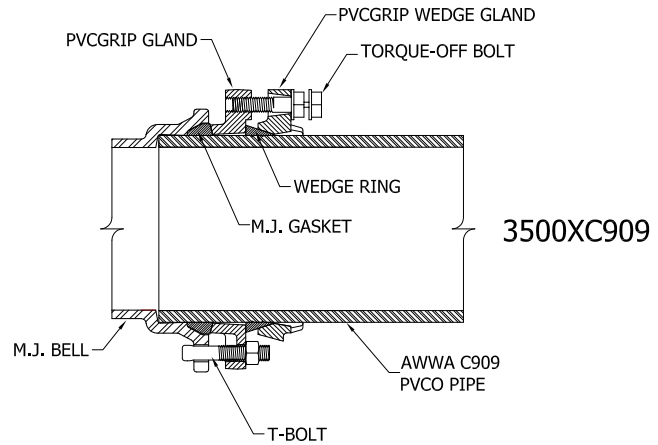
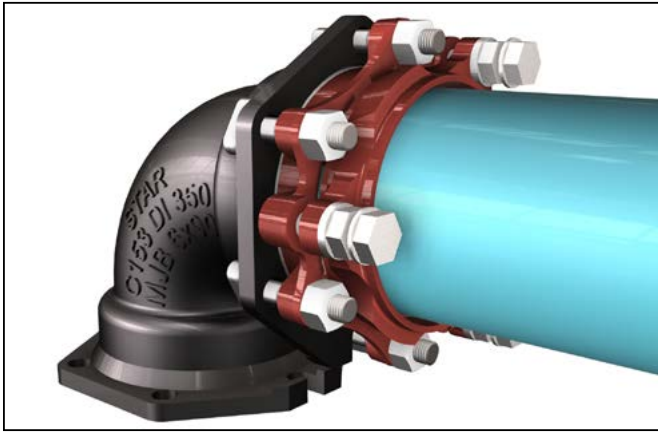




PVC Ring Lock (PVCGrip™) Series 3500 Restrainer

FOR USE ON JM EAGLE ULTRA BLUE™ AWWA C909 PVCO PIPE WITH C.I. OD



STAR® PIPE PRODUCTS

FEATURES & BENEFITS

- Designed for Restraining Mechanical Joint Fittings with JM Eagle Ultra Blue™ ANSI/AWWA C909 PVCO Pipe.
- Castings made of Ductile Iron per ASTM A536, Grade 65-45-12.
- Maximum pressure rating includes a 2:1 safety factor
- T-Bolts/Rods/Hex Nuts: High Strength Low Alloy Steel Per ANSI/AWWA C111/A21.11
- Series 3500 Restrainer is intended for underground use only.

PRESSURE RATINGS FOR JM EAGLE ULTRA BLUE™ AWWA C909 PVCO PIPE WITH C.I. OD

Nominal Size	PVCO PIPE OD	Joint Restraint Maximum Pressure Rating (PSI)	T-Bolt Torque (LB.-FT.)
6"	6.90	235	55-65
8"	9.05	235	55-65
10"	11.10	235	55-65
12"	13.20	235	55-65
16"	17.40	165	55-65

NOTES

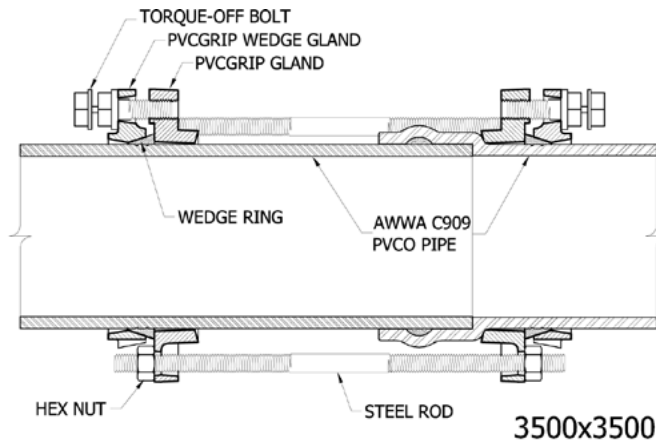
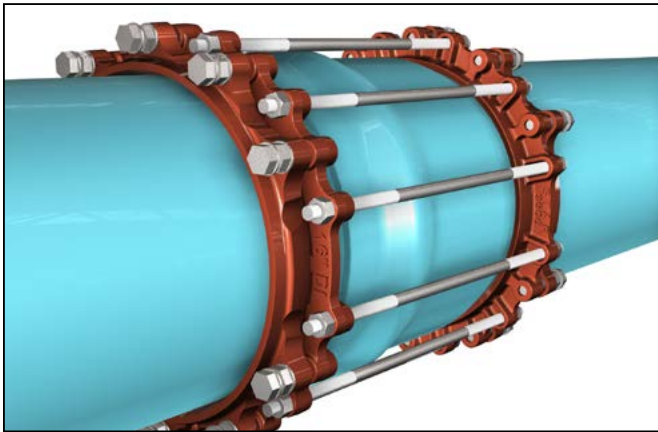
- Installation requires T-Bolt torque values to be applied as indicated above.
- Installation to be in accordance with ANSI/AWWA C605 and ANSI/AWWA C600.
- Pipeline testing to be in accordance with ANSI/AWWA C605.





