BAL SEAL®
ENGINEERING, INC.

Simply a better solution.

Aerospace and Defense

Sealing, Connecting, Conducting and EMI Shielding Solutions

VALVES • PUMPS • ACTUATORS • GIMBALS • CONNECTORS

Smart Solutions for Aerospace & Defense

When manufacturers of critical aerospace and defense equipment need intelligent solutions to the toughest sealing, connecting, conducting and EMI/RFI shielding challenges, they turn to Bal Seal Engineering. For more than 50 years, our precision-engineered polymer sealing and Bal Seal Canted Coil Spring® technologies have been improving the performance, safety and reliability of commercial and military aircraft systems, protecting sensitive onboard radar, and even ensuring the combat-readiness of ground troop communications and targeting gear.

We're more than just a problem-solver - we're your *innovation partner*. With our vast application engineering knowledge base, industry-compliant processes and advanced manufacturing capabilities, we can help you develop standard-setting breakthroughs that give you a competitive edge. Our unique collaborative approach enables us to quickly identify and address design issues, so that you can improve speed to market and enhance equipment performance.

Bal Seal products have earned the trust of industry primes, and they're already at work in many of the world's best-known commercial, regional and business aircraft, as well as fighter jet and military helicopter platforms. Our skilled engineers are continually developing new solutions for emerging aviation, marine and modern battlefield technologies.

Bal Seal® Spring-energized Seals

We offer a wide range of sealing products machined from Polytetrafluoroethylene (PTFE) and other premium polymers. These materials can be blended with engineered fillers, such as carbon fiber, to meet your specific application requirements for durability, temperature resistance and longevity. Typically, our seals are energized with a custom-engineered Bal Seal Canted Coil Spring®, which exerts a near-constant force over a wide deflection range to ensure more even, consistent wear and longer service life in the following types of applications:

- Rotary
- Reciprocating
- Oscillating
- Face

Controllable friction forces

Long life

Excellent chemical resistance

Broad temperature range

Canted Coil Technology at the Core

The solutions we develop begin with proven Bal Seal Canted Coil Spring® technology. In electrical conducting and EMI/RFI shielding applications, the spring's individual coils provide multi-point contact, and they compensate for mating surface irregularities and misalignment. As a contact component, the spring offers superior conductivity and power density. It runs cooler than other contact technologies, and it is also self-cleaning.

Since it is capable of performing both mechanical and electrical functions, the Bal Seal Canted Coil Spring® eliminates unnecessary components and can help reduce system weight. Its highly customizable design also allows for precise control of insertion and breakaway forces. As a stand-alone solution, the Bal Seal Canted Coil Spring® is ideal for use in applications that require:

- Latching/locking
- Holding
- Centering
- Conducting
- EMI/RFI Shielding
- Grounding
- Tolerance compensation

