



# AC-9 Grooved Coupling



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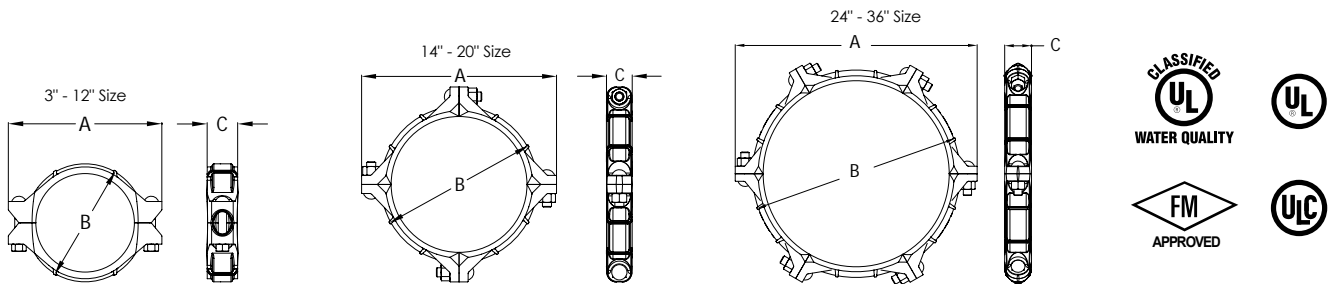
## INFORMATION

- Model AC-9 couplings are available in sizes 3" - 36" and are designed for connecting ductile iron pipe. These couplings provide an alternative to flanged piping methods.
- All sizes are furnished with flush gaskets which provide a triple seal.
- Couplings are designed for use on flexible or rigid radius grooved ductile iron pipe per ANSI/AWWA C606.
- 3"-12" sizes are UL, ULC Listed and Factory Mutual Approved.
- Gasket is NSF 61 & NSF 372 Approved.

## MATERIAL SPECIFICATIONS

- Housing: Ductile Iron per ASTM A536 Grade 65-45-12.
- Finish: Rust inhibiting primer.
- Bolt/Nut: Oval neck track bolt and heavy hex nut per ANSI/ASME B18.10 and B18.2.2. Contact Star Pipe Products for optional bolt/nut materials.
- Gasket: Halogenated Butyl per ASTM D2000. Gasket is NSF 61 & NSF 372 Approved. Temperature range -20°F to +200°F. Not recommended for petroleum services. See page 10 for other gasket materials and services.

