ROMAC INDUSTRIES, INC.

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.

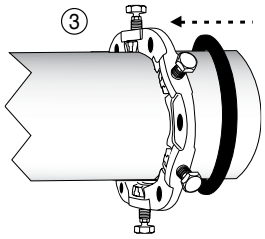
Style RG-PVC Mechanical Joint Retainer

FOR PVC PIPE 14"- 24"

Step 1 • Confirm pipe compatibility on the table below.

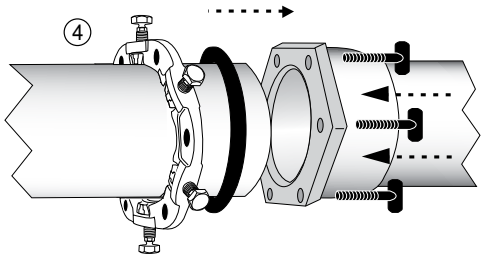
Step 2 • Check to ensure no damage has occurred in transit and that no parts are missing.

Step 3 • **Clean and lubricate the pipe end and gasket with soapy water** or other approved pipe lubricant per ANSI/AWWA C111/A21.11. Place the RG-PVC on the pipe with the raised lip towards the plain end. Place the gasket over the pipe so the flat side is toward the RG-PVC.



Note: A standard MJ gasket is used with this product.

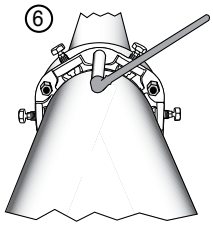
Step 4 • Keeping the joint straight, insert the pipe into the mechanical joint fitting. Seat the gasket properly, making sure that the gasket is fully pressed into the gasket recess.



Step 5 • Slide the gland toward the joint until the raised lip of the gland touches the gasket. Insert the T-bolts and hand tighten the nuts. Make any deflection adjustment after hand tightening the T-bolt nuts but before tightening them to the proper torque specifications.

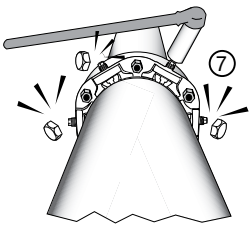
SIZE	MAX. DEFLECTION ANGLE
14" - 16"	2°
18"- 24"	1.5°

Step 6 • **Tighten T-bolts to the torque recommended in AWWA C111, see chart below.** Maintain the same overall gap between the RG-PVC and the MJ bell face by tightening the T-bolts in a uniform criss-cross pattern until proper torque is achieved. Using a torque wrench is highly recommended.
Socket size: 1 1/4"



Note: 90 ft-lbs. torque = 12" wrench w/90 lbs. force.

Step 7 • Tighten the restraining bolts until all the lugs just touch the pipe. Then, tighten each bolt, alternating between bolts in a uniform criss-cross pattern until the heads break off.
Socket size: 1 1/4"



Step 8 • Pressure test for leaks before backfilling.

To remove the RG-PVC restrainer, see "If Restrainer Must Be Removed" at bottom of side two.

PIPE MATERIAL	PIPE SIZE	WORKING PRESSURE	RECOMMENDED TORQUE FOR T-BOLTS	RECOMMENDED TORQUE FOR RESTRAINING BOLTS
PVC - D.I. Size (C905 Class 100, DR 41)	14"	80 PSI	75 - 90 FT-LBS	TORQUE OFF HEADS
PVC - D.I. Size (C905 Class 100, DR 41)	16" - 24"	100 PSI	75 - 90 FT-LBS	TORQUE OFF HEADS
PVC - D.I. Size (C905 Class 125, DR 32.5)	14" - 24"	125 PSI	75 - 90 FT-LBS	TORQUE OFF HEADS
PVC - D.I. Size (C905 Class 165, DR 25)	14" - 24"	165 PSI	75 - 90 FT-LBS	TORQUE OFF HEADS
PVC - D.I. Size (C905 Class 235, DR 18)	14" - 16"	235 PSI	75 - 90 FT-LBS	TORQUE OFF HEADS
PVC - D.I. Size (C905 Class 235, DR 18)	18" - 20"	200 PSI	75 - 90 FT-LBS	TORQUE OFF HEADS
PVC - D.I. Size (C905 Class 235, DR 18)	24"	165 PSI	75 - 90 FT-LBS	TORQUE OFF HEADS
PVC - D.I. Size (C905 Class 305, DR 14)	14" - 16"	235 PSI	75 - 90 FT-LBS	TORQUE OFF HEADS
PVC - D.I. Size (C905 Class 305, DR 14)	18" - 20"	200 PSI	75 - 90 FT-LBS	TORQUE OFF HEADS
PVC - D.I. Size (C905 Class 305, DR 14)	24"	165 PSI	75 - 90 FT-LBS	TORQUE OFF HEADS
PVC - D.I. SIZE (C909)	NOT COMPATIBLE WITH RG-PVC			
PVC - "CLASS PIPE" (IPS SIZE)				
DUCTILE IRON				
STEEL				
ASBESTOS CEMENT				
FIBERGLASS				
HDPE				
*PRESSURE RATINGS ARE DESIGNED WITH A 2:1 SAFETY FACTOR				

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ROMAC INDUSTRIES, INC.

INSTALLATION INSTRUCTIONS

Style RG-PVC Mechanical Joint Retainer

FOR PVC PIPE 14"- 24"

PRECAUTIONS

1. Make sure a standard MJ gasket is being used.
2. Check diameter of pipe to make sure you are using the correct size RomaGrip; also check gasket to make sure it is the size you think it is.
3. Be sure to clean pipe of dirt and corrosion in the area that the gasket will seal.
4. Lubricate both the gasket and the pipe end with soapy water or approved pipe lubricant per ANSI/AWWA C111/A21.11.
5. Make sure no foreign materials are lodged between the gasket and pipe.
6. Avoid loose fitting wrenches, or wrenches too short to achieve proper torque.
7. Keep threads free of foreign material to allow proper tightening.
8. Take extra care to follow proper bolt tightening procedures and torque recommendations. Bolts are often not tightened enough when a torque wrench is not used.
9. For best results, once T-bolts are properly torqued, wait 10 minutes and retighten to proper torque.
10. Pressure test for leaks before backfilling.
11. Backfill and compact carefully around pipe and fittings.

COMMON INSTALLATION PROBLEMS

1. T-Bolts are not tightened to the proper torque.
2. Rocks or debris between pipe and gasket.
3. Dirt or debris between pipe and restraining pad.
4. Dirt on threads of bolts or nuts.
5. Not enough pipe inserted into bell.
6. Not using a standard MJ gasket.
7. Too much defelction angle (see deflection chart on side one).
8. Using the RG-PVC on the wrong pipe

IF RESTRAINER MUST BE REMOVED

1. Make sure pipe is not pressurized. Removing the restrainer could cause the pipe joint to separate.
2. To remove the RG-PVC, loosen the restraining bolt using a 5/8" hex wrench or socket. Follow steps 7-4 in reverse order.
3. To reassemble, follow installation procedures and tighten the restraining bolts using a 5/8" hex wrench to the proper torque, see table on side one. If no torque is stated, use 45 - 55 ft-lbs.

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