Series 3500C PVC Ring Lock (PVCGrip™) by PVC Ring Lock (PVCGrip™)
Mechanical Joint 360° Ring Type Restraint for AWWA C909 PVC Pipe Bells

FOR USE ON JM Eagle Ultra Blue™ AWWA C909 PVCO PIPE WITH C.I. OD



FEATURES & BENEFITS

- Designed for restraining JM Eagle Ultra Blue™ ANSI/AWWA C909 PVCO Pipe-to-Pipe connections.
- Castings made of Ductile Iron per ASTM A536, Grade 65-45-12.
- Maximum pressure rating includes a 2:1 safety factor
- Rods/Hex Nuts: High Strength Low Alloy Steel Per ANSI/AWWA C111/A21.11
- Series 3500 Restrainer is intended for underground use only.

PRESSURE RATINGS FOR JM EAGLE ULTRA BLUE™ AWWA C909 PVCO PIPE WITH C.I. OD

Nominal Size	PVCO PIPE OD	Joint Restraint Maximum Pressure Rating (PSI)
16"	17.40	100

NOTES

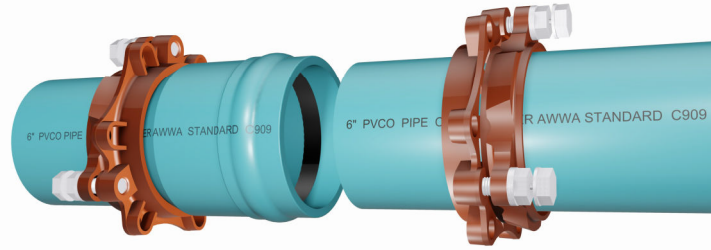
- Installation to be in accordance with ANSI/AWWA C605 and ANSI/AWWA C600.
- Pipeline testing to be in accordance with ANSI/AWWA C605.

STAR® PIPE PRODUCTS

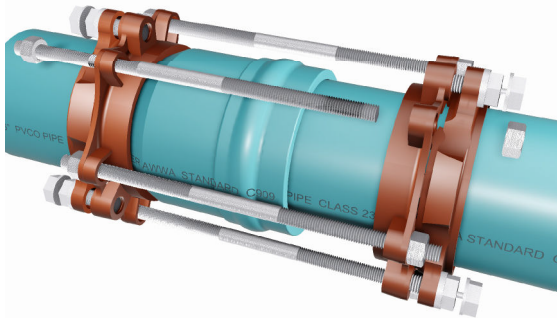




PVC RING LOCK(PVCGRIP) BY PVC RING LOCK(PVCGRIP) INSTALLATION INSTRUCTIONS



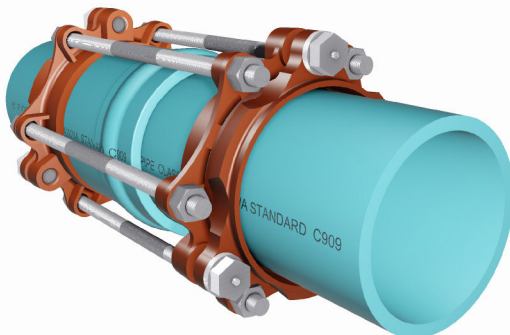
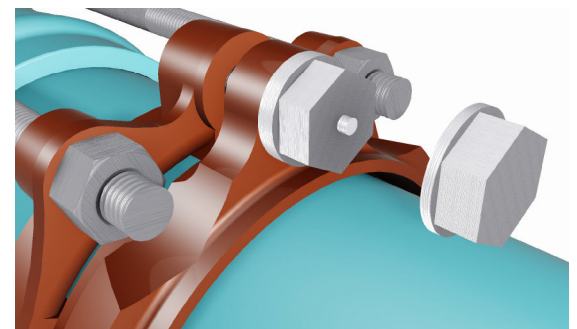
1. After making sure that pipe and pipe surface is in good and clean condition, slide the PVC RING LOCK with lip facing spigot end of first pipe as shown. Slide the second PVC RING LOCK, with lip facing pipe bell, along the length of second pipe to fit closely behind the pipe bell as shown.



