DRESSER "TYPE" PIPE COUPLINGS

Manufactured by Smith Blair

IAC
INDUSTRIAL ACCESSORIES COMPANY

Smith Blair Couplings

Dresser "Type" Couplings are used for heavy duty high pressure applications. A wide variety of gasket materials are available. The complete Smith Blair coupling product line is available from IAC.

IAC also supplies Repair Clamps, Saddles, Expansion Joints, Reducing Clamps and more.
IAC can cross-reference most coupling brands.

We must have the following information to quote couplings:

- Outside diameter and type of pipe
- Temperature and type of material going through the pipe for correct middle ring and gasket.
- Maximum amount of pressure in the pipe.

4800 Lamar Avenue / Mission, KS 66202 / USA 800.334.7431 ***www.iac-intl.com***

High Pressure Pipe Couplings for Steel, Cast Iron and Ductile Iron Pipe

411 Couplings

Our Steel couplings offer many distinct advantages when installed in a piping system. Properly selected and installed flexible couplings maintain the continuity of the pipe system, retain the line contents under internal pressure and prevent infiltration under vacuum. Our couplings consist of one cylinderical sleeve with conical inner surfaces at each end; two resilient, wedge-shaped, specially-compounded rubber gaskets; two ring-shaped followers and a set of high-strength, low-alloy track-head, oval-neck, rolled-thread bolts with heavy hex nuts.

Style 411 Steel Couplings Material Specifications

Style 411 Couplings are available in sizes from 1/2" to 48" Rated 150 PSI Working Pressure. Manufactured with Fusion Bonded Flexi-Coat® Epoxy Powder Coating.

2" - 12" (50mm-300mm)

Standard weight design with cast follower, steel sleeve and low-alloy bolts and nuts.

Material Specifications

Sleeve:
ASTM A53, ASTM A513 or carbon steel having minimum yield of 30,000 psi.
Followers
Ductile iron ASTM A536 or carbon steel having minimum yield of 30,000 psi.
Bolts & Nuts
High-strength, low-alloy steel with heavy semi-finished hexagon nuts. Optional: Stainless steel and electro-galvanized.
Finish:
Fusion bonded Flexi-Coat Epoxy per AWWA C213.
Material Specifications are subject to change.

Gasket Material Specifications

Standard: Nitrile (Buna-N) NSF 61 Compounded to produce superior storage and performance characteristics while resisting water, acids, alkalis, most (aliphatic) hydrocarbons and many other chemicals. Temperature range -20˚ F to 180˚ F. Consult Manufacturer for specific apllications or other service termperatures.

Optional: Nitrile (Buna N) Protected.
A continuous brass spring molded into the leading edge of the gasket to insure metal contact between the pipe and the coupling sleeve, Extra preotection is given against line content and the coupling is electrically bonded to the pipe.
Material Specifications are subject to change.

We must have the following information to quote couplings:

- Outside diameter and type of pipe
- Temperature and type of material going through the pipe for correct middle ring and gasket.
- Maximum amount of pressure in the pipe.

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411 STEEL COUPLINGS - **STEEL PIPE ONLY**

For Steel and Pipe with Flexi-Coat® Epoxy Coating

See page 3 for Cast and Ductile Iron Pipe Specifications.

Couplings Available with Alloy, 304 Stainless Steel or 316 Stainless Steel Bolts and Nuts.

