

STAR FASTENERS

## Huck® BOM® Structural Blind Fastener Vs Welding

### What is a Huck® BOM® fastener?

The BOM® (Blind, Oversized Mechanically-locked) heavy-duty fastener stands out as a structural blind fastener with superior strength and tamper resistance. BOM® not only delivers high tensile and shear strength typically associated with Lockbolts, but also introduces the flexibility of single-sided installation. This makes it especially well-suited for use in areas with limited access. The versatility of BOM® structural makes them suitable for diverse range of projects.

Huck® BOM® fasteners are commonly used in industrial and construction applications. Here are some general applications: -

#### Heavy Machinery and Equipment:

These fasteners are often employed in the assembly and construction of heavy machinery and equipment. Their oversized design and structural integrity make them suitable for handling significant loads and vibrations.

**Transportation Industry:** In the transportation sector, particularly in the assembly of commercial vehicles, trucks, buses, and other large vehicles, Huck® BOM® are used to provide robust and reliable connections and maintain strength and structural integrity for the life of the joint.

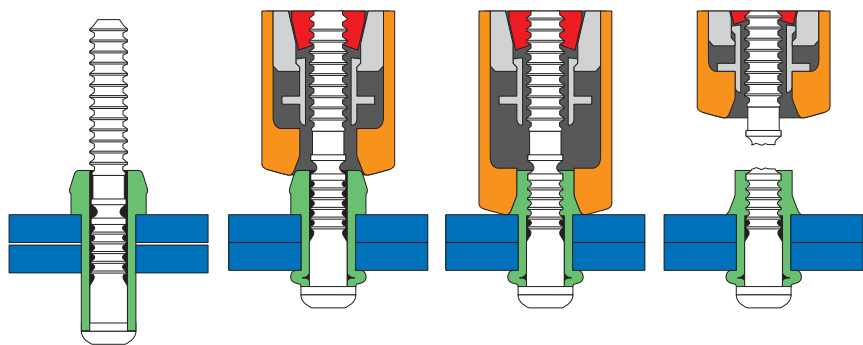
#### Infrastructure and Construction:

For large-scale construction projects, such as bridges, buildings, and other infrastructure, these fasteners can be used to join structural elements securely.

#### Rail and Aerospace Applications:

The rail and aerospace industries often require fasteners that can withstand high levels of stress and

### BOM Blind Fastener Installation Sequence



1. Insert the fastener into the hole and slip the installation tool over the pintail.

2. Press the trigger to initiate pulling action. As the tool pulls on the pintail, the unique collar design "stands off" the swaging action until the maximum allowable bulb is formed on the backside.

3. Continued pulling on the pintail draws the work pieces together and the swaging anvil overcomes the standoff and moves down the length of the collar, securely locking the collar to the pin.

4. Once the collar is swaged, the pin breaks leaving a high strength, vibration resistant secured joint.

ensure the structural integrity of components.

**Energy Sector:** In power plants, oil and gas facilities, or renewable energy projects, these fasteners are utilised for assembling components that need to endure harsh environmental conditions.

Often used as a replacement for welding, the Huck® BOM® fastener is so strong, one BOM® fastener can do the work of several conventional fasteners. Huck® BOM® fasteners have been proven to withstand years of service in high-stress, high-vibration environments without weakening

#### Key Benefits of the Huck® BOM®

- Offers Lockbolt® level performance.
- Very high tensile and shear strength.
- Exceptional quick, consistent and

repeatable installation.

