Installation Instructions

CAUTION: FOR BOTH FLANGE AND MJ OUTLET SLEEVES
• Use proper size (OD range) sleeve for pipe OD.
• Check for rocks or debris around/under gasket.
• Make sure threads on studs and nuts are clean.
• Make sure nuts are assembled to correct torque.
• Do not allow tapping sleeve to support cantilever load of tapping valve and/or tapping machine.
• Use blocks to support pipe, valve and machine to avoid placing undue stress on sleeve.

CAUTION: FOR MJ OUTLET SLEEVE.
• Use with standard MJ tapping gasket.
• Use with 1/2" undersized shell cutters only.

Note: Tapping sleeves are designed for sealing purposes only, not to serve as structural support or restraint.

WARNING: Never use air or other compressible gas to pressure test installation, which could cause the pipe or product to burst with sufficient force to cause property damage or serious injury to personnel. Use only hydrostatic pressure testing performed in accordance with accepted industry practice.

ALWAYS PRESSURE TEST FOR LEAKS BEFORE MAKING TAP

1. Visually inspect sleeve prior to installation to ensure no damage has occurred during shipment or storage, and that all components are present.
2. Measure outside diameter of pipe and compare it with OD range of sleeve to verify that correct size of tapping sleeve is being installed.
3. Thoroughly clean pipe surface where sleeve will be installed so it is free of dirt, corrosion or other debris that could impair gasket seal.
4. Lubricate pipe surface and sleeve gasket with soap solution (add glycerin in freezing weather).
5. Place top half on pipe in position required for permanent installation. Make sure test plug is accessible. Do not rotate tapping sleeve top half after it is placed on pipe.
6. Install bottom half of tapping sleeve, tucking gasket flaps in place to assure they are flat and smooth against the pipe surface. Do not rotate tapping sleeve. Make sure bottom half of 4"-12" sleeve laps over metal gap bridges on each side of top half (see Figure 3). Sleeves 14" and larger have separate pieces of metal inserted into gasket to bridge the gaps. For smaller sleeves, the bridges are an extension of the metal in the top half.
7. Insert bolts and nuts with washer and hand tighten, maintaining equal gaps between sleeve halves on both sides. Bolts can be installed from the top or bottom for convenience.
8. Wrench-tighten bolts starting at the center, alternating side to side and working outward to each end to equalize gaps on both sides. Continue tightening bolts until sleeve halves conform to contour of pipe, and all bolts are uniformly tightened within the following torque range:

<table>
<thead>
<tr>
<th>Pipe Diameter</th>
<th>Torque Range</th>
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<tbody>
<tr>
<td>4&quot; &amp; 6&quot;</td>
<td>75-90 ft.-lbs. or 102-122 N-m</td>
</tr>
<tr>
<td>8&quot;</td>
<td>90-110 ft.-lbs. or 122-149 N-m</td>
</tr>
<tr>
<td>10&quot; &amp; Larger</td>
<td>110-125 ft.-lbs. or 149-169 N-m</td>
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IMPORTANT: AFTER 10 MINUTES, RE-TORQUE TO ABOVE VALUES BEFORE LEAK TESTING

9. Test installation for leakage before making tap. Field testing 50 psig above rated working pressure is acceptable (4" - 12": 250 psig working pressure; 14" - 24": 200 psig working pressure).