BobTail®
The Next Generation
Small Diameter Huckbolt®

No Pintail
Fast Installation
Vibration Resistant

1/4” - 3/8”
The Huck® BobTail® System

Engineered for the Highest Level of Performance and Reliability

The Huck® BobTail® system was developed to meet the unique challenges of a wide range of assembly applications, offering safe, quiet, swaged-on installation technology in an advanced HuckBolt® design.

Offering up to 10 times the fatigue strength of conventional nuts and bolts, BobTail delivers ultimate strength, installation speed, and vibration resistance. It has been designed to provide superior joining strength in even the most extreme environments. Available in a wide range of sizes, grades, and materials, BobTail often provides an overall lower installed cost when you factor in the cost of the fasteners with installation speeds and inspection labor.

BobTail Benefits

■ No pintail
■ Unmatched installation speed
■ Low overall installed cost
■ Superior fatigue strength
■ Vibration resistant
■ Ergonomically designed installation tooling

■ Silent installation
■ No repetitive stress injuries
■ Eliminates need for secondary operations
■ No special training or skills required for operators
■ Quick visual inspection is all that’s needed for a quality-assured joint

Installed Gap Comparison

Unlike conventional nuts and bolts, which have gaps on the thread flanks even when tightened, the BobTail system is designed for full metal-to-metal contact around the bolt thread by the collar. An installed BobTail has no gaps and delivers a more secure connection, providing reliability even in the most severe environments.

The swaged collar forms over the lock thread, and eliminates the gap.

Regular nuts and bolts have gap, which allows for loosening by vibration.
Installation Sequence

The BobTail System delivers a lightning-quick installation cycle time for greater productivity. This quick cycle is due, in part, to the short time required to apply the tool to the pin and complete the installation cycle. Once the operator engages the trigger, the swage sequence begins. Releasing the trigger ejects the fastener.

1. The pin is inserted into the prepared hole, and the collar is placed onto the pin.

2. The installation tool is applied to annular pull grooves. When the tool is activated, a puller in the nose assembly draws the pin into the tool, tension loading the joint and drawing up any sheet gap.

3. At a predetermined force, the anvil begins to swage the collar into the pin’s lockgrooves. Continued swaging elongates the collar and pin, developing precise clamp.

4. When swaging of the collar into the pin lockgrooves is complete, the tool ejects the fastener and releases the puller to complete the sequence.

Secure, Fast Installation

Combining an advanced fastener design with the latest in easy-to-use, ergonomic installation tooling, the BobTail system delivers a strong connection and sets a new standard for ease of installation.

- Pintail-less design means reduced noise, no waste, and improved corrosion resistance.
- Collar material swaged into the lockgrooves forms a permanent, vibration-resistant connection.
- Low-swage technology means faster, lighter-weight tooling that costs less.

Visual Inspection

Before Swaging

After Swaging

The swaging process deforms and changes the color of the collar.
## Data and Dimensions

### Head Style Options

![Head Style Options Diagram]

### Fastener Dimensions

<table>
<thead>
<tr>
<th>Diameter</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>B</th>
<th>C</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4&quot;</td>
<td>.249 max</td>
<td>.537 — .507</td>
<td>140 — 120</td>
<td>595 — 545</td>
<td>155 — 135</td>
<td>.473 — .437</td>
<td>113 — 104</td>
</tr>
<tr>
<td>5/16&quot;</td>
<td>.313 max</td>
<td>.680 — .640</td>
<td>175 — 150</td>
<td>—</td>
<td>—</td>
<td>.589 — .547</td>
<td>141 — 127</td>
</tr>
<tr>
<td>3/8&quot;</td>
<td>.374 max</td>
<td>.820 — .780</td>
<td>210 — 190</td>
<td>825 — 775</td>
<td>210 — 190</td>
<td>.709 — .656</td>
<td>168 — 152</td>
</tr>
</tbody>
</table>