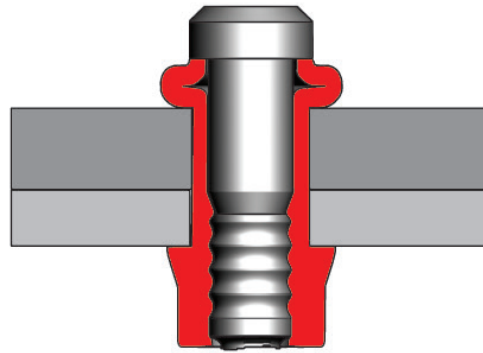
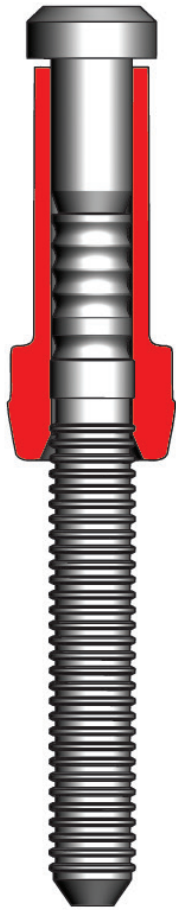
- Excellent vibration resistance.
- High grip capability
- Tamper-resistant features.
- A wide variety of diameters are available.

#### High strength/diameter ratio:

BOM® is used in demanding structural applications as an alternative to threaded fasteners as it has high joint tightness when compared to conventional blind fasteners.

#### Huck® BOM® fastener vs Welding

The choice of fastening methods plays a key role in determining the success of any project. Whether Huck® fasteners are a superior fastening method than welding depends on the specific application, requirements, and constraints of the project.



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Both methods have their advantages and disadvantages, and the choice between them should be made considering various factors. Here are some situations where the Huck® BOM® fastener might be considered preferable to welding:

**Speed and Ease of Installation:**

Huck® fasteners are generally quicker to install than welding as producing a welded joint involves a more intricate process, demanding additional time for preparation, execution, and cooling. If time is a critical factor in a project, Huck® fasteners can offer a faster assembly process.

**No Heat Generation:** Welding involves the application of heat to melt and fuse materials which can lead to thermal distortion, potentially leading to weakened structural integrity. Huck® fasteners do not generate heat during installation, making them suitable for heat-sensitive materials or applications where heat distortion is a concern. As welded joints are more susceptible to vibrational stresses impacting long-term

structural stability, they may require higher maintenance needs over time. Once correctly installed, the Huck® BOM® fastener needs no further checking.

**Corrosion Resistance:** The corrosion resistance of fasteners is a critical aspect in any project, where durability and longevity are paramount. Ensuring the corrosion resistance of fasteners not only preserves the structural integrity of the components but also extends the lifespan of the entire assembly.

**No Specialised Training Required:** Installing Huck® BOM® blind fasteners requires less specialised training compared to welding. The simple installation procedure requires just basic training, which in turn reduces the labour costs associated with installation and assembly, ultimately optimising the workflow.

**Enhanced Structural Integrity:** The BOM® fastener creates a robust mechanical link, enhancing structural integrity. Its large bearing area on both sides of the workpiece ensures a permanent, tamper resistant joint.

**Vibration Resistance:** The collared flange is locked to the pin through a swaging process, creating a high

vibration resistant connection, crucial in maintaining structural stability.

**Repair, Dismantling and Recycling:** Welded joints may require cutting and additional processing for recycling. Huck® BOM® fasteners are generally easier to remove than welded joints. This can be crucial in situations where components need to be disassembled / recycled, repaired, or replaced.

**Versatility:** Huck® fasteners can be used in various materials. They offer versatility in terms of material compatibility and can be a practical choice for projects involving differing materials.

It's important to note that although Huck® fasteners have advantages in certain scenarios, welding also has its own strengths, after all, welding has long been utilised in applications that requires a secure joint. However, today's manufacturers have an alternative fastening method which offers several compelling reasons to consider installing Huck® BOM® maintenance-free structural blind fasteners as a proven alternative to welding.

In summary, the choice between installing Huck® fasteners and welding depends on the specific requirements of the application, including the materials being joined, the desired strength of the joint, time constraints, and the need for reversibility or reparability. Each method has its own set of advantages and limitations and the best solution depends on the unique circumstances of each application.

