



Welding Technologies for the Unique Demands of Electric & Autonomous Vehicles

Branson™ Welding Solutions for Electric & Autonomous Vehicles

Achieve optimum performance, speed and cost-effectiveness in advanced technology assembly



Reliable, repeatable assembly solutions for the increasingly complex demands of electric & autonomous vehicles

The move to electric and autonomous vehicles presents a new set of complex challenges for your assembly of metals and plastics. You need to join complex assemblies with low-resistance connections of sensors, cameras and hi-tech lighting inside and out. You need an assembly solution for metals that can accommodate 100+ layers of copper foils, and large diameter cables that will enable faster battery charging. Plastics joining challenges continue to evolve as well. You need an efficient solution for large parts with complex geometries and advanced technologies that can perform perfect welds atop delicate electronics and with disparate plastic materials. It's a daunting challenge, especially when you consider that weld quality remains paramount and requires confirmation through digitally traceable process data.



GMX-20MA Metal Welder



GL-300 Laser Welder

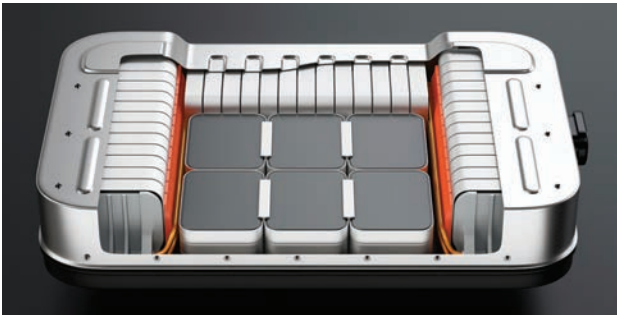
Technologies for Metal Welding

Our ultrasonic metal welding solutions include Branson wire splicers, spot welders and direct press welders that can reliably bond the thinner, more delicate metals needed for assemblies such as energy-dense batteries. These superior electrical connections are able to withstand high-voltage and high-temperature environments.

Technologies for Plastics Welding

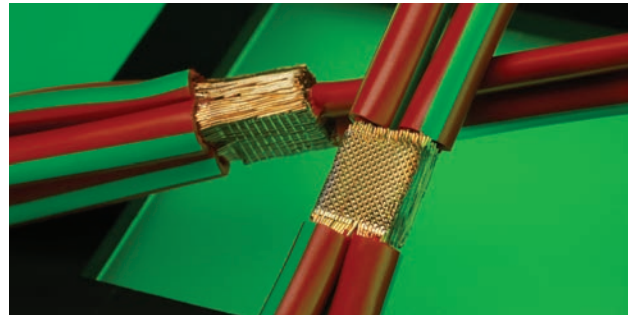
Emerson offers numerous leading-edge plastics-joining solutions, including ultrasonic, laser, and pulsestaking. Branson plastics-joining technologies feature short weld times and strong hermetic seals. They require no consumables and can weld complex 3-D parts while protecting delicate, embedded electronics.

Lighter, More Energy-dense Batteries



Every generation of battery design – cylindrical, prismatic, polymer pouch, and now, solid state – challenges technical limits and demands more from assembly technology. Our Branson ultrasonic metal welding solutions can reliably bond the thinner, more delicate metals and hybrid films needed for more energy-dense batteries.

Bonding Wire Harnesses & Terminals



Branson ultrasonic metal welders are proven to provide repeatable, solid-state, low-heat bonding and splicing needed to produce the more robust wire harnesses and terminals required for today's hybrid and electric vehicle systems.

Secure, Protective Battery Housings



The harsh environments of EV battery housings require high-integrity joining solutions. Branson ultrasonic plastics-joining technologies can produce robust, sealed housings that provide chemical resistance, EMI shielding, and flame retardancy.

Linking Sensors & Data Communications



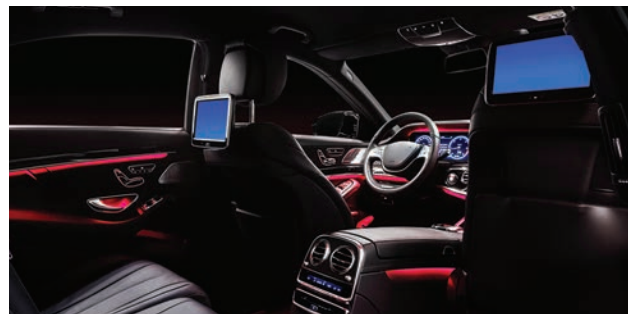
Ultrasonic and laser welding systems are proven ideal for assembling the metal and plastic heat-sensitive components needed to reduce weight, improve control, increase safety, and support reliable vehicle power-delivery and data communications systems.

Integrating Cameras & Visual Sensors



Ultrasonic, heat-staking and metal welding solutions are helping manufacturers achieve the precise, repeatable assembly of delicate electronics and lightweight materials used in high-performance cameras, radars, collision-avoidance, lane-keeping, night-vision and other visual sensing devices.

Lighting for Looks, Comfort, & Safety



Once purely functional, automotive lighting is now an element of style and design, requiring welders that allow for delicate sensors, larger components with complex geometries, and flash-free welds – such as Branson Vibration, Clean-Vibration, and Laser welders and PulseStakers.

A global leader in advanced welding technologies for electric & autonomous vehicles



BRANSON™ Branson's wide range of metal and plastics joining technologies gives you the freedom to choose the welding technology that best suits your application.

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