



CONTRACT MANUFACTURING FOR MEDICAL DEVICES

**Flexonics Medical Capabilities and Value-Added Services
Bellows, Cooling Coils, Heat Exchangers, Flexible Tubing
and Associated Surgical Consumables.**



www.FlexonicsMedical.com



Flexonics Medical designs, engineers, validates, and manufactures thermal management and flexible element solutions for the medical device market.

Flexonics Medical offers unparalleled product design, development, testing and manufacturing capabilities. Bartlett is the primary North American design and development center for thermal management, fluid conveyance, heat exchangers and flexible connectors. Housed in a dedicated sales, research, development and prototyping site Flexonics Medical's program of continuous improvement and innovation has enabled the delivery of cost effective, high performance products for the rapidly developing marketplace.



BELLOWS, COOLING COILS, HEAT EXCHANGERS, FLEXIBLE TUBING & ASSOCIATED SURGICAL CONSUMABLES

Flexonics Medical's Bartlett facility has a comprehensive range of manufacturing capabilities that offer a unique opportunity for our clients developing new products. In collaboration with our clients, our Specialty Products' Engineers have brought many new innovative medical products to market.

We have extensive expertise with stainless steel, aluminum and other metals critical to the medical market. We are also highly versed in the use of high-nickel alloys such as Inconel and Monel as well as various yellow metals if ever the need arose. Our designated testing lab offers all types of leak testing and inspection.

Our manufacturing capabilities include all methods of welding, brazing and soldering. Welding methods include (TIG/MIG/Resistance/Laser) and range from specialized and precision manual applications to the application of a high volume 4 axis robotic laser welder. Our brazing processes include vacuum, torch and induction. Filler options range from familiar silver-based alloys to copper, and gold. Additionally, we have a unique industry advantage of joining dissimilar metals.

Our large manufacturing footprint has 9 Ispen furnaces. Select heat treatments include Full Annealing, Sensitization, Hydrogen Scrub, as well as Citric Acid Cleaning. Catered atmospheres include Hard Vacuum and Partial Pressure using Argon, Hydrogen or Nitrogen.

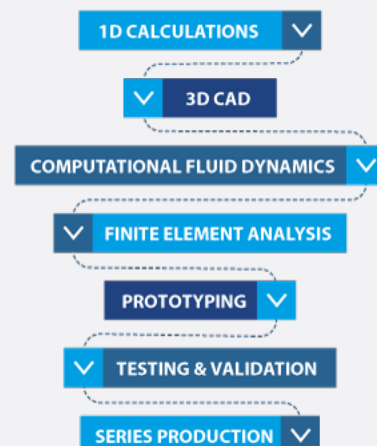
Multiple Surface treatment processes are also offered as a value-add to our customers including Alkaline Cleaning, Nitric Acid Passivation, Surface Etching (Sulfuric Acid), Citric Acid Cleaning and Vapor Degreasing on both manual and automated production lines, as required. Precision Swiss machining, plastic over molding and helium mass spectrometry leak testing capabilities also serve as a vital part of our vertically integrated manufacturing operations.

We pride ourselves on our innovative approach to solving technical problems, which we have used to develop trusted partnerships with customers and suppliers around the world. Flexonics Medical invites you to contact us about your next medical device concept.

- » Blood Heat Exchangers
- » Adult/Infant Oxygenator Bellows
- » Coronary Perfusion
- » Whole-body Perfusion Heat Exchangers
- » Medical Grade Cooling Coils
- » Flexible Metal Tubing For Surgical Instrumentation

Key Benefits:

- » Can fully support IQ/OQ/PQ product validation process
- » Well-versed in APQP, PPAP, Safe Launch and other production launch protocols
- » Capable of supporting high volume manufacturing
- » Can provide insight on elements of Design for Manufacturability



In all medical device applications, we use our knowledge and expertise to meet our customers requirements.



Metal Bellows

Bellows from Flexonics Medical are available for a wide range of industry applications and support companies of all sizes from start-ups to global conglomerates. Our offerings range in size, scale and complexity... from micro to mega, from prototype to serial, from commercial to bespoke.



Flexible Metal Tubing

For purposes of fluid conveyance, heat exchange, position offset, or gooseneck applications, our helically formed corrugated tubing can be customized to meet your specific performance needs.