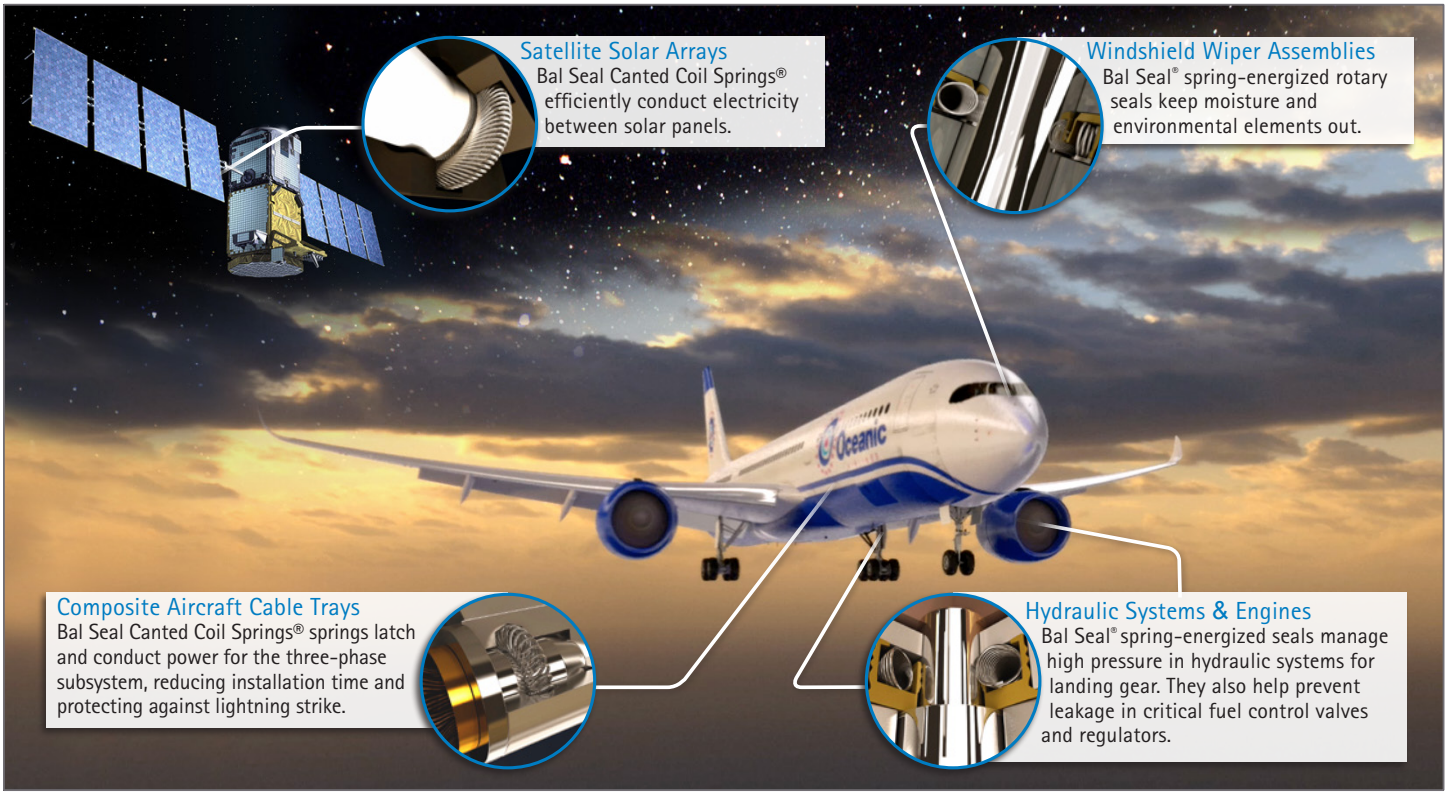
High contact power density

Easy installation/ field replacement

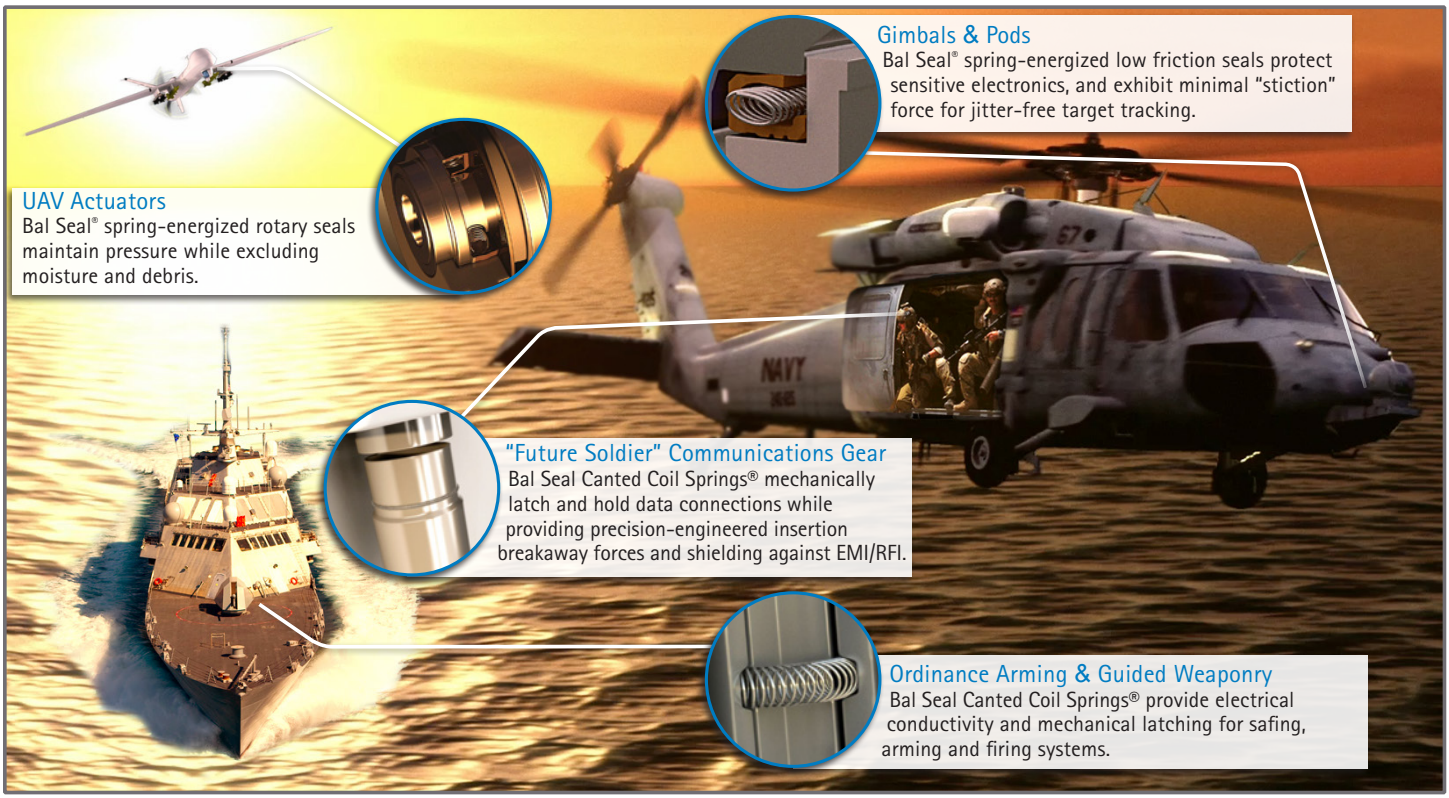
Built-in shock and vibration resistance

Customizable insertion & breakaway forces

Typical Aerospace Applications



Typical Defense Applications



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Bal Seal Engineering is certified to ISO 9001

TMB11-APG-3C-10/30

Cover photo of soldier courtesy of Natick Soldier Systems Center