AMETEK®

ENGINEERED MEDICAL
COMPONENTS

YOUR INNOVATION PARTNER FOR **ENGINEERED MEDICAL COMPONENTS**

AMETEK EMC are experts at collaborative engineering focused on the custom manufacture of cable assemblies, unique interconnect solutions as well as polymer and metal laser-processed components for medical devices.

avicenna / ESE® / LASERAGE®

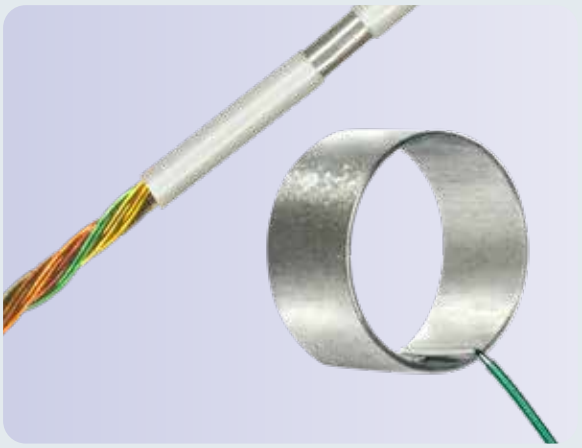
AMETEK
ENGINEERED MEDICAL COMPONENTS

DELIVERING STATE-OF-THE-ART TECHNOLOGY SOLUTIONS

AMETEK Engineered Medical Components (EMC) is a market leader in delivering optimal solutions for the medical device industry. Comprised of three businesses: Avicenna, Technical Services for Electronics, and Laserage, AMETEK EMC has served the medical device industry for more than 40 years.

Solving complex challenges

Understanding what our customers need is key in the process of engineering the right solution to fill that need. Our team of experts collaborate with customers to develop and define requirements to establish the desired target for a solution. We leverage our expertise in a wide range of technologies including: laser processing, fine wire twisting and cabling, termination, high-speed automation, machine vision, insert molding, liquid silicone molding, potting, gluing, custom interconnects and cable assembly, catheter components and systems, implanted lead components, ultrasound assemblies, precision laser machining services and more to map from requirements to solution output.



Avicenna

Avicenna was founded in 2000 with core competencies in laser ablating and automated processing of coated fine wire. Since its founding, Avicenna has leveraged these key competencies to develop best-in-class capabilities for laser welding fine wire to precious metal electrodes, laser machining polymer tube extrusions, fine wire cabling and shielding, as well as fine wire termination to PCB and flex circuits.

In 2015 Avicenna opened a facility in Reynosa Mexico to complement its Minnesota USA operations. Avicenna combines its Mexican assembly operations with its process capabilities for fine wire, tube extrusions, and welded electrodes to offer a complete solution for manufacturing catheter products.

Today, Avicenna serves as a vital contract manufacturing partner for customers with complex and high-volume catheter assembly requirements. Avicenna's engineering and operating teams have expertise and scale that earn the trust of global device companies for new and next generation catheter products.

Capabilities:

- Precision laser ablation of coils
- Laser marked cables
- Precision laser ablated lead bodies
- Laser etched lead bodies
- Laser welded electrode assemblies
- Laser drilled tubes
- Micro cabling
- Fine wire termination
- Precision laser ablation of wire
- Precision laser ablation of sensors
- Ultrasound cables
- Laser tube marking
- Laser ablated shafts
- Laser micro-welded sub-assemblies

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Laserage

Laserage is widely regarded as the medical industry-leading expert in laser contract manufacturing. Since 1979, we have been leading the way in the field of custom laser processing, providing medical device component fabrication with numerous laser manufacturing capabilities.

Laserage Capabilities

Laserage is a laser processing service provider with a focus on precision medical device components. Equipped with a fleet of over 45 laser systems utilizing over 65 lasers, and driven by a team of 130 committed employees.

Stent Manufacturing

Stent manufacturing applies to a wide variety of medical applications including cardiovascular applications, birth control, kidney stone pain control and esophageal and gastrointestinal uses. Each of these medical applications requires a precise design and technologically advanced manufacturing technique. Laserage utilizes its broad-based experience in stent manufacturing to serve clients worldwide.

Orthopedic Components

Laserage offers a wide variety of laser welding capabilities for metal implant materials for the orthopedic industry.

