



## JCM 219 Restrained Ductile Iron Coupling

### INSTALLATION INSTRUCTIONS

**JCM RESTRAINED FITTINGS USING TORQUE HEAD SET SCREWS ARE NOT RECOMMENDED FOR ASBESTOS CEMENT, PVC, HDPE, FIBERGLASS OR ANY OTHER TYPES OF NON-RIGID OR BRITTLE PIPE MATERIALS. INSPECTION OF PIPE INTEGRITY IS THE RESPONSIBILITY OF THE END USER.**

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. 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. *\*TIP\* To ease installation of the gaskets, pipe should be lubricated with water or soapy-water mixture. 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 gasket is evenly centered in the ends.**
5. Torque coupling bolts on opposite sides, using a star rotation pattern, drawing up the followers evenly until all bolts have been tightened to 60 to 75 foot pounds of torque.
6. Using a 12 point 7/16" socket wrench, evenly tighten all restraining set screws until they are in contact with the pipe. Then alternately tighten them in a star rotation pattern to approximately 50 foot pounds of torque. To complete installation, tighten all set screws in a star pattern until the special break away head shears off. This indicates that the pre-set optimum torque value of the set screw (80-90ft/lbs) has been reached. The 5/8" square head remaining on the set screw is for the convenience of removing the set screw should removal of the fitting be necessary.

**SEE NOTES AND IMPORTANT INFORMATION ON REVERSE**

INT219-0700

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Installation Instructions  
Continued**

**NOTES:** On joints that do not permit centering of the coupling, the pipe ends must be inserted past the end of the gasket a minimum of one inch.

For applications with deflection of offset pipe ends, the pipe end must be inserted a minimum of one inch 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. **Lift the middle ring to insure that the gasket is evenly centered in the ends.**

Ductile iron couplings and flanged coupling adapters create a flexible joint that allows minimal deflection and movement of the pipe at the joint. Use of restraining torque head set screws eliminates this flexibility and changes the fitting to a rigid joint that no longer accommodates deflection or movement after fitting installation.

**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.