

# INSTALLATION INSTRUCTIONS

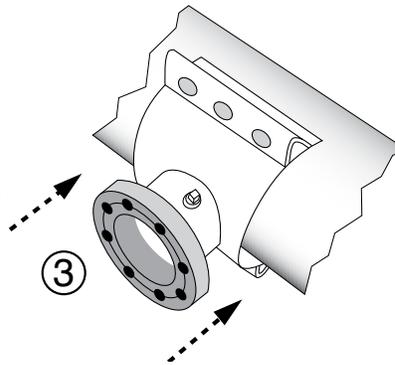
Read installation instructions first before installing. Check parts to ensure that no damage has occurred during transit and that no parts are missing. Also check the diameter of the pipe and the range marked on the tapping sleeve to ensure you have the proper size.

## Style FTS 420

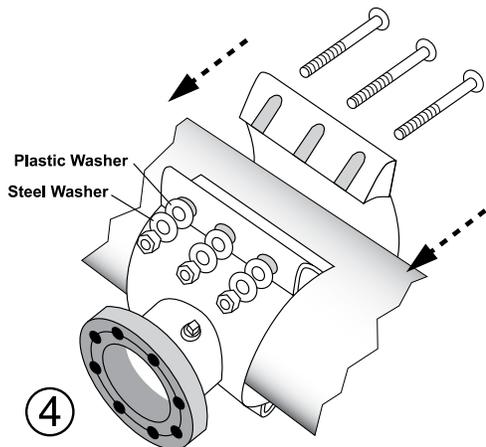
**Step 1** • Clean pipe surface, particularly in the gasket sealing area.

**Step 2** • Lubricate gasket and pipe surface with a suitable gasket lubricant.

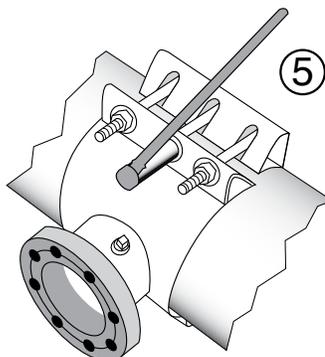
**Step 3** • Place the outlet half of sleeve onto the pipe and move into position. Do not slide outlet half of sleeve around pipe.



**Step 4** • Bring the back half of sleeve into position and insert the bolts.

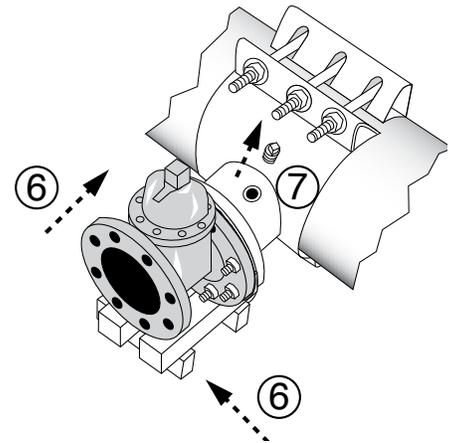


**Step 5** • Install washers, (plastic first, then steel) and nuts. Tighten uniformly to a minimum 90 - 100 ft-lbs. torque. The gap between sleeve halves should be equal on both sides when the nuts are fully torqued.



**Step 6** • Bolt tapping valve to flange. The inside of the flange accepts the tapping valve locator. The flange gasket is provided on 3" - 12" outlet sizes. Block or otherwise support valve.

**Step 7** • Remove test plug and pressure test assembly to determine a tight joint. Test at pressures up to 1.25 times the pressure shown in the table below.



NOM. PIPE SIZE	WORKING PRESSURE RATING PER OUTLET SIZE (PSI)																
	<=3	4	6	8	10	12	14	16	18	20	24	28	30	36	42	48	
6	250	250	250														
8	250	250	250	250													
10	250	250	250	250	250 <sup>1</sup>												
12	250	250	250	250	250 <sup>1</sup>	250 <sup>1</sup>											
14	250	250	250	250	250 <sup>1</sup>	250 <sup>1</sup>	150										
16	250	250	250	250	250 <sup>1</sup>	250 <sup>1</sup>	150	150									
18	250	250	250	250	250 <sup>1</sup>	250 <sup>1</sup>	150	150	150								
20	250	250	250	250	250 <sup>1</sup>	250 <sup>1</sup>	150	150	150	150							
24	250	250	250	250	250 <sup>1</sup>	250 <sup>1</sup>	150	150	150	150	150						
28	200	200	200	200	200 <sup>1</sup>	200 <sup>1</sup>	150	150	150	150	150	150					
30	150	150	150	150	150	150	150	150	150	150	150	150	150				
36	150	150	150	150	150	150	150	150	150	150	150	150	150	150			
42	150	150	150	150	150	150	150	150	150	150	150	150	150	150	100	100	100
>42	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

<sup>1</sup> Class E flanges are required on 10" and 12" outlets for working pressure requirements greater than 200 psi and up to 250 psi. For higher pressure ratings consult your representative.

**Step 8** • When it is ascertained that sleeve is leak-tight, proceed with the tapping operation.

**Step 9** • Tapping equipment must be supported so that its weight is not supported by the sleeve.

## Style FTS 420 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

- |   |   |
|---|---|
| <ol style="list-style-type: none"><li>1. Not enough torque on bolts.</li><li>2. Rocks or debris cutting gasket.</li><li>3. Dirty threads on bolts or nuts.</li><li>4. Allowing tapping sleeve to support the cantilever load of the valve, tapping machine or pipe.</li><li>5. Not using the proper size sleeve for the pipe.</li></ol> | <ol style="list-style-type: none"><li>6. 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.</li><li>7. Spinning or rotating tapping sleeve on the pipe.</li></ol> |
|---|---|

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