Branson Material Joining and Cleaning Technologies

Meeting assembly challenges with a portfolio of innovative solutions, backed by deep industry expertise and unparalleled global resources

Key Value Drivers

- Branson assembly and cleaning solutions are built on unparalleled global experience.
- "Process Neutral" approach considers the capabilities and limitations of all available solutions.
- Product support from service centers and specialists at more than 60 locations worldwide.

Core Technologies

PLASTICS JOINING

Fast-cycling, energy-efficient, and versatile, Branson ultrasonic, laser, infrared, heat staking and (clean) vibration welding technologies create strong and consistent welds in a variety of plastic materials.

METAL WELDING

Our ultrasonic metal welding process creates low-resistance, solid-state bonds between conductive, non-ferrous metals, making it critical to development of next generation vehicle batteries.

PRECISION CLEANING

Trusted in medical, electronic, and industrial applications, our cleaning systems use ultrasonic pulses to create fluid turbulence that thoroughly cleanses even complex part contours and hidden surfaces.

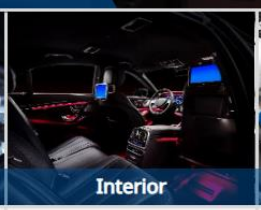
Automotive
Innovative, trusted assembly solutions support advances in vehicle technology, safety, and efficiency

Electric & Autonomous

Ultrasonic metal welding innovations are enabling next-generation Li-ion batteries that promise greater energy density, longer range, and faster charging cycles

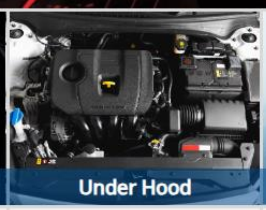
Exterior

From the distinctive contours of head and tail lamps to the lenses and electronics in a back-up cameras, Branson™ assembly technology helps shape the form and function of today's vehicles.



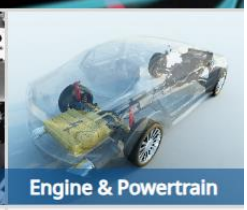
Interior

Instrument panels, touchscreens, and console-mounted controls put comfort, illumination, and entertainment in easy reach. Our assembly technologies are behind all of them.



Under Hood

Lightweight welded plastics form intake manifolds, turbo housings, and emission control components, while metal welds bond cables, wiring, and sensors essential to engine and power management.



Engine & Powertrain

To optimize performance, vehicle engines and powertrains rely on digital controls that respond to inputs from a growing array of sensors, many of which are built or linked using Branson technologies.

Medical

Innovative, trusted assembly solutions to meet a world of medical product needs

In-Vitro Diagnostics

Medical test devices must be affordable, easy to handle, and able to capture and preserve samples contaminant-free until processing. Branson assembly solutions allow for rapid, high-volume output.

Respiratory

Precise, yet portable, medical inhalers surround aerosol medication canisters with welded plastic shells. Our plastic welding processes deliver high reliability and meet global product traceability requirements.

Drug Delivery

High-volume production of self-injection pens for drug delivery devices relies on automated ultrasonic welding systems to provide the particulate-free bonds and seals essential to high-purity drug delivery devices.

Dialysis

Renal dialysis systems rely on artificial filters and membranes to remove blood-borne wastes and contaminants. Our joining solutions are vital to assembling and sealing these critical, fragile structures.

Surgical Instruments

Contoured, welded plastic assemblies make surgical instruments, staplers, and trocars easier to use, yet economical enough to be disposable, simplifying infection control.

PPE

Critical to automated production of PPE, our ultrasonic welders cut and bond roll-fed nonwoven fabrics into respirators, face masks, surgical caps and gowns, and other products by the millions worldwide.

Electronics

Innovative, trusted assembly solutions for the latest business and consumer electronics

Batteries

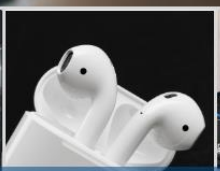
Global battery makers face the challenge of bonding ever-thinner metal foils and specialty films into more powerful, energy-dense products for device, vehicle, and storage applications. Our ultrasonic welding transforms designs into next-generation batteries.

Sensors

Sensors deliver data and feedback essential to digital control systems in everything from electric vehicles to virtual reality games. Our solutions can assemble them more reliably at lower cost.

