



PVC Stargrip® series 4000

Mechanical Joint Wedge Action Restraint
for AWWA C900/C905 and IPS PVC Pipe
Patent #5,071,175

INSTALLATION INSTRUCTIONS - SIZES 3" - 36"

**STEP 1**

The rubber gasket seals more effectively if the surfaces with which it comes in contact are thoroughly cleaned just before assembly to remove all loose foreign material. Lubrication and additional cleaning should be provided by brushing both the gasket and the plain end with soapy water or pipe lubricant. Slide the PVC Stargrip® on the plain end, followed by the MJ gasket.

**STEP 2**

After insertion of the pipe into the bell of the fitting, firmly press the gasket into the gasket recess. During this process the joint should be kept straight.

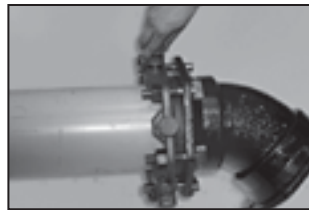
**STEP 3**

Slide the PVC Stargrip® toward the MJ bell with the gland lip against the gasket. Insert T-bolts and hand tighten nuts.

IMPORTANT: Make deflection after joint is assembled but before tightening T-bolts.

**STEP 4**

While tightening T-bolts, it is essential that the gland be brought up toward the bell flange evenly, maintaining approximately the same distance between the gland and the face of the flange at all points around the socket. All T-bolts should be tightened until they are in within the torque range per ANSI/AWWA C600 (See Table A). T-Bolts should be tightened alternately on opposite sides (Star Pattern).

**STEP 5**

Hand tighten the Torque-limiting twist-off Bolts in a clockwise direction until all wedges are in firm contact with the pipe surface.

IMPORTANT: When installing sizes 4" through 12" on IPS PVC, the spacer washers must be removed from the torque limiting bolts.

**STEP 6**

Continue tightening in an alternative manner going on opposite sides [Star Pattern], until all of the Torque-limiting twist-off Bolt heads have been twisted off. Never turn a single bolt over 180 degrees without alternating to another bolt.

If removal is necessary, utilize the 1 1/4" hex head provided. [If reassembly is required, assemble the joint in the same manner as above and tighten the wedge bolt to 90 ft. lb].

Note: If effective sealing is not attained at the maximum torque indicated, then the joint should be disassembled, thoroughly cleaned, and reassembled. **Overstressing the bolts to compensate for poor installation practice is not acceptable.**

Note: Not to be used on plain end fittings, DI or steel pipe.

TABLE A) T-HEAD BOLT & NUT DETAILS		
PIPE SIZE (IN)	BOLT SIZE (IN)	RANGE ¹ OF TORQUE (FT/LBS)
3	5/8	45-60
4-24	3/4	75-90
30-36	1	100-120

¹These torque ranges are requirements of AWWA C600