He-490M

HELIUM LEAK DETECTOR

TURNKEY VACUUM MASS SPECTROMETER SYSTEMS

The He-490M is at the heart of VIC's turnkey vacuum mass spectrometer systems which feature ease of service and its adaptability for system use. Our Leak Detection Systems use the most sensitive and accurate leak detection device science has developed -- the helium mass spectrometer. The helium mass spectrometer is at least 1000 times more sensitive than other leak detection methods. V.I.C. Leak Detection has taken the helium mass spectrometer out of the laboratory, where it has served as a research tool for over 30 years, and redesigned it to meet the stringent requirements of ruggedness, reliability and ease of maintenance that are essential in any industrial environment.

BENEFITS

- → INDUSTRY'S MOST SENSITIVE AND ACCURATE LEAK DETECTION
- → RELIABLE
- → RUGGED WITH MANY SYSTEMS OPERATING FOR 20 YEARS
- → EASY TO MAINTAIN
- → FAST RESPONSE TIME
- → PORTABLE
- → PASSWORD PROTECTION PREVENTS UNAUTHORIZED ACCESS
- → HELIUM MASS SPECTROMETER IS A LEAST 1000 TIMES MORE SENSITIVE THAN OTHER LEAK DETECTION METHODS

Applications

Air Conditioning and Refrigeration Systems,
Automotive Components and Appliance

ATEQ

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Performance

- Sensitivity: System Mode, minimum detectable helium leak rate 2.5 x 10^{-9} atm-cc/sec.
  Sniffer Mode, minimum detectable helium leak rate 2.5 x 10^{-7} atm- cc/sec.
- Response Time: < 1.0 second system mode testing, < 1.5 seconds sniffer mode testing.
- Startup Time: One button automatic operation.
  Cold Start-Up, less than 3 minutes.
  Standby Start-Up, less than 1 minute.

Display Leak Rate Range

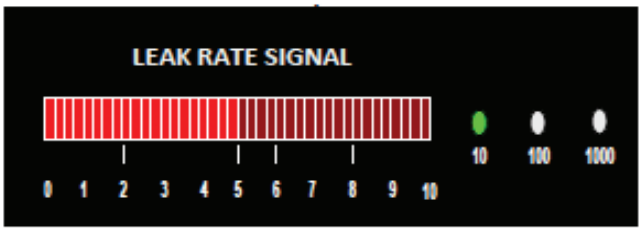
- System Mode Testing: 0-10 Volts output to main PLC. Leak rate configured to systems calibrated gas leak.
- Interface Signals: Auto-Zero, Ready, Leak Rate and Fault Signals.
- Sniffer Mode Testing: 10^{-3} to 10^{-7} atm-cc/sec He direct-reading.

Options

- 24Vdc control
- 110Vdc control
- Atmospheric sniffer module
- Side mount configuration
- Bottom mount configuration
- Electrical Converter Box

A standardized solution for thermal leak testing equipment. The Scepter is offered as a single, dual or IHX configuration

The internal analog leak rate value is displayed on the bar graph and three range LED's indicate the relative severity of the leak.



Main Features

- Cold Start-Up, less than 3 minutes
- Standby Start-Up, less than 1 minute
- One button automatic operation
- Hard vacuum leak detection system
- PLC controlled
- Modular assembly for custom arrangement
- Turn-key operation
- Front panel key lock-out
- Five year warranty on major components
- Turbo speed adjustable from 600 to 1500HZ
- Includes an internal fast clean-up sniffer manifold
- Allows rapid switching between sniff and vacuum testing modes
- Auto peak cycle

Technical Specifications

Power	115/220 Volts AC, 60/50 Hz, 4 Amps (other voltages available upon request)
Dimensions	(W x H x D): 344 x 395 x 618 mm
Valve	High vacuum rated solenoid actuated fore-line isolation
Pressure Measurement	Connection gage for rough vacuum (atm-10^{-3} Torr), Turbo pump speed characteristics for high vacuum (10^{-6} Torr)
Inlet System	External PLC controlled valves, externally mounted. Options: DC or AC
High Vacuum Pump	Air-cooled turbo-molecular
Mechanical Pump	External forepump arrangement, standard package with 7 CFM

Other Formats & Integration

- SMART CHARGE 5

He-490M can be fully integrated with our Smart Charge 5 evacuation and backfill station

Specifications subjects to change without notice, non-contractual photos. February 2025.

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