### Grip Tables

<table>
<thead>
<tr>
<th>Grip</th>
<th>Grip Range</th>
<th>1/4&quot;(8)</th>
<th>5/16&quot;(10)</th>
<th>3/8&quot;(12)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>D</td>
<td>E</td>
<td>D</td>
</tr>
<tr>
<td>4</td>
<td>125 — 375</td>
<td>0.187</td>
<td>1.000</td>
<td>0.187</td>
</tr>
<tr>
<td>6</td>
<td>250 — 500</td>
<td>0.312</td>
<td>1.125</td>
<td>0.312</td>
</tr>
<tr>
<td>8</td>
<td>375 — 625</td>
<td>0.437</td>
<td>1.250</td>
<td>0.437</td>
</tr>
<tr>
<td>10</td>
<td>500 — 750</td>
<td>0.562</td>
<td>1.375</td>
<td>0.562</td>
</tr>
<tr>
<td>12</td>
<td>625 — 875</td>
<td>0.687</td>
<td>1.500</td>
<td>0.687</td>
</tr>
<tr>
<td>14</td>
<td>750 — 1000</td>
<td>0.812</td>
<td>1.625</td>
<td>0.812</td>
</tr>
<tr>
<td>16</td>
<td>875 — 1125</td>
<td>0.937</td>
<td>1.750</td>
<td>0.937</td>
</tr>
<tr>
<td>18</td>
<td>1000 — 1250</td>
<td>1.062</td>
<td>1.875</td>
<td>1.062</td>
</tr>
<tr>
<td>20</td>
<td>1125 — 1375</td>
<td>1.187</td>
<td>2.000</td>
<td>1.187</td>
</tr>
</tbody>
</table>
**Collar Dimensions**

<table>
<thead>
<tr>
<th>Diameter</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>J</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4&quot;</td>
<td>0.485—0.515</td>
<td>0.360—0.380</td>
<td>0.396 MAX</td>
<td>0.250—0.255</td>
</tr>
<tr>
<td>5/16&quot;</td>
<td>0.610—0.640</td>
<td>0.458—0.478</td>
<td>0.500 MAX</td>
<td>0.316—0.322</td>
</tr>
<tr>
<td>3/8&quot;</td>
<td>0.730—0.770</td>
<td>0.545—0.565</td>
<td>0.600 MAX</td>
<td>0.376—0.384</td>
</tr>
</tbody>
</table>

**Installed Fastener Values - lbf (KN)**

<table>
<thead>
<tr>
<th>Diameter</th>
<th>Carbon Steel</th>
<th>Aluminum</th>
<th>Stainless Steel</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Grade 2R</td>
<td>Grade 5 BR</td>
<td>2024C</td>
</tr>
<tr>
<td></td>
<td>Clamp Tensile</td>
<td>Shear</td>
<td>Clamp Tensile</td>
</tr>
<tr>
<td>1/4&quot;</td>
<td>1,805 (8.0)</td>
<td>3,000 (13.3)</td>
<td>3,050 (13.6)</td>
</tr>
<tr>
<td>5/16&quot;</td>
<td>2,810 (12.5)</td>
<td>4,600 (20.5)</td>
<td>4,725 (21.0)</td>
</tr>
<tr>
<td>3/8&quot;</td>
<td>4,020 (17.9)</td>
<td>6,500 (28.9)</td>
<td>6,825 (30.3)</td>
</tr>
</tbody>
</table>

Should “A” or “B” dimensions exceed the given values, the fastener is out-of-grip.
A “C” dimension less than the given values indicates an incomplete swage. A “D” dimension greater than the given values indicates an incorrect or worn anvil on the installation tool.
Bobtail Installation Tooling

Lightweight, Technologically Advanced Tooling

Newly designed BobTail tooling makes the installation process quicker and easier by reducing the force required to install each fastener. More compact and lighter weight than previous Huck lockbolt production tooling, BobTail installation tools also offer greater operator flexibility as well as extended reach into difficult areas.

For tight, space-constrained applications, BobTail tools allow the operator to position his or her hand at a safe distance from the working structure during installation.

### Tooling Selection

<table>
<thead>
<tr>
<th>Diameter</th>
<th>Tool</th>
<th>Installation Nose</th>
<th>Cutter Nose</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4&quot;</td>
<td>244BT 2480 SFBBT8</td>
<td>99-7932 99-7930</td>
<td>99-7932CC 99-7930CC</td>
</tr>
<tr>
<td>5/16&quot;</td>
<td>256BT SFBBT8</td>
<td>99-7923 99-7929</td>
<td>99-7923CC 99-7929CC</td>
</tr>
</tbody>
</table>

