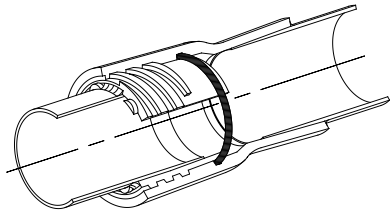


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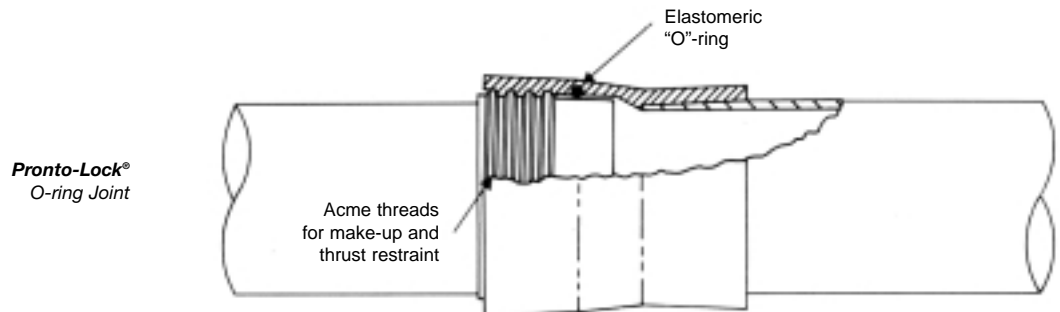


Pronto-Lock® Mechanical Joints

for Series 3000A & 3200A in 2"-6" diameters

General

The Ameron Pronto-Lock® mechanical joining system, U.S. Patent No. 3784239, utilizes an O-ring seal and is designed to provide a fast, simple, rugged and reliable method of installing pipe. The O-ring fits in a groove in the female end of the joint and is installed in the factory. The sealing surface is the smooth tapered section of the male end of the joint. Any irregularity, discontinuity or foreign material either on this surface, in the groove or on the O-ring itself may prevent the joint from properly sealing upon make-up. The heavy duty molded ACME type threads in this joint start easily and make-up quickly with minimum danger of cross threading or jamming.



Lubricants

In order to minimize installation effort and permit disassembly when necessary, it is recommended that a lubricant be used on all Pronto-Lock® joints. In general, lubricants such as motor oil, ethylene glycol, petroleum jelly, lard or vegetable shortening may be used. Liquid detergent is also very effective and is the preferred lubricant for potable water lines. Lubricants containing granular fillers or solid particles should not be used because these may prevent the O-ring from properly sealing. Those lubricants containing powdered or flaked metal or hardening type thread dopes should not be used.

A major consideration regarding all types of lubricants is that they will catch and hold any dirt, dust or sand which might come in contact with the joint, this possibly might contaminate the O-ring or gall the threads and cause problems. For this reason, it is necessary to emphasize cleanliness and care on the part of the installation crew.

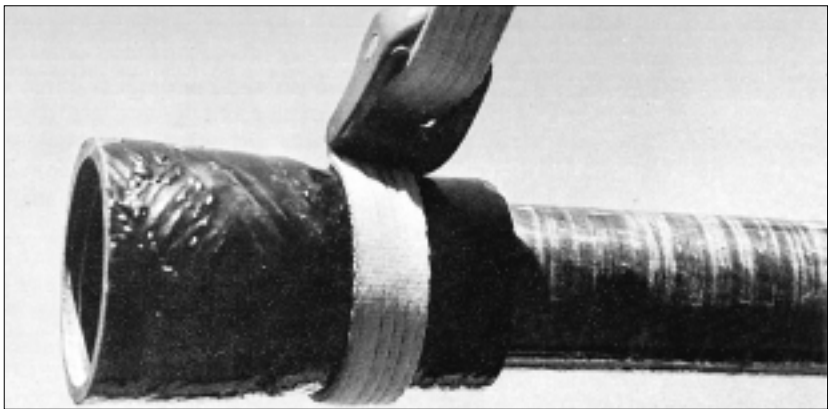
Strap Wrenches

Standard strap wrenches, or chain tongs may be used to make up the Pronto-Lock® (2"-6") joint. When using one of the accepted wrenches, the following rules must be followed:

- a. Always apply wrenches to the straight section of the Pronto-Lock® female end. **Never apply any kind of wrench directly on the pipe wall.**
- b. Never use a tool or "Cheater" with a longer than 24" handle. The joints will turn and make up easily if they are clean, lubricated and properly aligned. Any difficulties encountered are usually the result of misalignment. When resistance is felt, the joint should be either backed off and cleaned or the alignment should be checked.

Installation Procedure

- a. String the pipe along the right-of-way.
- b. Inspect the pipe wall for any sign of cracking or impact damage.
- c. Remove the protector from the female end of one length of pipe.
- d. Inspect the female end to be sure it is free of dirt, sand or any foreign particles which could prevent complete make-up of the joint.
- e. Check the O-ring to be sure it is properly seated in the O-ring groove.
- f. Support the female end from falling into the dirt by placing the strap wrench (or other acceptable wrench) around the **collar** in the back-up position.
Note: Do not use any wrenches on the pipe wall itself.

