

# BarSplicer



*BARSPLICER with Plastic Flange*

*BARSPLICER POSITION System*

*BARSPLICER DoughNUT*

**BarSplice**  
PRODUCTS INC.  
A SUBSIDIARY OF FC INDUSTRIES, INC.

# BPI® BARSPLICER SYSTEM

## A simple concept – a better solution

**BPI® BARSPLICER** dowel bar replacements have the advantage of permitting continuity of reinforcement across construction joints without formwork penetration. Because flanged couplers are typically fully embedded in concrete, their use eliminates projecting bars, thereby relieving constructability problems and potential worker injuries.

*Dowel bars at construction joints transfer tension and compression loads between reinforcing bars on both sides of the joint. A common headache for contractors and placers is that one-piece bars projecting from the concrete get damaged, interfere with other construction activities and can be a cause of accidents.*

REPLACE THIS      WITH THIS      OR THIS



**BPI® SETTING BARS and SPLICE BARS** are supplied to your dimensional specifications, straight or bent or can be headed with a Barsplicer DoughNUT™. When fully assembled, splices across construction joints achieve the full tension-compression requirements of ACI 318 Chapter 12.

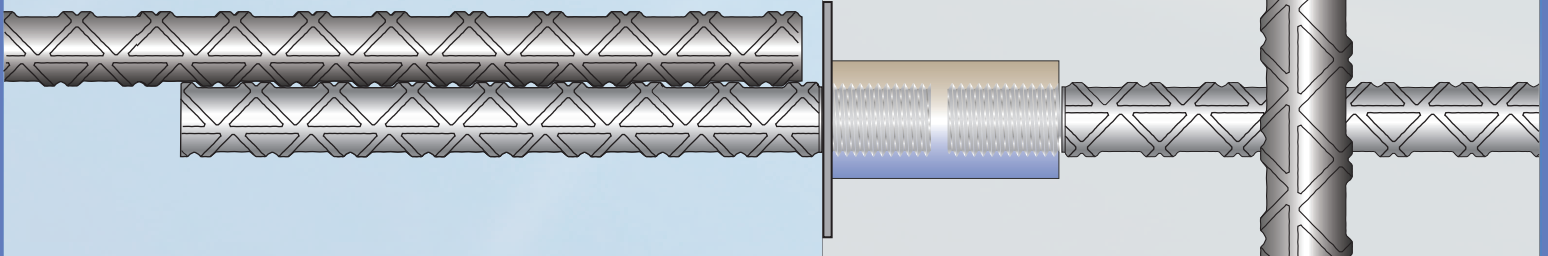
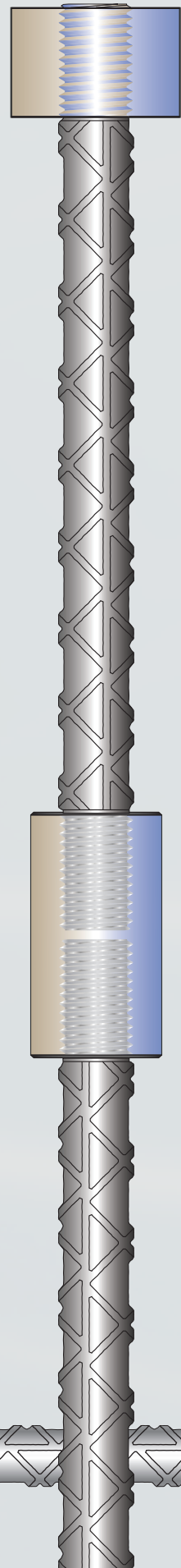
**Flanged couplers** used on setting bars have holes that permit nailing them to the sides or ends of the formwork. Flanges may be metal or plastic. BPI® Barsplicer couplers have internal threads that permit the attachment of dowel splice bars or long lengths of reinforcing bar. These couplers are typically made from steel conforming to ASTM A108. *Although mostly used for splicing reinforcing bars to dowel splice bars, nothing precludes their use as standard tension-compression mechanical splices.*

**Bar sizes No. 4 through 11** (metric 13 through 36) Grade 60 (420), Grade 75 (520) and Grade 80 (550) can be spliced by the BPI® Barsplicer method. **The system uses standard Unified American national coarse threads – the same as those utilized in the familiar nuts and bolts you know and trust.** Threaded couplers are used with bars that have matching exterior threads cut or rolled directly onto the ends of the reinforcing bars. There is no requirement for pre-forging or for a bar end upsizing operation so the system is simple and highly cost-effective. The thread length on the bars is controlled by BPI to ensure proper thread engagement. Precautions are taken by BPI to protect the threaded ends of the bars during shipping and handling.

