



Installation Instructions  
Models 136 Heavy Duty  
All Stainless Steel  
Repair Clamp

Read instructions before starting installation\*

Review of "Tricks of the Trade" on the reverse will assist with 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.

Fitting is furnished with stainless steel hardware; see reverse for fastener management.

- 2. Lubricate the pipe and the fitting gasket with soapy water. Do not use oil base pipe lubricant.
- 3. Position top half of clamp body on pipe centered over damage area. Do Not position so that rotation is required. Rotation can result in gasket dislocation. Position back half of clamp body over tapered gasket edges extending from top half of body, making certain the tapered edges of the gasket lay smooth and install bolts. NOTE: For fittings with hardware furnished with double washer sets, to assure ease of installation and obtain optimum bolt torque levels, install the double set of washers under each nut.
- 4. Tighten outside bolts first, working toward the center. Tighten bolts evenly. Alternate from one side of the clamp to the other. The gap between clamp halves should be equal on both sides. Tighten bolts to the following torque levels:

Rigid pipe (DI, CI, A/C, Steel), C-900/905 PVC

4" - 8" Nominal Pipe Sizes	85 ft. lbs. minimum - 125 ft. lbs. maximum
10" and Larger Nominal Pipe Sizes	100 ft. lbs. minimum - 125 ft. lbs. maximum

Thin wall, flexible, class PVC (SDR 21, 26)	50 ft. lbs. minimum - 55 ft. lbs. maximum
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- 5. Complete installation of fitting, return after approximately 15 minutes and confirm minimum bolt torque levels have been maintained.

For water applications: if applicable, test assembly seals with water. (per ANSI/AWWA C-223). When testing the assembly against the pipe to pressures greater than the internal pressure of the host pipe, application should be treated with caution to prevent imploding or damaging the pipe wall due to thin wall, flexible or brittle conditions. For inquires, contact JCM Industries, Inc.



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\*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.

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



## Tricks of the Trade for Installation Models 136 Heavy Duty All Stainless Steel Repair Clamp

This JCM Quality Fitting is equipped with 18-8 stainless steel bolts and nuts for superior corrosion resistance. 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. Standard 5/8" and 3/4" nuts are coated with a special blue or green (antiseize) coating. Additional lubricant may be needed. Uncoated stainless steel hardware is provided without lubrication to prevent a build up of dirt, sand or grit during shipment. **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 overtightening, 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 the **JCM 901 Master Wrench or JCM 905 Torque Wrench with Deep Socket is highly recommended.** 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 repair clamps. For maximum performance under adverse conditions take advantage of the JCM "Tricks of the Trade."**

- Always clean and lubricate pipe with water or soapy water. This helps overcome friction when rotating the clamp to smooth the gasket. Do not use oil base pipe lubricant; the oil does not disperse, leaves residue and prevents the gasket from sealing/adhering to the pipe wall. Use water solvent lubricant. Use of a mirror will assist inspection of backside of pipe or pipe in cramped, limited space.
- Place a reference mark on the pipe back from the damaged area to help in centering clamp over break. Clamps provide maximum performance when centered over damage area.
- For installation on pipe under pressure: lubricate the clamp gasket with soap/water mixture, assemble clamp on the pipe beside the damaged area, lightly engage bolts and slid the clamp over the damaged area, ensure tapered gasket lays flat without curl or fold, proceed with installation steps.
- Damage involving large holes or massive pitted areas - use stainless steel plate over large holes (under repair clamp) to provide the gasket a surface to seal against.
- Clamp performance drops when gap between pipe ends is larger than 1/2". Use a stainless steel spacer to fill or to place over gap.
- Leave sufficient pressure on a broken line to prevent intrusion of foreign matter to prevent excessive line contamination.
- With pressure reduced, spraying water will cease as soon as water level rises above break.
- Lubricating clamp bolts will ease clamp installation and assure proper torquing of bolts.