## TECHNICAL INFORMATION



## AC-9 AWWA GROOVED COUPLING

NOM. SIZE	ACTUAL PIPE SIZE	MAX WORKING (PSI)/(kPa)	MAX END LOAD (LBS)/(N)	ALLOW PIPE END SEP.	DEFLECTION		NUTS/BOLTS		DIMENSIONS			APPROX WT. (LBS)/(KG)
					DEG. PER COUPLING	PIPE	QTY.	SIZE	A	B	C	
3	3.96	500	6158	0 - 0.09	1" - 20'	0.28	2	1/2 X 2 3/4	7.20	5.38	2.26	5
80	100.6	3447	27392	0 - 2.3		23			183	137	57	2.3
4	4.80	500	9048	0 - 0.09	1" - 6'	0.23	2	5/8 X 3 1/4	8.77	6.26	2.26	7
100	121.9	3447	40248	0 - 2.3		19			223	159	57	3.1
6	6.90	400	14957	0 - 0.09	0" - 47'	0.16	2	5/8 X 3 1/4	10.93	8.30	2.33	8
150	175.3	2758	66532	0 - 2.3		14			278	211	59	3.6
8	9.05	400	25730	0 - 0.09	0" - 36'	0.12	2	3/4 X 5	13.68	10.72	2.72	16
200	229.9	2758	114453	0 - 2.3		10			347	272	69	7.3
10	11.10	350	33869	0 - 0.16	0" - 49'	0.17	2	3/4 X 5	15.93	12.98	2.86	21
250	281.9	2413	150657	0 - 4.1		14			405	330	73	9.5
12	13.20	350	47897	0 - 0.16	0" - 41'	0.14	2	7/8 X 5	18.63	15.12	2.86	30
300	335.3	2413	213057	0 - 4.1		12			473	384	73	13.6
14	15.30	250	45963	0 - 0.16	0" - 35'	0.12	4	1 X 3 1/2	21.50	17.54	2.84	39
350	388.6	1724	204454	0 - 4.1		10			546	446	72	17.7
16	17.40	250	59447	0 - 0.25	0" - 49'	0.17	4	1 X 3 1/2	23.68	20.24	3.61	63
400	442.0	1724	264433	0 - 6.4		14			601	515	92	28.6
18	19.50	250	74662	0 - 0.25	0" - 44'	0.15	4	1 X 3 1/2	26.56	22.40	3.61	80
450	495.3	1724	332113	0 - 6.4		13			675	569	92	36.3
20	21.60	150	54965	0 - 0.25	0" - 40'	0.14	4	1 1/8 X 4	28.48	24.50	3.68	86
500	548.6	1034	244496	0 - 6.4		12			622	622	93	39.0
24	25.80	150	78419	0 - 0.25	0" - 33'	0.11	6	1 1/8 X 4	33.06	28.70	3.68	103
600	655.3	1034	348825	0 - 6.4		10			840	729	93	46.7
30	32.00	150	120637	0 - 0.47	0" - 51'	0.18	6	1 1/8 X 4	39.68	35.36	4.44	165
750	812.8	1034	536620	0 - 11.9		16			1008	898	113	74.8
36	38.30	150	172814	0 - 0.47	0" - 47'	0.16	6	1 1/8 X 4	46.20	42.00	4.44	200
900	972.8	1034	768715	0 - 11.9		15			1173	1067	113	90.7

\*All dimensions in black text are in inches except where indicated. \*All dimensions in blue text (below number) are in millimeters except where indicated.  
 • Allowable pipe end separation and deflection figures at each joint are for flexible radius grooved ends. Rigid grooved ends do not allow expansion and contraction  
 • Working pressure and/or end load are total allowable.  
 • One time field test pressure may be increased to 1.5 times the figures listed above.

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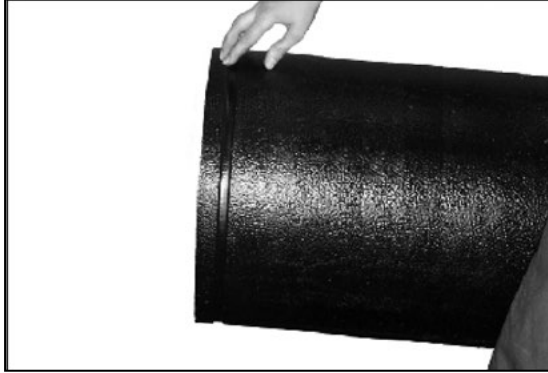
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# AC-9 Grooved Coupling

## COUPLING INSTALLATION INSTRUCTIONS - SIZES 3"-12"



STEP 1

Inspect pipe ends for proper groove dimensions being sure that grooved pipe ends are free from burrs, scores, rust, indentations, etc.



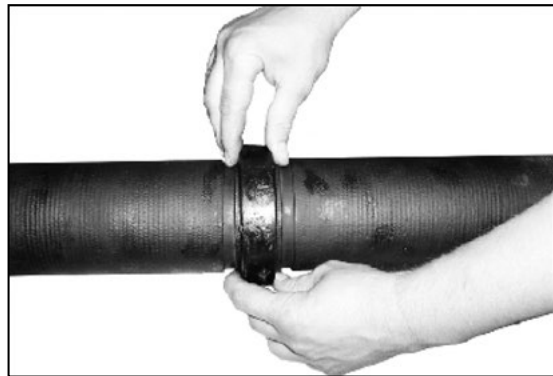
STEP 2

Apply a non - petroleum base, non - toxic gasket lubricant to pipe / fitting ends as well as inside and outside of the gasket itself.