**In the field,** reinforcing bars are cast in concrete with the flanged coupler attached to the form face. After the formwork is removed, straight or bent splice bars are installed into the coupler to extend the reinforcing bar. A simple pipe wrench can be used to snug and secure the splice assembly. No torque wrench is required for this operation.

**Epoxy-coated couplers** are used for splicing epoxy coated bars that comply to ASTM A775 / A775M.

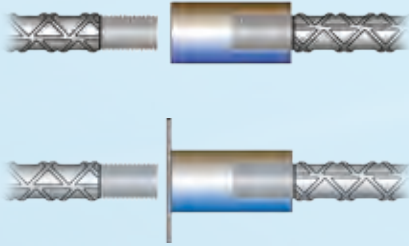
Specialty manufacturing includes:  
**HOT-DIP GALVANIZED COUPLERS** for mechanically splicing ASTM A767 / A767M galvanized bars,  
**STAINLESS STEEL THREADED COUPLERS** for splicing stainless steel reinforcing bars, and  
**BPI® 100KSI BARSPLICER THREADED COUPLERS** for splicing ASTM A1035 Grade 100 corrosion resistant bars.



## BPI® BARSPLICER Standard national coarse threaded system

### BPI® STANDARD BARSPLICER

#### COUPLER WITH STANDARD NATIONAL COARSE THREADS & OPTIONAL FLANGE



- **PRE-FABRICATED SETTING AND SPLICE BARS** – Made by BPI to your dimensions, straight, hooked 90° – 180°, single or double-ended connections and other configurations.
- **STANDARD REINFORCING BARS** – Each heat lot supplied by BPI is controlled, tested and certified, ASTM A615 black or ASTM A775 epoxy coated deformed reinforcing bars, Grades 60, 75 and 80.
- **DOWEL BAR REPLACEMENT** – No drilling holes through forms – No protruding rebar when concrete is poured. Continuity across construction joint is established upon engaging splice bar from BPI.
- **AASHTO Standard Specifications for Highway Bridges** – Meets the full mechanical connection requirements of 8.32.2.3 (17<sup>th</sup> Ed) for 125% x specified yield strength ( $f_y$ ) of the bar supplied by BPI.
- **DOT PROJECTS and COMMERCIAL APPLICATIONS** – Bridge decks, piers, ramps, walls, mats, tanks, parking garages – where specifications are 125% x specified yield Grade 60, 75 and 80.
- **ACI 318 FULL MECHANICAL SPLICE** – Standard BPI Barsplacers threaded by BPI are pre-tested to develop at least 1.25 x  $f_y$  of the bar. For Xtra Performance, use the BARSPLICER XP series.
- **BARSPLICER XP SERIES** – Bars supplied by BPI exceed 135% x specified yield ( $f_y$ ) ASTM A 615 black, ASTM A706 black and epoxy, ASTM A775 epoxy and ASTM A767 galvanized, Grade 60 bar. Procurable as a TYPE 2 splice to exceed the specified tensile ( $f_t$ ) strength of Grade 60 bar. For ASTM A615 bars, this equals 150% x  $f_y$ , black and epoxy coated. For ASTM A706 bars, this equals 133% x  $f_y$ , black and epoxy coated. Specify Barsplicer XP Type 2.

