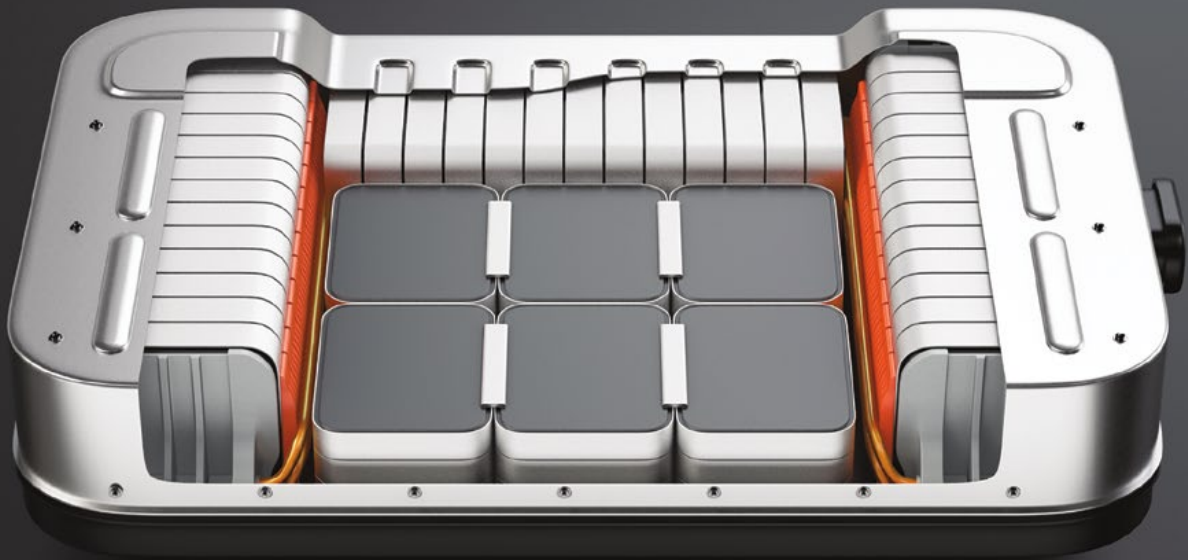


# Meeting Lithium-Ion Battery Manufacturing Challenges

## Branson™ ultrasonic metal welding keeps pace with latest battery designs

### SOLUTION



### Energy-dense designs challenge your assembly processes and yield

Building Li-ion cells that deliver higher energy density, faster charging, and lighter weight means you need to bond fragile battery foils in greater numbers, and with greater consistency. Every foil layer must be free of tears or cracks or individual cells, and entire battery assemblies could fail.

### We deliver assembly solutions with proven consistency

Our application engineers continue to develop and deliver new generations of Branson ultrasonic metal welding solutions to meet evolving battery-assembly demands. Today, that means we can supply you with welders that can bond 100-plus thin-foil layers in next-generation batteries or join the larger-diameter cables essential for faster charging.

**BRANSON™**



**CONSIDER IT SOLVED™**

# Advancing assembly technology. Improving yields. Reducing costs.

Whether you manufacture small batteries used in consumer electronic devices, or large batteries for electric vehicles and electrical storage systems, every new design demands more from assembly technology.

Branson ultrasonic metal welders can reliably bond thinner, more delicate foils and advanced hybrid films, while automation and tooling solutions drive down costs and improve production yields. We are ready to help you build tomorrow's batteries.

## Branson metal welding solutions perform in every battery type

- |   |   |
|---|---|
| <ul style="list-style-type: none"><li>• Cylindrical batteries</li><li>• Prismatic batteries</li></ul> | <ul style="list-style-type: none"><li>• Polymer pouch batteries</li><li>• Solid state batteries</li></ul> |
|---|---|

## Ultrasonic metal welding – Process benefits

- |  |   |
|--|---|
| <ul style="list-style-type: none"><li>• Consistent, repeatable welds on non-ferrous metals</li><li>• Solid-state, molecular-level bonding</li><li>• Creates no intermetallic compounds or corrosion</li><li>• Joins 100-plus thin foil or hybrid foil layers</li><li>• Weld cycles completed in a fraction of a second</li><li>• Widest range of weld equipment and controls</li></ul> | <ul style="list-style-type: none"><li>• Long-lasting, low-resistance connections</li><li>• Lowest energy use of any welding process</li><li>• Precise, digital weld controls</li><li>• Weld thick bus bars and large cases</li><li>• Weld data ensures quality and traceability</li></ul> |
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Full Range of Branson Ultrasonic Metal Welding Equipment

**BRANSON**™ For more information  
visit [Emerson.com/Branson](http://Emerson.com/Branson)

