



**CERAMIC PARTS FOR BATTERY INDUSTRY**

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With the rapid expansion of the lithium-ion and solid-state battery sectors, the need for high-performance, non-reactive, and durable materials is more critical than ever. Ceramic components play a crucial role in ensuring purity, thermal stability, and mechanical integrity across battery manufacturing and testing systems.

CeramForge supplies engineered ceramic parts tailored for demanding battery applications, offering outstanding resistance to chemical attack, high temperatures, and contamination—all essential for reliable and efficient battery production.

## MATERIAL DIVERSITY

Yttria-Stabilized Zirconia (YSZ) | Zirconia Toughened Alumina (ZTA) | Alumina Toughened Zirconia (ATZ)

All components are produced using high-purity powders, precision-forming techniques, and sintered under controlled conditions to ensure dimensional accuracy and material purity.

## INDUSTRIES SERVED

- Lithium-Ion and Solid-State Battery Manufacturing
- Electric Vehicle (EV) and Energy Storage Systems (ESS)
- Cathode/Anode Material Processing
- Battery Testing and R&D Labs
- Dry Room and Vacuum Assembly Systems

## APPLICATION

- Battery cell assembly jigs and holders
- Battery tooling
- Ceramic insulating plates and guides
- Nozzles and fixtures for slurry coating
- Thermal blocks for sintering and calcination
- Seal faces for electrolyte processing pumps

## KEY ADVANTAGES

- Chemical Stability: Non-reactive with battery electrolytes, lithium compounds, and solvents.
- Thermal Shock Resistance: Suitable for high-temperature sintering or coating processes.
- Electrical Insulation: Essential for safe energy storage device assembly.
- Minimal Particle Shedding: Maintains cleanroom compatibility and product purity.
- Custom Geometry: Designed to integrate seamlessly into OEM production equipment.

## CONCLUSION

As the battery industry continues to drive global electrification, CeramForge ceramic components are supporting this transformation with the reliability and purity required for next-generation energy systems. From cathode lines to electrolyte handling, our advanced ceramics deliver stability, cleanliness, and longevity in every critical process.