

UL1000

Helium Leak Detector

SETTING THE STANDARD
FOR INDUSTRIAL LEAK DETECTION

INFICON

UL1000 delivers speed, sensitivity and reliability

The INFICON UL1000 Helium Leak Detector provides the unique combination of high sensitivity at high test pressures to ensure fast, repeatable and accurate results with the testing flexibility required for the most demanding industrial leak detection applications. More importantly, its exceptional ability to isolate the helium signal from its environment allows the UL1000 to excel in the most challenging applications. So, if you require a reliable high performance leak detector, the UL1000 is the right choice for you.

The UL1000 vacuum architecture and simple, robust pump set delivers unsurpassed performance in a cost-effective, low maintenance package. Featuring the proprietary software algorithm I-CAL (**I**ntelligent - **C**alculation **A**lgorithm for **L**eak Rates), the UL1000 delivers lightning-fast response to leaks in all measurement ranges. The UL1000's high helium pumping speeds with great sensitivity at high pressures means you get excellent gas movement and sensitivity at favorable test pressures to ensure fast, accurate and repeatable results.



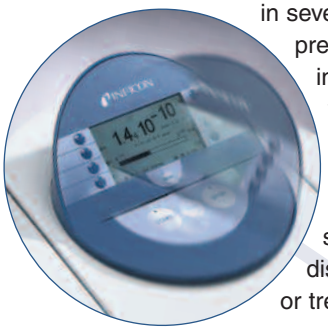
Features for easy and reliable operation include a rotatable display/user interface, large convenient work surface, durable metal housing, and integrated wheels for maximum mobility. Options include a wireless remote control with touch screen, attachable toolbox, helium bottle holder, and Leakware for PC-controlled operation and data collection.

I-CAL PROVIDES ULTRAFAST DETECTION

Using the special software algorithm I-CAL, the UL1000 provides accurate measurements at unsurpassed speed in all measurement ranges. While other leak detectors must average the signal over long periods of time to ensure a stable leak rate, the UL1000 with I-CAL responds with unparalleled speed and stability even in the smallest leak rate ranges.

ROTATABLE DISPLAY AND SIMPLE USER INTERFACE

The rotatable display / user interface on the UL1000 provides easy system control and access to information in several languages. The display presents results and status information in large characters with excellent clarity. Readings can be monitored conveniently from considerable distances even in bright or low light settings. Results can be displayed in digital, bar graph, or trend formats.



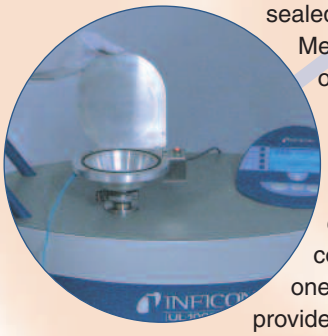
The Start, Stop and Zero functions are readily accessible on the display. More advanced functions are available in the menus of the easy-to-use, intuitive user interface.

The UL1000 system software provides security and testing flexibility. User access can be limited, and menu items can be protected against unauthorized use or unintended modifications. For quick and easy system operation, the UL1000 can be programmed for three different user applications.



CONVENIENT TESTING

The test chamber TC1000 turns the UL1000 into a reliable and user-friendly workstation for testing hermetically sealed parts (acc. to MIL-STD 843, Method 1014) and is available as an option.



EASY SET-UP

To simplify installation, all the electrical and mechanical connections are located on one side of the UL1000 to provide convenient access to the RS232, I/O, chart recorder, optional remote control, vent, gas ballast, exhaust and accessory ports.



Industrial performance with laboratory accuracy and flexibility

INTELLIGENT VACUUM DESIGN

The UL1000 uses the INFICON field-proven, 180° magnetic sector mass spectrometer and ion source in a highly efficient vacuum system. The UL1000 crosses over to test modes at high pressures and delivers consistently high pumping speeds with excellent sensitivity. The system cleans up quickly after large leaks, and superior water vapor rejection allows for flexible testing conditions. The enhanced counterflow design with high cross-over to the test modes ensures good gas movement, excellent sensitivity, and faster test results without compromising the integrity or cleanliness of the mass spectrometer, as compared to hybrid counterflow/direct-flow designs.



