



MEDICAL DEVICE SOLUTIONS

Senior Flexonics Capabilities and Value-Added Services
Bellows, Cooling Coils, Heat Exchangers, and Flexible Tubing



www.seniorflexonicsUSA.com



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

Senior Flexonics 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 Senior Flexonics' 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 and FLEXIBLE TUBING

Senior Flexonics' 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 materials expertise with specialty metals including Inconel, Monel, Austenitic Stainless Steel, 904L, Phosphor Bronze, 17-7, 17-4, Hastelloy, and Carbon Steel, to name a few. 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 5 axis robotic laser cell. Our brazing processes include vacuum, torch and induction. Filler options range from familiar nickel-based alloys to copper, silver, and gold. Additionally, we have a unique industry advantage of joining dissimilar metals.

Our large manufacturing footprint has 8 Ispen furnaces. Select heat treatments include Full Annealing, Sensitization, Hydrogen Scrub, Citric Acid Cleaning as well as Vapor Degreasing. 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.

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. Senior Flexonics 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 Tools

Product Validation Capabilities:

- » CFD for performance and boiling
- » FEA for vibration NRFs
- » Rig performance measurement
- » Gas side and coolant side pressure pulsation
- » Thermal shock
- » Shaker vibration durability
- » Acceleration data acquisition on vehicle



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



Metal Bellows

Bellows from Senior Flexionics 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

Senior 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

Senior Flexionics 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

Senior Flexionics manufactures specialized tubing to client specifications for a variety of fluid transfer applications.



Turnkey Supplier

Senior 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 Senior as a true full service, one stop supplier.

KEY 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, 30 operations in 13 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.



LOCATIONS

- » **Bartlett USA:** Sales, Engineering & Manufacturing
- » **Brampton CANADA:** Sales, Engineering & Manufacturing
- » **Cape Town SA:** Manufacturing
- » **Crumlin UK:** Sales, Engineering & Manufacturing
- » **Kassel GERMANY:** Sales, Engineering & Manufacturing
- » **New Delhi INDIA:** Sales, Engineering & Manufacturing
- » **Olomouc CZE:** Sales & Manufacturing
- » **Saltillo MEXICO:** Manufacturing
- » **San Antonio USA:** Sales, Engineering & Manufacturing
- » **Tokyo JAPAN:** Sales
- » **Wuhan & Tianjin CHINA:** Sales & Manufacturing

senior
Flexonics

CONTACT

Email: info@seniorflexonics.com

www.seniorflexonicsUSA.com

