ROMAC INDUSTRIES, INC.

INSTALLATION INSTRUCTIONS

Read installation instructions first before installing. Check parts to ensure that no damage has occurred during transit and that no parts are missing. Also check the diameter of the pipe and the range marked on the tapping sleeve to ensure you have the proper size.

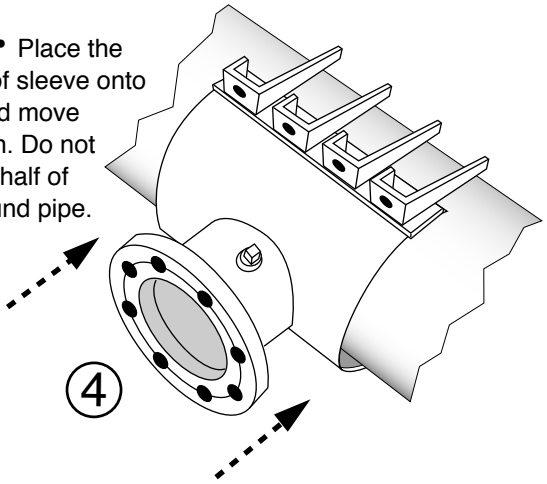
Style FTS 419 Fabricated Steel Tapping Sleeve

Step 1 • Clean pipe surface, particularly in the gasket sealing area.

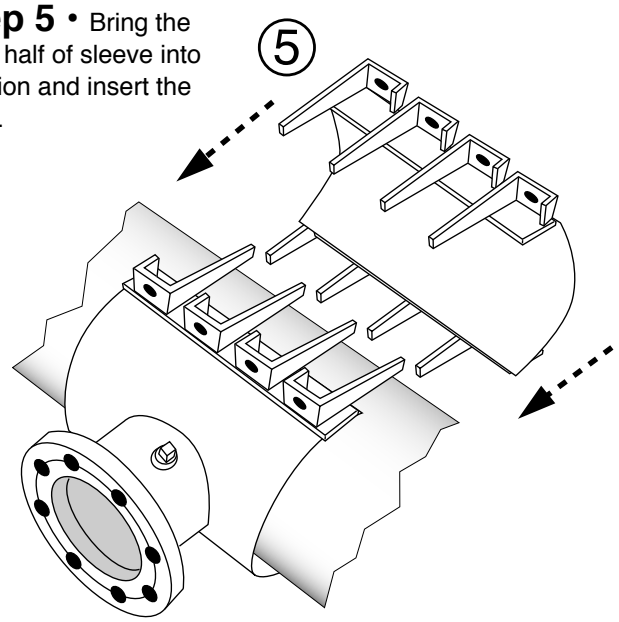
Step 2 • Remove bolts and separate sleeve halves.

Step 3 • Lubricate gasket and pipe surface with a suitable gasket lubricant.

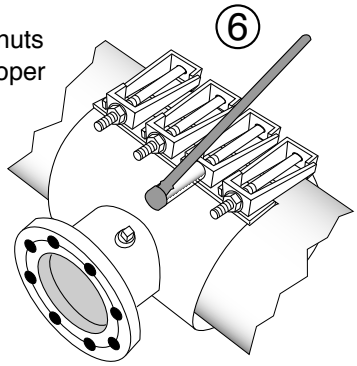
Step 4 • Place the outlet half of sleeve onto the pipe and move into position. Do not slide outlet half of sleeve around pipe.



Step 5 • Bring the back half of sleeve into position and insert the bolts.

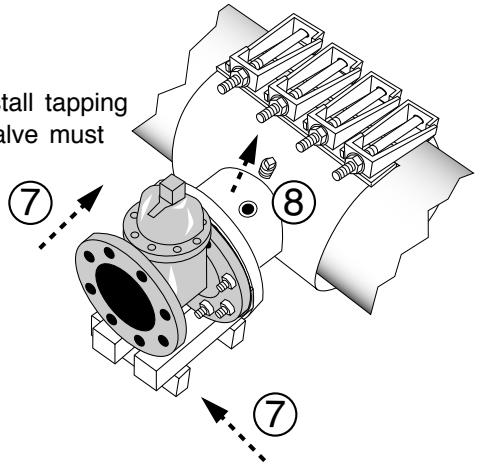


Step 6 • Well tightened nuts are important to ensure a proper seal. Tighten nuts, starting with the center bolts, alternating on either side of the sleeve. The gaps between sleeve halves should be the same when the nuts are fully torqued. Tighten nuts evenly in 25 ft-lb increments.



Pipe Size	Pipe Material	Torque
4"	PVC	25 - 30 ft-lbs.
6" - 24"	PVC	45 - 50 ft-lbs.
4" - 24"	Steel / DI	45 - 50 ft-lbs.

Step 7 • Install tapping valve. Tapping valve must be supported.



Step 8 • Remove test plug and pressure test assembly to determine a tight joint. Test at pressure up to 1.25 times flange rating. For AWWA Class D flanges, sizes 4-12 inch, maximum working pressure of 175 psi, and up to 220 psi for test.

Step 9 • When it is ascertained that sleeve is leak-tight, proceed with the tapping operation.

Step 10 • Tapping equipment must be supported so that its weight is not supported by the sleeve.

Document #30-9-419-0004 02/10/2017

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ROMAC INDUSTRIES, INC.

INSTALLATION INSTRUCTIONS

Style FTS 419

Fabricated Steel Tapping Sleeve

PRECAUTIONS

1. Check diameter of pipe to make sure you are using the correctly sized sleeve.
2. Clean pipe to remove as much dirt and corrosion as possible from the surface.
3. Make sure no foreign materials stick to the gasket as it is brought around the pipe, nor become lodged between gasket and pipe as nuts are tightened.
4. Avoid loose fitting wrenches, or wrenches too short to achieve proper torque.
5. Keep threads free of foreign material to allow proper tightening.
6. Bolts are often not tightened enough when a torque wrench is not used. Take extra care in this situation to make sure proper tightening occurs.
7. Install tapping sleeve with outlet in the direction of the branch pipe. Do not spin or rotate tapping sleeve on pipe.
8. Pressure test for leaks before tapping pipe.
9. Backfill and compact carefully around sleeve.
10. Caution, when reinstalling parts with stainless steel hardware there may be a loss in pressure holding ability due to worn or damaged threads during the original installation.
11. For personal safety reasons, do not use a compressible fluid (such as air) to check for water tightness.

COMMON INSTALLATION PROBLEMS

1. Not enough torque on bolts.
2. Rocks or debris cutting gasket.
3. Dirty threads on bolts or nuts.
4. Allowing tapping sleeve to support the cantilever load of the valve, tapping machine or pipe.
5. When insufficiently restrained and supported, pipe pullout or movement may occur. To prevent movement, sufficient support must be provided using: thrust blocks, anchors, soil friction, or other restraint devices.
6. Not using thrust block or other form of restraint.
7. Spinning or rotating tapping sleeve on the pipe.

NOTE: Tapping sleeves are designed for sealing purposes only, not structural support or restraint.

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