



## ELT3000 PLUS Battery Leak Detector

Inline leak testing  
in sync with your battery  
cell production



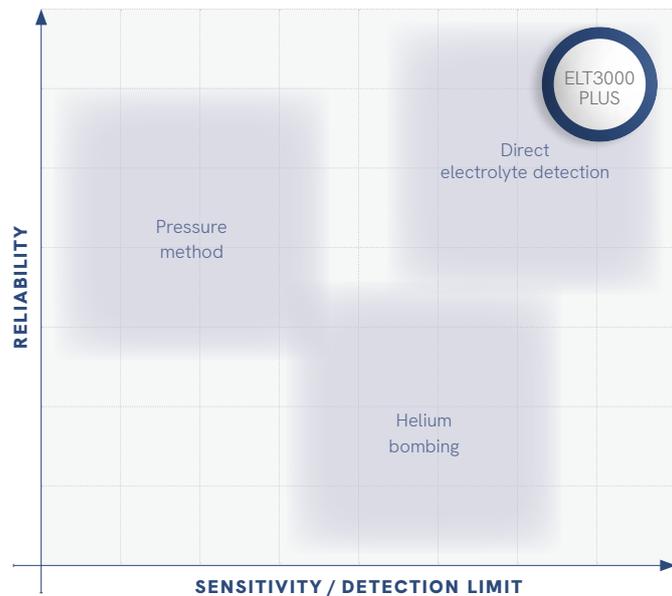
 **INFICON**  
Inspired by visions. Proven by success.



# The future is electric

**To meet the need for mobile energy and the high demand for metal-ion batteries, battery production is ramping up all around the world.**

Large quantities and high throughput are essential to manufacturing. ELT3000 PLUS provides an unrivaled, safe solution for battery leak testing on high-speed manufacturing lines.

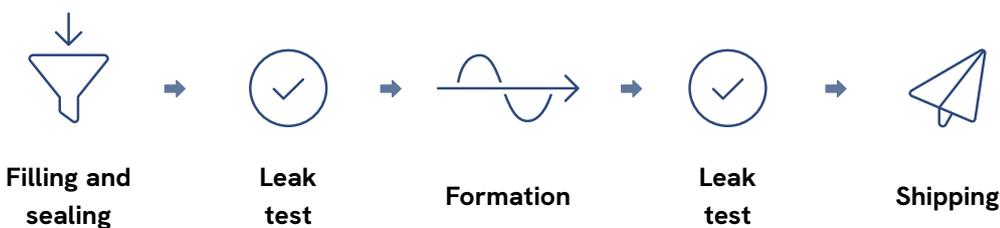


**ACCURATE DOWN TO THE MICROMETER, HIGHLY SENSITIVE AND SIGNIFICANTLY FASTER**

INFICON offers a unique, patented leak testing method for all types of metal-ion batteries like e.g. lithium-ion batteries with the new ELT3000 PLUS. ELT3000 PLUS can detect electrolyte leaks down to the micrometer level, 1,000 times smaller than those detected by conventional pressure methods. Rely on ELT3000 PLUS to test all types of metal-ion batteries, like lithium-ion, sodium-ion or aluminum-ion batteries, including those used in automotive, communications technology, computers, consumer goods, electric tools, and medical devices. Regardless of how different the fields of application may be, any metal-ion battery can be checked using electrolyte leak testing.

**END-OF-LINE-TEST FOR HIGH QUALITY PRODUCTS**

INFICON's direct leak detection can be used throughout the battery production process. Right after filling the various metal-ion cells, thus preventing the costs and risks due to leaks resulting from formation of faulty cells. For true, end of line leak testing, check after forming and aging of the cells.



# Quality assurance 4.0 for industrial battery cell manufacturing

## **Benefit from fast measurement times and high throughput.**

Serial and field bus interfaces allow ELT3000 PLUS to be integrated into higher-level host systems easily, to automate leak testing. High-speed production line operators and system integrators can reliably compile all data parameters and operating states of their equipment and adapt them as needed.



### **GAS DETECTION SYSTEM**

Detects electrolyte leaks in all lithium-ion batteries and transfers test data to the control unit.

### **CONTROL UNIT**

Coordinates the test cycle and displays the process on the touch screen. Data can be retrieved in real-time via bus interfaces.

## ADVANTAGES AT A GLANCE

### + High-speed throughput

Simultaneous testing in multiple chambers ensures exceedingly high throughput.