Implantable Medical Devices

Laserage can provide processing of your implantable medical device components from laser cutting to the finished component, including the intermediate steps that may include annealing, shape setting, micro-abrasive blasting, electropolishing and more.

Laser Swiss Machining: Available for laser cutting and CNC machining precision tube and rod components from 1mm – 20 mm in diameter. Lengths can vary because the back spindle can bring material out of the main spindle then machining can continue. ID work as well as OD work will be capable of being done on both ends of the tube/rod component.

LASERAGE®
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Technical Services for Electronics (TSE)

TSE manufacture medical connectors on a global scale with sites in the United States, China, Taiwan and Mexico. Each location is equipped with the capabilities to develop and manufacture the most complex products to meet the most demanding challenges.

TSE Capabilities

TSE leverages a broad base of interconnect technology capabilities to help customers design, develop, test, and manufacture innovative custom connectors and assemblies.

Densyty™

The DENSYTY™; Interconnect System uses proven card edge technology to maximize contact density, performance and usability. The need for high contact density in a small form factor is increasing.

Custom Interconnect Solutions

TSE has been designing custom interconnect solutions for 25+ years and is a market leader in custom connector design.

Design and Development

TSE's application engineers work with your design and development engineers to provide the best Interconnect solution. Engineers have a strong expertise in interconnect manufacturing including customized design, prototyping, material selection, BOM management, injection molding and can lead projects.

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World-class manufacturing for all medical sectors

AMETEK EMC delivers cutting-edge products with a strong emphasis on innovation focusing on the highest requirements of performance, safety, and reliability. Our integrative service model helps our customers accelerate the go-to-market of innovative device, instrument, or implant concepts with a robust quality and manufacturing solution.

We partner with medical device manufacturers to get the next generation of life-saving medical devices to waiting patients and physicians with in-depth understanding of the requirements, trends and challenges across a multitude of individual medical sectors.

Electro Surgical

Robotic Surgical

Endocrine

Structural Heart

Cardiac Rhythm

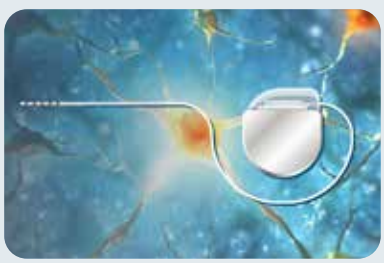
Instruments

Orthopedic

Vascular

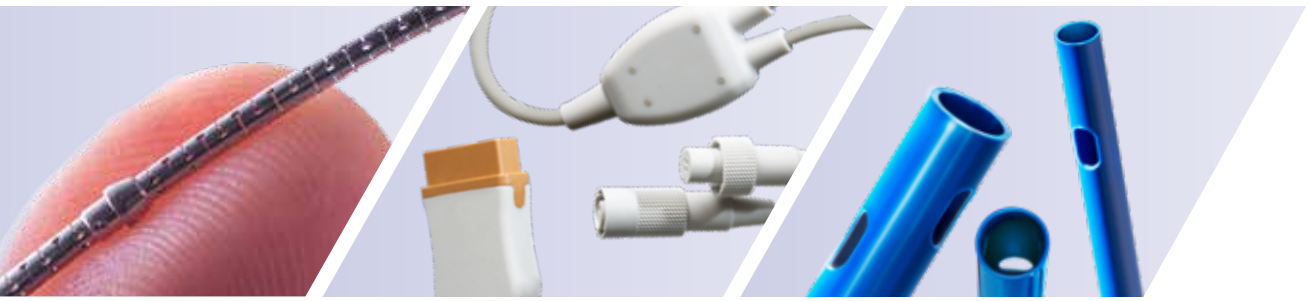
Electrophysiology

Patient Monitoring



Neuromodulation

Wearables



AMETEK EMC AT A GLANCE

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Each business is a leader in its respective product category and is well established in delivering state-of-the-art technology solutions with our experience in: product design and development, precision engineering, pre-production to commercialized manufacturing, supply chain management, and quality assurance for cable assemblies and custom interconnects, laser processed polymers, catheter assemblies and sub-components, laser processed metals including NiTi and metal post processing.

AMETEK EMC is a business unit of AMETEK, Inc. a leading global provider of industrial technology solutions serving a diverse set of attractive niche markets with annual sales over $6.0 billion.

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