



Maryland Precision Spring

Quality Products.  
Expert Engineering.  
Innovative Solutions.



**Bellevilles are used in multiple applications in aviation from tip to tail.**

**COCKPIT CONTROLS**

- Cabin Pressure Indication
- Sensors

**DOOR ASSEMBLIES**

- Latch Mechanism
- Handle Assist

**MECHANICAL &  
ELECTROMECHANICAL  
FLIGHT CONTROLS**

- Valves
- Actuators

**INTERIORS**

- Cargo Barriers
- Overhead Bins

**RAM AIR TURBINE**

- Latch mechanism
- Handle assist

**ELECTRONIC SYSTEMS  
AND AVIONICS**

- Fasteners
- Chassis

**LANDING GEAR**

- Position and Weight-on-Wheel Indicators
- Actuator Assembly

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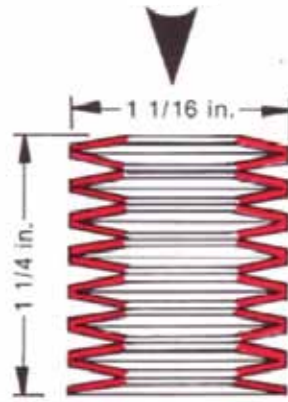
**DISC SPRINGS** have a conical shape that generates high force in a very short spring length and with minimal movement when compressed.

**WEIGHT: 68% LESS**  
**VOLUME: 77% LESS**  
**THAN HELICAL SPRINGS**

Disc spring stack compared to helical spring: same load achieved at substantial reduction in weight and space.

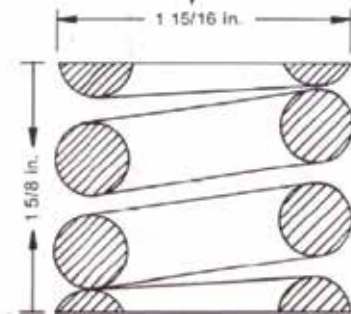
**Disc Spring Stack:**  
 Stack weight: 0.18 lb  
 Volume: 1.11 in<sup>3</sup>

Load: 900 lb.



**Helical Spring:**  
 Stack weight: 0.57 lb  
 Volume: 4.64 in<sup>3</sup>

Load: 900 lb.



## Advantages

- Used singly or in stacks to achieve a desired load and travel
- Parallel stacks provide natural damping effect useful for vibration isolation and shock absorption
- Very space efficient – very high loads can be obtained with small deflections
- Can be tailored to provide loading profiles that are not feasible with coiled springs.



**Minimum Part Weight +  
 Maximum Load Capacity +  
 Minimum Space Requirements**

**BELLEVILLE DISC SPRINGS**

**Need more information or want to discuss your application? Contact  
 Maryland Precision Spring (410) 391-7400 [mps\\_inquiries@mw-ind.com](mailto:mps_inquiries@mw-ind.com)**

The merging of National Disc Spring brand and Rolex Spring brand into MPS ensures continuation of the selection, quality and value that you have come to expect, allowing for a streamlined manufacturing process, optimized system performance and providing ultimate quality control.