Heat Exchangers

Flexonics Medical specializes in the design and development of a wide variety of heat exchangers and pertinent thermal management componentry. All designs are developed for given applications and are selected based upon customer specifications.



Complex Assemblies

Flexonics Medical makes all types of expansion joint products for precision applications. We manufacture complex assemblies that require forming, welding, brazing, soldering, bending, machining and assembly of metallic components.



Specialty Cooling Coils

Flexonics Medical manufactures specialized tubing to client specifications for a variety of fluid transfer applications.



Turnkey Supplier

Flexonics Medical possesses a multitude of under one roof value-add capabilities that enable our core bellows product to be expanded into full functioning assemblies and sub-assemblies, thus positioning Flexonics Medical as a true full service, one stop supplier.



ADDITIONAL BENEFITS

- » Full service supplier.
- » Full collaboration with customers to provide products.
- » A fully engineered solution, from design concept through to high volume manufacture.
- » Global production facilities, 26 operations in 12 countries.
- » Extensive range of thermal management solutions.
- » Programs managed using APQP framework.
- » Comprehensive fleet of FEA and CFD software.
- » Fully equipped test lab for validation testing.
- » Performance and durability test equipment.
- » ISO 9001 / 14001 and IATF 16949 certification.



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Project Examples:

Open Heart Surgery

- Blood Heat Exchangers

Cryoablation

- Flexible Surgical Instruments

MRI

- Liquid Helium Seal/Expansion

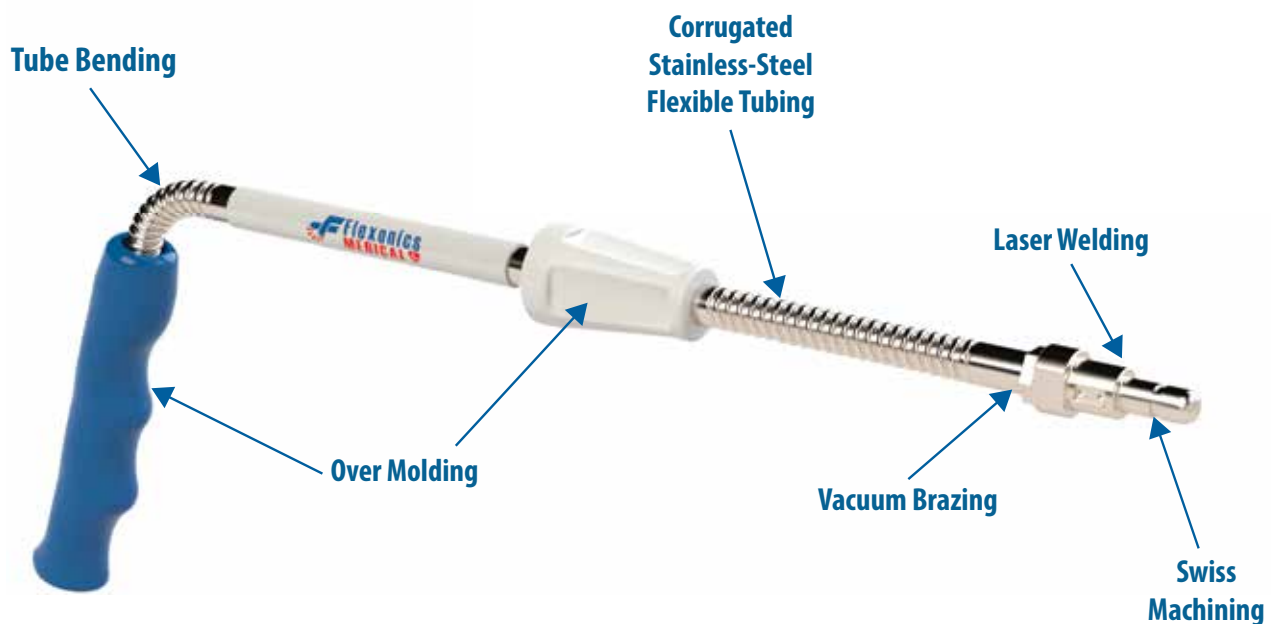
CT Scan

- X-Ray Tubes

Sterilization Equipment



Manufacturing Capabilities:



Additional Levels of Vertical Integration:

- Leak Testing
- Passivation
- Assembly Services
- Vacuum Heat Treatment
- Design for Manufacturability



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