

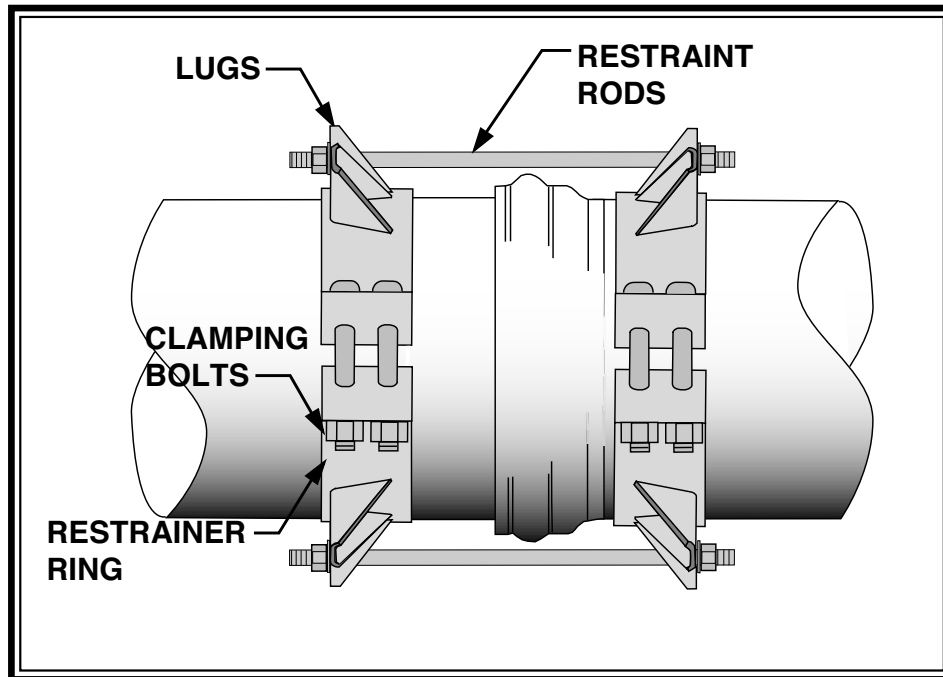


# INSTALLATION INSTRUCTIONS

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 restrainer to ensure you have the proper size.

## Style 470 Restrainer for Bell Joints and Romac Couplings 14" to 24"

FOR USE ON PVC PIPE ONLY



**Step 1** • Assemble the pipe joint or coupling per manufacturer's installation instructions.

**Step 2** • Clean pipe surface on both sides of the pipe joint or coupling to remove as much dirt and foreign material as possible. Check diameter of pipe to make sure you are using the correctly sized restrainer.

**Step 3** • Place one set of restrainer halves on each side of the pipe joint or coupling. Make sure that the open side of the harness lugs are toward the joint. Restrainers should be equally spaced on each side of the joint.

**Step 4** • Rotate one of the restrainer assemblies so that the harness lugs are aligned with the loops in the opposing restrainer. Slide the restraining rods through the harness lugs and install a nut and washer on each rod end. Make sure the nut is fully engaged on the rod.

**Step 5** • Make sure both restrainer assemblies are perpendicular to the pipe and the restraining rods are parallel to the pipe. Tighten the clamping bolts to 150 ft-lbs.

**Note:** The clamping bolts should be tightened in a manner that keeps the gaps between the restrainer halves equal on both sides.

**Step 6** • Tighten all nuts on the restraining rods hand tight. Finish by tightening these nuts one turn.

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### PRECAUTIONS

1. Check diameter of pipe to make sure you are using the correctly sized restrainer.
2. Clean pipe to remove as much dirt and debris as possible from the surface.
3. Make sure no foreign materials become lodged between the restrainer halves or between the restrainer and pipe.
4. Avoid loose fitting wrenches, or wrenches so short that achieving proper torque is difficult.
5. Keep threads free of foreign material to allow proper tightening.
6. 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.
7. Overtightening the restraining rod nuts can put excessive stress on the pipe.
8. Pressure test before backfilling.
9. Backfill and compact carefully around pipe and fittings.

### COMMON INSTALLATION ERRORS

1. Not enough torque on clamping bolts.
2. Debris lodged between restrainer halves or between restrainer and pipe.
3. Dirty threads on bolts or nuts.
4. Forgetting to tighten clamping bolts, mechanical joint bolts, and or restraining rod nuts.

### IF RESTRAINER MUST BE REMOVED

1. Make sure pipe is not pressurized. Removing the restrainer could allow the pipe joint to separate.
2. Make sure a restraining system is in place before repressurizing pipe.