

RELIABLE TORQUE:

Spiral Torsion Springs for Medical Innovation



Within medical device manufacturing, every rotation and movement must be precise and smooth. As America's first springmaker, we combine over 175 years of engineering excellence at John Evans' Sons. We use modern manufacturing and our expertise to support your most critical projects. Our spiral torsion springs continue to deliver dependable rotational force, providing the high-performance torque required for the next generation of medical technology.



The Spiral Torsion Advantage

Spiral torsion springs are crafted from flat strip material coiled into a spiral. They are designed to provide torque consistently over a specific range of rotation, typically less than 360 degrees. This differs from variation in wire spring torque. This design offers several key benefits for medical applications:

Space-Efficient Torque:

Their flat profile allows them to fit into slim housings where traditional springs might fail.

Consistent Rotational Force:

They provide a steady increase in torque, perfect for applications requiring controlled, circular movement.

Low Friction Performance:

When designed with "open" coils, they eliminate turn-to-turn friction during initial deflection, ensuring the quiet, smooth operation essential for precision clinical settings.

Versatility Across the Medical Spectrum

Our spiral torsion springs are the hidden engines behind a vast array of medical equipment. In the operating room, they provide the necessary torque for surgical staplers and facilitate the controlled articulation of endoscopic and laparoscopic tools. They are also vital in self-retaining retractors, where they maintain the consistent tension surgeons depend on.



Beyond surgery, these springs power auto-injectors for accurate drug delivery and ensure precise component movement within blood analyzers. In patient care, they are found in the joint mechanisms of prosthetics for energy return and in adjustable hospital beds for smooth reclining. They even drive the future of recovery in powered exoskeletons and wearable rehabilitation devices, providing the precise rotational assistance needed for patient mobility.



Partner with the Experts

When you choose John Evans' Sons, you are gaining more than a supplier; you are gaining an engineering partner. We work with you to select the ideal materials, such as corrosion-resistant stainless steel, to ensure your components withstand rigorous sterilization and long-term use. Trust our legacy of precision to power your medical innovations. Let's build the future of healthcare together.



Contact John Evans' Sons Today

Our experts offer a depth of expertise to assist you with all parts of the process. We are ready to answer your questions in a timely manner and will help you define what you need. We produce custom springs for all purposes, and we are here to work with you on any of your customization needs. [Contact us today.](mailto:sales@springcompany.com)