



## Installation Instructions

### Model 241 Optimum Range Ductile Iron Couplings Model 242 Long Length Optimum Range Ductile Iron Couplings

**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 pipe surface of all dirt, rust, mud or loose scale from pipe ends. Inspect the pipe ends where gaskets will contact the pipe for any gouges, grooves, irregularities or imperfections that will interfere with the gasket seal. Measure the cleaned pipe diameter to confirm proper size of coupling for application. Inspection of the pipe's integrity for product application is the responsibility of the end user. **\*TIP\*** *Difficult to reach or cramped areas on the backside or underside of the pipe can be visually checked by using a mirror.*
2. Measure back on each pipe end one-half of the middle ring length plus two inches and place a reference mark. These marks will be a visual reference point for centering the middle ring over the joint. **\*TIP\*** *Couplings perform at optimal effectiveness when centered over joint area.*
3. **Lubricate both the pipe and the entire gasket with water or soapy-water mixture.** Install follower rings, then gasket onto the pipe ends. **NOTE:** Flat side of the gasket face meets the follower ring, the tapered side inserts into the middle ring. *Alcohol may be added to water in freezing weather. **DO NOT** use pipe lubricant or grease based products to lubricate.*
4. Install middle ring on one pipe end. Insert other pipe end into middle ring and center the middle ring over the joint, between the reference marks. **Lift the middle ring to insure that the gaskets are evenly centered in the ends.** Center follower rings on the pipe to ensure even gasket compression into the middle ring.
5. **Torque coupling bolts on opposite sides, using a star rotation pattern,** draw the followers evenly until all bolts are tightened to a minimum of 75 Ft/Lb. of torque. For fittings provided with stainless steel bolts, see reverse for guidelines. **NOTES:** Pipe ends must be inserted past the end of the gasket a minimum of one and one-half (1-1/2") inches. For deflected/offset pipe ends, pipe ends must be inserted a minimum of one and one-half (1-1/2") inches past the end of the gasket after the deflection/offset has occurred. Do not exceed a recommended 4° of pipe deflection with the coupling without inspecting the centering and sealing of the gasket in the middle ring and follower ring. Excessive deflection will cause the gasket to improperly seal.

#### **IMPORTANT:**

Standard couplings do not provide for axial pipe movement. In applications in which lateral pipe pull out may occur, pipe restraint must be provided. See fitting manufacturer recommendations for applications on High Density Polyethylene Pipe (HDPE). Pipe inspection is the responsibility of the end user.

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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**



**Stainless Steel Fastener Management  
and  
Tips and Tricks Of The Trade  
For a Successful Installation**

**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. 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 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 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.

**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."**

1. Difficult to reach or cramped areas on the backside or underside of the pipe can be visually checked by using a mirror.
2. Couplings perform at optimal effectiveness when centered over joint area.
3. To ease installation gaskets and pipe should be lubricated with water or soapy-water mixture. DO NOT use pipe lubricant or grease based products to lubricate. Lubricant does not dissipate with water and will not let the gasket adhere to the pipe.
4. While inspecting pipe ends, assess the condition of the pipe wall. Weakened or deteriorated pipe conditions should be analyzed and allowed for during the installation and bolt tightening process.
5. Lubricating coupling bolts will ease installation and assure proper torquing of bolts. During the bolt tightening procedure, tighten bolts in a star pattern, evenly compressing the gasket into the middle ring. Inspect for gasket misalignment or "cocked" position in the middle ring.