

INSTALLATION INSTRUCTIONS

Read installation instructions first before installing. Check parts to ensure that no damage has occurred during transit and that no parts are missing. Also check the diameter of the pipe and the range marked on the restrainer to ensure you have the proper size.

4"-12" GripRing™ Pipe Restrainer

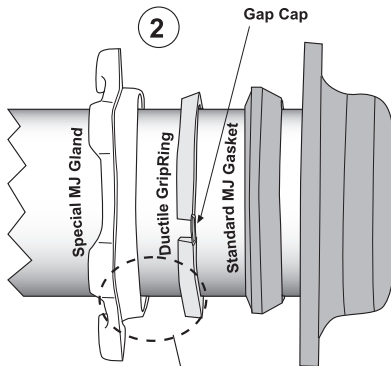
Patent #5335946



Not for use on polyethylene pipe, steel pipe, plain end mechanical joint fittings, Molecularly Oriented Polyvinylchloride (PVCO) AWWA C909-02. See pipe material compatibility chart for details.

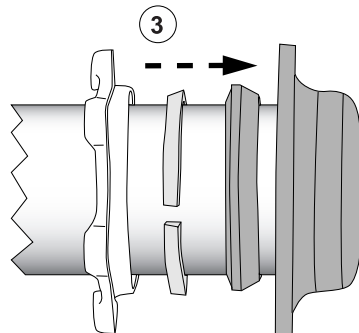
Step 1 • Clean pipe to remove as much dirt, coating, and corrosion as possible from the surface. (Asphaltic coating common to DI pipe does not have to be removed). Check diameter of pipe to make sure you are using the correctly sized GripRing. Coat both the gasket and plain pipe end with approved lubricant.

Step 2 • Slide the gland, GripRing, and MJ gasket onto pipe end. The GripRing should slide easily along the pipe. It can be sprung open slightly if needed, to facilitate moving it into position.

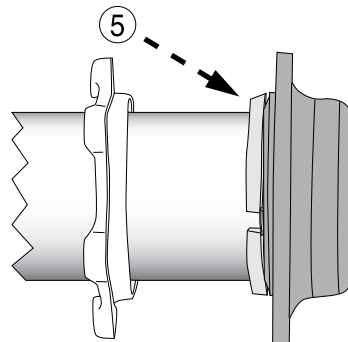
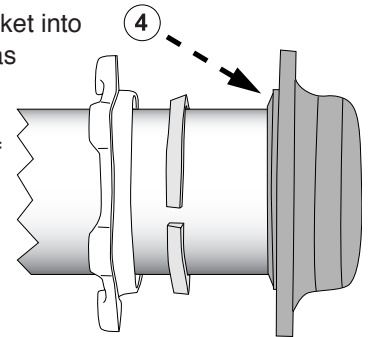


Note: Make sure that the tapered side of the GripRing faces the gland. This is very important, since the GripRing taper engages the taper in the gland. 10 & 12" GripRings have a Gap Cap.

Step 3 • Insert the pipe end into the MJ fitting.

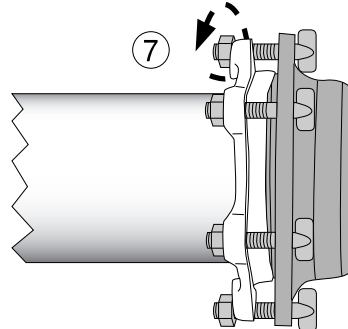
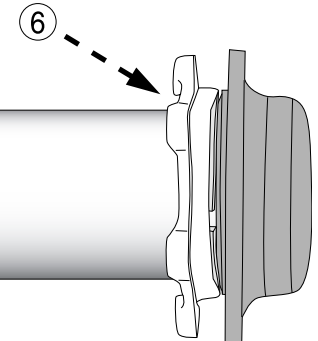


Step 4 • Slide the gasket into the MJ bell pocket as far as possible. The gland (and GripRing) may be used to tap the gasket into place if required. In rare circumstances a hammer may be required to seat the gasket properly.



Step 5 • Slide the GripRing up the pipe until its face is against the MJ gasket.

Step 6 • Slide the gland up the pipe until it engages the GripRing.



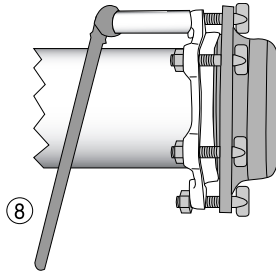
Step 7 • Install T-bolts in the MJ fitting and gland. Tighten hand tight.

