BPI® BUTTONHEAD™ EXTENDER – BNE, 5Ab

COLD-SWAGED HEADED DEFORMED BARS WITH PROVISION FOR EXPANSION

- **BNE 5Ab HEAD** – Has the same bearing area as the standard BPI ButtonHead. For transmitting bond force from the reinforcing bar to concrete by a combination of head bearing & development length.
- **DUAL USE** – Behaves as a Headed Deformed Bar by itself, and/or as a Full Mechanical Splice when connected to a standard GRIP-TWIST® male coupler.
- **HIGH STRENGTH HEADED BAR** – Connections to bar exceed the specified yield strength (fy) of the bar for ASTM A615 Grades 60, 75 and 80 and A706 Grades 60 and 80, as required by ACI 318. Confirming in-air tests meet ASTM A970 Class A and Class HA for uncoated Grades 60, 75, 80, 100, and 120 reinforcing bars.
- **TYPE 2 FULL MECHANICAL SPlice** – ACI 318 Section 18 (ACI 318-11 Section 21) and 2018 International Building Code. Exceeds the specified tensile strength (f_t) of the bar for ASTM A615 Grades 60 & 75 and A706 Grades 60 & 80 uncoated deformed bars. Also Exceeds 125% specified yield strength (fy) of these bars as well as ASTM A615 Grades 80.
- **SHOP INSTALLATION** – Attaches directly to the reinforcing bar. Shop swaged quickly and efficiently.
- **POSITIVE INTERNAL STOP** – Reinforcement bar is simply inserted completely before shop swaging.
- **KEY ADVANTAGES** – Acts as an ACI 318 and ASTM A970 Headed Deformed Bar while providing for future expansion in a subsequent phase of construction with the ease of the self locating and quick assembly of the standard GRIP-TWIST® male coupler’s tapered threads.
- **CONVENIENCE** – No special bar end preparation or thread cutting. For bar sizes #4 – #11 (Ø 13 – 36 mm). Plastic thread protection is included.

### HOW TO SPECIFY BPI® BUTTONHEAD™ EXTENDER HEADED DEFORMED BARS

**BAR-TO-HEAD EXTENSION** by BarSplice Products, Inc., Dayton OH

**BPI® BUTTONHEAD™ EXTENDER**

By Name:  **By Generic Description:**

<table>
<thead>
<tr>
<th>REBAR SIZE</th>
<th>EXTENDER PRODUCT CODE</th>
<th>EXTENDER COLOR CODE*</th>
<th>EXTENDER WEIGHT (lb)</th>
<th>LENGTH ‘L’</th>
<th>SWAGE LENGTH ‘L’</th>
<th>DIAMETER ‘D’</th>
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</thead>
<tbody>
<tr>
<td>#4 [13]</td>
<td>04BNE</td>
<td>YELLOW</td>
<td>0.46</td>
<td>2</td>
<td>1/8</td>
<td>1 3/8</td>
</tr>
<tr>
<td>#5 [16]</td>
<td>05BNE</td>
<td>BLACK</td>
<td>1.05</td>
<td>2 13/16</td>
<td>1 1/16</td>
<td>1 3/4</td>
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<tr>
<td>#6 [19]</td>
<td>06BNE</td>
<td>RED</td>
<td>1.44</td>
<td>3 1/4</td>
<td>1 5/16</td>
<td>1 7/8</td>
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<tr>
<td>#7 [22]</td>
<td>07BNE</td>
<td>BLUE</td>
<td>2.65</td>
<td>3 7/8</td>
<td>1 1/2</td>
<td>2 3/8</td>
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<tr>
<td>#9 [29]</td>
<td>09BNE</td>
<td>PINK</td>
<td>4.68</td>
<td>4 9/16</td>
<td>1 15/16</td>
<td>2 7/8</td>
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<tr>
<td>#10 [32]</td>
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<td>7.38</td>
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<td>2 3/4</td>
<td>3 3/8</td>
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<tr>
<td>#11 [36]</td>
<td>11BNE</td>
<td>RED</td>
<td>11.6</td>
<td>6</td>
<td>2 7/16</td>
<td>3 13/16</td>
</tr>
</tbody>
</table>

* COLOR CODE OF ButtonHead MUST MATCH COLOR OF DIE SET

**ALL DIMENSIONS ARE APPROXIMATE**

**REMARKS**

- **DUAL USE** – Uses a standard BPI ButtonHead™ Extender.
- **HEADED DEFORMED BAR** – Acts as a Headed Deformed Bar by itself.
- **FULL MECHANICAL SPlice** – Acts as a Full Mechanical Splice by itself.
- **COLOR CODE** – Must match color of die set for proper installation.

**SPECIFICATIONS**

- **BAR-TO-HEAD EXTENSION**
- **BNE 5Ab HEAD**
- **DUAL USE**
- **HIGH STRENGTH HEADED BAR**
- **TYPE 2 FULL MECHANICAL SPlice**
- **SHOP INSTALLATION**
- **POSITIVE INTERNAL STOP**
- **KEY ADVANTAGES**
- **CONVENIENCE**

**DIMENSIONS (in)**

- **BNE SIZES #4 - #11**
- **BEFORE AND AFTER SWAGING**

**HOW TO SPECIFY BPI® BUTTONHEAD™ EXTENDER HEADED DEFORMED BARS**

**BPI® ButtonHead™ Extender** cold-swaged headed devices are made from high quality steel that meets the chemistry and grade requirements of ASTM A519 or A576. Installed performance satisfies the CLASS A and CLASS HA requirements of ASTM A970-17 and ACI 318 Section 20.2.1.6 (ACI 318-11 Section 3.5.9). Develops the specified tensile strength of uncoated Grade 60, 75, 80, 100 & 120 reinforcing bar.

Powerful hydraulically actuated presses with color-coded octagonal die sets are utilized in fabricating shops for the most efficient swaging operation. Swaging pressure is factory preset and equipment is automated to release after each swaging ‘bite’ or pressing. When components have been compressed onto the reinforcing bar by cold-swaging they become mechanically interlocked with the rebar deformation.

Cold swaging technology for mechanical anchorage and splicing is one of the most established, developed, and refined connection methods worldwide. Key to cold swaging success is its simplicity, low cost and adaptability. There is no loss of reinforcing bar cross-sectional area at the anchorage location so the system is a natural choice when considering the objectives of seismic design and safety related applications. BPI-Grip swaging equipment is easy to use and may be leased or purchased. Splicing manuals provided with equipment explain step-by-step installation and safety information.

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