



## High-Performance Composite Springs

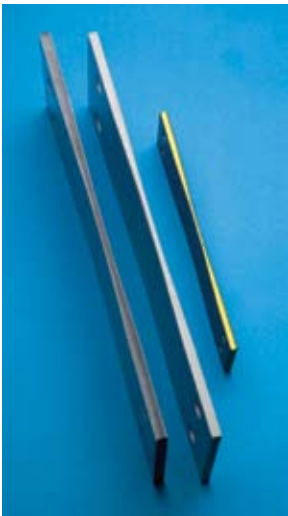
From  
**Gordon Composites**



*Gordon Composite G-Flex™ springs in office chairs withstand millions of cycles with virtually no loss of recovery.*

**You can count on Gordon Composites to produce thousands of parts with consistent performance**

- Technical Expertise
- Manufacturing Capability
- Years of Experience
- Precise Control
- Consistent Performance



The technology in every G-Flex™ high-performance composite spring evolved from laminates that power archery bows used by today's top competitors. Gordon Composites started making world class bows and bow limbs nearly 50 years ago and applied that know-how to make today's most advanced composite springs for a wide range of consumer, commercial and industrial applications, including diving boards, vibratory conveyors and office chairs.

Commercial and industrial spring applications have demanding requirements for consistent resistance and recovery over millions of cycles. G-Flex™ high-performance composite springs have proven their ability to meet those challenging requirements for controlled spring rates in finely tuned mechanical systems.

Gordon Composites is much more than a laboratory for technical advancement. G-Flex™ springs are tailored from start to finish to meet your needs for strength and stiffness, and will withstand numerous flexing cycles.

You can depend on G-Flex™ high-performance springs from Gordon Composites:

- Engineered from start to finish (no prepreps)
- Made with a proprietary pull-forming process
- Using one of the world's largest glass fiber creels
- With more than 50 years experience

Gordon Composites designs, engineers, and manufactures all G-Flex™ springs. Depending on customer needs, they start with tough epoxy resins and either E-glass, S-glass or carbon fiber reinforcements. All springs are made in house, and Gordon has the ability to machine composites post-cure to meet specific performance requirements.



### the leader in deep-deflection, fatigue-resistant laminates

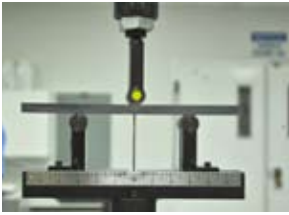
**G-Flex™** high-performance composite springs are available in three popular formats:

- **Pull-formed billets** providing consistent resistance over many cycles with low unit cost
- **Multi-layer laminates** that have a preferred surface finish and provide improved cycle life
- **Stress-contoured laminates** with a patented geometry that combines flexibility with extra strength at connecting points to further increase cycle life



# G-Flex™ High-Performance Composite Springs

## and the art and science of managing energy



The common thread that runs through all of the products at Gordon Composites is their ability to withstand deep deflection over numerous cycles without fatigue or loss of performance.

Pound for pound, glass fibers are stronger than steel and have been used successfully in thousands of demanding end-use applications.



G-Flex™ springs are made with epoxy resin, a thermosetting polymer or plastic that becomes permanently hard after “curing.” This high-performance material is used in aircraft, automobiles, bicycles, golf clubs, skis, snow boards and other applications where high-strength is required.

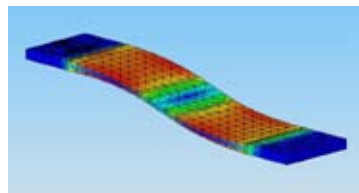


Composites can be tailored to achieve specific performance requirements through fiber direction and placement. Compared to metal, composite springs are:

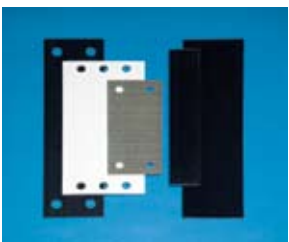
- Light weight
- Fatigue resistant
- Corrosion resistant
- Capable of deep deflection
- Engineered to perform through materials selection and configuration

### **Engineered from start to finish for precise control**

- High-strength glass fibers
- Tough epoxy resins
- Proprietary pull-forming technology
- Post-cure fabrication



*FEA software visualizes the distribution of stress and allows spring designs to be optimized for performance, weight and cost.*



For more than 20 years, Gordon Composites has been supplying advanced composite springs to leading manufacturers of process automation systems. Large or small, G-Flex springs are chosen for their durability and tuning capabilities.

Gordon’s diverse design technology and rapid response to customers’ needs have helped keep them a leader in the composite industry.

**For more information about composite springs, visit [www.gordoncomposites.com](http://www.gordoncomposites.com), or contact Don Forrest at (970) 240-4460, ext. 206 or [donf@gordoncomposites.com](mailto:donf@gordoncomposites.com)**