SOLON® MANUFACTURING CO.

Washers
Belleville Springs
Flange Washers
DIN/Disc Springs
Flat Washers

SOLON® Belleville Springs



ISO 9001 CERTIFIED

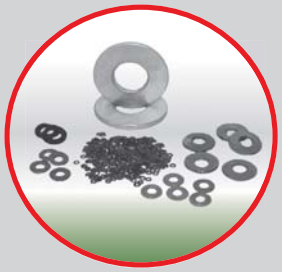
ENGINEERED SOLUTIONS
FOR INDUSTRIES
WORLDWIDE

MADE IN THE USA

www.solonmfg.com

Keep Bolted Joints Tight

Solon Belleville



Solon Flange



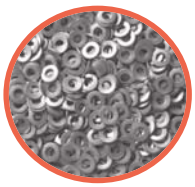
Solon Disc Springs



SOLON® Belleville Springs

Bolted joints loosen due to a variety of reasons. The loss of bolt preload is one of the most prevalent. **Solon Belleville Springs reduce bolted joint failures by maintaining the bolt preload** when exposed to embedment relaxation, bolt creep/yield, elastic interactions and vibration-induced loosening.

Over 2,000 sizes in stock



Belleville Advantages:

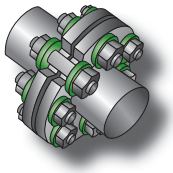
- Maintain bolt preload under normal conditions
- High spring force with small deflections
- Absorbs shock and compensates for vibration
- Predictable load deflection curves where straight, progressive or regressive characteristics are required
- No deformation or fatigue under normal conditions

SOLON® Flange Washers

Flange Washers, a type of Solon Belleville spring, are designed to fit ANSI/ASTM standard flanges. They maintain sufficient bolt tension and resultant gasket stress. In addition, the flat loads for flange washers are designed to meet the demands of many flange live loading applications.

Leak Reducing Applications:

- Valve gaskets and packing
- Heat exchangers
- Pipe flanges



SOLON® Disc Springs - DIN 2093

Solon offers a full range of disc springs for use in dynamic applications which require a large number of deflection cycles or critical deflections.

- Punch and die sets
- Clutch break mechanisms
- Bearing assemblies
- Valve live loading



Solon Disc Spring Sizes and Materials

- Sizes: 6mm to 250mm OD, 3mm to 127mm ID
- Materials: High Carbon Steel, AISI 6150, 17-7PH and 301 Stainless Steel, Inconel 718

ISO 9001 CERTIFIED

Quality

Solon is committed to complete customer satisfaction by meeting customer requirements for engineered solutions, quality, performance, and customer service through continuous improvement in all areas of the organization.

Solon Manufacturing Company has established, documented, implemented and maintains a quality management system to continually improve the effectiveness of its processes and to better satisfy the needs of its customers. The quality system complies with the ISO 9001 Standard.

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Belleville Benefits: *Saving YOU Time and Money*

- Simple adjustment to load/deflection of a spring stack
- Largely self-damping
- Long service life
- No or minimal maintenance



Materials & Specifications

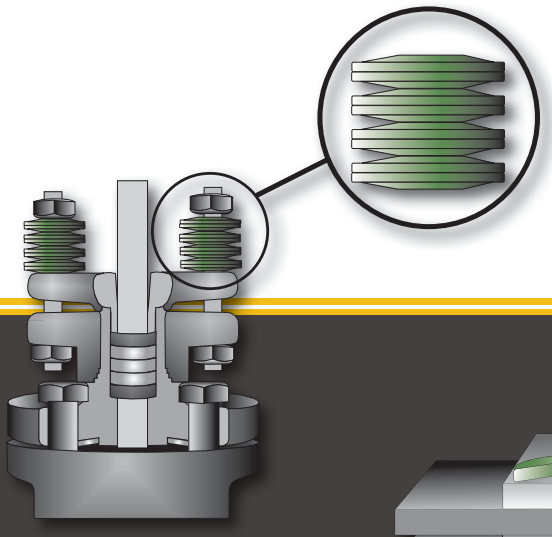
Solon designs and manufactures Bellevilles with materials and coatings that offer excellent spring performance. Solon's Belleville Spring Division stocks sizes from **#4 to 4 inch and from 3mm to 127mm.** Material types available include Alloy Steel, High Carbon Steel, 17-7PH and 301 Stainless Steel, Inconel 718, Phosphor Bronze, and H-13 Tool Steel. Temperature ranges: -400ºF to 1100ºF. Other exotic materials available upon request.

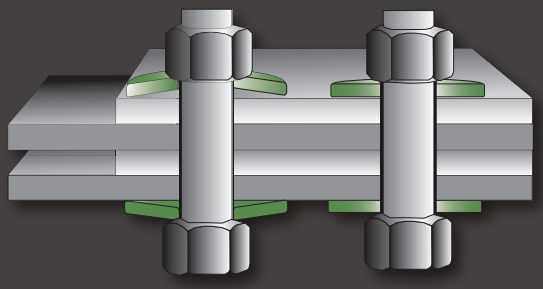
DIN 2093, AISI, ASTM, RoHS
DFAR compliant

Engineering Support

Our highly trained engineering staff provides solutions for difficult and unique applications. We will work with you to support your design needs for standard and custom applications. Call today to speak with an application engineer - 800.323.9717.

Valve Live Loading
Heavy Duty Bolting
Electrical Connections
Structural Members
Offshore
LNG
Off-Road Equipment
Vibratory Equipment
Substations
High Temperature Pipe Flanges





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SOLON® MANUFACTURING CO.

EST. 1949

Located in Chardon, OH, Solon Manufacturing Co. has been engineering and manufacturing products for industries worldwide since 1949. In the early days, with the development of the Solon Relief Valve, used most notably on John Glenn's spacesuit on his historic orbit of the earth in 1962. To the late 1960's when Solon Flange Washers were designed for use in flange bolting in cyrogenic, hydrocarbon, and petro-chemical industries. Through the 1970's and 80's, adding additional materials to compensate extreme temperatures, corrosion and magnetism. Today, Solon Manufacturing manufactures a wide variety of standard and metric sizes using many different materials and protective coatings, with over 2,000 sizes in stock. Solon is committed to manufacturing high quality Belleville springs for use in simple bolting to the most complex bolting applications.



SOLON® Pressure Switches

Solon also manufactures a complete line of high quality industrial pressure switches, many used in the same markets as Solon Belleville Springs.

Applications ranges:

- Low-pressure differential pressure switches for nuclear safety
- High-pressure petro-chemical
- SF_6 gas density and pressure monitoring to electric utilities worldwide

For more information on Solon Pressure Switches, please call 800.323.9717 or visit www.solonmfg.com.

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