2. After completing the pipe joint assembly per the pipe manufacturer instructions, position PVC RING LOCK by inserting one of the restraint rods provided into the restrainer ears of PVC RING LOCK such that the restraint rod ends extend past each nut approximately 1/2". Continue inserting the remaining restraint rods through provided PVC RING LOCK ears. Leave all the nuts untightened at this moment.

3. Tighten each twist off bolt on PVC RING LOCK by turning approximately 180° in a clockwise direction, alternating between bolts until the break away heads twist off. Never turn a single head over 180° without alternating to another bolt.

Note: If removal is necessary, use the 1 1/4" nut provided. If reassembly is required, contact Star for replacement twist off bolts.



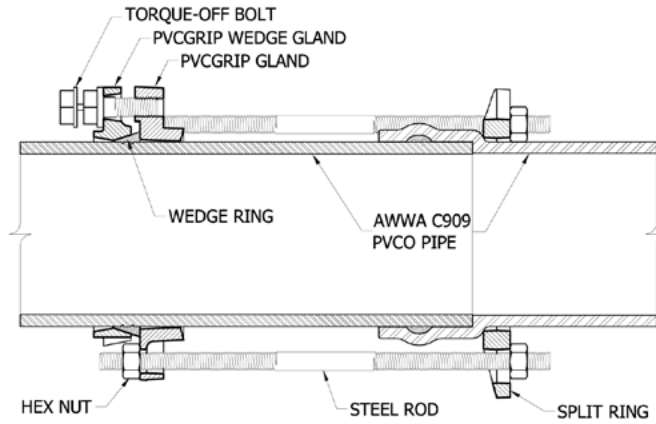
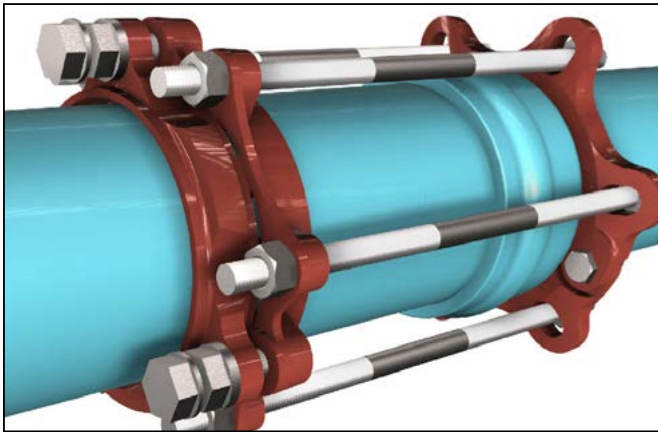
4. Snug tighten all nuts such that the spigot end is secured into the bell end and rods stick out approximately 1/2" past the nuts. Make sure that PVC RING LOCK on bell end is sitting evenly and is bearing against the pipe bell.
Caution: Do not over-tighten restraining nuts. Turn nut to hand tight plus half turn.



Series 3500P PVC Ring Lock (PVCgrip™) with Split Follower

Mechanical Joint 360° Ring Type Restraint for AWWA C909 PVC Pipe Bells

FOR USE ON JM EAGLE ULTRA BLUE™ AWWA C909 PVCO PIPE WITH C.I. OD



3500xSplit Ring

FEATURES & BENEFITS

- Designed for restraining JM Eagle Ultra Blue™ ANSI/AWWA C909 PVCO Pipe-to-Pipe connections.
- Castings made of Ductile Iron per ASTM A536, Grade 65-45-12.
- Maximum pressure rating includes a 2:1 safety factor
- Rods/Hex Nuts: High Strength Low Alloy Steel Per ANSI/AWWA C111/A21.11
- Series 3500 Restrainer is intended for underground use only.

