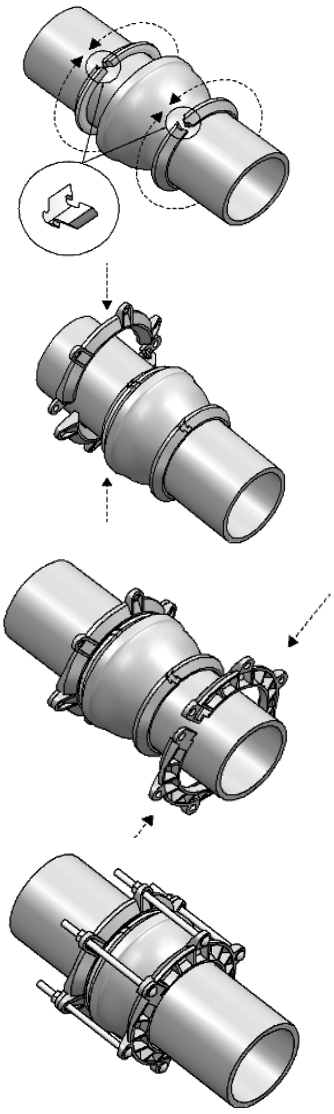
JCM INDUSTRIES

Installation Instructions

Model 106 Leak Clamp
For IPS PVC Bell Joints/Steel Threaded Couplings

Read instructions before starting installation*
For purposes other than water, contact JCM Industries for application and product assistance.



1. Clean and scrape pipe. Remove any scale, pipe wrap, debris or dirt that may interfere with the complete sealing of the gasket. Inspect pipe for integrity, size, outside diameter and surface irregularities. Confirm the proper size and range of repair clamp. Inspect fitting to ensure all parts are included.

2. For fittings furnished with stainless steel hardware, see reverse for fastener management. Lubricate the pipe and the fitting gasket with soapy water. **Do not use oil base pipe lubricant.**

3. Install a gasket (key-locked for installation) on the spigot side of the joint, flat side of gasket toward the face of the bell (the tapered side will fit into the iron pusher ring). Install the other gasket in the same manner on the bell side of the joint where the bell tapers down to the straight run of pipe. This gasket protects the PVC pipe wall from the iron pusher ring at the bell.

4. Interlock the ductile iron clamp ring segments on the spigot side of the joint. ***Ensure that the ductile iron clamp ring joint is rotated 90° (1/4 turn) from the gasket joint.*** Install a track head bolt into the bolt holes to hold the segments together.

   On the bell side of the joint install the other set of clamp ring segments in the same manner, behind the protective gasket. To ensure proper gasket compression, rotate the bell side ductile iron clamp ring one bolt hole turn from the spigot ductile iron ring (i.e. do not align clamp ring joints or gasket joints). Interlock the segments.

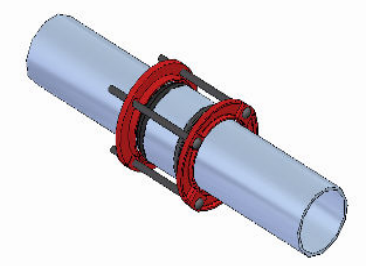
   Starting from the bell side to the spigot side, install track head bolts through the segments and over the joint into the corresponding bolt holes of the opposite clamp rings. Loosely assemble nuts on the ends of the bolts.

5. Tighten the nuts evenly (ensure gasket compresses against bell face on complete circumference of the pipe) until the spigot gasket compresses against the joint and the leak stops.

   Tighten nuts to approximately 20 - 30 ft. lbs. of torque.

   To ensure integrity of installation, wait 15 minutes, inspect for leaking, and confirm bolt torque. If necessary, retighten bolts evenly as required to stop the leak.

Installation for IPS PVC or Threaded Steel Collar Joint
JCM 106 Bell Joint Leak Clamp repairs (and prevents) leaks on both sides of the collar joint.



1. Follow steps above. During step 2, place the first and second gaskets in the same manner with the flat side meeting up against the lip of the collar.

2. Continue with installation of ductile iron clamp ring segments and position against gasket (taper facing out) and install bolts as described in step 4 above.

*Ensure fitting is suitable for application (confirm size, materials, pressure ratings, line content, meets local governing & association standards, etc.). Pipeline operation forces, including pressure fluctuations, thermal expansion/contraction, movement/shifting, etc. will influence the success of the application. Proper anchorage, restraint, harnessing, thrust blocks or other devices must be provided to prevent pipe movement (lateral, angular, axial) or pipe pullout from the bolt-on fitting. Inspection of the pipe integrity is the responsibility of the end user. JCM recommends the use of calibrated torque wrench. Failure to follow installation instructions will result in voided product warranty

NSF Certified to NSF/ANSI/CAN 61 & NSF/ANSI 372

For application review or questions contact JCM Industries at 1-800-527-8482, 903-832-2581

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Stainless Steel Fastener Management and Tips and Tricks of the Trade for Successful Installation

JCM Quality Fittings Equipped With 18-8 Stainless Steel Bolts and Nuts

When not properly handled it is the nature of stainless steel fasteners to gall and freeze (seize up). This is due to the inherent properties of the stainless material. Galling and freezing is often triggered by the presence of metal chips, burrs and grains of sand on the threads of the bolts and nuts. Extra care has been taken by JCM prior to assembly and packing of this fitting to assure a trouble-free installation.

1. The nuts and bolts are made from material of different hardness so that they have different strengths.
2. Nuts are coated with a special anti-seize coating. Additional lubricant may be needed. A Molybdenum-Base lubricant is recommended.
3. Each nut is assembled by hand to be sure that it went on the bolt freely.
4. The bolts and nuts are handled carefully to avoid damage to the threads.
5. The bolts and nuts are made to exacting specifications to assure that the correct material is used and that the thread form is correct.

Stainless hardware is especially susceptible to galling. JCM supplies specially coated nuts to eliminate the galling caused by over-torquing, but the bolt threads must be kept clean, free from nicks and not pitched or thrown into the tool bucket during the installation process. Use of pneumatic wrench for installation could cause hardware to seize and is not recommended.

Tricks of the Trade

Years of field experience, special applications and product testing have revealed many subtleties regarding application and installation of bolted fittings. For maximum performance under adverse conditions take advantage of the JCM “Tricks of the Trade.”

Lubricate the pipe with soap-water or water. Oil based pipe lubricants produce a film between the gasket and pipe surface that is not water soluble and can interfere with the gasket/pipe water tight seal.

Tighten the bolts in the sequence provided in the instructions. Fittings are engineered to “load” the gasket in a certain fashion. Instructions provide the “sequence” of tightening bolts. Ensure the gap between sleeve halves is equal on both sides

Confirm bolt torques with a torque wrench. Proper compression of the gasket is critical to the success of the tapping sleeve installation. A torque wrench should be used to ensure recommended levels are achieved. Most field problems are directly related to lack of proper torque levels.

Backfill carefully. Improper assembly support and careless backfilling can sabotage an otherwise perfect installation.