Certified to NSF® / ANSI 61-G

Nominal Size (Inches)	O.D (Inches)	Sleeve Thickness & Length (Inches)	Bolts		Catalog Number	Wt. Each (lbs)
			No.	Diameter Length (In.)		
1/2*	.84	.120 x 4 1/2 .120 x 12	2 2	1/2 x 7 1/2 x 14	411-00008401 411-00008410	2 4
3/4*	1.05	.120 x 4 1/2 .120 x 12	2 2	1/2 x 7 1/2 x 14	411-00010501 411-00010510	3 5
1*	1.32	.120 x 5 .120 x 12	2 2	1/2 x 7 1/2 x 14	411-00013201 411-00013210	3 6
1-1/4*	1.66	.120 x 5 .120 x 12	2 2	1/2 x 7 1/2 x 14	411-00016601 411-00016610	4 7
1-1/2*	1.90	.120 x 5 .120 x 12	2 2	1/2 x 7 1/2 x 14	411-00019001 411-00019010	4 8
2*	2.00	.120 x 5 .120 x 12	2 2	1/2 x 7 1/2 x 14	411-00020001 411-00020010	4 8
2*	2.38	.120 x 5 .120 x 5 .120 x 7 .120 x 12 .120 x 5 .120 x 7 .120 x 12	2 2 2 2 3 3 3	1/2 x 7 5/8 x 8 5/8 x 10 1/2 5/8 x 15 5/8 x 8 5/8 x 10 1/2 5/8 x 15	411-00023801 411-00023851 411-00023821 411-00023841 411-00023861 411-00023802 411-00023810	5 6 6 10 7 10 13
2-1/2	2.88	.203 x 5 .203 x 12	3 3	5/8 x 8 5/8 x 15	411-00028801 411-00028810	13 17
3	3.00	.203 x 5	3	5/8 x 8	411-00030001	13
3	3.50	.180 x 5 .180 x 5 .180 x 7 .180 x 12	3 4 4 4	5/8 x 6 5/8 x 8 5/8 x 10 1/2 5/8 x 15	411-90035001 † 411-00035051 411-00035002 411-90035010 †	11 12 15 21
4	4.00	.188 x 5 .188 x 12	4 4	5/8 x 8 5/8 x 15	411-00040001 411-00040010	17 25
4	4.50	.188 x 5 .188 x 7 .188 x 12 .188 x 16 .188 x 24	4 4 4 4 4	5/8 x 6 5/8 x 8 5/8 x 13 1/2 5/8 x 17 5/8 x 25	411-90045001 † 411-90045002 † 411-90045010 † 411-90045011 † 411-90045012 †	12 14 21 26 27
5	5.00	1/4 x 5 1/4 x 12	4 4	5/8 x 8 5/8 x 15	411-00050001 411-00050010	21 30
5	5.56	1/4 x 5 1/4 x 7 1/4 x 10 1/4 x 16 1/4 x 24	4 4 4 4 4	5/8 x 8 5/8 x 10 1/2 5/8 x 13 1/2 5/8 x 19 1/2 5/8 x 27 1/2	411-00055601 411-00055602 411-00055603 411-00055611 411-00055612	21 24 32 41 52
6	6.63	1/4 x 5 1/4 x 7 1/4 x 10 1/4 x 16 1/4 x 24	6 6 6 6 6	5/8 x 6 5/8 x 8 5/8 x 10 1/2 5/8 x 17 5/8 x 25	411-90066301 † 411-90066302 † 411-90066303 † 411-90066311 † 411-90066312 †	20 23 30 43 61

† Couplings furnished with steel "Z" section, High Strength Followers
Buna N Protected Gaskets priced on application.
Suitable anchorage must be provided when excessive pipe movement could cause the pipe to move out of the coupling.
* Note: 1/2" - 2" have electro-galvanized bolts and nuts.

For Steel and Pipe with Flexi-Coat® Epoxy Coating

See page 3 for Cast and Ductile Iron Pipe Specifications.

Couplings Available with Alloy, 304 Stainless Steel or 316 Stainless Steel Bolts and Nuts.