Personal Devices

Personal electronic devices feature many precise, delicate subassemblies such as cameras, speaker boxes, touchscreens, and other small components. This requires precision, high aesthetics, and hermetic sealing to ensure their function. Branson's assembly solutions provide, precise, high quality joining without the need for adhesives or fasteners.

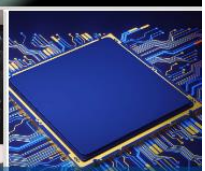


Wearable Devices

Consumers expect big sound from miniature audio devices. But building high-end electronics into tiny, water-resistant wearables can pose huge assembly problems. Let us share solutions.

Smart Technology

Today smart devices feature sensitive circuit boards, thin films and delicate thin-wall parts that make precision assembly critical. Branson can deliver multiple joining methods to deliver precise, high quality joining solutions.



Semiconductor

Branson's customized benchtop and fully automated vapor degreasing systems use ultrasonic technology to precisely clean and remove tough-to-reach contaminants in semiconductor applications.

Packaging
Lightweight, flexible, and sustainable packaging solutions for a resource-conscious world

Single Serve Capsules & Pods

Thanks to precise controls and lower heat inputs, our ultrasonic welds bond bio-based plastics parts into coffee capsules and pods when traditional heat seals cannot, making compostable packages possible.

Pouch & Bag Sealing

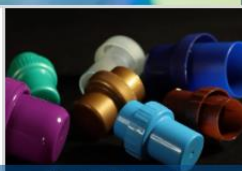
Ultrasonic welding uses less energy, less material and vibrates potential contaminants out of the way. The result: Improved package quality, repeatability and reliability, along with lower costs.

Degassing Valve Sealing

This flavor protection valve degasses aromatic coffee packages yet keeps damaging oxygen out. It is bonded to the package with the same technology used in our Vertical Form Fill and Sealing (VFFS) systems.

Clamshell

Transparent, tamper-resistant clamshell packages made of recycled PET plastic are secured with ultrasonic "stitch welds." With no added adhesives or contaminants, package recycling is simplified.



Dosing/Mixing Cap

Child-friendly and virtually spill-proof, this patented plastic cap assures consistent, accurate dosing of liquid products. Inside each cap, Branson assembly solutions assure precise, consistent sealing.

Other Applications
Assembly and joining solutions for more efficient and sustainable industrial production

Appliances

Durable, light and corrosion resistant, welded plastic components make small and major appliances – hair dryers, blenders, coffee makers, refrigerators and more – easier to design, build, ship, and repair.

Power Tools

Chainsaws, mowers, and power tools depend on ultrasonic plastic welds for housings, fuel and fluid reservoirs, while our metal welding technology helps create long-life rechargeable batteries.

Textiles

Nonwoven fabrics, cut and bonded with ultrasonic welders, provide filters that purify water, children's diapers and adult incontinence products, and even the hook-and-loop fasteners to hold them in place.

Home Products

Indoors and out, lightweight welded plastics – in watches and fitness trackers, coolers and coffee mugs, wiffle balls, children's games and more – make life, exercise, and fun a little easier for everyone.

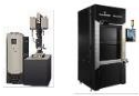
Green Energy

Efficient, solid-state, low-resistance welds of conductive metals made by our ultrasonic metal welding solutions enable mass production of solar arrays, wind turbine circuitry, and ESS batteries.

The Broadest Technology Portfolio to Address Your Needs

Plastics Joining


Ultrasonic


Laser


Vibration


Clean Vibration


Infrared


Thermal


PulseStaking


Hot Plate

Metal Welding


Seaming/Tube Sealing


Spot Welding


Wire Termination


Splicing

Precision Cleaning


Aqueous


Solvent


Baths


Homogenizers

Support & Solutions

Applications Laboratory

- Feasibility Review
- Part & Joint Design
- Resolve technical issues with part design
- Recommend Tooling & Equipment
- Reports
- Troubleshooting
- Customer visits
- Training (seminars)
- Tooling checkout

Design & Tooling Engineering

- Horn & fixture design
- 3D CAD drawings
- Evaluation of horn design by Finite Element Analysis
- Generate drawings for tooling manufacturing
- Create 3D horn layouts for system quotes
- Tool debugging & checkout
- Feasibility & conceptualization
- Cost estimating /quotations

Project Engineering

- Project Management
- Coordination of engineering & manufacturing
- Customer approval