WHERE LASTING BONDS BEGIN – PEOPLE, CAPABILITIES AND PRODUCTS

Dedicated to Delivering a Higher Standard for Medical Device OEMs
Our vision is to be your partner of choice, helping you build medical devices that save lives. We’re focused on reliability and durability, delivering value through a relentless pursuit of the standards that matter most to you. With a commitment to progress and an extensive product range, we enable medical device OEMs, large and small to transform ideas into reality.
Our medical division unleashes the potential of every connection

The power of TE for medical device OEMs – a connected ecosystem
Building on a legacy of innovation with each new portfolio addition.

Precision Interconnect
fine wire and medical cable assemblies

AMP
collectors and electro-mechanical components

Raychem
material science and heat shrink tubing

2015
Advancedcath
access and delivery solutions for minimally invasive devices

2016
Creganna Medical
access and delivery solutions for minimally invasive devices

2017
MicroGroup
precision metal components and advanced medical metals tubing

2018
Heat Shrink Innovations
FEP heat shrink for catheter manufacturing

2019
Expanded polymer capabilities
Extruded tubing & PTFE etched liners

Why TE Connectivity?

We’re more than a components supplier. With TE, you get an integrated solutions partner who can develop your idea from prototyping to volume manufacturing. This connected value gives you a competitive advantage in today’s marketplace.

Engineering expertise: Early design collaboration takes you from concept to production, and beyond.

Extensive manufacturing capabilities: TE has the expertise in a range of manufacturing processes to develop highly engineered components and value-added sub-assemblies.

Global footprint: Improved supply chain resilience, responsiveness and access to emerging and low-cost manufacturing markets.

End user focus: We design for ergonomics, small spaces, high speed, high performance, and reliable connectivity.
CONNECT TO A HIGHER STANDARD OF VALUE CHAIN RESILIENCE

Flexibility of location

Your design and development projects can be managed from one or more global centers of excellence, depending on the capabilities you required. Many locations offer dedicated R&D fabrication and testing labs, support tools, prototyping facilities and pilot manufacturing capacity to support your project through all phases of the product development cycle.

**USA**
- Wilsonville, OR
- Plymouth, MN (2x)
- Brooklyn Park, MN
- Medway, MA

**LATIN AMERICA**
- Guaymas, Mexico
- Heredia, Costa Rica
- San Rafael, Costa Rica

**EUROPE**
- Galway, Ireland

**ASIA**
- Suzhou, China
- Kawasaki, Japan
- Bangalore, India

Meeting your evolving needs today with an eye to the future

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Forming lasting bonds in key medical device hubs around the world

- FDA REGISTERED MANUFACTURING SITES
- STRONG REGULATORY BODY RELATIONSHIPS
- EXCELLENT AUDIT RECORD - 100+ AUDITS ANNUALLY
- DEMONSTRATED COMPREHENSION OF EVOLVING REGULATORY ENVIRONMENTS
We are an essential component in turning your ideas into reality at speed

This is where the promise of lasting bonds gets real – partnering with customers to deliver medical device innovation in core medical specialties:

**Interventional Cardiology:** Providing leading medical device companies with components and sub-assemblies to develop interventional devices used to diagnose and treat cardiovascular disease.

**Imaging:** Broad array of miniaturized components and sub-assemblies for improved ergonomics and increased data acquisition used to develop high-density imaging device applications.

**Surgery:** Robust portfolio of technologies, capabilities and services to develop components for surgical robotic, laparoscopy and electrosurgical systems.

**In Vitro Diagnostics (IVD):** Supporting IVD manufacturers in the design, development, testing, and manufacturing of innovative point-of-care IVD technology using microfluidic platforms.
From standard to customized metal shafts and hypotubes to specialty high-density cable assemblies and medical grade polymers, TE has the scale, global capacity, and expertise in a range of manufacturing processes. It’s this unique combination that allows us to bring your concept to reality, whether your solution requires a trustworthy partner in metals, polymer extrusions, laser processing, connectors, cables or other capabilities.
PROPELUS™ PROTOTYPE CENTER

A dedicated rapid prototyping center that supports you with fast turnaround prototypes of your medical components and sub-assemblies.

FINE WIRE AUTOMATION AND TERMINATION

Our expertise in fine wire termination as small as 0.004 inches in pitch allows for a high number of signal or energy-delivery channels to be packaged in a small form factor.

LASER PROCESSING

Extensive laser welding and cutting capabilities add value to our catheter and guidewire manufacturing, giving you more options for materials and design.
**Metal Shafts & Hypotubes**
We offer a diverse selection of shafts and hypotubes solutions, all designed to meet specific performance requirements such as transition, trackability, push and torque, kink performance, compression resistance, and flexibility.

**Wires & Coils**
We provide high-performing wires with superior surface finishing, tight tolerances, and exceptional stress relief, resulting in increased kink resistance and outstanding torque response. Our team can customize complex wires and coils to precise specifications, even for small profile solutions down to 0.001 inches in diameter.

**Heat Shrink Tubing**
Whether you use off-the-shelf—Fluoropolymers, Polyolefins, Pebax®—or custom-formulated materials, our expertise in compounding, expansion, and polymer crosslinking can provide you with the tubing to meet your specifications.

