

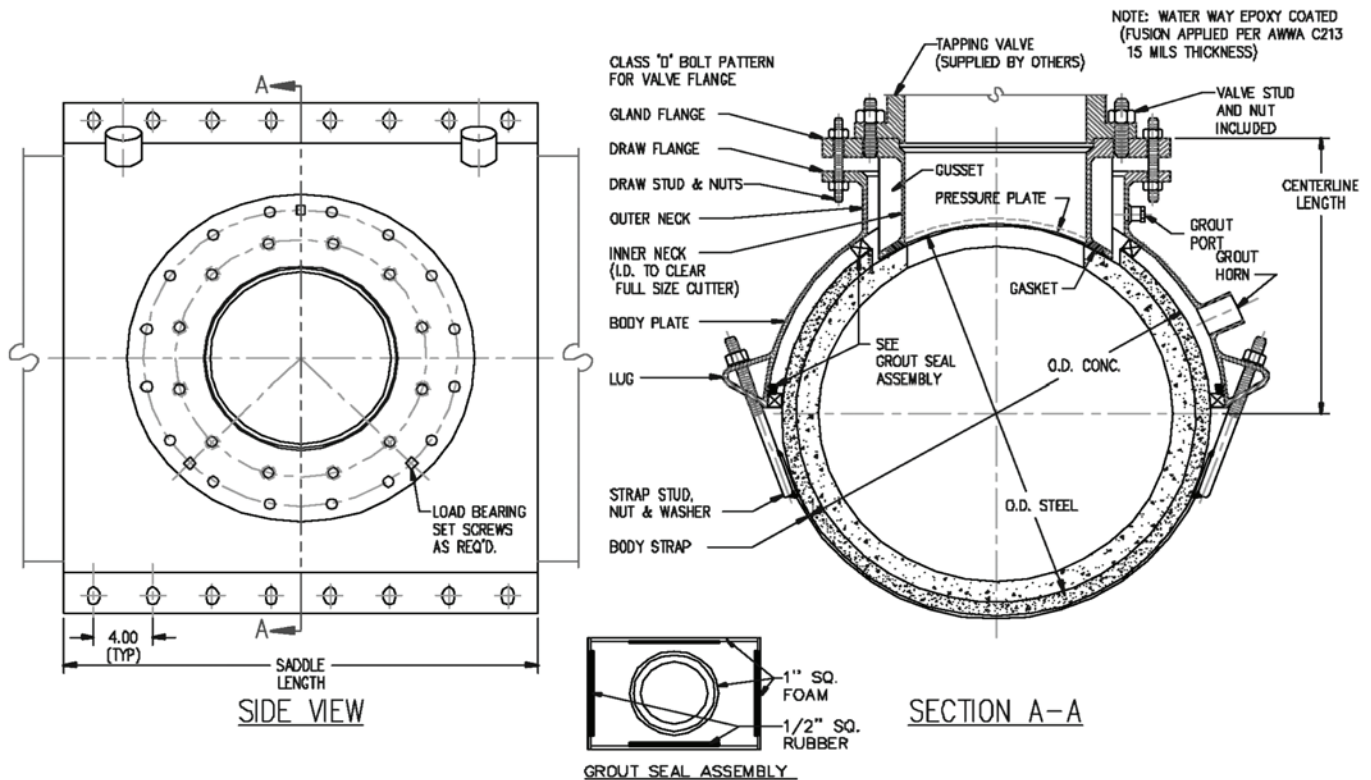
# JCM INDUSTRIES

## Installation Instructions

### Model 415 Type 1 Tapping Sleeve Concrete Steel Cylinder Pipe

Read instructions before starting installation\*

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



## READ ENTIRE INSTRUCTION SET BEFORE INSTALLING SLEEVE

1. Excavate and clean pipe in area where sleeve is to be installed. Remove any irregularities extending beyond the normal contour of the pipe surface. Check all measurements to be certain sleeve is correct size for the pipe.
2. Position gland on the pipe and mark area where mortar coating is to be removed.
3. Remove gland and set aside. Carefully remove mortar coating from area where tap is to be made - exposing but not damaging the prestress wires and steel cylinder.
4. Check to make certain all grout gaskets are in place around the edge of the sleeve and around the outlet. Place the sleeve on the pipe with the outlet over the opening in the mortar coating (with the grouting horns up) and install the straps. Tighten the straps with only sufficient torque to lightly seal the grout gaskets, alternating from one side of the sleeve to the other - starting at the outside straps and working in toward the center.

Continued on Reverse

\*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, tapping and line stopping processes, etc. will influence the success of the application. Proper equipment support, 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

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## Continued Installation Instructions

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5. Pour cement grout into the grout horns in the sleeve filling the space between the sleeve and the pipe. Pound the sleeve with a dead blow rubber coated hammer or place wood between the hammer to vibrate grout into place. After the grout has set, tighten bolts on straps to 80 - 90 ft. lbs. of torque.

(Note: Torque given is based on clean lightly lubricated threads)

6. Carefully cut and remove the exposed prestressed wires to provide clearance for the gland to seal against the cylinder.

For embedded cylinder pipe, the outer portion of the concrete core must be removed to expose the cylinder. Clean steel cylinder surface of any remaining concrete. (Note: If there is a weld seam on the cylinder of the pipe in the area of the tap, carefully flatten the weld so that the tapping sleeve will seal on it, do not grind the weld). Check the gasket in the gland to make certain it is undamaged and in its retaining groove. Remove any tape used to secure gasket in place during shipment.

7. Install the four (4) threaded studs in the sleeve outlet to assist in properly aligning the gland. Install the gland in the sleeve outlet so that the contour of the gasket seat exactly matches the contour of the steel cylinder. Install the remainder of the draw bolts. Check the gasket seat and all alignments. Tighten the draw bolts evenly to compress the gasket. A feeler gauge can be used to check gasket position during tightening. When completely tightened there should be approximately 1/8" between the gasket seat and pipe cylinder.
9. After installation of the tapping gland, tighten the load bearing set screws located between the draw bolts of the outer bolt circle to hand tight (less than 10ft-lbs torque). This locks the gland in place and transfers any loading from the outlet onto the sleeve and away from the cylinder.
10. Install the tapping valve utilizing the inner circle of studs and nuts. (Furnished on 4" - 12" Outlets.) JCM recommends adherence to the AWWA M-44 Manual (Distribution Valves: Selection, Installation, Field Testing, and Maintenance) for proper valve installation, support and trenching.
11. Pressure test the gland seal assembly with water (per AWWA C223), flange gaskets and tapping valve to assure all joints are tight and gaskets properly seated. **Note: For safety purposes do not test above line pressure. Contact pipe manufacturer for possible need to throttle back pressure on larger taps or for special concerns.**
12. On completion of the pressure test, pour cement mortar (2 parts sand, 1 part cement) into the opening between the gland and the saddle and into the grout port(s) in the sleeve neck, completely filling the space around the gland (including the space between the draw flanges); allow to set.

**Horizontal taps:** After the tap is complete, encase the saddle in a protective coating of cement mortar or concrete to a minimum thickness of 1" over the entire assembly including straps to further protect the sleeve.

**Vertical taps or line stops:** For outlet sizes 16" and larger, prior to tapping, JCM recommends rebar and concrete encasement to support anticipated external loading (static and dynamic). The concrete shall be level to the top draw flange at a minimum.