

EnginSoft is a premier consulting firm in the field of Simulation Based Engineering Science (SBES) with a global presence. It was founded in 1984, but its founder and initial employees had been working in SBES since the mid '70s. Throughout its long history it has been at the forefront of technological innovation and remains a catalyst for change in the way SBES and CAE technologies in general are applied to solve even the most complex industrial problems with a high degree of reliability.

Today, EnginSoft is comprised of groups of highly qualified engineers, with expertise in a variety of engineering simulation technologies including FEM Analysis and CFD, working in synergic companies across the globe. We are present in Italy, France, Germany, the UK, Turkey and the U.S.A. and have a close partnership with synergic companies located in Greece, Spain, Israel, Portugal, Brazil, Japan and the U.S.A.

EnginSoft works across a broad range of industries that include the automotive, aerospace, defense, energy, civil engineering, consumer goods and biomechanics industries to help them get the most out of existing engineering simulation technologies.



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DATA SHEET



Simplifying Complex Engineering
from Design to Deployment

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oorja is a SaaS-based platform revolutionizing the battery industry by aiding in the design and modeling of battery packs for optimum performance. Our innovative hybrid approach integrates physics models with minimal data to accurately simulate and predict battery behavior.

We address key performance factors such as fast charging, ageing, and overheating, while also tackling challenges like thermal runaway and degradation in EVs and ESS.

With oorja's affordable, infrastructure-free solution, we expedite the time to market for any battery product, making EVs more efficient and accelerating their adoption.

SPEED

(Cycles per Second)

oorja



Standard Physics Based Software



ACCURACY

oorja



Standard Physics Based Software



Test Run using Standard Models for 1000 cycles for a LG M50 5Ah NMC Chemistry

Simplifying Complex Engineering from Design to Deployment

Cell Design and Performance

- ✓ Energy Cell/ Power Cell
- ✓ Cell Design Parameter Optimization

Cell Qualification

- ✓ Selecting the right cell supplier

Battery Pack

- ✓ Design and Performance optimization, Cooling Strategy

Battery Pack Safety

- ✓ Certification Tests

Warranty Estimation

- ✓ Operating/ Ambient conditions
- ✓ Drive Cycles
- ✓ Fast Charging
- ✓ Power Fade

BMS

- ✓ Sensors/ Thermocouple locations
- ✓ Correction Factors to account for signal delays
- ✓ Designing Control Algorithm: Temperature, C-rates, Voltage and SOC cut-offs

Fast Charging Algorithms

- ✓ Fast Charging Algorithms:
- ✓ Safety
- ✓ Thermal Stability
- ✓ Degradation