### BPI® BARSPLICER POSITION

#### COUPLER WITH STANDARD NATIONAL COARSE THREADS



- **NO ROTATION OF BARS** – When reinforcing steel congestion is a problem and splice bars cannot be rotated to engage the threads, or when bar lengths are long and impractical to rotate, the assembly can be completed in the field by unwinding a pre-assembled coupler from a long thread on the splice bar onto the adjoining thread on the setting bar.
- **OPTIONAL LOCK NUT** – Available to lock a pre-bent splice bar in a specific position, alignment or orientation after engaging a position coupler onto the setting bar. (Extra thread length required)
- **CONVENIENCE** – Position Couplers, and optional lock nuts, are pre-assembled to splice bars that have been fabricated to your dimensions, resulting in time saved in the field.
- **GRADE 60 and 75 REINFORCING** – Setting and positional splice bars threaded and supplied by BPI are controlled and certified, ASTM A 615 black deformed or ASTM A775 epoxy coated reinforcing bars.
- **ACI 318 FULL MECHANICAL SPLICE** – BPI Barsplicer Position couplers are designed to develop at least 1.25 x  $f_y$  of the bar, Grade 60 and 75, meeting the mechanical splice requirements of ACI 318 and most state DOT requirements. For Xtra Performance, use the BARSPLICER XP series.
- **BARSPLICER XP SERIES** – Bars supplied by BPI exceed 135% x specified yield ( $f_y$ ) ASTM A 615 black, ASTM A706 black and epoxy, ASTM A775 epoxy and ASTM A767 galvanized, Grade 60 bar.

### BPI® STRUCTURAL CONNECTOR

#### WELDABLE CONNECTOR WITH STANDARD NATIONAL COARSE THREADS



- **STRENGTH RATING** – Barsplicer Structural Connectors, installed with threaded bars from BPI, have the capacity to exceed a minimum joint strength of 80,000 psi measured in the rebar.\*
- **COMPATIBILITY** – Both ASTM A615 black and ASTM A775 epoxy coated reinforcing bars, Grade 60, 75 and 80, supplied with threaded ends from BPI can be used.
- **VERSATILITY** – For attachment of reinforcing bars with threaded ends to plates, structural steel shapes or for creating headed anchorage. Shop or field weldable, before or after bar placement.
- **CERTIFIED LOW CARBON STEEL** – Meets chemistry AISI Grade 1018 and ASTM A36. Suited to E7018 electrode.
- **WELDING BEVEL** – For full penetration, provided for greater strength, convenience & quality assurance.
- **LESS WELD STRESS** – Compared to direct butt welds, the weld area is disposed over greater length, because the outside diameter of structural connector is larger than the reinforcing bar.

\* Welder qualification, weld procedure, integrity and strength are the responsibility of others.

### BPI® BARSPLICER DoughNUT™

#### NATIONAL COARSE THREADED BAR HEADED ANCHORAGE



- **HEADED REINFORCING BAR MECHANICAL ANCHORAGE** – Reduces development length of bars by transmitting a proportion of force from bar to concrete via head bearing area.
- **STRENGTH RATING** – In accordance with ACI 318, the BPI® Barsplicer DoughNUT develops at least the specified yield ( $f_y$ ) strength of the bar for Grades 60, 75 and 80. In air tests exceed 125% x  $f_y$  for Grades 60, 75 and 80. The Barsplicer DoughNUT also meets ASTM A970 Class A and HA requirements.
- **HEADED versus HOOK** – While hook bars reduce development length compared to straight, they bring about congestion. The DoughNUT alleviates this problem, eases installation and facilitates bar placement.
- **APPLICATIONS** – Replaces hook bars in beam-column joints, knee joints, pile caps and column roof slab connections. Replaces stirrup bars as confinement steel.
- **BENEFITS** – The DoughNUT comes pre-installed on threaded reinforcing bars supplied by BPI, saving field labor. Easy placement – no special bend direction, minimal detailing, saves space, more design flexibility.
- **HEAD AREA** – 5A<sub>b</sub> full cross-sectional area with at least 4A<sub>b</sub> projected bearing area in tension.

\*\* Ref: "Headed Reinforcement A Viable Option" John W. Wallace.

# BPI® BARSPLICER SYSTEM

Cost effective and fast turn around – configured to your requirements

BPI® BARSPLICER setting and splice bars can be fabricated to almost any shape, and the small, compact, threaded couplers allow the system to be used in tight spaces such as walls, traffic barriers, corbels, and slabs. For DOT projects, BPI can supply you fully certified epoxy coated bars and couplers, threaded, processed and tested in accordance with BPI's quality system ISO 9001:2015.



