

Leak Detection

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PICO[®] VACUUM LEAK DETECTOR

THE WORLD'S SMALLEST MASS SPECTROMETER-BASED HELIUM LEAK DETECTOR

Welcome to the future of mass spectrometer-based helium leak detection. Weighing 17 lbs., the PICO[®] is truly the smallest mass spectrometer-based leak detector available in the world today. Incorporating advanced technology in mass spectrometry and vacuum technology (patents pending), the PICO provides fast, contamination-free, leak detection. As a vacuum style helium leak detector, the PICO can be quickly and easily transported to the vacuum system to be leak tested without the need for bulky transport carts.

In addition to an ion trap mass spectrometer, the PICO has an integral vacuum system which incorporates a turbomolecular pump as well as a backing scroll pump. Aided by the small volumes of the unit, the PICO has a very fast response and clean-up time. The PICO incorporates a removable handheld remote display with 15 ft. of interconnecting cable. The user interface is self-intuitive and very simple to use. The helium leak rate is displayed in numeric, bar graph, and historical trending formats. The remote display also incorporates an audio alarm which can be heard in very noisy environments, often encountered in leak detection applications. The PICO also includes self-protection circuitry that protects the integral turbomolecular pump from situations which would normally damage the turbo pump and require significant repair. The unit also includes a "zero" feature that compensates for background levels of helium often encountered in leak detection applications.

Features & Benefits

- Lightweight and truly portable (17 lbs.)
- Rugged design for demanding applications
- 1×10^{-10} atm-cc/s min detectable leak rate
- Self protection for turbo pump and mass spec
- Extremely simple to operate
- Displays historical leak rate
- Quick response and clean-up time
- Removable hand-held display
- Integral vacuum system (turbo/scroll pump)
- Patent pending technologies

Typical Applications

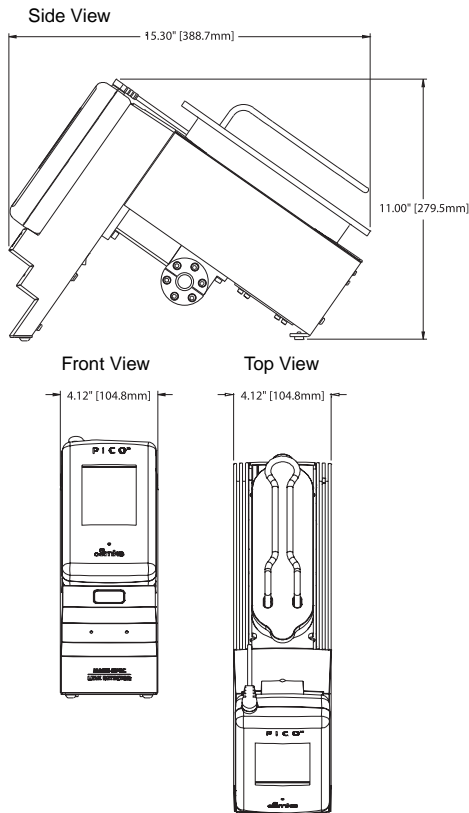
- Semiconductor Manufacturing
- Refrigeration/Air Conditioning
- Scientific Instrumentation
- Research and Development
- Systems Manufacturing
- High Purity Gas Industry
- Pharmaceutical Industry
- High Vacuum Engineering
- Automotive Industry
- Aerospace Industry
- Packaging Industry
- Quality Assurance
- Medical



Specifications and Ordering Information



PICO Helium Leak Detector with Remote Display



Dimensional Drawing —

Note: Unless otherwise specified, dimensions are nominal values in inches (mm referenced).

Detectable Gases
Theory of Operation
Minimum Detectable Helium Leak Rate
Response Time
Start-Up Time
Maximum Inlet Test Pressure
Vacuum System
Test Port
Remote Control

Audible Alarm
Zero Function
Units of Measure (selectable)
Ambient Operating Temperature
Weight
Input Power
Conformance Standards

Helium
 Mass spectrometry
 $< 1 \times 10^{-10}$ atm-cc/s
 < 1 second
 < 5 minutes
 500 mTorr
 Integral turbomolecular and scroll pump
 NW 16
 Removable touch-screen display with 15 ft. interconnecting cable
 Included in remote control
 Suppression of background helium levels
 atm-cc/s, mb l/s, Pa m³/s, torr l/s
 $+10^\circ$ to 45°C
 17 lbs
 110-240 VAC, 50-60 Hz
 CE Compliant to EMC Directive 2004/108/EC

Ordering Code Example: MSVAHEABCDEF	Code	Configuration
Standard PICO Vacuum Leak Detector	MSVAHE	MSVAHE
Sniffer Probe Option (A)		
None	1	
Sniffer probe, 3m length	2	2
Sniffer probe, 6m length	3	
Test Port Connection (B)		
KF16	6	6
Communications (C)		
None	0	D
RS232	D	
Display Options (D)		
None	0	0
Option 1 (E)		
None	0	0
Option 2 (F)		
None	0	0
Accessories		
Calibrated helium leak standard (10 ⁻⁸ atm cc/s leak rate)	143-9997	

Common Ordering Examples

MSVAHE160000: PICO Vacuum, no options
 MSVAHE260000: PICO Vacuum with 3m sniffing probe, no RS232
 MSVAHE26D000: PICO Vacuum with 3m sniffing probe, including RS232

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