Flexi-Coat ® Epoxy Coating, Certified to NSF® / ANSI 61-G

Nominal Size (Inches)	O.D (Inches)	Sleeve Thickness & Length (Inches)	Bolts		Catalog Number	Wt. Each (lbs)
			No.	Diameter Length (In.)		
8	8.63	1/4 x 5	6	5/8 x 6	411-90086301 †	24
		1/4 x 7	6	5/8 x 8	411-90086302 †	28
		1/4 x 10	6	5/8 x 10 1/2	411-90086303 †	37
		1/4 x 16	6	5/8 x 17	411-90086311 †	52
		1/4 x 24	6	5/8 x 25	411-90086312 †	74
10	10.00	1/4 x 5	8	5/8 x 8	411-00100001	33
		1/4 x 7	8	5/8 x 10 1/2	411-00100002	38
		1/4 x 10	8	5/8 x 13 1/2	411-00100003	50
		1/4 x 16	8	5/8 x 19 1/2	411-00100011	67
		1/4 x 24	8	5/8 x 27 1/2	411-00100012	97
10	10.75	1/4 x 5	8	5/8 x 6	411-90107501 †	30
		1/4 x 7	8	5/8 x 8	411-90107502 †	37
		3/8 x 7	8	5/8 x 8	411-90107507 †	45
		1/4 x 10	8	5/8 x 10 1/2	411-90107503 †	47
		1/4 x 16	8	5/8 x 17	411-90107511 †	67
		1/4 x 24	8	5/8 x 25	411-90107512 †	95
12	12.00	1/4 x 5	8	5/8 x 8	411-00120001	37
		1/4 x 7	8	5/8 x 10 1/2	411-00120002	44
		1/4 x 10	8	5/8 x 13 1/2	411-00120003	56
		1/4 x 16	8	5/8 x 19 1/2	411-00120011	77
		1/4 x 24	8	5/8 x 27 1/2	411-00120012	108
12	12.75	1/4 x 5	8	5/8 x 6	411-90127501 †	34
		1/4 x 7	8	5/8 x 8	411-90127502 †	42
		3/8 x 7	8	5/8 x 8	411-90127507 †	52
		1/4 x 10	8	5/8 x 10 1/2	411-90127503 †	52
		1/4 x 16	8	5/8 x 17	411-90127511 †	75
		1/4 x 24	8	5/8 x 25	411-90127512 †	107
		3/8 x 24	8	5/8 x 25	411-90127516 †	142

† Couplings furnished with steel "Z" section, High Strength Followers
Buna N Protected Gaskets priced on application.
Suitable anchorage must be provided when excessive pipe movement could cause the pipe to move out of the coupling.
* Note: 1/2" - 2" have electro-galvanized bolts and nuts.

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For Cast and Ductile Iron Pipe Sizes

See page 2 for Steel Pipe Specifications.

Couplings Available with Alloy, 304 Stainless Steel or 316 Stainless Steel Bolts and Nuts.
Flexi-Coat® Epoxy Coating, Certified to NSF®/ANSI61-G

Nominal Size (Inches)	O.D (Inches)	Sleeve Thickness & Length (Inches)	Bolts		Catalog Number	Wt. Each (lbs)
			No.	Diameter Length (In.)		
2	2.50	.203 x 7 .203 x 10	2 2	5/8 x 10 1/2 5/8 x 13 1/2	411-00025002 411-00025003	14 16
2 1/2	2.75	.203 x 7 .203 x 10	3 3	5/8 x 10 1/2 5/8 x 13 1/2	411-00027502 411-00027503	15 18
3	3.80	.237 x 7 .237 x 10	3 3	5/8 x 10 1/2 5/8 x 13 1/2	411-00038002 411-00038003	20 25
3-4	3.96	.188 x 7 .188 x 10	4 4	5/8 x 10 1/2 5/8 x 13 1/2	411-00039602 411-00039603	21 26
4 4	4.13 4.80	.188 x 7 .188 x 10 1/4 x 7 1/4 x 10	4 4 4 4	5/8 x 10 1/2 5/8 x 13 1/2 5/8 x 10 1/2 5/8 x 13 1/2	411-00041302 411-00041303 411-00048002 411-00048003	22 27 27 32
4	5.00	1/4 x 7 1/4 x 10	4 4	5/8 x 10 1/2 5/8 x 13 1/2	411-00050002 411-00050003	27 32
4-5	5.10	1/4 x 7 1/4 x 10	4 4	5/8 x 10 1/2 5/8 x 13 1/2	411-00051002 411-00051003	28 33
6	6.90	1/4 x 7 1/4 x 10	4 4	5/8 x 10 1/2 5/8 x 13 1/2	411-00069002 411-00069003	37 45
6	7.10	1/4 x 7 1/4 x 10	5 5	5/8 x 10 1/2 5/8 x 13 1/2	411-00071002 411-00071003	38 46
6	7.20	1/4 x 7 1/4 x 10	5 5	5/8 x 10 1/2 5/8 x 13 1/2	411-00072002 411-00072003	39 47
8	9.05	1/4 x 7 1/4 x 10	6 6	5/8 x 10 1/2 5/8 x 13 1/2	411-00090502 411-00090503	49 59
8	9.15	1/4 x 7 1/4 x 10	6 6	5/8 x 10 1/2 5/8 x 13 1/2	411-00091502 411-00091503	49 60
8	9.42	1/4 x 7 1/4 x 10	6 6	5/8 x 10 1/2 5/8 x 13 1/2	411-00094202 411-00094203	51 61
10	11.10	1/4 x 7 1/4 x 10	7 7	5/8 x 10 1/2 5/8 x 13 1/2	411-00111002 411-00111003	60 72
10	11.40	1/4 x 7 1/4 x 10	7 7	5/8 x 10 1/2 5/8 x 13 1/2	411-00114002 411-00114003	62 74
10	11.95	1/4 x 7 1/4 x 10	8 8	5/8 x 10 1/2 5/8 x 13 1/2	411-00119502 411-00119503	65 78
12	13.20	3/8 x 7 3/8 x 10	8 8	5/8 x 10 1/2 5/8 x 13 1/2	411-00132007 411-00132008	71 86
12	13.50	3/8 x 7 3/8 x 10	8 8	5/8 x 10 1/2 5/8 x 13 1/2	411-00135007 411-00135008	73 88
12-14	13.92	3/8 x 7 3/8 x 10	8 8	5/8 x 10 1/2 5/8 x 13 1/2	411-00139207 411-00139208	75 91
14	15.30	3/8 x 7 3/8 x 10 3/8 x 16 3/8 x 24	8 8 8 8	5/8 x 10 1/2 5/8 x 13 1/2 5/8 x 19 1/2 5/8 x 27 1/2	411-00153007 411-00153008 411-00153015 411-00153016	86 107 144 196
14	15.65	3/8 x 7 3/8 x 10 3/8 x 16 3/8 x 24	8 8 8 8	5/8 x 10 1/2 5/8 x 13 1/2 5/8 x 19 1/2 5/8 x 27 1/2	411-00156507 411-00156508 411-00156515 411-00156516	88 109 146 200

