

# Medical Device Assembly

Helping customers develop next-generation products and advanced assembly processes to meet a world of diagnostic and therapeutic needs.

## Challenges

To make diagnosis and treatment accessible for millions worldwide, device designs must replicate complex biological processes and meet medical and user-safety needs. This demands rapid iteration of design prototypes based on scalable assembly processes.

**SUPPORT FOR  
FASTER PROTOTYPING,  
PROCESS DEVELOPMENT  
AND PROCESS VALIDATION**



Scaling up production from low-volume prototypes into error-free medical devices demands affordable, automated, and error-free assembly, with technology optimized for joining small or fragile plastic, metal, electronic or sensing components.

**WE SUPPORT  
OUR CUSTOMER FROM LAB  
DEVELOPMENT INTO FULL  
SCALE MANUFACTURING**



Global regulators demand medical devices supported by robust, validated manufacturing processes, with consistency and quality backed by secure collection of assembly and weld data for device traceability.

**WE OFFER  
SOLUTIONS CAPABLE OF  
MEETING FDA 21CFR PART 11,  
AND MDR REGULATIONS**



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Driven by ever-growing medical needs, medical device manufacturers strive to develop and produce affordable, reliable, and easy-to-use diagnostic and therapeutic tools. To help you meet your assembly needs/goals, Emerson offers an array of Branson™ joining technologies that can handle even the smallest and most delicate plastics, electronics, and sensors. From lab-scale to pilot-scale to high-volume production, our expertise and global resources make Emerson a trusted partner in all phases of medical device manufacturing.

## Lab Trials/Proof of Concept

New device concepts, and the means of proving their potential for real world use, is the lifeblood of medical device development. Let Emerson's material and joining knowledge, together with our dedicated applications laboratories and global technical capabilities, assist you in creating practical solutions that support your design development and qualification needs.



## Pre-Production and Validation

Translating your design into manufacturing specifications and processes for pilot production demands attention to every detail. Emerson's technical and solutions experts will provide a scalable, manual, or automated Branson assembly solution that meets IQ, OQ & PQ operational & qualification requirements, enabling you to validate pilot production and efficiently increase commercial production.



## High-volume, Automated Production

Emerson's assures that the same Branson assembly technology used for lab-scale development can scale up to support repeatable and traceable high-volume manufacturing. From manual benchtops to fully automated processes. Branson solutions fit every assembly need, offering ultrasonic welding, laser welding, swaging, staking, and other solutions for uninterrupted, performance qualified production.



### GSX Ultrasonic Welder



### 2000 XC Micro Ultrasonic Welder



### GLX-1 Laser Welder



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