



Installation Instructions 470 Series Straight Restraint Couplings

WARNING:

- Do not remove retaining washer under torque-off nut.**
- Do not use red wedges on ductile iron pipe.**
- Do not use black wedges on PVC pipe.**

Pipe-Lock Restraint Couplings utilize Cam-Lock Mechanical Joint Restraint Glands which are designed for use with PVC pipe (red wedges) and with ductile iron pipe (black wedges).

PVC Cam-Lock (with red wedges)

Do not use RED wedges on ductile iron pipe. The PVC Cam-Lock is designed for use on PVC pipe conforming to the requirements of AWWA C900/C905, having cast iron ODs and for use on PVC conforming to the requirements of ASTM D-2241 having IPS C905 (steel) ODs (**limited to SDR 26 or heavier pipe wall**). PVC Cam-Lock is rated at the pressure rating of the pipe on which it is used, up to 250 PSI (150 PSI on 30" and 125 PSI on 36"). A standard MJ gasket is required for C900 pipe and a transition gasket is required for IPS pipe. Either pipe can be accommodated **without modification** of the gland. **Do not remove the retaining washers under the torque-off nuts.**

Ductile Iron Cam-Lock (with black wedges)

Do not use BLACK wedges on PVC pipe. The DI Cam-Lock is designed for use with ductile iron pipe conforming to the requirements of AWWA C151. It is rated at 350 PSI in sizes 3"-12", 14" & 16"; 250 PSI in sizes 18" & 24"; 200 PSI for 20".

Pipe-Lock Installation Instructions

Please read installation instructions carefully and fully.

<p>Step 1 Clean working area of pipe ends.</p> <p>Step 2 Place the Cam-Lock gland on the plain end of both pipes with the lip extensions toward the plain ends. Lubricate the pipe ends and gaskets with an approved pipe lubricant conforming to requirements of AWWA-C111/ANSI-A21.11. Slip gaskets onto the plain end with taper toward the plain ends.</p> <p>Step 3 Center coupling sleeve over pipe ends while maintaining recommended gap below. Slide gaskets against sleeve followed by glands.</p> <p>Step 4 Tighten bolts while maintaining equal distance between the gland and coupling sleeve at all points around the sleeve. This can be accomplished by partially tightening the bottom bolt first, then the top bolt, followed by the bolts at either side and finished by partially tighten-</p>	<p>ing the remaining bolts. Repeat the process until all bolts are tightened to within the recommended torque range (see chart below). The use of a torque wrench is recommended. Do not over-torque the bolts.</p> <p>Step 5 Hand-tighten Cam-Lock torque-off nuts in a clockwise fashion until all wedges touch the pipe. Then tighten torque-off nuts in an alternating pattern, turning each nut 1/2 turn until all nuts twist off. Never turn a single torque-off nut more than 1/2 a turn without moving to another nut. Do not tighten further after the nuts twist off. Cam-Lock only requires 45-60 ft.-lb. torque to set wedges.</p> <p>If removal and re-assembly are required, use 5/8" hex that remains after the nuts have twisted off. Follow above instructions in reverse order to completely remove the Pipe-Lock fitting. Re-assemble Pipe-Lock following above instructions, using a torque wrench to set wedges to 45-60 ft.-lb.</p>
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Recommended Gap Between Pipe Ends	
7" Sleeve	1/2" to 3/4" Gap
10" Sleeve	1/2" to 1 1/4" Gap
16" Sleeve	1/2" to 1 3/4" Gap

Recommended Bolt Torque	
5/8" Bolts	45 to 60 ft. lbs.
3/4" Bolts	75 to 90 ft. lbs.
1" Bolts	100 to 120 ft. lbs.
1 1/4" Bolts	120 to 150 ft. lbs.