

Z-Form®

Zero Clearance Bolt & Sleeve Assembly



Acument Global Technologies

Quality first. Engineered to last.®

Zero clearance. Zero Slip.

Typical bolted joints require clearance to accommodate machining tolerances and rely solely on clamp load to prevent joint slip. In joints subjected to high shear loads, traditional bolted joint assemblies may not be capable of keeping the clamped components from moving laterally in relation to each other. Dowel pins and locating sleeves are traditionally used to resist these shear loads.

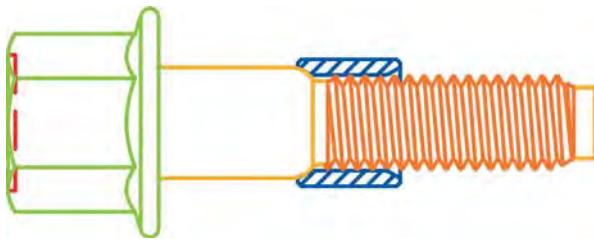
The Z-Form® Assembly consists of a shoulder bolt with a pre-assembled deformable sleeve which, when installed completely eliminates clearance between the bolt and the through hole in the clamped component. This increases resistance to slippage, retains clampload and extends gasket/seal life.

Features

- Sleeve expanding shoulder
- Retained deformable sleeve
- Zero clearance joint interface

Benefits

- Extremely high level of torque capacity for drive line joints
- Prevents lateral slippage in joints subjected to high shear loads
- Allows for the use of fewer or smaller fasteners in many applications



Specifications

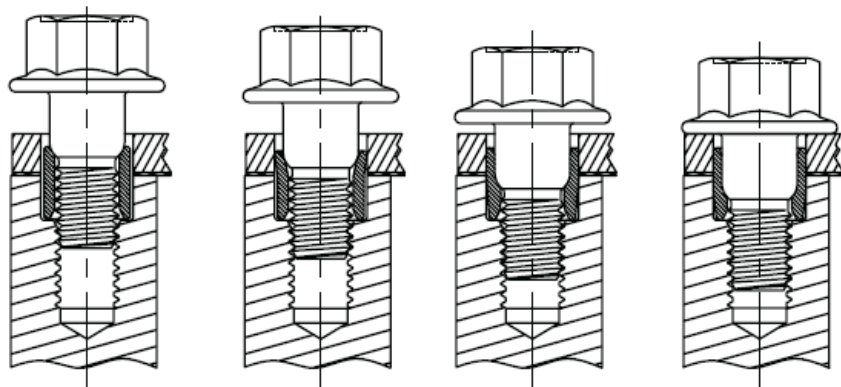
- Available in standard sizes from M6 through M12

Industry Applications

- Drive Trains
- Brake Systems
- Flex Plates
- Flywheels
- Ring Gears
- Bearing Caps
- Floating Axle Hubs
- Transmission Housings
- Suspension Components

Holding the world together.

In one customer validation test involving a ring gear application, Z-Form® Bolt & Sleeve Assembly outperformed the existing fastener by achieving 18X the number of reversing cycles. As a result, fewer or smaller fasteners may be used while still retaining a longer lived and completely serviceable joint.



Acument Engineering Services

Available for Z-Form® Zero Clearance Bolt & Sleeve Assembly

Value Analysis / Value Engineering

Acument Global Technologies VAVE is a cross-functional, highly creative, systematic approach in which cross-disciplined Acument engineers interact directly with your team to help you eliminate or prevent unnecessary costs. However, Acument VAVE means much more than cost reduction. Acument VAVE engineers work directly with your team to effect changes that while reducing overall costs will improve the process efficiency and/or product quality. Acument offers seven distinct VAVE programs to help you realize the highest value for your product.

Fastener Consolidation Program

The Acument team reviews and filters all of your fasteners for commonization and consolidation into like products. This program simplifies your bill structure and part management costs and reduces your total purchased cost.

Line Touch

An Acument engineer focuses on a single application or station on your assembly line to solve a single problem with a limited scope.

Cost Reduction

An Acument engineer focuses on optimizing part design and reducing the manufacturing cost of a part to help you meet your price reduction targets.

Benchmarking

An Acument team reviews similar products from multiple companies to determine our ability to supply you with the best solutions.

Product Assembly Map

The Acument Product Assembly Map program engages a cross-functional, cross-disciplined team to review your finished product through disassembly and breakdown of individual sub-components to help us determine our capacity to supply you with the best fastening solutions.

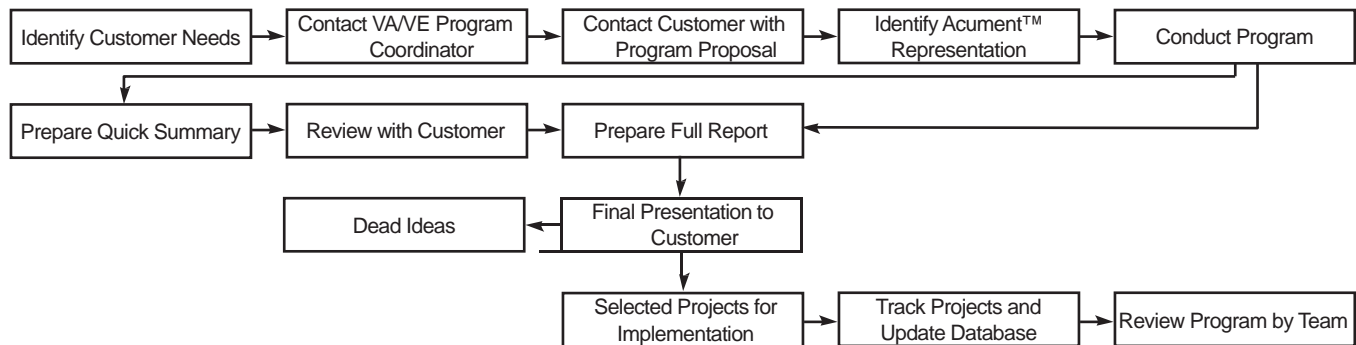
Product Teardown

The Acument product teardowns/dissassemblies are conducted to help you reduce your overall costs through product dissassemblies. The teardowns target design changes that reduce overall product cost or improve product quality, while increasing process efficiency.

Line Review

The Acument VAVE team conducts a thorough review of your assembly line with the objective of increasing value by reducing assembly costs through part or process changes and at the same time increasing your product quality.

VAVE Process Flow



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