

Example of automated large-scale testing of battery cells.

A STRONG PRODUCT LINE

Whether it's a mobile testing device, a complete testing station, or a customizable system platform – our ZED family portfolio is characterized by maximum flexibility. The devices offer intuitive operation and can be intelligently integrated into existing production systems thanks to comprehensive interface solutions.



22/24 - The information is non-binding and does not represent warranted characteristics. Subject to technical changes, improvements, errors and misprints.

THE POWER OF INTEGRITY

Leak testing for battery systems



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LEAK TESTING FOR BATTERY SYSTEMS

Leak-tightness is an important requirement for the safety and performance of battery systems. With reliable solutions for **leak testing using air and tracer gases**, such as helium, we support you in quality assurance for battery cells, battery modules, battery packs, and their components. Benefit from our many years of experience in this field.

In addition to the core process of leak testing, we are also happy to integrate adjacent processes such as component handling or component marking. Our **automation solutions** tailored to your requirements promise the highest efficiency and precision.

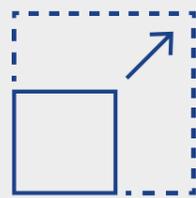
We ensure **optimal integration** into complex production infrastructures through a variety of standard interfaces and options for custom connections to higher-level control systems, such as MES or ERP systems.

YOUR PARTNER FOR LEAK DETECTION WITH AIR AND TRACER GASES



Holistic

Self-developed high-end testing technology, development support, automation and integration: with us, you get the full spectrum of leak testing from a single source, on request also as a turnkey solution.



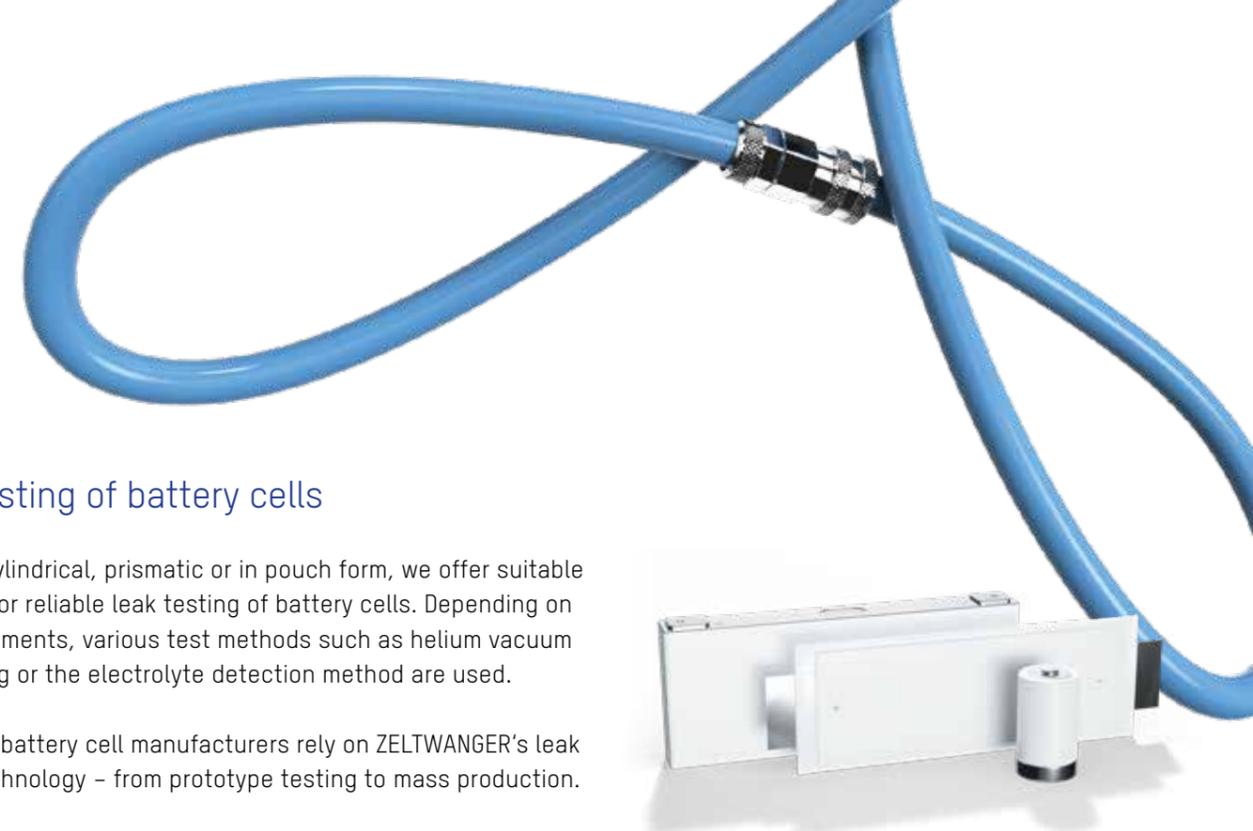
Scalable

From initial tests in the R&D laboratory to series production: with our scalable solutions and services, we support you on your way to the future, true to the motto "From Lab to Fab".



Customizable

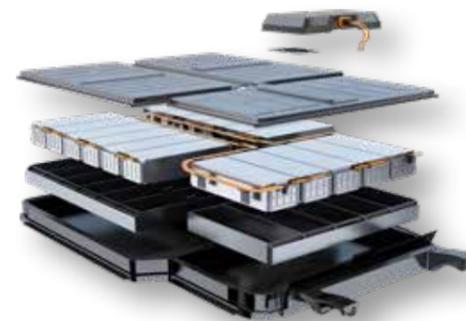
Leakage rate, geometry, environmental factors – each test item has individual requirements. The same applies to your processes. Together, we will develop the optimal solution.



Leak testing of battery cells

Whether cylindrical, prismatic or in pouch form, we offer suitable solutions for reliable leak testing of battery cells. Depending on the requirements, various test methods such as helium vacuum leak testing or the electrolyte detection method are used.

Renowned battery cell manufacturers rely on ZELTWANGER's leak testing technology – from prototype testing to mass production.



Leak testing of battery modules and components

A battery system, consists of many individual components and assemblies that have to be checked for leaks. This includes battery modules, the cooling system, high-voltage connectors, pressure compensation elements (DAE), and enclosure components such as the battery tray, the battery cover, and other attachments. We also offer the appropriate leak testing solutions using air and tracer gases for these components.

Leak testing of battery packs

Mounted battery packs must meet the highest requirements for leakage. The end-of-line test ensures that no leaks remain undetected before the pack is installed in a vehicle. Depending on the size of the component, the required cycle time, and the leak rate, different testing methods are used, such as the mass flow method, as well as accumulation or sniffing tests with helium. With the sniffing test, leaks can be pinpointed precisely using a manually or robotically guided probe.