WHEN A STATE DOT REQUIRES THE USE OF ASTM A706 EPOXY COATED REINFORCEMENT AND/OR DOWEL BARS, BPI IS READY TO HELP – JUST LET US KNOW YOUR PROJECT SPECIFICATIONS AND NEEDS.

## Great value built-in...

- Controlled heat lots tested for every order
- Copy of mill CMTR provided
- Copy of epoxy coating certification
- Splice test reports available
- ISO 9001:2015 quality system
- Bundled and tagged to requirements
- Unmatched Sales and technical support



## HOW TO SPECIFY BPI® BARSPLICER Couplers, Heads and Connectors

	By Name:*	By Generic Description:*
<b>DOWEL BAR SPLICE</b> <i>Dowel Bar Replacement or Dowel Bar Substitute</i>	BPI® Barsplicer Setting & Splice Bars <i>and/or</i> BPI® Barsplicer Position Setting & Splice Bars. Specify Standard series, XP series, or XP Type 2 by BarSplice Products, Inc., Dayton OH.	<i>Dowel bar splices at construction joints shall consist of threaded setting and splice bars [configured as shown on plans] having standard unified NC threads, flanged couplers and/or position couplers, be procured with ISO 9001 certification and pre-tested to develop at least 1.25 x f<sub>y</sub>**.</i>
<b>BAR-TO-BAR</b>	BPI® Barsplicer Couplers <i>and/or</i> BPI® Barsplicer Position Couplers. Specify Standard series, XP series, or XP Type 2 by BarSplice Products, Inc., Dayton OH.	<i>Reinforcing bar mechanical splices shall be tension-compression threaded couplers or position couplers with standard unified NC threads, procured with ISO 9001 certification and pre-tested to develop at least 1.25 x f<sub>y</sub>**.</i>
<b>BAR-TO-HEAD</b>	BPI® Barsplicer DoughNUT™ by BarSplice Products, Inc., Dayton OH.	<i>Mechanical Reinforcing Bar Anchorages shall consist of round steel heads with area 5A<sub>b</sub>, attached to the bar by means of standard unified NC threads, procured with ISO 9001 certification and pre-tested to develop at least 1.25 x f<sub>y</sub>**.</i>
<b>BAR-TO-STRUCTURAL STEEL</b>	BPI® Barsplicer Structural Connectors. Specify Standard series, XP series, or XP Type 2 by BarSplice Products, Inc., Dayton OH.	<i>Bar-to-structural steel connections shall consist of threaded bars and weldable connectors with standard UNC threads, weld bevels inclined 30-degrees to the rebar axis, ISO 9001 certification and pre-tested to develop at least 1.25 x f<sub>y</sub>**.</i>

\* Include flange requirements (if any), bar size(s), and statement: "Parts shall be manufactured to the quality requirements of ISO 9001."

\*\* Substitute 1.33 f<sub>y</sub> or 1.35 f<sub>y</sub> (Grade 60 or 75) or 1.50 f<sub>y</sub> (Grade 60) as required, and specify bar type and Grade (60, 75 or 80).

Unless otherwise specified, bars shall be ASTM A615 / A615M Grade 60, 75 or 80; epoxy coated bars shall be ASTM A775 / A775M Grade 60, 75 or 80; all bend diameters and standard hook dimensions shall be per ACI Detailing Manual SP-66; length tolerances shall be per the CRSI Manual of Standard Practice. Customer is responsible for notifying BPI of any special space restrictions, tolerance, bar grade, coating thickness and/or strength requirements before placing order. All fabricated and/or in-process setting bars, splice bars and parts are non-cancellable and non-returnable. While the information contained in this document is believed to be accurate at the time of publication, BPI reserves the right to make changes, design modifications, corrections and other revisions as it sees fit, without notice. All products described herein are supplied in accordance with BPI's standard Terms and Conditions of Sale. This document is of a promotional nature only. Aspects of structural design, evaluation of product fitness for use, suitability or similar attributes are the responsibility of others.



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