PRESSURE RATINGS FOR JM EAGLE ULTRA BLUE™ AWWA C909 PVCO PIPE WITH C.I. OD

Nominal Size	PVCO PIPE OD	Joint Restraint Maximum Pressure Rating (PSI)
6"	6.90	235
8"	9.05	235
10"	11.10	235
12"	13.20	165

NOTES

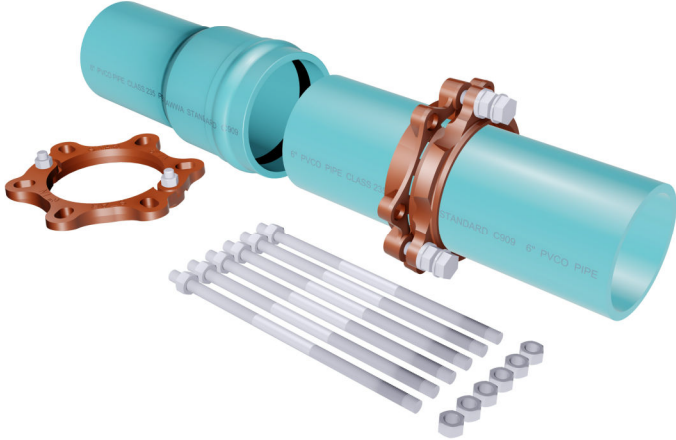
- Installation to be in accordance with ANSI/AWWA C605 and ANSI/AWWA C600.
- Pipeline testing to be in accordance with ANSI/AWWA C605.

STAR® PIPE PRODUCTS

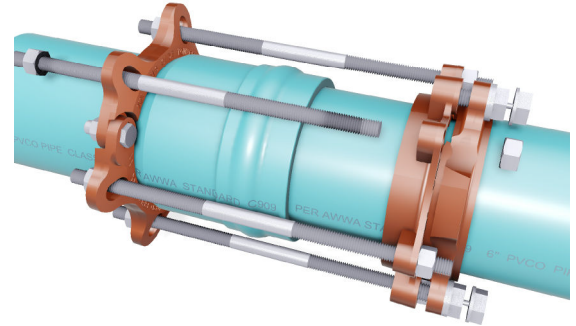




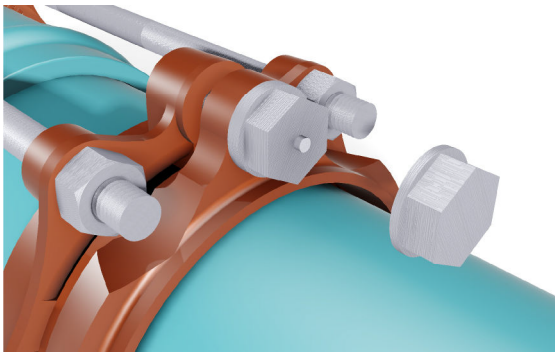
PVC RING LOCK(PVCGRIP) BY SPLIT FOLLOWER INSTALLATION INSTRUCTIONS



1. After making sure that pipe and pipe surface is in good and clean condition, slide the PVC RING LOCK with lip facing spigot end of first pipe as shown.

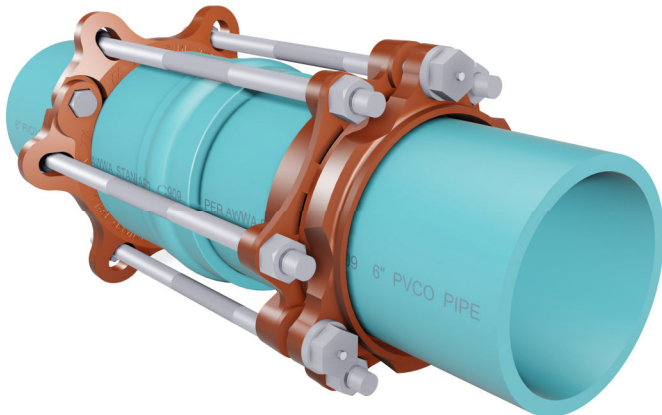


2. After completing the pipe joint assembly per the pipe manufacturer instructions, install split follower on second pipe behind the pipe bell in the direction indicated on the casting. Tighten clamping bolts on the split follower to 90 ft-lbs. Align PVC RING LOCK and split follower by inserting one of the restraint rods provided into the restrainer ears of PVC RING LOCK and split follower such that the restraint rod ends extend past each nut approximately 1/2". Continue inserting the remaining restraint rods through provided split follower ears. Leave all the nuts untightened at this moment.



3. Tighten each twist off bolt on PVC RING LOCK by turning approximately 180° in a clockwise direction, alternating between bolts until the break away heads twist off. Never turn a single head over 180° without alternating to another bolt.

Note: If removal is necessary, use the 1 1/4" nut provided. If reassembly is required, contact Star for replacement twist off bolts.



4. Snug tighten all nuts such that the spigot end is secured into the bell end and rods stick out approximately 1/2" past the nuts. Make sure that split follower on bell end is sitting evenly and is bearing against the pipe bell.

Caution: Do not over - tighten restraining nuts. Turn nut to hand tight plus half turn.