**Connectors**
Our durable solutions enable power, data and signal to generate, transmit and provide feedback along a range of devices.

**Specialty Needles**
From handle to tip, we specialize in sophisticated needle designs for biopsies, implantation and transseptal crossing.

**Cables**
Small, lightweight, flexible and durable cable solutions that deliver high signal quality using true coax in acoustic applications where cross talk, bandwidth and attenuation affect performance.

**Engineered Metal Components**
Complex and delicate surgical instruments, implants or analytical devices required highly engineered components and assemblies. We have the expertise, capabilities and raw materials to support your needs, from device prototyping to high-volume production runs.
Sensor-Enabled Smart Catheters
We're helping to innovate the next generation of catheters with components and sub-assemblies that offer enhanced 3D visualization, integrated sensing abilities and digitization.

Catheter Technologies
We use our proprietary processes to manufacture a wide range of catheter components and sub-assemblies, including introducer sheaths, braided and coiled catheters, steerable catheters, and sensor-enabled smart catheters.

Extruded Medical Tubing
Custom extrusion for close-tolerance, single-lumen, multi-lumen and bump tubing as well as wire coating, co-extrusion and profile extrusions are available.

Molding
We can provide molding and over-molding services for a variety of components, including catheter tips and complex distal assemblies. We can work with a diverse selection of materials, configurations, and specifications to meet the specific needs of your device.

Cable Assemblies
Our innovative designs combine lightweight, flexible, durable cable with highly-reliable system ZIF connectors and precision wire terminations that offer enhanced visual clarity, built to withstand harsh sterilization needs.

Pull Wire Assemblies
Our off-the shelf pull wire assemblies are backed by advanced laser-welding technology, with standard assemblies available in 8 sizes, ranging from 6 Fr to 17 Fr, and in 1, 2 or 4 pull wires. We can build custom assemblies up to 36 Fr and can produce assemblies in the 15 - 25 Fr range using a wide variety of materials.

See the full range of components and manufacturing capabilities at TE.com/medical.
CONNECT TO A HIGHER STANDARD OF PRODUCT ADVANCEMENT

**PROx™** Proximal shaft sub-assembly

PROx is a proximal metal shaft sub-assembly that offers the essential design, service and cost model for a Rx catheter. This high-performance proximal shaft offers premium design features at a lower price point and is manufactured in a high yield, robotic and fully automated environment.

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**PoleVault™** The gold standard hypotube

PoleVault™ is a hypotube solution with up to 40% kink resistance. PoleVault™ hypotubes are specifically designed to optimize catheter performance.

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**MICROFLEX** A highly flexible micro metal tube >0.013"

MICROFLEX is a micro-hypotube that is specifically developed for minimally invasive treatment of the body’s smallest vasculature, including interventional neuroradiology and is available in dimensions of 1F or less. The single-piece construction provides a consistent user experience. It is completely customizable, enabling numerous design possibilities and the single-piece design also maximizes end-product margins by decreasing component and assembly costs.

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**Javelin™** An advanced alloy for specialty needles

Javelin™ has greater penetration ability and exhibits superior hardness over Stainless Steel. In comparative testing, Javelin demonstrated up to 24% increased hardness over 304SS.

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**MP456P Imaging** Diagnostic I/O connector

A high-density, interposer-based connector for use in advanced imaging systems. With 20,000 mating cycle to meet industry standards, the MP456P is suitable for the high-end cart-based medical equipment.
**COMFORT™ NX Cable Assembly**
From coax manufacturing, cable assembly and micro-coax termination, the COMFORT NX platform allows you to take advantage of favorable cost and quality enabled by the precision associated with automation.

**Meridian Technology™ Laser cut metal tubes with tailored mechanical properties**
Precision laser cut metal tubes with tailored mechanical properties based on interrupted spiral cut pattern.
- A full spiral cut is interrupted by short uncut sections
- The helical patterns formed by the uncut sections determine the flexibility, axial stiffness and torque capabilities of the parts
- The pattern can be fully described by 3 variables, cut length, uncut length and pitch
- High-speed cutting techniques have been developed for these patterns
- Patterns and properties can change continuously from distal to proximal

**VERSIO™ Catheter Connector**
A connector for high-density signal and power transmission in a low-profile catheter.
- High-density transmission – analog signal & electrical power
- Up to 272 contact positions in a 1” diameter connector
- Integrated & shielded connector sub-system, single connector
- Ultra-high cycle capability, low insertion forces
- Modular design – easy configurability

**Specialty Sheath**
Inspired custom sheath design solutions to solve clinical challenges—from concept to the finished packaged product. We specialize in designs required for Structural Heart, Electrophysiology, Endovascular and large-bore access >12F applications.

See the full range of product platforms at [TE.com/medical](http://TE.com/medical).
CONNECT TO A HIGHER STANDARD OF CUSTOMER DEDICATION

TE Connectivity is a partner of choice to the world’s leading medical technology brands. We provide top-tier engineering expertise and manufacturing excellence in the development of optimally engineered components and value-added subassemblies to support the production of life-saving medical devices used in interventional cardiology, surgery, imaging, in vitro diagnostics, and other medical specialties.

Explore our extensive range of medical solutions at TE.com/medical.