SYSTEM PROTECTION AND INTELLIGENCE

The UL1000 has built-in system protection and intelligence. The system software has self-protection features that can be selected to prevent helium and particulate contamination. The enhanced counterflow design and high-compression turbomolecular pump add another level of protection to the mass spectrometer, keeping it clean and isolated. This ensures fast clean-up and a quick return to testing after detecting huge leaks. The intelligent Zero function automatically optimizes the zero correction based on the clean-up characteristic of the background ensuring all leaks are detected. And, the UL1000 features advanced self-diagnostic routines with troubleshooting prompts to guarantee the UL1000 is ready when you need it.

3-YEAR ION SOURCE WARRANTY GUARANTEE

A 3-year ion source warranty helps you control consumable costs. However, the robust design of the INFICON ion source effectively eliminates downtime and maintenance expenses associated with filament or ion source exchange.
All other components comprise a 24 month warranty.

SOFTWARE UPDATES BY E-MAIL KEEP YOU CURRENT

All new software features and firmware improvements are available by e-mail. From your computer, new firmware is installed via the standard interface within minutes, guaranteeing your UL1000 always delivers optimum performance.



REMOTE CONTROL FOR WIRELESS OPERATION

The optional RC1000WL allows more than 8 hours remote operation in a distance of up to 100 m. The unit features a 3.5“ full color touch screen display and an intuitive usage. A wired RC1000C version and a wireless transmitter for the connection of > 2 leak detectors complete the portfolio.

APPLICATIONS

For example:

- Automotive components, subassemblies and systems
- Refrigeration and air conditioning components and subassemblies
- Hermetically-sealed electronic devices, integrated circuits, liquid crystal displays, quartz displays, flat panel displays, fiber optics
- Packaging for medical, pharmaceutical and food products, and barrels
- Flow controllers, flow transmitters, pressure sensors and switches, valves
- Light bulbs, transformers, high voltage relays, circuit breakers
- Cryogenic components, lines, systems

TRUST THE UL1000

The UL1000 brings superior leak testing flexibility and efficiency to all industrial leak detection applications. For fast, accurate and repeatable measurements and complete confidence in all your test results, rely on the INFICON UL1000 Helium Leak Detector.



SPECIFICATIONS

Smallest detectable leak rate (per AVS 2.1 and EN 1518)		< 5 x 10^{-12} mbar l/s
Smallest detectable leak rate (sniffer mode)		< 5 x 10^{-8} mbar l/s
Inlet pressure	GROSS FINE ULTRA	15 mbar 2 mbar 0.4 mbar
Pumping speed during evacuation		16 m^3/h (11.2 cfm) at 50 Hz 19 m^3/h (13.3 cfm) at 60 Hz
He pumping speed at the inlet (EN 1518)	GROSS FINE ULTRA	8 l/s max. 7 l/s 2.5 l/s
Detectable masses		2, 3, 4 amu H_2, ^{3}He, He
Supply voltages		100 - 120 V; 220 - 240 V
Weight		110 kg; 242 lbs
Dimensions, incl. handle (L x W x H)		1068 x 525 x 850 mm; 42 x 21 x 33 inch

ORDERING INFORMATION

	Cat. No.
UL1000, 230 volts, EU version	550-000
UL1000, 115 volts, US version	550-001
UL1000, 110 volts, Japan version	550-002
Test Chamber TC1000 incl. ESD wrist band	551-005
Test leak adapter for TC1000, DN 25 KF flange	200 001 797
Remote control with touch screen:	
RC1000WL, wireless including wireless transmitter with connection cable, charger/mains adapter for integrated battery (85 - 250 V, 50/60 Hz) and 4 m spiral cable	551-015
RC1000C, wired, including 4 m spiral cable	551-010
Accessories:	
Toolbox with lock, attachable	551-000
Helium bottle holder	551-001
ESD mat	551 002
Sniffer line SL200, 4 m length	140 05
LeakWare PC software package	140 90

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Due to our continuing program of product improvements, specifications are subject to change without notice.

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