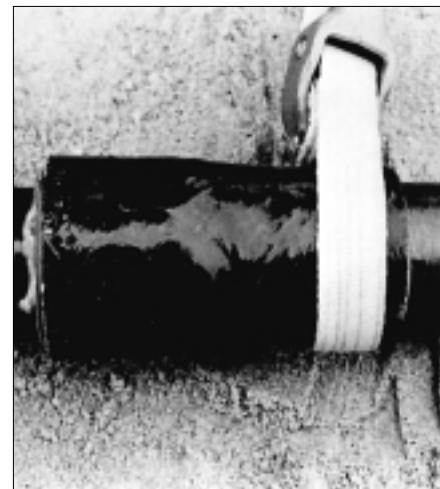


- g. Inspect the second length of pipe for any sign of cracking or impact damage.
- h. Remove the protective end cap from the male end of the adjacent length of pipe.
- i. Insure that the sealing surface is clean and free from any roughness or foreign material which might prevent the O-ring from sealing.
- j. Insure that the threads are clean and free of any foreign material which might prevent complete joint make-up.
- k. Lubricate the male end and the O-ring with the appropriate lubricant as discussed in Section "Lubricants".



Installation Procedure (cont'd)

- I. Insert the male end of the second length into the female end of the first length as far as possible and begin turning clockwise so that the threads engage.



- m. Apply a strap wrench or chain tong to the female end of the second length of pipe and tighten. Use the strap wrench on the straight section of the Pronto-Lock® female ends only. **Do not use wrenches on the pipe wall.**

Note: It is not necessary to apply excessive pressure on the wrench to “insure a seal”. These are not sealing threads.

Variations in Joint Make-Up

Due to make-up tolerances, some joints will make-up flush while some will stand off 3/8” or more. This standoff does not affect performance because it is the O-ring which provides the seal, not the threads. Attempts to make all the joints flush or deeper may result in damage to the pipe. Experience with joint make-up will dictate the amount of torque necessary to insure complete make-up. In no case is a lever arm greater than 24” to be used in making up the joints. “Cheater” extensions of existing tools are also not to be used.

O-rings

The standard O-rings recommended by Ameron for use with the Pronto-Lock® joints are listed in the table below. Use of O-rings other than these without formal approval is not recommended and performance cannot be guaranteed.

O-Ring and Dimensional Data (2”-6”)					
Supplier	Compound Number	Part Number			
		2”	3”	4”	6”
Hercules	7446-70	231	240	352	365
Parker	N103-70	231	240	352	365
National	B-46	NS-231	NS-240	NS-352	NS-365
Standard Dimensions in Inches					
O-Ring I.D.		2 ⁵ / ₈	3 ³ / ₄	4 ⁷ / ₈	7
O-Ring O.D.		2 ⁷ / ₈	4	5 ¹ / ₄	7 ³ / ₈
O-Ring Width		1/8	1/8	3/16	3/16

Equipment List

The following tools are recommended for installing Bonsdtrand pipe Series 3000A & 3200A:

- a. Unique Tool®
- b. Hacksaw or power saw with abrasive wheel
- c. Pipe vise (Pilot No. 20) and 1/4" (6 mm) thick elastomeric pads
- d. Flapper wheel sander (available from Ameron) with electric or air drill motor with 1/4" (6 mm) drive, 1700-2200 rpm (faster drills will produce a polished surface)
- e. Rubber mallet, 2 lb. (1 kg), Shore Durometer A 70-80, 2 1/2 to 3" diameter
- f. Comealong for 6" (150 mm) pipe Dayton No. 2Z614
- g. Heating blankets
- h. Chem Cure Paks®
- i. Pipefitter's wraparound, level and white grease pencil or soapstone
- j. Duster brush and clean rags
- k. Dust mask, eye protection and gloves
- l. Folding rule, 10 ft. (3 m)
- m. Tape, 50 ft. (15 m)
- n. Disc grinder or file (optional)

When using pneumatic tools, the air supply must be dry and oil-free as moisture or oil on bonding surfaces will interfere with the adhesive.

Small-diameter joints may be made up with a rubber mallet (or equal) and wooden block (left). Large-diameter joint make-up requires comealongs (right).



Adhesives for the Pronto-Lock® joint can be force-cured with Ameron electric heating blankets (left) or Chem Cure Paks®. An ample supply of clean rags and dust brushes is required to keep all bonding surfaces clean (right).



A pipefitter's wraparound, a level and a grease pencil are suggested for alignment and marking (left). Essential safety wear includes eye protection, dust mask and clean cotton gloves (right).



Important Notice

This literature and the information and recommendations it contains are based on data reasonably believed to be reliable. However, such factors as variations in environment, application or installation, changes in operating procedures, or extrapolation of data may cause different results. Ameron makes no representation or warranty, expressed or implied, including warranties of merchantability or fitness for purpose, as to the accuracy, adequacy or completeness of the recommendations or information contained herein. Ameron assumes no liability whatsoever in connection with this literature or the information or recommendations it contains.



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