Suitable anchorage must be provided when excessive pipe movement could cause the pipe to move out of the coupling.

INSTALLATION INSTRUCTIONS - 400 SERIES COUPLINGS

Pipe Stiffeners are required when using these products on polyethylene (P.E. pipe).

Step 1:

Clean working area of pipe ends.

Step 2:

Place coupling flanges on pipe ends.

Step 3:

Clean gaskets and install with lubricant suitable for potable waters systems. Beveled edge of gasket should face pipe ends.

Step 4:

Center coupling sleeve over pipe ends while maintaining recommended gap below. Slide gaskets against sleeve followed by flanges.

Step 5:

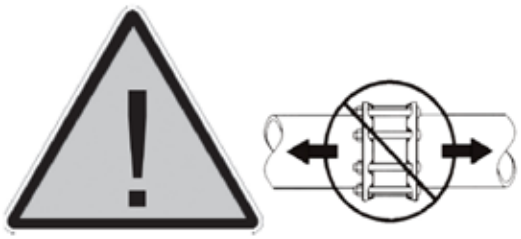
Install the bolts and hand-tighten the nuts. If carriage bolts are furnished, alternate direction of the bolts.

Step 6:

Gradually tighten nuts to proper torque values listed below, alternating between opposite sides of the coupling and keeping all parts centered about pipe. Tighten both nuts if studs are used.

Step 7:

Recheck torque after line pressurization.



WARNING:

This product does not restrain against axial pipe movement.

Pipe forces due to internal pressure, thermal contraction, earth shifting, etc. can cause the pipe to pull out of the product and/or axial product movement unless the pipe and/or product is properly restrained from movement.

Suitable anchorage devices, such as anchor studs, harness rods, joint restrainers, thrust block, etc. must be installed prior to filling pipes or applying pressure to prevent pipe pull out. Restraint may also be required to prevent axial product movement.

This product must be installed in accordance with recommended procedures.

Recommended Gap Between Pipe Ends	
5" Sleeve	1/4" to 1/2" Gap
7" Sleeve	1/2" to 3/4" Gap
10" Sleeve	1/2" to 1-1/4" Gap

Recommended Bolt Torque	
7/16" Bolts	20 to 23 ft. lbs.
1/2" Bolts	30 to 35 ft. lbs.
5/8" Bolts	60 to 70 ft. lbs.
3/4" Bolts	85 to 95 ft. lbs.

