



# 411, 413 and 415 Steel Couplings

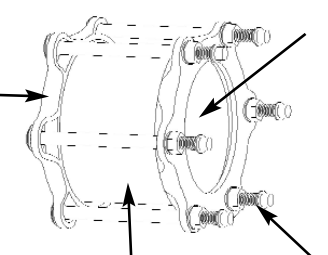
## 1/2" thru 60" O.D. (larger sizes available)

### Product Specifications

**Flanges:**  
Vary by size and style.

- 1/2" to 2" are ductile iron, per ASTM A536.
- 2" to 12" are ductile iron, per ASTM A536 or carbon steel having a minimum yield of 30,000 PSI.
- 3" to 12" Z-Section Style are high strength, low alloy steel per ASTM A715, Gr. 80.
- 14" to 60" are AISI C1020 steel.

**Coating:**  
Fusion bonded Flexi-Coat epoxy.



**Sleeve:**  
Carbon steel per ASTM A53C or having a minimum yield of 30,000 PSI.

**Gasket:**  
Nitrile (Buna-N), compounded to resist natural gas, water, oil, acids, alkalis, most (aliphatic) hydrocarbon fluids and many chemicals.  
*Temperature Range: -20° F to +180° F.*

**Bolts and Nuts:**  
Carbon steel per ASTM A307, electro-galvanized with di-chromate seal, or high strength, low-alloy steel with heavy semi-finished hexagon nuts.  
*Optional: 304 Stainless Steel*

## Features:

- Certified to NSF®/ANSI 61-G.
- Meets applicable AWWA C219 Standards.
- Allows for limited expansion and contraction.
- Will dampen vibration to reduced pipe fatigue.
- Easy to install, no special pipe end preparation required.
- Available in a wide variety of pipe O.D. sizes and sleeve lengths.
- Most sizes will accommodate anchor studs to restrain the joints.
- Can be custom made to fit odd O.D.s or other unusual applications.
- Provided with or without pipe stops to accommodate customer needs.
- Different styles allow for straight (411), transition (413) or reducing (415) connections.
- Has good deflection capabilities, allows change in piping direction without the need of elbows, bends, etc...
- Steel sizes built to specific O.D. and ductile iron sizes are built with range to accommodate the variances in ductile iron pipe O.D.s

| Coupling Number | Size             | Working Pressure*                   |
|-----------------|------------------|-------------------------------------|
| 411             | 1/2" and larger  | 150 PSI and up - check with factory |
| 413             | 2"- 48" Nominal  | 150 PSI and up - check with factory |
| 415             | 6" - 48" Nominal | 150 PSI and up - check with factory |

\*The allowable working pressure of a coupling decreases as pipe diameter increases (regardless of manufacturer).

# Product Specifications

## SPECIFICATION:

The coupling shall also have a Flexi-Coat fusion bonded epoxy finish.

### **(1/2"-2" nominal)**

The coupling shall have a steel sleeve made of carbon steel with a minimum yield of 30,000 PSI.

The flanges shall be made of ductile iron per ASTM A536. The coupling shall have nuts and bolts made of carbon steel per ASTM A307 and be electro galvanized with a di-chromate seal.

### **(2"-12" nominal)**

The coupling sleeve shall be carbon steel per ASTM A53 or have a minimum yield of 30,000 PSI. The flanges shall be ductile iron per ASTM A536 or carbon steel with a minimum yield of 30,000 PSI. The coupling shall have bolts and nuts made of high-strength, low-alloy steel. The nuts shall be semi-finished hexagon type.

### **(3"-12" nominal Z section style)**

The coupling sleeve shall be carbon steel per ASTM A53 or have a minimum yield of 30,000 PSI. The flanges shall be ASTM A715 Grade 80 HSLA steel. The coupling shall have bolts and nuts made of high-strength, low-alloy steel. The nuts

shall be semi-finished hexagon type.

### **(14" thru 60" nominal)**

The coupling shall have a steel sleeve made of carbon steel with a minimum yield of 30,000 PSI. The flanges shall be AISI C1020 steel. The coupling shall have bolts and nuts made of high-strength, low-alloy steel. The nuts shall be semi-finished hexagon type. *OPTION: Nuts and bolts shall be 304 stainless steel.*

The coupling shall have plain wedge-style gaskets that are Nitrile (Buna N) NSF 61 listed. The gasket material shall be compounded to resist: water, oil acids, alkalies, most (aliphatic) hydrocarbon fluids and many other chemicals. The gasket shall have a temperature range of -20 to +180 F.

*OPTION: The coupling shall have wedge style gaskets of the same material above but also have a continuous brass spring molded into the leading edge of the gasket to insure metal contact between the pipe and the coupling sleeve. This is for extra protection against the line contents and makes the coupling electrically bonded to the pipe.*

The coupling shall be a Smith-Blair, Inc., 411, 413, 415 or approved equal.

### Approved By

Name:

Title:

Date:

*THESE PRODUCT SPECIFICATIONS WERE CORRECT AT TIME OF PUBLICATION.*

*MATERIAL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.*

*SEE CATALOG BROCHURE CC-411 FOR MORE DETAILS. VISIT SMITH-BLAIR'S*

*WEBSITE AT WWW.SMITH-BLAIR.COM TO DOWNLOAD THE MOST CURRENT INFORMATION.*



**Ph: 870-773-5127 • Fax: 870-773-5212 • [www.smith-blair.com](http://www.smith-blair.com)**

**Toll-Free Numbers: Ph: 800-643-9705 • Fax: 800-648-6792**

**30 Globe Ave, Texarkana, AR 71854 • PO Box 5337, Texarkana, TX 75505**