



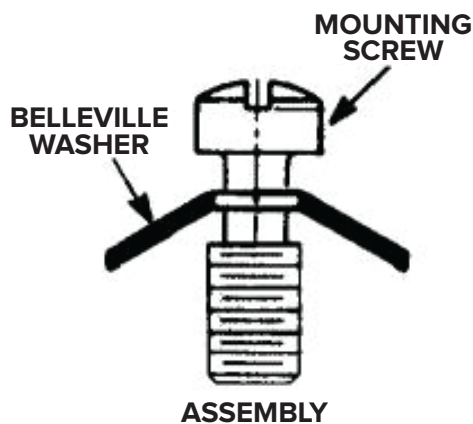
## Belleville Washers: Critical Components for Precise Applications

### What is a Belleville Washer?

Belleville washers, or disc springs, have a conical shape that generates high force in a very short spring length and with minimal movement when compressed.

Belleville washers are designed to match bolts with specific preload requirements

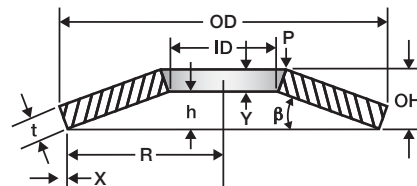
Proper installation of a belleville washer.



### Belleville Washer



applies clamping pressure along a continuous arc pattern



Disc Spring Dimensions

### Advantages of Belleville Washers

- High load capacity in a small space
- Maintain high tension in bolted applications
- Act as shock absorbers
- Provide a dampening function
- Load characteristics can be changed by stacking



Parallel Stack

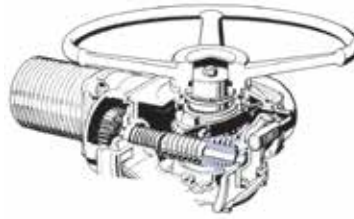
Series Stack

Parallel-Series Stack

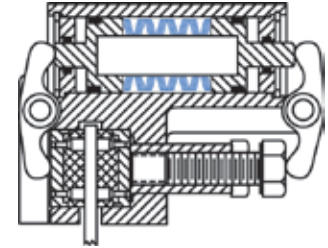
# Belleville Washers and Disc Springs

Disc springs are used in applications throughout a wide range of industries. Because spring washers exert a uniform pressure that remains constant, they are an ideal situation for solutions where tension losses caused by thermal expansion/ contraction, compression set, or wear of parts occur.

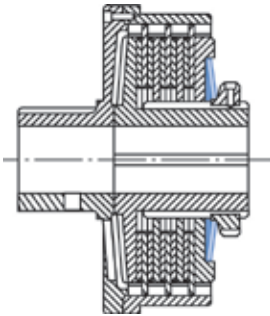
Valve Actuator Assembly



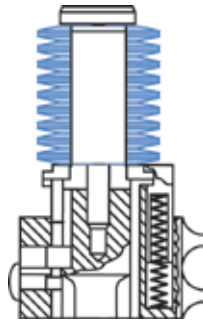
Fall-Safe Brake Assembly



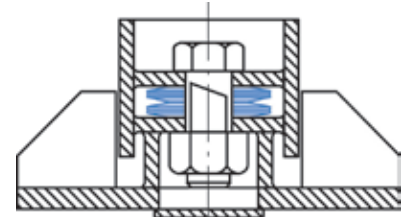
Friction Assemblies



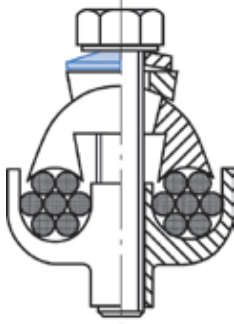
Punch Stripper Assembly



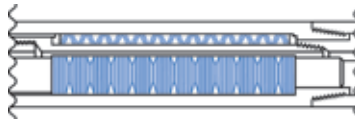
Shock Absorbing Bolted Assembly



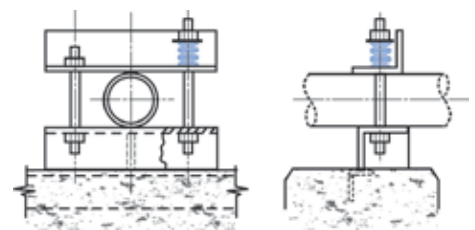
Cable Support Assembly



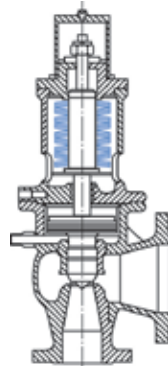
Drill Bit Shock Absorber



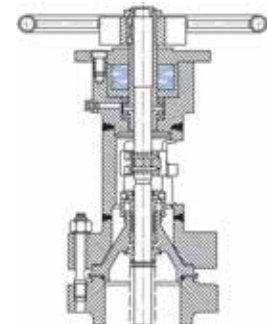
Pipe-Hold-Down Assembly



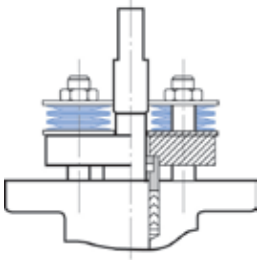
Cable Support Assembly



Pipe-Hold-Down Assembly



Drill Bit Shock Absorber



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.

