

# 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 size marked on the coupling to ensure you have the proper size.



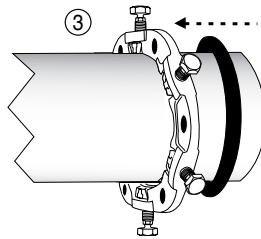
## RFCA for PVC Restrained Flange Coupling Adapter

FOR PVC PIPE 3" - 12"

**Step 1** • Identify the pipe. The RFCA-PVC is for use with PVC pipe. Check the compatibility chart on the back of these instructions and make sure the pipe you are using is listed.

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

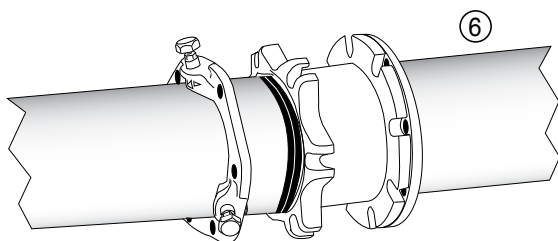
**Step 3** • Clean and lubricate the pipe end and gasket with soapy water or other approved pipe lubricant per ANSI/AWWA C111/A21.11 for a distance 2" greater than the length of the RFCA for PVC.



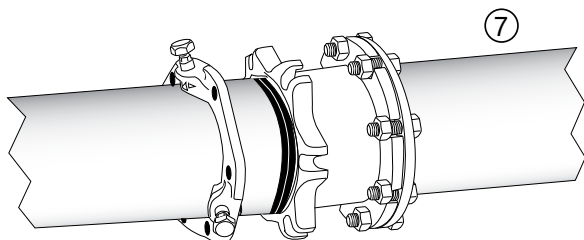
**Step 4** • Place the RomaGrip gland on the pipe with the nose extension towards the plain end.

**Step 5** • Place the gasket over the pipe so the flat side is toward the RomaGrip gland.

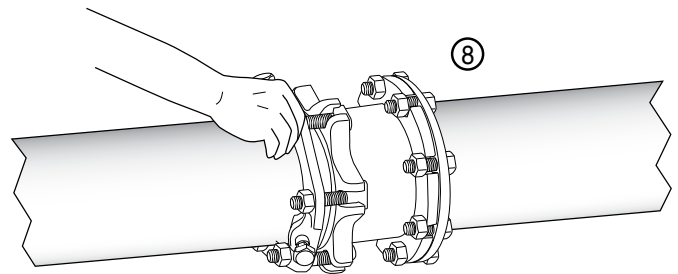
**Step 6** • Slide the RFCA on to the pipe. Position the pipe and flanged coupling against the mating flange.



**Step 7** • The pipe should be centered such that the space between the OD of the pipe and the ID of the RFCA is even all around the pipe. Slide the RFCA gasket into position with the beveled edge engaging the beveled end of the RFCA body.

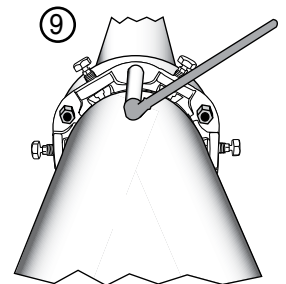


**Step 8** • Slide the RomaGrip toward the RFCA body until the nose of the gland touches the gasket. Insert the T-bolts and hand tighten the nuts. Make any deflection after hand tightening the T-bolt nuts but before tightening them to the proper torque specifications.

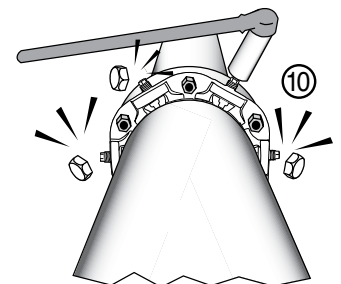


MAXIMUM DEFLECTION	
SIZE	MAX ALLOWABLE
4" - 8"	3.5°
10" - 12"	3.0°

**Step 9** • Tighten T-bolts to the torque recommended in AWWA C111. Maintain the same overall gap between the RomaGrip Gland and the RFCA body by tightening the T-bolts in a uniform criss-cross pattern (12 o'clock, 6 o'clock, 3 o'clock, 9 o'clock) until proper torque is achieved. Using a torque wrench is highly recommended. For best results, wait 10 minutes and retighten bolts to proper torque.



**Step 10** • Hand tighten the restraining bolts in the clockwise direction until the lugs touch the pipe. Continue to tighten in a uniform criss-cross pattern until the heads break off.



**Step 11** • Pressure test for leaks before backfilling.



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## RFCA for PVC Restrained Flange Coupling Adapter

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 224 Class 160)	3" - 12"	RATING OF PIPE	45 - 60 FT-LBS	30 - 40 FT-LBS
PVC - "CLASS PIPE" (IPS Size ASTM D 224 Class 160 & 200)	3"	RATING OF PIPE	45 - 60 FT-LBS	TORQUE OFF HEADS
PVC - "CLASS PIPE" (IPS Size ASTM D 224 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 1786	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	-	-	-	-
STEEL	-	-	-	-
ASBESTOS CEMENT	-	-	-	-
FIBERGLASS	-	-	-	-
HDPE	-	-	-	-

\*PRESSURE RATINGS ARE DESIGNED WITH A 2:1 SAFETY FACTOR

### PRECAUTIONS

1. 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.
2. Be sure to clean pipe of as much dirt and corrosion as possible in the area that the gasket will seal.
3. Lubricate both the gasket and the pipe end with soapy water or approved pipe lubricant per ANSI/AWWA C111/A21.11.
4. Make sure no foreign materials lodge between gasket and pipe.
5. Avoid loose fitting wrenches, or wrenches too short to achieve proper torque.
6. Keep threads free of foreign material to allow proper tightening.
7. 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.
8. Be sure that the gland is centered around the pipe.
9. Pressure test for leaks before backfilling.
10. Backfill and compact carefully around pipe and fittings.
11. Do not use on very cold pipe.

### 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. Restraining bolt heads not snapped off.
6. Not enough pipe inserted into RFCA body.
7. Using the RFCA for PVC on PVC pipe not allowed in compatibility chart.

### IF RFCA for PVC MUST BE REMOVED

1. Make sure pipe is not pressurized. Removing the restrainer could cause the pipe joint to separate.
2. Rocks or debris between pipe and gasket.
3. To reassemble, follow installation procedures and tighten the restraining bolts to the proper torque, see table above. If no torque is stated, use 45 - 55 ft-lbs.