Installation Instructions continued on back

4" - 12" GripRing™ (continued from front)

Step 8 • Using a torque wrench, tighten the nuts to the proper torque shown on torque chart (below). Care must be taken to assure that the flanges of the gland and MJ fitting remain parallel. This can be done by alternating side-to-side while tightening.

Nom. Size	Bolt Size	Torque
4", 6" & 8"	3/4"	75-90 ft-lbs
10" & 12"	3/4"	90-110 ft-lbs



For best results, wait 10 minutes and re-torque.

Proper torque is necessary to get a proper gasket seal and assure that the GripRing engages the pipe to provide restraint.

Pressure test for leaks before backfilling.

GRIPRING™ PIPE MATERIAL COMPATIBILITY CHART

Pipe Material	Ring Color	Working Pressure	Comments
* Ductile Iron - AWWA C151	Black	350	
Cast Iron - Obsolete Std.	Black	350	OD is same as DI, C151
* PVC - D.I. Size AWWA C900	Black	Rating of pipe	Class 235 (SDR18) & 305 (SDR14) only.
PVC - "Class Pipe" ASTM D2241	Red	Rating of pipe	4"-8" Class 160 (SDR26) - 200 (SDR21). 10" & 12" Class 200 only.
PVC - Sched. 80, ASTM D1785	Red	Rating of pipe	4"-8" Class Sched 40-80. 10" & 12" Sched. 80 only.
PVC C900 DR Class 100/165 (DR25)	—	—	GripRing is not for use on C900 DR Class 100/165 (DR25) pipe.
PVC Molecularly Oriented (C909)	—	—	GripRing is not for use on C909 pipe
Steel	—	—	GripRing is not for use on steel pipe
Asbestos Cement	—	—	GripRing not for use on asbestos cement
Fiberglass	—	—	GripRing not for use on fiberglass pipe
HDPE	—	—	GripRing not for use on HDPE pipe
Plain end mechanical joint fittings	—	—	GripRing not for use on plain end MJ fittings

NOTE: Angular deflection of up to 5° is allowable between the pipe and fitting for all GripRing sizes.

*** UL Listed & FM Approved**

PRECAUTIONS

1. MJ gasket must comply with ANSI/AWWA C111/A21.11.
2. Check diameter of pipe to make sure you are using the correctly sized GripRing. Red rings are for IPS sized pipe, Black rings for Cast Iron size (C900).
3. Clean pipe to remove as much dirt, coatings, and corrosion as possible from the surface. Lubrication and additional cleaning should be provided by brushing both the gasket and plain pipe end with soapy water or approved pipe lubricant per ANSI/AWWA C111/A21.11.
4. Make sure no foreign materials become lodged between the GripRing and pipe, gasket and GripRing, or between the GripRing and gland.
5. Avoid loose fitting wrenches, or wrenches so short that achieving proper torque is difficult.
6. Keep threads free of foreign material to allow proper tightening.
7. Bolts are often not tightened enough when a torque wrench is not used. Take extra care in this situation to make sure bolts are properly tightened.
8. Pressure test for leaks before backfilling.
9. If a good seal is not attained at 90 ft-lbs torque, the joint should be disassembled, thoroughly cleaned, and carefully reassembled.
10. Backfill and compact carefully around pipe and fittings.
11. When reinstalling parts with stainless steel hardware there may be a loss in pressure holding ability due to worn or damaged threads during the original installation.

COMMON INSTALLATION ERRORS

1. Not enough torque on bolts.
2. Debris lodged between GripRing and pipe/gasket/gland.
3. Dirty threads on bolts or nuts.
4. Not using the proper size GripRing for the pipe.
5. Allowing the gland to get cocked at an angle to the bell flange.
6. Forgetting to install the GripRing (provides gasket seal, but no restraint).

IF GRIPRING MUST BE REMOVED

1. Make sure pipe is not pressurized. Disassembling the joint compromises gasket seal and restraint.
2. Remove all bolts and nuts from gland. Slide gland away from MJ bell, disengaging it from the GripRing.
3. Pry open the GripRing gap to approximately 3/4" using a screw driver, snap ring pliers, or other available tool. This will disengage the GripRing from the pipe.