated

Helium Analyzer Flow Through System Instruction Manual

All product specifications are at sea level, 25°C, and ambient conditions
Designed for use in safety monitoring

This Helium monitor is available with a **Flow-through** Cap for continuous monitoring of the Gas.

Unpacking and Inspection

The user should always inspect the shipping package for damage. If there is damage evident, please save the package and notify the shipping company immediately.

General Description

The Helium Analyzer is a hand-held device for measuring Helium content in a gas mixture, and is specifically designed to confirm the Helium content in a gas mixture similar to normal air or nitrogen. The Analyzer is powered by rechargeable batteries. (Figure 1 shows the top panel.)

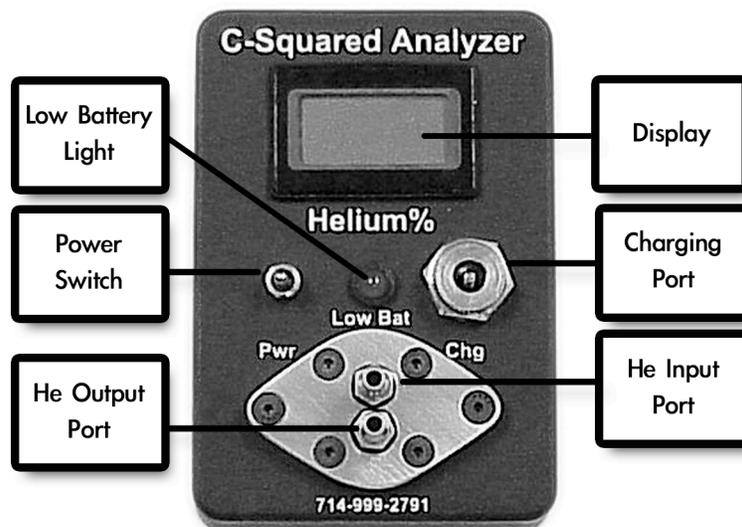


Fig. 1. Unit top panel view.

The LCD displays the helium content from 0 to 100% with 0.1% resolution. When the low battery indicator LED is on, the unit's battery needs to be recharged prior to use. The patented sample unit allows the user to flow a gas mixture through the sensor inside the unit.

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Operation:

The procedure is simple:

1. Connect the top hose connector marked with a (IN) to the incoming gas supply.
2. Connect the lower hose connector marked with an (OUT) below it to either your oxygen monitor or exhaust it to a vent.
3. Turn on the power switch (up) and wait about 10 seconds to take your first reading. Your gas flow should be between 100 cc/min to 300 cc/min for accurate readings. The unit will read continuously during the flow.
4. The system will operate for about 2 hours on batteries alone or if you plug in the charger the unit will operate for 5 hours before you need to recharge the batteries.

Cautions

1. The Helium Analyzer is a vibration sensitive device. Please avoid mechanical shock while handling. Dropping the unit on a hard floor may cause damage to the unit.
2. When operating the Helium unit out doors, please avoid direct sunlight on the unit.

Operating Principle

The Analyzer measures the helium content based on the extreme high thermal conductivity of helium gas. The unit consists of two main components: one is the sensor block and the other is the electronic circuit. The patented design allows the unknown gas mixture to flow through the sensing chamber. Once the gas mixture is inside the sensing chamber, the electronic circuit then measures the difference of the thermal conductivity between the gas mixture and the reference gas. The helium content is then calculated by the circuit and displayed.

V:11/06/05