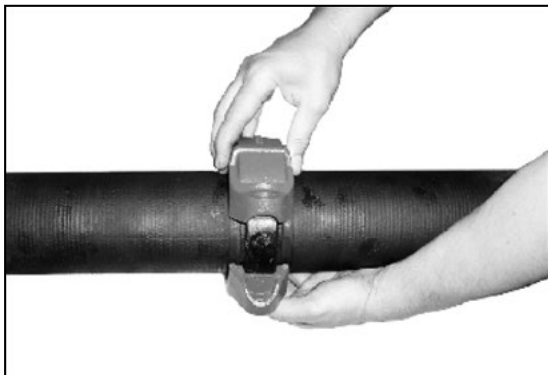
STEP 3

Slip gasket over pipe / fitting end. The lip of the gasket must not overhang the pipe / fitting ends.



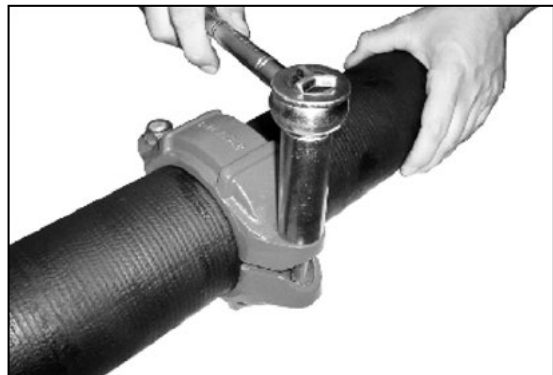
STEP 4

Align second grooved pipe / fitting end until it touches the first. Slide gasket over the second pipe / fitting, so it is centered between the grooves. No portion of the gasket should extend into the grooves.



STEP 5

Assemble both housings over the gasket and assure the housing keys are fully engaged into the grooves. Insert bolts and hand tighten the nuts uniformly.



STEP 6

Be sure that the housing is not pinching the gasket after hand tightening the nuts, then uniformly tighten the nuts until the coupling housings are firmly together, metal to metal.

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**COUPLING INSTALLATION INSTRUCTIONS - SIZES 14"-36"****STEP 1**

Inspect pipe end for proper groove dimensions being sure that grooved pipe ends are free from burrs, scores, rust, indentations, etc.

**STEP 2**

Turn the gasket inside out and slide the gasket completely over one of the pipe ends to reduce the stretching necessary to place the gasket into position.

**STEP 3**

Pull the two grooved pipes into contact aligning the pipe ends and lubricate the gasket sealing lips by applying a non-petroleum base, non-toxic gasket lubricant.

**STEP 4**

Working your hands around circumference of pipe, flip gasket towards the mating ends of two grooved pipes so that the sealing lips are contacting the pipe O.D. Position gasket centrally between the grooves of the two pipe ends. No portion of the gasket should extend into the grooves.

**STEP 5**

Lubricate exterior surface of the gasket or interior gasket pocket surfaces of casting housings.

**STEP 6**

Place first housing over gasket on top side of the pipe to support the weight of the housing segment making sure the housing keys are fully engaged into the grooves. Assemble the adjacent housing with supplied bolt and nut, then rotate the secured housings by balancing the weight of the housings on top of the pipe.

**STEP 7**

Assemble the remaining housings by following the procedure in step 6, making sure the weight of the housings is balanced on the top of the pipe.

**STEP 8**

After coupling is in place with all the required bolts and nuts, alternately tighten the nuts uniformly until the coupling housings are firmly together, metal to metal.

**ALTERNATE HOUSING INSTALLATION:**

1. Pre assemble housing segments loosely into two equal halves by allowing slight clearance between housing segments.
2. Assemble equal halves over the gasket making sure the housing keys are fully engaged into the grooves. Insert remaining two bolts and hand tighten nuts uniformly.
3. After coupling is in place with all the required bolts and nuts, alternately tighten the nuts uniformly until the coupling housings are firmly together, metal to metal.

**NOTES:**

Lined area for notes with horizontal ruling lines.

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