



# UL5000

Mobile Helium Leak Detector  
ULTRATEST® Sensor Technology

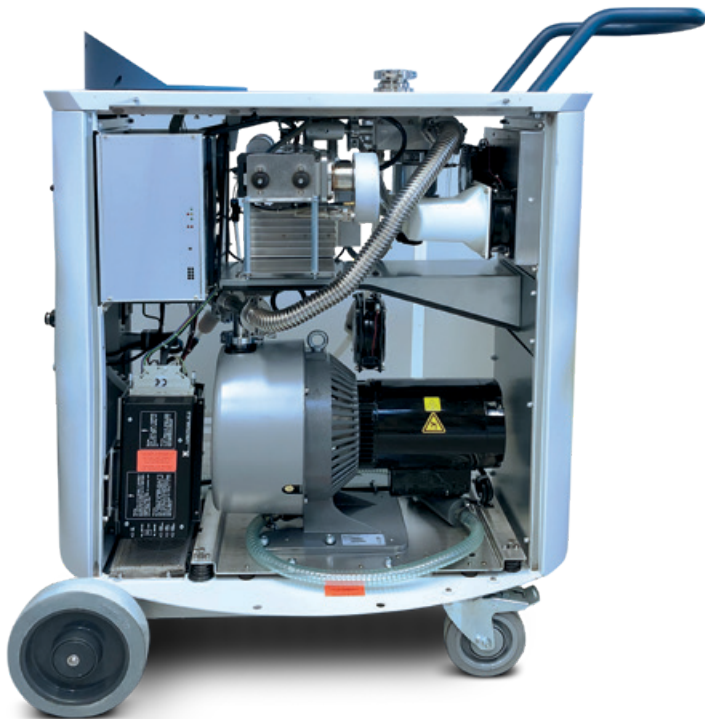
Defining speed and accuracy  
in leak detection



# Defining speed and accuracy in leak detection

**The INFICON UL5000 Helium Leak Detector is designed to meet the most critical and demanding leak detection applications.**

Featuring INFICON proprietary software algorithms I·CAL and HYDRO·S in a field-proven vacuum design, the UL5000 provides testing flexibility, high sensitivity and quick accurate results making any leak detection application fast and easy. The UL5000 delivers fast response times in all measurement ranges and



## TYPICAL APPLICATIONS

- Industrial vacuum equipment manufacturing with high demand for cleanliness
- Vacuum components or sub-assemblies before they are installed in existing tools
- Maintenance work on vacuum tools, with or without support from their own pump
- Inspections and installations of process gas systems
- Semiconductor, flat panel display or solar cell manufacturing

extremely short cycle times in reaching test conditions and final results. The specially designed vacuum architecture with booster pump provides the unsurpassed helium pumping speeds and the extremely fast response times you demand. The selectable background suppression (I·ZERO) enables continuous leak testing within at least two decades lower than existing background levels.

All features enable you to shorten the time of your leak testing efforts while assuring that all leaks can be identified at an economic scale.

## ADVANTAGES AT A GLANCE

- Shortest leak testing efforts through quickest pump down and fastest response time enhanced by a booster TMP and HYDRO·S
- Avoids need for multiple leak tests by using selectable background suppression (I·ZERO)
- Enable easy access to maintenance areas with restricted space through maneuverable design
- Low total cost of ownership (TCO) enabled by robust two hot filament ion source (3 years warranty) and counterflow vacuum system
- Easy to use with rotatable display, optical and audible leak indication, and optional remote control
- Low maintenance via a built-in test leak with auto calibration procedure





#### CONVENIENT ROTATABLE DISPLAY

- Rotatable control interface
- Information in large characters on integrated display for readings from considerable distances
- Different display modes: digital, bar graph, trend or circular
- Most important basic functions (Start, Zero, Stop) available at the press of a button
- Intuitive operation
- Protection against unauthorized use or unintended modifications

#### ULTRATEST SENSOR TECHNOLOGY

- 180° mass spectrometer
- All components made of stainless steel
- Ruggedized ion source with 3 year warranty
- Pre-amplifier with highest sensitivity in industry

#### MOBILE FOR ADDED CONVENIENCE

A low center of gravity, large wheels, ergonomically positioned handle and sleek profile ensure mobility throughout the facility. The instrument's maneuverability is uncompromised by rolling vibrations on the floor grid or by barriers such as small steps, door thresholds or cables.

