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 3" - 12"

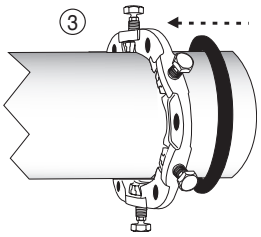
FM APPROVED

SIZES 4"-12"
FM APPROVED

Step 1 • Confirm pipe compatibility on the table below.

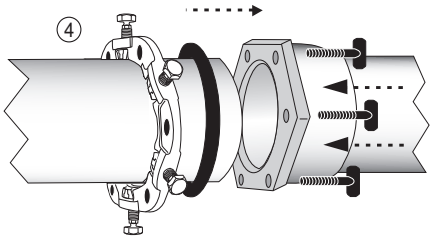
Step 2 • Check to ensure no damage has occurred in transit and that no parts are missing.

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.



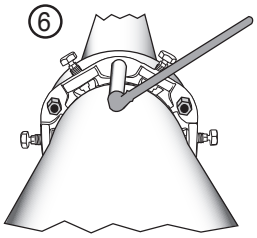
Note: Make sure the correct gasket is being used. The Romac DI/IPS combination gasket can be used on both C-900 and IPS pipe. A standard MJ gasket can be used on C-900 pipe and an MJ x IPS transition gasket on IPS pipe.

Step 4 • Keeping the joint straight, insert the pipe into the mechanical joint fitting. Be sure that the gasket is properly seated and 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 (5º maximum).

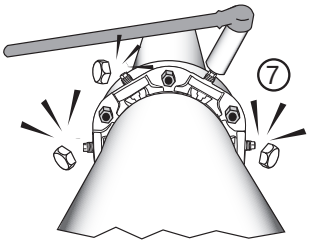
Step 6 • **Tighten T-bolts to the torque recommended in AWWA C111, see chart below.** Maintain the same overall gap between the RG-PVC and the MJ bell face by tightening the T-bolts in a uniform crisscross pattern until proper torque is achieved. Using a torque wrench is highly recommended.



Pipe Size	Socket Size
3"	1 1/16"
4" - 12"	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 crisscross pattern to the torque recommended in the table below.
Socket size: 1 1/4"



Step 8 • Pressure test for leaks before backfilling.

PIPE MATERIAL	PIPE SIZE	WORKING PRESSURE	RECOMMENDED TORQUE FOR T-BOLTS	RECOMMENDED TORQUE FOR RESTRAINING BOLTS
PVC - D.I. SIZE (C900 Class 165)	4" - 12"	RATING OF PIPE	45 - 60 FT-LBS	30 - 40 FT-LBS
PVC - D.I. SIZE (C900 Class 235 & 305)	4" - 12	RATING OF PIPE	75 - 90 FT-LBS	TORQUE OFF HEADS
PVC - "CLASS PIPE" (IPS Size Less than ASTM D 2241 Class 160)	3" - 12"	RATING OF PIPE	45 - 60 FT-LBS	30 - 40 FT-LBS
PVC - "CLASS PIPE" (IPS Size ASTM D 2241 Class 160 & 200)	3"	RATING OF PIPE	45 - 60 FT-LBS	TORQUE OFF HEADS
PVC - "CLASS PIPE" (IPS Size ASTM D 2241 Class 160 & 200)	4" - 12"	RATING OF PIPE	75 - 90 FT-LBS	TORQUE OFF HEADS
PVC - SCHED. 40 & 80 ASTM D 1785	3"	RATING OF PIPE	45 - 60 FT-LBS	TORQUE OFF HEADS
PVC - SCHED. 40 & 80 ASTM D 1785	4" - 12"	RATING OF PIPE	75 - 90 FT-LBS	TORQUE OFF HEADS
PVC - D.I. SIZE (C909)	4" - 6"	235 PSI	75 - 90 FT-LBS	30 - 40 FT-LBS
PVC - D.I. SIZE (C909)	8"	235 PSI	75 - 90 FT-LBS	TORQUE OFF HEADS
PVC - D.I. SIZE (C909)	10" - 12"	150 PSI	75 - 90 FT-LBS	TORQUE OFF HEADS
DUCTILE IRON	NOT COMPATIBLE WITH RG-PVC			
STEEL				
ASBESTOS CEMENT				
FIBERGLASS				
HDPE				
*WORKING PRESSURES ARE DESIGNED WITH A 2:1 SAFETY FACTOR				

NOTE: Angular deflection of up to 5º is allowable between the pipe and fitting for RG-PVC sizes 3"-12".

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21919 20th Avenue SE • Suite 100 • Bothell, WA 98021 • Phone (425) 951-6200 • 1-800-426-9341 • Fax (425) 951-6201

ROMAC INDUSTRIES, INC.

INSTALLATION INSTRUCTIONS

Style RG-PVC Mechanical Joint Retainer

FOR PVC PIPE 3" - 12"

PRECAUTIONS

1. Make sure the correct gasket is being used.
2. Check diameter of pipe to make sure you are using the correct size RomaGrip.
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 Romac DI/IPS combination gasket or MJ x IPS transition gasket when using the RG-PVC on IPS size PVC pipe.
7. 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 restrainer, loosen the restraining bolts, if the bolt heads have been torqued off, use a 5/8” hex wrench or socket and follow steps 7-4 in reverse order.
3. To reassemble, follow installation procedures and tighten the restraining bolts to the proper torque, see table on side one. If no torque is stated, use 45 - 55 ft-lbs.

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