

# The Battery Index: Comprehensive Battery Benchmarking for Agile Cell Selection

Ensure product success through agility, quality, and speed to market

Serving every battery-enabled industry:



Automotive & Transportation



Consumer Electronics



Cell & Pack Manufacturing



Grid Storage



Medical Devices

## Companies Need To Be Agile When Selecting Batteries

The smallest internal battery flaw or unexpected degradation can trigger time consuming redesigns and launch delays resulting in lost opportunities and revenue. With global cell supply massively constrained, product success depends on agility, quality, and speed to market – which all depend on having the essential tools to streamline the process of finding the right battery for your product.

For this reason, Voltaiq, Batemo, and Energy Assurance (EA) have teamed up to create the Battery Index – a broad and ever-expanding database of real battery performance, composition, and high-fidelity models, generated using the industry’s most robust test and modeling standards. The Battery Index, available through Voltaiq’s Enterprise Battery Intelligence™ platform, will help solve challenges in battery system design and development including:

- Providing valuable input for cell selection by specific use case
- Enabling supply chain diversity for vendor selection and procurement
- Creating model input for controls, system, operations and warranty development
- Generating supplemental data for in-house qualification and modeling

## Components of the Battery Index



### Test Data

**Day Zero:** Comprehensive test characterization of incoming cells

**Aging:** Cycle and calendar aging of battery cells under standard protocols



### Composition Data

**Day Zero:** Exhaustive composition analysis of incoming cells down to electrode materials and microstructure

**Aging:** Additional analysis after aging to surface component evolution



### Models

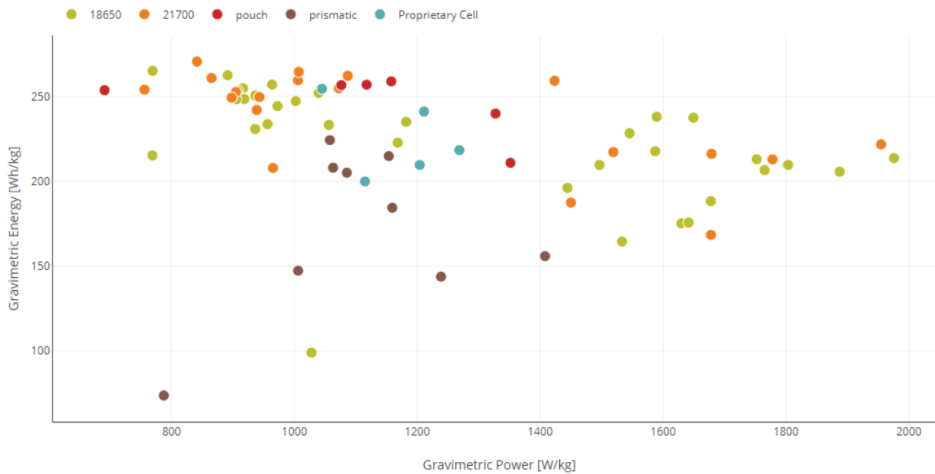
**Day Zero:** High-precision, physical simulation models of cells – fast, physical, accurate

**Aging:** Extension of models through aging under variable conditions

The Battery Index is available as a standalone offering or as an add-on to your Voltaiq subscription.

# Benchmark Your Cells Directly in Voltaiq

The Battery Index includes a comprehensive library of 60 commercial cells, with dozens of new cells added every year. If added to your Voltaiq subscription, you can benchmark your cells against the commercial competition directly in the application.



Real benchmarking chart generated by The Battery Index

To learn more about the Battery Index, please email us at [sales@batteryindex.com](mailto:sales@batteryindex.com)

## Use Cases and Benefits:



Benchmark for competitive analysis or vendor diversification



Rapidly select batteries that meet application requirements



Advanced models to accelerate controls, systems, operation, and warranty development



Supplement to in-house qualification testing and modeling



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## About Voltaiq

Voltaiq has built the industry's first Enterprise Battery Intelligence™ (EBI) software platform, helping its customers optimize battery performance, reliability and financing, while avoiding costly recalls and catastrophic battery fires. Voltaiq is the only purpose-built, fully automated software solution that marshals vast quantities of battery data from across the full product lifecycle, providing a window into real-time battery function and a detailed view into future performance and behavior. Voltaiq's global customer base includes industry leaders in transportation, consumer electronics, energy storage, & the full battery supply chain. For more information, please visit [www.voltaiq.com](http://www.voltaiq.com).

## About Batemo

Batemo was founded in March 2017 by Dr.-Ing. Michael Schönleber and Dr.-Ing. Jan Richter in Karlsruhe, Germany. The company offers various solutions for the development of battery systems, such as high-precision battery modeling and simulation, comprehensive measurement data and detailed cell reports. Batemo serves customers in power tools, light mobility, automotive, aviation, industrial and cell manufacturing. For more information, please visit [www.batemo.com](http://www.batemo.com).

## About Energy Assurance

Energy Assurance, LLC is a provider of cell and pack battery testing for performance, safety/regulatory, and failure analysis as well as engineering services for the battery industry. The company focuses on all sizes of high-performance lithium-ion cells and batteries up to 150V and 2400A, enabling it to service all industries where batteries are used for portable power and now electric/hybrid automotive and energy storage systems. To learn more about Energy Assurance, please visit [www.energy-assurance.com](http://www.energy-assurance.com).

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