

A close-up, low-angle shot of a person's hand plugging a black charging cable into the port of a dark-colored electric vehicle. The scene is bathed in a cool, blue-toned light, creating a futuristic and clean aesthetic. The car's body panels and a wheel are visible, reflecting the ambient light. The background is slightly blurred, showing other parts of the charging station and a clear sky.

LEAK TESTING FOR ELECTRIC VEHICLES

Battery Components & Cells | Battery Modules and Packs | Battery Cooling Circuits

LEAK TESTING FOR ELECTRIC VEHICLES

Why Choose Us

For over 30 years, LACO Technologies has been a pioneer in leak test solutions, serving 850+ customers across 40 countries. Our expertise spans various industries including automotive, energy, consumer products, electronics, medical, and refrigeration. In the automotive industry, LACO's experience includes leak testing of components in fuel, cooling, air conditioning, suspension, braking, engine, and safety systems. In the EV market LACO has leak testing experience with leading EV manufacturers.

EV Component Leak Testing

LACO's solutions are ideal for full in-line production leak testing, off-line leak testing, and laboratory testing and validation. Our EV leak testing application experience include:

- Prismatic and cylindrical battery cells
- Battery cell components
- Battery enclosures



Tracer Gas Leak Testing

As the leader in production tracer gas leak testing, LACO can tailor the best test method to meet your needs. Our tracer gas leak testing solutions can provide faster test cycle times and detect smaller leaks compared to air leak testing. LACO's tracer gas leak testing experience and methods include:

- Helium hard vacuum
- Helium and hydrogen sniffing
- Helium and hydrogen accumulation
- RGA-based detection of electrolytes and other gases

Calibrated Leak Technology

LACO's calibrated leak technology, coupled with our in-house testing lab, offer valuable resources to help:

- Determine leak rate limits for production testing
- Calibrate leak test systems and instruments
- Validate component designs for leak tightness
- Validate the capability of a leak test process



CUSTOM LEAK TESTING SYSTEMS

LACO has custom engineered several production systems for leak testing electric vehicle batteries. Learn more about some of these systems below.

Helium Accumulation System



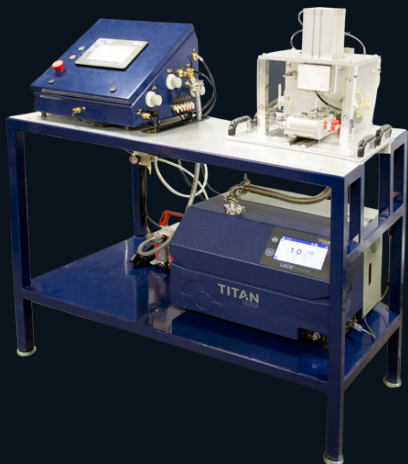
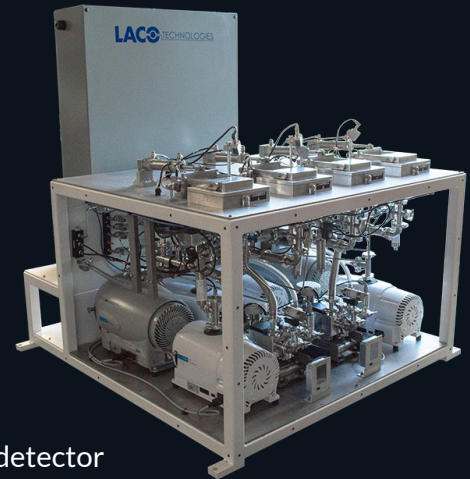
A leader in energy technology required a turnkey leak test system allowing for easy loading and unloading of large battery packs. The system utilizes a sniffer probe to detect helium in an air sample with a helium mass spectrometer leak detector. LACO developed a custom solution incorporating these key features:

- Mobile carts simplify transfer of battery packs into and out of the chamber
- Chamber securely seals with the carts in place, ensuring a reliable testing process
- Five dedicated mobile carts accelerate throughput and enhance efficiency

Leak Testing Prismatic Battery Cells

A worldwide leader in automated assembly and testing solutions required a system for leak testing prismatic battery cells. Their specifications required multiple test chambers and built-in automation for the testing process. LACO engineered a specialized system equipped with the following capabilities:

- Four test chambers for efficient testing
- Hydraulic system for closing, sealing, and opening of each chamber
- Dedicated roughing pump for each chamber
- Hard vacuum helium testing using a helium mass spectrometer leak detector



Helium Hard Vacuum System

A leader in electric vehicle manufacturing required an automated leak test system for testing riveted caps before installing them on electric vehicle batteries. They desired the option to test multiple caps at once. LACO custom engineered 3 separate systems with these features:

- Systems designed for flexible testing of 1, 4, or 8 caps simultaneously
- Automated hydraulic system ensures secure sealing of the test chamber
- Integrated with LACO's TITAN VERSA™ helium leak detector and ATLAS™ process controller for fully automated testing

LACO TECHNOLOGIES

At LACO Technologies, leak testing and vacuum technology are at the heart of what we do. With over 45 years of industry experience, we deliver engineered solutions tailored to meet your specific needs.

Our product offerings include turnkey production leak test systems, helium leak detectors, calibrated leak standards, and comprehensive vacuum technology solutions.

By choosing LACO as your trusted partner, you gain access to our extensive engineering expertise, cutting-edge innovations, and a global support network.

We proudly serve customers across the United States and around the world. With decades of specialized experience, LACO is uniquely positioned to provide innovative and reliable solutions for vacuum and leak testing applications.

Our expertise spans a wide range of industries, including Automotive & Transportation, Consumer Products, Electronics & Semiconductors, Medical & Pharmaceutical, Aerospace & Defense, Power & Energy, Laboratory/R&D, Refrigeration & A/C, and more.

