

 **QUAKELOGIC**

QL-LeakMaster Ultra

ULTRA-SENSITIVE HELIUM LEAK DETECTION SYSTEM



QL-LeakMaster Ultra

ULTRA-SENSITIVE HELIUM LEAK DETECTION SYSTEM

- QL-LeakMaster Ultra is a high-performance Helium Mass Spectrometer Leak Detection (MSLD) system engineered for ultra-sensitive vacuum and sniffer-based leak detection applications. Utilizing advanced magnetic deflection mass spectrometry and a high-speed vacuum pumping system, the unit achieves minimum detectable leak rates down to 5×10^{-12} mbar·l/s, ensuring precise and reliable detection in critical environments.
- The system features a fully automatic, microprocessor-controlled architecture with integrated auto calibration, auto ranging, and intelligent diagnostics for consistent and repeatable measurements. With multi-gas detection capability (H_2 , 3He , 4He), rapid response time, and user-friendly operation, the QL-LeakMaster Ultra is optimized for demanding applications in aerospace, semiconductor, research laboratories, and high-vacuum industrial processes.

Technical Specifications:

Detection Principle:	Helium Mass Spectrometer (Magnetic Deflection Type)
Tracer Gases:	H ₂ , ³ He, ⁴ He (2, 3, 4 AMU)
Minimum Detectable Leak Rate (Vacuum Mode):	5 × 10 ⁻¹² mbar·l/s
Minimum Detectable Leak Rate (Sniffer Mode):	1 × 10 ⁻⁹ mbar·l/s
Measuring Range:	5 × 10 ⁻¹² to 0.1 mbar·l/s
Response Time:	0.5 seconds
System Start-up Time:	3 minutes
Maximum Test Port Pressure (Gross Mode):	1 mbar
Operation Mode:	Fully automatic, single-button operation
Control System:	Microprocessor-based with auto calibration and auto ranging
Calibration:	Integrated internal calibrated helium leak standard
Auto Zeroing:	Included
Audio Alarm:	Included
Standby Mode:	Included



Technical Specifications:

Filaments:	Dual filament system
Filament Material:	Yttria-coated Iridium
Mass Analyzer:	180° magnetic deflection mass spectrometer
Display Modes:	Gross and fine leak display
Leak Rate Units:	mbar·l/s, Pa·m ³ /s, Torr·l/s, atm·cc/s (user selectable)
Pressure Units:	mbar, Pa, atm, Torr (user selectable)
Safety Features:	Air rush protection with safety interlocks
Diagnostics:	Self-diagnostics system
Communication Ports:	RS232 / USB / RS485 / LAN
Software:	PC interface software included
Test Port:	DN25 KF / DN40 KF
Power Supply:	230V AC, 50 Hz, single phase
Operating Environment:	5–40°C, up to 80% relative humidity



Advanced Leak Detection & Vacuum Testing Solutions

Corporate Headquarters

QUAKELOGIC INC.
2008 Opportunity Dr. Suite 130
Roseville, CA 95678, USA

Executive Support Line

+1 (916) 899-0391

Direct support for leak detection systems, vacuum testing operations, and industrial inspection applications.

Available Monday - Friday, 9 AM - 5 PM PST

Strategic Inquiries

sales@quakelogic.net

For helium leak detection systems, vacuum testing solutions, and high-precision industrial applications

Our Commitment to Advanced Leak Detection Solutions

Reliable Data Retention

Delivering ultra-sensitive, non-invasive leak detection for vacuum systems, sealed components, and critical assemblies.

Edge Computing Performance

Providing high-speed helium mass spectrometry for accurate leak detection without compromising system integrity.

Dedicated Client Support

Ensuring reliable operation with automated calibration, intelligent diagnostics, and responsive technical support for industrial applications.

Scan to Explore Leak Detection & Vacuum Testing Solutions



Explore Leak Detection Capabilities and Industrial Applications

Discover how QL-LeakMaster Ultra enhances leak detection accuracy, operational reliability, and performance in high-vacuum applications.

www.quakelogic.net