



Installation Instructions

JCM 432 All Stainless Steel Tapping Sleeve

JCM 462 Stainless Tapping Sleeve Carbon Flange

Read instructions before starting installation*

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

Size on size tapping cutter must not be larger than recommended by pipe manufacturer.

Tapping operation must not force the pipe away from the gasket seal.

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 tapping sleeve. 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 outlet half of body on pipe, making sure outlet is aligned with branch line to be connected. Do Not position so that rotation is required. Rotation can result in gasket dislocation. **NOTE:** If pre-assembling valve to tapping sleeve before installing sleeve on pipe, for size on size sleeve install center bolts before installing the valve.
4. Position back half of body over tapered gasket edges extending from outlet 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.

Tighten outside bolts first, working toward the center. Tighten bolts evenly. Alternate from one side of sleeve to the other. The gap between sleeve halves should be equal on both sides. The use of a torque wrench ensures proper torque levels. Improper torque levels can result in leaking assembly or damage to the pipe wall. Tighten bolts to the following torque levels:

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

4" - 8" Nominal Pipe Sizes, 10" Size 4" - 8" outlets **85 ft. lbs. minimum - 125 ft. lbs. maximum**

10 x 10 Sizes and Larger Nominal Pipe Sizes **100 ft. lbs. minimum - 125 ft. lbs. maximum**

Thin wall, flexible, class PVC (SDR 21, 26) pipe **50 ft. lbs. minimum - 55 ft. lbs. maximum**

5. Check inside of sleeve neck to make certain gasket is properly seated and not protruding where tapping cutter may damage it.
6. Install tapping valve. JCM recommends adherence to the AWWA M-44 Manual recommendations for proper valve installation, support and trenching. Improper support can result in undo stress.
7. Test assembly seals with water (per ANSI/AWWA C-223) using test port provided on sleeve or test connection on tapping machines. 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 due to thin wall, flexible or brittle conditions. Inspection and verification of the pipe integrity is the responsibility of the end user. For inquiries, contact JCM Industries, Inc.
8. When assured that all seals are tight and test is completed, re-check bolt torques after 15 minutes and proceed with the tapping operation. JCM Industries endorses the ANSI/AWWA C105/A21.5 and ASTM A674 for polyethylene encasement for corrosion protection.

*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

INT 432/462-0415



**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. 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 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.

To ensure a successful, trouble free installation of this JCM Tapping Sleeve, the following Tips/Tricks are offered:

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.

Do not rotate the sleeve on the pipe. Rotation of the sleeve on the pipe can result in the gasket being ripped from the groove and damaging the gasket beyond repair. Some manufacturers recommend rotation - JCM does not.

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.

Proper valve installation, support and trenching per AWWA M-44. Improper assembly support and careless backfilling can sabotage an otherwise perfect installation.

Test assembly with water per ANSI/AWWA C-223. After successfully testing, reconfirm bolt torque levels as instructed.

INTSSB - 0415

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