



Spring Alignment Dowels/Bushings

SPIROL's roll formed hardened Bushings are designed to meet one or more of the following objectives:

- ⊙ **Align mating components,**
- ⊙ **Eliminate drilling of a separate bolt hole,**
- ⊙ **Protect bolts from shear loading, and/or**
- ⊙ **Maintain joint integrity**

Although these hollow, lightweight Bushings are not precision ground and do not require precision holes, thus saving in component and hole preparation costs, they are capable of precision alignment if the design guidelines are followed. Further savings can be achieved by using the inside of the Dowel Bushing for the bolt and thus eliminating the cost of a separate bolt hole. This design concept also protects the bolt from shear loads perpendicular to the bolt and isolates the forces on the bolt to tension loading. Shear forces acting on a bolted joint cause the joint members to slip back and forth, which causes the bolts and nuts to rotate, reducing the pre-load tension. This is particularly the case with short bolts with a reduced clamping distance.

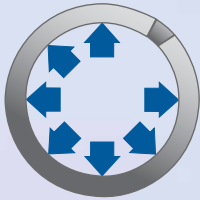




Product Features and Benefits

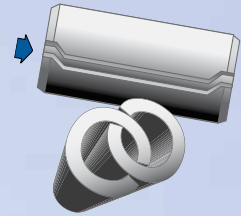
SPRING ACTION

The diameter of the Bushing is slightly larger than the hole. The spring action of the Bushing allows it to be installed into a drilled or cored hole and assume the diameter of the hole. It is self-retained once installed.



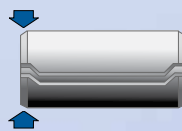
STAGGERED SEAM

The staggered seam prevents interlocking, making these Bushings suitable for automatic feeding and eliminating the need to separate them during manual assembly.



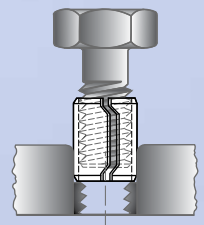
LEAD-IN CHAMFERS

The beveled chamfer around the entire periphery of the Bushing is designed to facilitate ease of insertion and to avoid skiving of the Bushing during installation.



CONTROLLED INSIDE DIAMETER

The inside diameter of the Dowel Bushings is designed to provide clearance for a bolt through the Bushing for the purpose of fastening the aligned components together. This isolates the bolt from the shear loading and increases the joint integrity. It also eliminates the cost of a separate hole.





**Innovative fastening solutions.
Lower assembly costs.**



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SPIROL Application Engineers will review your application needs and work with you to recommend the optimum solution. One way to start the process is to visit our **Optimal Application Engineering** portal at **SPIROL.com**.