#### DESIGNED FOR EXCELLENT PRICE, PERFORMANCE AND RESULTS

The UL5000 provides:

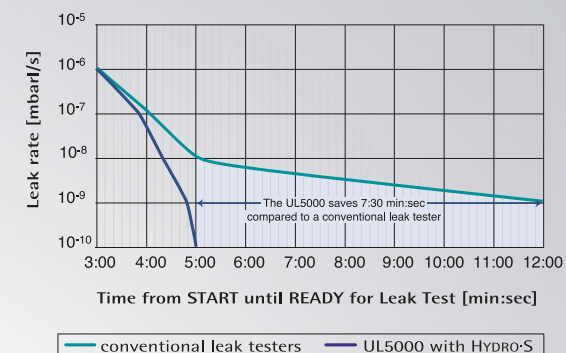
- Superior leak testing efficiency in semiconductor applications
- Fast, accurate, stable and repeatable results

#### CONNECTIONS TO ONE SIDE

To simplify installation, all the electrical and mechanical connections are located together on one side of the instrument.

#### CONTROL AND DATA LOGGING VIA PC

The optional software package Leak Ware makes it possible to acquire, display and store measurement data in spreadsheet programs.



#### SHORTEST TIME UNTIL TEST

The UL5000 with HYDRO-S compared to a conventional leak detector on a 100 liter volume demonstrates the dramatic improvement in time to test.

HYDRO-S reduces the time, so leak checking in the  $10^{-10}$  range can start quickly.

#### LOW OPERATIONAL AND MAINTENANCE COSTS

- Three year warranty on INFICON ion sources
- Free replacement in case of failure
- No consumable costs, down time, maintenance expense or filament changes
- 24 months warranty on all other components

#### MANUFACTURED FOR QUALITY

All INFICON components and leak detectors are:

- Manufactured in oil-free, cleanroom conditions
- Quality tested for optimum performance

#### ULTRAFAST DETECTION DUE TO I-CAL

The special software algorithm I-CAL provides:

- Measurements at unsurpassed speed in the  $10^{-12}$  mbar l/s range, making that decade truly usable
- Responds with unparalleled speed and stability in this low measurement range
- At background readings of  $1 \times 10^{-12}$  mbar·l/s, an ultra-tiny leak of  $1 \times 10^{-10}$  mbar·l/s displayed in less than a second



#### REMOTE CONTROL FOR WIRELESS OPERATION

The optional RC1000WL provides:

- More than 8 hours remote operation for distances of up to 100 m
- 3.5 in. full color touch screen display with intuitive usage
- Wired RC1000C version and wireless transmitter to connect >2 leak detectors



#### UL5000 UNIQUE ADVANTAGES

- HYDRO-S (HYDROgen-Suppression) to enable test conditions to be reached quickly
- A booster turbomolecular pump for extremely fast response on any test object including the largest volumes and chambers





## Your specialists for leak detection solutions

INFICON offers globally leading technologies in measurement and sensor technology, as well as process management for demanding vacuum processes in highly specialized industries. INFICON products for gas leak detection are used particularly in cooling and air conditioning technology, semiconductor manufacturing and automotive production.

With INFICON you have an expert consultant at your side who knows the challenges of your industry and works with you to find the right solutions for your needs. INFICON guarantees top service and maximum support with specialized experts at many branch offices around the world. Leading manufacturing facilities are located in the US and Europe, with branches in China, Denmark, France, Germany, Japan, Korea, Liechtenstein, Singapore, Switzerland, Taiwan, Great Britain and the US.

## UL5000 MOBILE HELIUM LEAK DETECTOR

### SPECIFICATIONS

Smallest detectable leak rate (vacuum mode)	<5 x 10 <sup>-12</sup> mbar·l/s
Min. detectable leak rate for helium (sniffer mode)	<5 x 10 <sup>-8</sup> mbar·l/s
Largest detectable leak rate for helium	30 mbar l/s
Max. inlet pressure (GROSS mode)	15 mbar
Start-up time	<4 min
Pumping speed during evacuation	25 m <sup>3</sup> /h (17.6 cfm)
He pumping speed (ULTRA mode)	>20 l/s (in ULTRA mode)
Time until ready for leak check* of leak rates in the range of at the inlet (without test volume) with test volume 50 l	10 <sup>-9</sup> mbar l/s <10 sec <150 sec
Venting time (with test volume 100 l)	approx. 25 sec
Detectable masses (ULTRATEST Sensor Technology)	2, 3, 4 (H <sub>2</sub> , <sup>3</sup> He, He)
Supply voltages	100 V, 115 V, 230 V, 1200 VA
Weight	140 kg (308 lb.)
Dimensions, incl. handle (L x W x H)	1080 x 530 x 1083 mm (42.5 x 21 x 42.6 in.)

\* with HYDRO-S

### ORDERING INFORMATION

PRODUCT	Cat. no.
UL5000, 230 V 50 Hz	550-500A
UL5000, 100/115 V 50/60 Hz	550-501A
all UL5000 including Tool box and ESD mat	
Helium bottle holder	551-001
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



[www.inficon.com](http://www.inficon.com) [reachus@inficon.com](mailto:reachus@inficon.com)

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