



# Installation Instructions Models 105 & 135 Collar Leak Clamps

**Read instructions before starting installation\***

**For purposes other than water, contact JCM Industries for application and product assistance.**

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

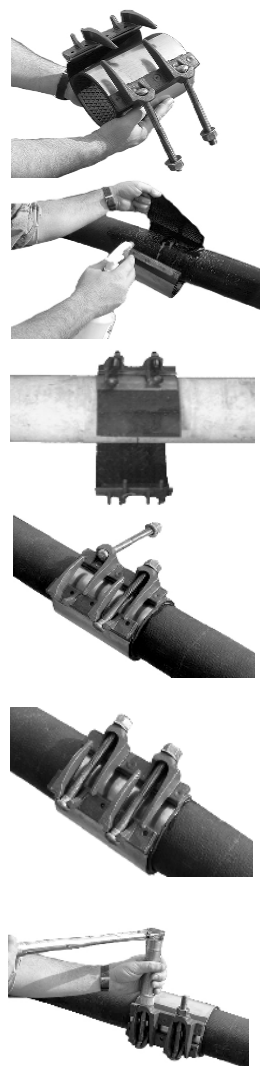
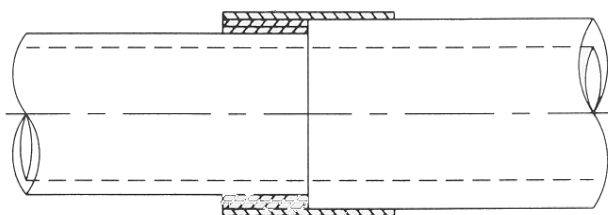
**Pipe and coupling joints with a wall thickness greater than 5/32" and less than 5/16" are best repaired with a JCM Collar Leak Clamp utilizing an extra thickness of gasket on one end.**

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.

**For Models 135 and 105 furnished with stainless steel hardware, see reverse for fastener management.**

2. Loosen nuts of bolts and back nuts to the end of the bolt (complete removal of bolts is not necessary). Release oval necked bolts from lug ears and open the clamp. Lubricate the pipe and the fitting gasket with soapy water. **Do not use oil base pipe lubricant.**
3. Place clamp on joint with the extra thick portion of the gasket on the smaller diameter portion of the joint. Tuck tapered gasket in place; mesh finger lugs and rotate clamp in direction of arrow on the clamp to smooth tapered gasket flap. Before tightening - **PUSH CLAMP COMPLETELY UP AGAINST JOINT STEP** to assure proper positioning. Position bolting lug for easy access to continued bolt tightening. Engage bolts in receiver lugs and finger tighten to hold in place. Ensure tapered gasket is flat under the clamp. Begin bolt tightening sequence.
4. Tighten all bolts evenly to the following torque values, ensure torque values with calibrated field torque wrench:
  - 5/8" Bolts to 40 - 50 Foot Pounds of Torque+
  - 3/4" Bolts to 90 Foot Pounds of Torque+
5. Complete installation of fitting, return after approximately 15 minutes and confirm minimum bolt torque levels have been maintained.

+During bolt tightening sequence, the installer should take care to prevent overtightening bolts causing the pipe to deform or misshapen.



\*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.



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

INT105135-0423

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

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## Installation Instructions

### Models 175 Collar Leak Clamp Couplings Removable Lug

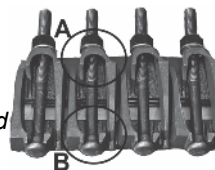
Read instructions before starting installation\*

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. This clamp has a removable lug section to ease installation on pipe applications in rock bound soil, narrow piping galleries and other tight repair locations. The removable lug section is identified by visually inspecting the open weld ports.
2. Lubricate the pipe and the fitting gasket with soapy water. **Do not use oil base pipe lubricant.** Loosen nuts of bolts and back nuts to the end of the bolt (complete removal of bolts is not necessary). Release oval necked bolts from lug ears and open the clamp.
3. **For Models 171, 173** - To remove the lug, slide the open ear bolt lug to the side (if necessary, lug end may be tapped with hammer or field tool to assist removal). Take care not to bend or cause any damage to the stainless band that may prevent re-installation of the finger lug. Place clamp on pipe and center over damaged area. Tuck tapered gasket in place; mesh finger lugs and rotate clamp in direction of arrow to smooth tapered gasket flap. Position bolting lug for easy access to continued bolt tightening. Engage bolts in receiver lugs and finger tighten to hold in place. Begin bolt tightening sequence. See step 4.

**For 172, 174 Multi Band Clamps** - Note: Only one lug section is removable identified by the open weld ports.



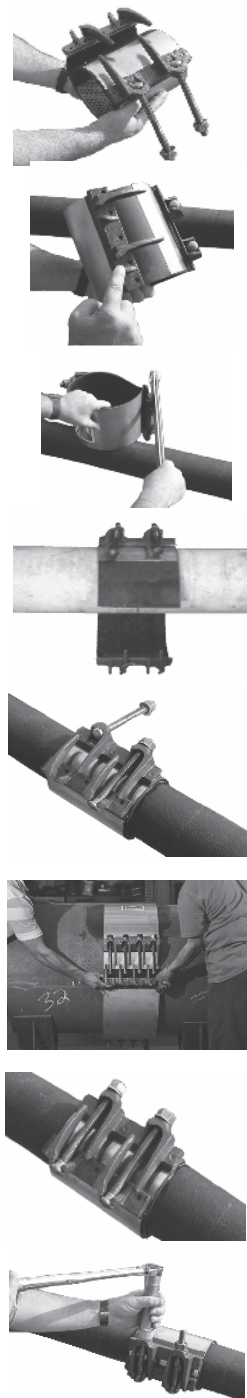
Bring back half of clamp around pipe. Feed tapered gasket end into place, mesh top lug fingers into "open ears" and engage bolts. Rotate clamp in direction of arrow to smooth tapered gasket flaps. Finger tighten bolts to hold in place. Begin tightening bolts to proper torque values. Continue around pipe at each lug segment. Avoid tightening lugs to metal bound at any one segment - *gaps between lugs should be approximately even on both sides. Continue bolting sequence to proper torque values below.*

4. Tighten all bolts evenly to the following torque values, ensure torque values with calibrated field torque wrench:

**5/8" Bolts to 70 Foot Pounds**

**3/4" Bolts to 90 Foot Pounds**

5. Complete installation of fitting, return after approximately 15 minutes and confirm minimum bolt torque levels have been maintained.



\*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.

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INT175-112025



## Tricks of the Trade for Installation Models 105 & 135 Collar Leak Clamps

### JCM Quality Fitting 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. Standard 5/8" and 3/4" nuts are coated with a special blue or green (antiseize) coating. Additional lubricant may be needed. Each nut is assembled by hand to be sure that it went on the bolt freely. 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. The bolts and nuts are handled carefully to avoid damage to the threads.
4. 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 a 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 soluble 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.
- Breaks involving deflected pipe require a wider clamp. JCM lugs will articulate, permitting clamp to better conform to pipe.
- 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.
- Drill holes in the ends of splits or cracks to relieve forces which could cause splits to continue.
- 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.



**For additional guidance, contact JCM Industries Technical Services at 1-800-527-8482.**