Maximum Angular Deflection Between Pipes			
Pipe Size (Inches)	5" Sleeve Length	7" Sleeve Length	10" Sleeve Length
0.84 to 2.38	7°	7°	7°
2.50 to 13.50	4°	4-1/2°	4-1/2°
13.60 to 24.00	2-1/2°	4°	4-1/2°
24.10 to 36.00	1-1/2°	3-1/2°	4°
36.10 to 42.00	-	3°	3-1/2°
42.10 to 60.00	2-1/2°	3°	-
60.10 to 100.00	-	-	2-1/4°

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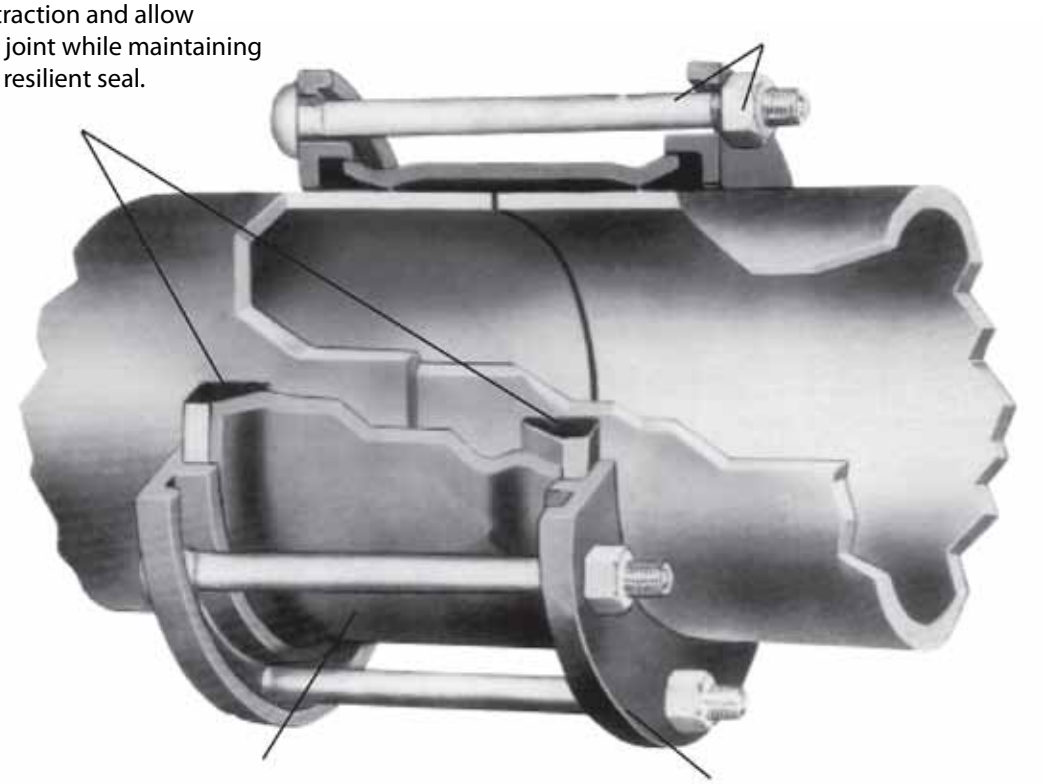
411 STEEL COUPLINGS

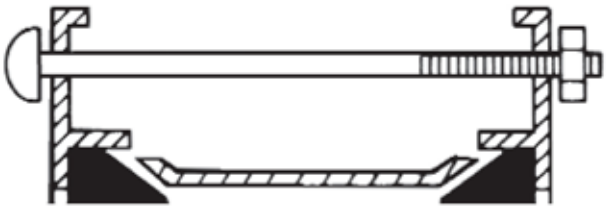
Specially compounded gaskets of all new materials formulated to resist compression set. They absorb vibration, expansion, contraction and allow flexibility to the joint while maintaining a leak-resistant, resilient seal.



Center sleeve made from carbon steel rolled to manufactures specifications.

