



Steel Fabricated Coupling

Straight Connection

411



Description: A bolted sleeve type coupling for joining plain end pipe of the same diameters.

Application: Joining plain end pipe without the need for welding or special pipe fittings.

Key Features:

- Meets applicable AWWA C219 Standards
- Allows for limited expansion and contraction
- Will dampen vibration to reduce 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
- Has good deflection capabilities, allows change in piping direction without the need of elbows, bends
- 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

Materials Specifications (subject to change):

SLEEVE: ASTM A53, ASTM A512 or Carbon Steel having minimum yield of 30,000 PSI

FOLLOWERS: Ductile Iron ASTM A536, Steel AISI C 1020, or A715 Grade 80 HSLA Steel. Designed for a high strength-to-weight ratio. Follower thickness determined by coupling size

BOLTS & NUTS: High strength, low alloy Steel with heavy semi-finished hexagon nuts *Optional: Stainless Steel and Carbon Steel ASTM A307 electro-galvanized with di-chromate seal*

GASKET: Nitrile (Buna N) NSF 61 compounded to produce superior storage and performance characteristics while resisting water, acids, alkalies, most (aliphatic) hydrocarbon fluids, and other chemicals

Temperature Range: -20°F to 180°F

FINISH: Flexi-Coat® Fusion Bonded Epoxy Finish

Working Pressure: Up to 150 PSI

Pipe Applications: All Types. HDPE requires use of stiffeners. Contact Smith-Blair Engineering for any questions.

Sizes (in inches): ½, ¾, 1, 1¼, 1½, 2, 2½, 3, 3-4, 4, 4-5, 6, 8, 10, 12, 12-14, 14, 16, 18, 20, 24, 30, 36, 42, 48, 54. NOTE: Larger sizes available upon request.



THIS PRODUCT DOES NOT RESTRAIN PIPE MOVEMENT. Proper anchoring is required to prevent pipe pullout. Failure to anchor or improper anchoring can result in dangerous pipe content escape, property damage, serious injury, or death. Read the product installation instructions prior to installing this product.



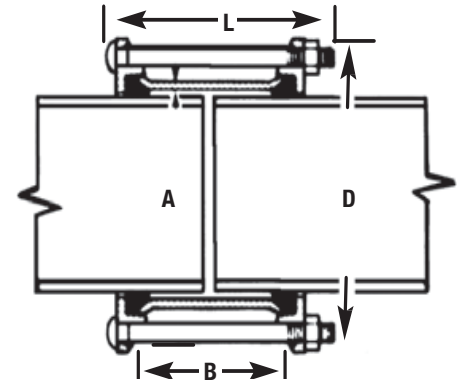
Steel Fabricated Coupling

Straight Connection

411

Total Angular Deflection Per Joint

FOR PIPE O.D. RANGES		SLEEVE LENGTH		
INCHES	MM	5" 127MM	7" 178MM	10" 250MM
0.84 thru 2.38	21 thru 60.5	7°	7°	7°
2.50 thru 13.50	63.5 thru 342.9	4°	4½°	4½°
13.60 thru 24.00	345.4 thru 610	2½°	4°	4½°
24.10 thru 36.00	612 thru 914	2°	3½°	4°
36.10 thru 42.00	917 thru 1067	-	3°	3½°
42.10 thru 60.00	1323 thru 1524	-	2½°	3°
60.10 thru 80.00	1527 thru 2032	-	-	2½°
80.10 thru 100.00	2035 thru 2540	-	-	2°



Standard Lengths for Steel Sizes

NOM. PIPE SIZE IN.	PIPE O.D. INCHES	CATALOG NO. BUNA-N GASKET	SLEEVE THK. X LGTH. IN.		FLANGE O.D. INCHES (D)	BOLTS			APPROX. SHIP WT. LBS.
			(A)	(B)		NO.	DIA. IN.	LGTH. IN. (L)	
1/2	0.84	411-00008401-003	.120	4 1/2	3 5/8	2	1/2	7	2 1/4
3/4	1.05	411-00010501-003	.120	4 1/2	3 7/8	2	1/2	7	2 1/2
1	1.32	411-00013201-003	.120	5	4 1/4	2	1/2	7	3 1/4
1 1/4	1.66	411-00016601-003	.120	5	4 9/16	2	1/2	7	4
1 1/2	1.90	411-00019001-003	.120	5	4 13/16	2	1/2	7	4 1/4
2	2.00	411-00020001-003	.120	5	4 13/16	2	1/2	7	4 1/4
2	2.38	411-00023801-003	.120	5	5 5/16	2	1/2	7	4 3/4
		411-00023851-003	.120	5	5 11/16	2	5/8	8	5 1/2
		411-00023861-003	.120	5	5 11/16	3	5/8	8	6 1/2
		411-00023802-003	.120	7	5 11/16	3	5/8	10 1/2	9 1/2
2 1/2	2.88	411-00028801-003	.203	5	6 1/2	3	5/8	8	12 3/4
3	3.00	411-00030001-003	.203	5	6 9/16	3	5/8	8	12 3/4
		411-90035001-003	.180	5	8 3/100	3	5/8	6	11 1/2
	3.50	411-00035051-003	.180	5	7 9/100	4	5/8	8	12 1/4
		411-90035002-003	.180	7	8 3/100	3	5/8	10 1/2	14 1/2
3 1/2-4	4.00	411-00040001-003	.188	5	7 9/16	4	5/8	8 1/2	17 1/2
+4	4.50	411-90045001-003	.188	5	9 1/20	4	5/8	6	13
		411-90045002-003	.188	7	9 1/20	4	5/8	8	15 1/2
4 1/2-5	5.00	411-00050001-003	.250	5	8 5/8	4	5/8	8	20 1/2
5	5.56	411-00055601-003	.250	5	9 3/16	4	5/8	8	20 1/2
		411-00055602-003	.250	7	9 3/16	4	5/8	10 1/2	23 1/2
		411-00055603-003	.250	10	9 3/16	4	5/8	13 1/2	31 1/2

Standard Length Sleeves 1/2" thru 12" Steel Pipe Sizes. + Indicates couplings furnished with Steel "Z" section, High Strength Follower Flanges. The basic design of bolted compression couplings does not provide for anchoring the pipes against pull-out. Suitable anchorage must be provided when excessive pipe movement could cause the pipe to move out of the coupling. NOTE: Couplings working pressures depend on many variables such as pipe type, pipe diameter, sleeve thickness, sleeve material, gasket cross section, follower type and number of bolts. Consult Smith-Blair® regarding your specific coupling pressure requirements.