



The Titanium Advantage

Lighter, Faster, Higher Performance and Improved Suspension

Titanium's low modulus, low density, and high strength combine to produce a spring which is typically 40% to 60% lighter than steel.

The performance advantages of titanium springs extend beyond the weight savings over steel springs. Advanced data recovery systems have shown that titanium springs enhance shock performance and wheel control through improved dynamic response. This is a result of the reduced mass of the titanium springs. Lower mass springs develop less inertia as the suspension is displaced. Less inertia in the spring mass enables the suspension to respond quicker, resulting in improved ground contact and traction. RCS Titanium Springs represent the state of the art in spring engineering.

Titanium springs are lighter, have a higher frequency response and improved suspension dynamics. Properly designed titanium springs have more resistance to set and longer fatigue life than the highly stressed steel springs commonly used in performance applications.

For the exacting specifications of Formula 1 suspensions to the extreme fatigue requirements of snowmobile clutch springs, RCS Titanium Springs provide reduced weight and improved performance.

Titanium vs. Steel

	RCS SPRING GRADE TITANIUM	CHROME SILICON (STEEL)	RCS TITANIUM SPRING	STEEL SPRING	DIFFERENCE
TENSILE STRENGTH	200,000 psi (1.27 GPa)	250,000 psi (1.72 GPa)			
DENSITY	.174 lbs/in³ (4.82 g/mm³)	.285 lbs/in³ (7.90 g/mm³)			
ELASTIC MODULUS	5,350,000 psi (36.9 GPa)	11,500,000 psi (79.3 GPa)			
WEIGHT			2.33 lbs.	4.27 lbs.	45% less
FREE LENGTH			10.0 in.	10.0 in.	same
TRAVEL			6.4 in.	5.2 in.	1.2 in. more
NATURAL FREQUENCY*			127 Hz.	88 Hz.	44% higher

Titanium Expertise

RCS is the Leader in Titanium Spring Manufacturing

RCS has designed, manufactured, and tested titanium springs for demanding aerospace applications for over 15 years. We are now bringing our design and manufacturing expertise to new markets where performance counts.

RCS engineers design springs specifically for demanding applications, not around the production ease or common material sizes as with most mass-produced steel springs. Consequently, the wire size, number of coils, and spring lengths are the optimal dimensions for the application. This optimization results in a custom designed spring that is as light as possible while providing the strength and durability demanded by the application.

RCS offers complete engineering assistance to help our customers. Advanced materials, computer modeling, state of the art equipment and extensive experience are the foundations of a successful spring design. You don't have to know a lot about springs to work with us, that's our job. We'll help you make your product perform better.