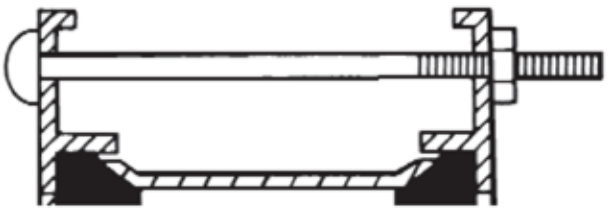
Followers of special steel rolled mill section, high-strength ductile iron or stamped high-strength, low alloy steel

Coupling Parts Loose On Pipe



The coupling is assembled on the pipes with the sleeve centered over the pipe ends, a wedge-shaped gasket engaging the conical inner surface on each end of the sleeve, a follower confining the outer surface of each gasket and the bolts joining the followers

Coupling Parts After Tightening Bolts



As the bolts are tightened, the followers are drawn toward each other compacting the gaskets in the cavity formed by the sleeve conical surface, follower and the pipe wall. This forms a flexible, leak-resistant, safe method of joining pipe. The coupling is floating on the pipe and stresses caused by expansion, contraction or angular defelction can be absorbed.

411 STEEL COUPLINGS PARTS

Our couplings consist of one cylinderical sleeve with conical inner surfaces at each end; two resilient, wedge-shaped, specially-compounded rubber gaskets; two ring-shaped followers and a set of high-strength, low-alloy track-head, oval-neck, rolled-thread bolts with heavy hex nuts.

411 Steel Coupling Advantages

- No Special pipe end preperation required.
- Simple installation requires only a wrench.
- Pipe does not have to be cut to exact length.
- Exact alignment of pipe ends is not necessary
- Coupling fits on outside wall of pipe so there are no internal projections to disturb flow and no damage to the pipe lining.
- Many types of pipe, including pipes of different materials, can be joined.
- Every joint is a union (a length of pipe can be reomoved by disassembling the coupling).
- Coupling allows for limited expansion and contraction.
- Coupling dampens vibration.
- Deflection capability of coupling permits installation of curves or changes in grade without the use of special pipe fabrications.
- Coupling allows for angular deflection caused by settlement or lateral movement after installation.
- Coupling can be installed in any environment, so weather is not a factor.
- Fire hazard eliminated because no welding is required.
- Coupling increases the hoop strength of the pipe at the joint.

411 Steel Coupling Parts

CROSS REFERENCE CHART

Couplings & End Caps	Smith-Blair	Dresser
Steel Couplings	411 Reg.	38, STAB 38
Steel Couplings	411 Long	40, STAB 40
Steel Couplings, Transition	413	162, 62TY.1
Steel Couplings, Reducing	415	62TY.2
Steel Couplings, Insulating	416	39
Steel Couplings, Two Bolt	421	-
Omni Cast Couplings System, Standard Sleeve	441	253
Omni Cast Couplings System, Long Sleeve	442	253
Omni Cast Reducing Couplings	441	253
Quantum Coupling	461	-
Quantum Coupling	462	-
Pipe End Caps, Steel	481	31
Pipe End Caps, Cast	482	231
Compression Couplings	525	65 Long
Expansion Joints	**Smith-Blair**	**Dresser**
Plain Single End		
without Limit Rods	611	63TY-1
with Limit Rods	612	63TY-3
Plain Double End		
without Limit Rods	622	63TY-2
with Limit Rods	623	63TY-4
Tapping Sleeves	**Smith-Blair**	**Dresser**
Carbon Steel	622	610
Steel MJ Type - Side and End Seals	623	-
Steel MJ Type - Side and End MJ Gaskets	624	-
For Concrete Cylinder Pipe	625	-
Weld-On, Top Only	626	-
Weld-On, Full Body	627	-
Stainless Steel Body, Fab Lugs, with Carbon Steel Coated Flange	662	630
All Stainless Steel, Fab Lugs	663	630
Stainless Steel Body, V Lugs, with Carbon Steel Coated Flange	664	640
All Stainless Steel, V Lugs	665	640
Flanged Coupling Adapters	**Smith-Blair**	**Dresser**
Cast	912	127
Steel	913	128
Steel Reducing	914	-
Flanged Meter Adapters	926	131
Dismantling Joints	**Smith-Blair**	**Dresser**
Dismantling Joint	971	131
Dismantling Joint, Restraining	972	-
Dismantling Joint, Restraining	975	-