### Tooling Weight and Dimensions

<table>
<thead>
<tr>
<th>Model</th>
<th>Type</th>
<th>Weight</th>
<th>Length</th>
<th>Height</th>
<th>Width</th>
</tr>
</thead>
<tbody>
<tr>
<td>244BT</td>
<td>Pneumatic</td>
<td>6.3 lbs</td>
<td>5.99&quot;</td>
<td>12.79&quot;</td>
<td>1.44&quot;</td>
</tr>
<tr>
<td>256BT</td>
<td>Pneumatic</td>
<td>11 lbs</td>
<td>6.99&quot;</td>
<td>14.85&quot;</td>
<td>1.50&quot;</td>
</tr>
<tr>
<td>2480</td>
<td>Hydraulic</td>
<td>2.2 lbs</td>
<td>8.21&quot;</td>
<td>6.55&quot;</td>
<td>1.82&quot;</td>
</tr>
<tr>
<td>SFBBT8</td>
<td>Hydraulic</td>
<td>4.0 lbs</td>
<td>3.69&quot;</td>
<td>2.29&quot;</td>
<td>1.70&quot;</td>
</tr>
</tbody>
</table>

### Cost-Efficient Operation

The BobTail System’s low swage technology directly contributes to longer tool and component life, while allowing extended tool maintenance cycles. As a result, costs for parts and overall support are reduced, while system uptime is increased.

### Safe and Silent Performance

The BobTail fastener is installed without a pin break, contributing to a dramatic reduction of noise on the shop floor, and subsequently, improved worker hearing safety. Instances of foreign object damage (FOD) and loose pintail injuries are eliminated. Because BobTail tooling features a smooth, shock-free installation sequence, repetitive stress injuries are eliminated, and overall safety is increased.

This BobTail installation tool was specifically designed to perform in tight spaces with less than 5-1/2" of clearance.
Ordering Information

Follow the form below to construct a part number for ordering BobTail® pins and their respective collars. Refer to the Grip Tables (page 4) for grip numbers.

**Pins**

BT (HEAD STYLE) - (MATERIAL) (DIAMETER) - (GRIP NUMBER) (FINISH)

Example: BT-BR8-8GA is a BobTail Pin, Grade 5 Carbon Steel, 1/4" Diameter, Grip 8, Zinc Plated

<table>
<thead>
<tr>
<th>Head Style</th>
<th>Prefix</th>
<th>Material Code</th>
<th>Diameter</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trazier</td>
<td>BT</td>
<td>Grade 2 Carbon Steel</td>
<td>1/4&quot;</td>
<td>8</td>
</tr>
<tr>
<td>9BT</td>
<td>BT9BT</td>
<td>Grade 5 Carbon Steel</td>
<td>5/16&quot;</td>
<td>10</td>
</tr>
<tr>
<td>90°</td>
<td>BT90</td>
<td>2024 Aluminum</td>
<td>3/8&quot;</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td></td>
<td>305 Stainless Steel</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>430 Stainless Steel</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Collars**

BTC (GRADE) - (MATERIAL) (DIAMETER) (FINISH)

Example: BTC5-R8UA is a BobTail Collar, Grade 5 Carbon Steel, 1/4" Diameter, Zinc Plated

<table>
<thead>
<tr>
<th>Grade</th>
<th>Prefix</th>
<th>Material Code</th>
<th>Diameter</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade 2</td>
<td>BTC</td>
<td>Low Carbon Steel</td>
<td>1/4&quot;</td>
<td>8</td>
</tr>
<tr>
<td>Grade 5</td>
<td>BTC5</td>
<td>Aluminum</td>
<td>5/16&quot;</td>
<td>10</td>
</tr>
<tr>
<td>Grade 8</td>
<td>BTC8</td>
<td>305 Stainless Steel</td>
<td>3/8&quot;</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td></td>
<td>430 Stainless Steel</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Tab lock option available*
Arconic Fastening Systems

Arconic Inc. (NYSE: ARNC) creates breakthrough products that shape industries, providing solutions to complex engineering challenges to transform the way we fly, drive, build, and power. Combining ingenuity and advanced manufacturing, we deliver products that meet the challenges and demands faced by our customers.

Arconic Fastening Systems, formerly Alcoa Fastening Systems & Rings, is a global leader in fastening technology. Offering the greatest breadth and depth of fastening system solutions in the industry, Arconic continues to reflect the same commitment to product quality and support that customers have come to expect. To serve its growing market, Arconic Fastening Systems maintains corporate offices worldwide. In addition, Arconic distributors are located in many key industrial centers throughout the world, providing a ready supply of fasteners, installation tools, tool parts, and application assistance.

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