

Your Single Source Partner for Medical Device Manufacturing

Resistance Welding – Laser Welding – Laser Marking



- Equipment and Systems
- Applications Development

Application Solutions

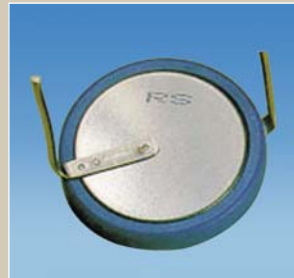
Miyachi Unitek offers today's medical device manufacturers the broadest range of precision joining and marking solutions in the industry. Below are just a few examples from thousands of successful applications.



*Laser Seam Weld,
Pacemaker Case*



*Resistance Spot Weld,
Pacemaker Interconnects*



*Laser Seam Weld, Resistance
Spot Weld, Battery Case and Tab*



*Laser Seam Weld,
Insulin Pump Case*



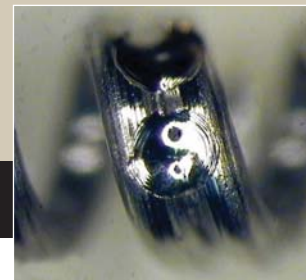
Laser Spot Weld, Hypo Tube



Laser Spot Weld, Hypo Tube



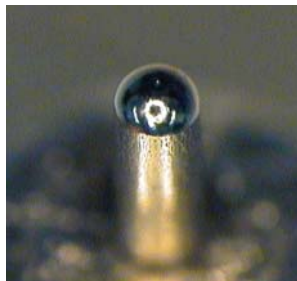
*Resistance Spot Weld,
Catheter Assembly*



Laser Spot Weld, Spring



*Resistance Spot Weld,
Thermocouple Joining*



Laser Spot Weld, Brachyseed



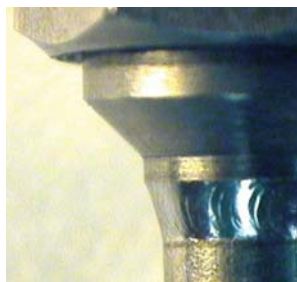
*Resistance Spot Weld,
Hearing Aid Wires*



*Resistance and Laser Spot Weld,
Wire Joining*



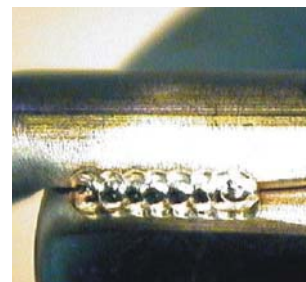
*Laser Spot Weld,
Surgical Staple Clip*



*Laser Seam Welding,
End-Effector Cap*



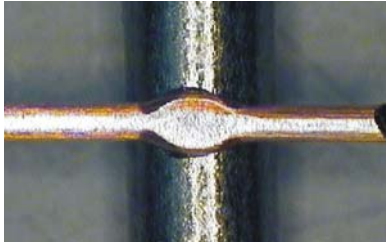
*Resistance and Laser Spot Weld,
Orthodontic Appliances*



*Laser Seam Weld,
Tool Attachment*

Products for Device Manufacture

Resistance Welding



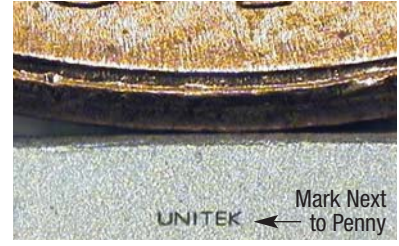
- Self-fixturing with contact electrodes
- No disturbance of surrounding material
- Easy to monitor
- Fast process

Laser Welding



- Non-contact process
- Weld joint flexibility
- Highly controllable weld dimensions
- Minimal heat input

Laser Marking

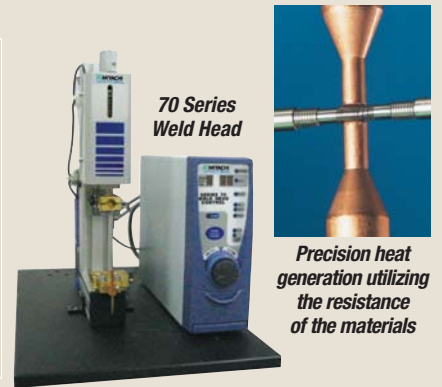


- Non-contact process
- High quality mark
- Good contrast on both plastics and metals
- No process consumables

All Miyachi Unitek welders feature closed-loop feedback, built-in quality monitors and data output to help meet the FDA's stringent standards regarding GMP.

Resistance Welders

Precision resistance welders provide excellent low-energy control for the high reliability welding of miniature and micro-miniature parts. Linear DC, High Frequency and Capacitive Discharge models available to fit every application and budget. Electronic weld head technology offers stable, repeatable electrode force for a wide variety of welding applications. Both opposed and parallel gap configurations available to provide the flexibility for tight part access.



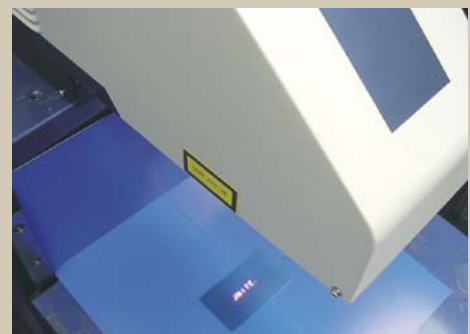
Laser Welders

Miyachi Unitek's laser welders range in power from 0.25 to 600W – 12 models to choose from – addressing both micro spot welding and high speed seam applications. The lasers are well geared to system integration, and, with multiple outputs, can support several workstations or focus head configurations.



Laser Markers

Our Nd:YAG and Nd:YVO₄ laser markers are air cooled and run off a standard 110V line output. Their small footprint and separated power supply and laser provide excellent integration flexibility. The Windows®-based marking software allows for alphanumeric, graphics and codes to be programmed along with serialized part numbers, date codes, and Bar or DataMatrix code data.



Laser Welding and Marking Systems

Standard and custom turnkey Class I systems are available in a wide range of cost-effective configurations.

Welding system options include: precision motion, custom tooling and parts handling, vision corrected motion, glovebox enclosures and custom software.

Marking system options include: rotary loading, programmable focus control for variable part heights and a rotary stage for circumferential marking.



Material Processing Expertise

For more than 50 years Miyachi Unitek has been dedicated to providing cutting-edge equipment and systems to the medical device industry. Our experienced staff of applications engineers and familiarity with microscopic joint design and process development make us a valuable resource to the medical device industry. We have experience in joining a wide variety of materials, including:

- Nitinol • Titanium • Steel Alloys • Nickel Alloys
- Aluminum • Nyobium • Kovar • Gold and Silver
- Beryllium • Tantalum



Take advantage of our applications expertise by using our FREE sample service. Completed parts, together with a detailed evaluation report and equipment recommendations are quickly returned at no charge.



Your Local Representative

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