### + Seamless integration

A wide range of interfaces allows ELT3000 PLUS to be easily implemented into automated production lines.

### + Always ready for operation

Integrated detection of gross leaks protects the device from severe contamination and maintains operational readiness.

### + Universally capable

ELT3000 PLUS tests all cell formats of battery cells filled with liquid electrolyte, e.g. lithium-ion, sodium-ion and many other batteries.

### + Dual operating modes

Use automation mode for easy integration into automated processes or use as a separate device in stand-alone mode for battery development and pilot projects.

### + Standard or customized

For manual use, we offer pre-fabricated rigid and flexible chambers (for pouch cells).

We recommend chambers optimized to meet your needs when integrating into automated processes.



### E-CHECK FOR INLINE CALIBRATION

Certified calibration leaks enable traceable results. Thanks to the E-Check Connection Kit, ELT3000 PLUS can be used directly in automated serial manufacturing without manual intervention.



# At the forefront of innovation?

## **Providing support throughout your entire testing process.**

To maximize the potential of your application, take advantage of our professional consulting services for everything related to ELT3000 PLUS. We will work with you to design the best way to integrate ELT3000 PLUS into your battery production process. Our experts can provide training for how to use batch testing processes or how to adapt the chambers precisely to your requirements. This allows system integrators to be very flexible when it comes to strategies regarding removal and placement of batteries.

## **INFICON ACADEMY GIVES YOU THE EDGE ON KNOWLEDGE**

Would you like to learn more about how to use ELT3000 PLUS in serial production processes? INFICON offers webinars, individual workshops, and in-house seminars. INFICON Academy lets you share ideas with our experts and benefit from their expertise. Services range from how-to videos, training to meet your specific leak detection requirements and more. INFICON Academy also includes useful examples and tips from practical applications.

## **OUR SERVICE AND SUPPORT**

From expert support for integration and operation to preventative maintenance and spare parts with worldwide availability, we ensure that you can use your ELT3000 PLUS to its full potential. An INFICON service contract maximizes the life and performance of your testing device. Save time and money by protecting your investment today. Contact us to learn more.



## **ELT3000 PLUS – OUR CONTRIBUTION TO SUSTAINABILITY**

In the future, the global battery market will be driven substantially by the availability of raw materials and the need for sustainability. With its reliable battery leak detection, INFICON ensures safe, long-lasting battery cells that are resistant to cycling and an efficient use of resources.



## ELT3000 PLUS BATTERY TESTING SYSTEMS

### TECHNICAL DATA

Smallest detectable leak rate	5 x 10 <sup>-7</sup> mbar l/s (helium-equivalent leak rate)
Leak rate unit	mbar·l/s, atm·cc/s, Pa·m <sup>3</sup> /s
Detection sensor	Quadrupol mass spectrometer (2 cathodes)
Interfaces	PROFIBUS, PROFINET, DeviceNet, Ethernet/IP, serial interfaces (RS232), digital I/Os
Dimensions gas detection unit (W x H x D)	610 mm x 300 mm x 380 mm (24 in x 12 in x 15 in)
Dimensions control unit (W x H x D)	700 mm x 540 mm x 250 mm (27.6 in x 21.3 in x 9.8 in)
Operating languages	German, English, Spanish, Korean, Chinese, Japanese

### ORDERING INFORMATION

PRODUCT	CATALOG NUMBER
Basic leak detector	
ELT3000 PLUS (gas detection unit + control unit) 230 V, 50 Hz	600-201
ELT3000 PLUS (gas detection unit + control unit) 115 V, 60 Hz	600-202
Test chambers for stand-alone mode	
TC3000S rigid chamber (180 mm x 180 mm x 27 mm)	600-100
TC3000L rigid chamber (400 mm x 210 mm x 120 mm)	600-101
FTC3000 flexible chamber (400 mm x 350 mm)	600-102
Calibration leak E-Check	600-105
<b>ACCESSORIES</b>	
Module I/O1000	560-310
Data cable I/O1000	
2 m	560-332
5 m	560-335
10 m	560-340
Bus module BM1000	
PROFIBUS	560-315
PROFINET	560-316
DeviceNet	560-317
EtherNet/IP	560-318



ISO 14001  
ISO 9001

Premium Quality  
made in Germany

### INNOVATION BASED ON PROVEN, PATENTED TECHNOLOGY

At INFICON, we know that leadership in technology can't happen without being a leader in innovation. This is why we develop and realize pioneering solutions that enable our customers to conquer even the future challenges facing their industry.



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