

City of Milwaukee
Department of Public Works

Milwaukee Water Works

Material Specifications for
Mechanical Joint Tapping Sleeves
6" through 20"



City of Milwaukee Specification No. 30-B-9a
Milwaukee Water Works Specification No. 3d607
Revised June 8, 2007

841 N. Broadway
Zeidler Municipal Building
Room 409
Milwaukee, Wisconsin 53202
www.water.mpw.net

I. **GENERAL REQUIREMENTS:** Vendors bidding through the Department of Administration - Business Operations Division, Procurement Services Section shall comply with the latest version of City of Milwaukee Specification No. 70b-D-7, except as modified herein.

II. **TECHNICAL REQUIREMENTS**

A. **Description:** Tapping sleeves as described herein consist of a split cast iron tee with mechanical joint ends with split glands and gaskets, and a flanged branch outlet. They are to be used in making connections to pressurized water mains by means of a tapping machine and tapping gate valve.

B. **Material:**

1. Sleeve halves and mechanical joint split glands shall be made of ductile iron conforming to ASTM A-536, AWWA C110, or AWWA C153.
2. The bolts and nuts used to join the mechanical joint flange and follower gland shall be of high-strength, low-alloy steel conforming to AWWA C111, or as approved.
3. The test plug and the bolts and nuts to join the sleeve halves and the split gland halves shall be made of low-zinc bronze or 300 series 18-8 stainless steel.

C. **Standards:** All tapping sleeves shall conform to the thickness requirement of AWWA C153 specification for mechanical joint tees for Class 350 fittings.

D. **Design Features:**

1. **Nominal Sizes:** The nominal water main sizes are 6" thru 20" diameter, and the nominal branch outlet sizes are 3" thru 12" diameter.
 - a. The sleeve halves in each size shall be suitable for use on cast iron pipe having the following outside diameters. All dimensions are in inches:

6 = 6.90 to 7.10
8 = 9.05 to 9.30
10 = 11.10 to 11.40
12 = 13.20 to 13.50
16 = 17.40 & 17.80 (Each dia.)
20 = 21.60 & 22.06 (Each dia.)
 - b. Split mechanical joint end gaskets for diameters other than the current AWWA standard for ductile iron, AWWA C151, shall be as stated on the bid form.
2. The branch outlet flange shall be drilled to conform to Class 125 of ANSI Standard B16.1 and faced to conform to MSS SP-60 for mating to a tapping valve.

3. Accessories: The sleeve shall be furnished complete with all bolts, glands, and gaskets, except the bolts and gasket for the outlet flange are not required.
 4. Pressure: Sleeves shall be designed for water working pressure of 150 psi and a test pressure of 300 psi.
- E. Coating:** Interior and exterior coatings shall conform to AWWA C153.
- F. Markings:** The markings shall conform to AWWA C153.
- G. Certification by Manufacturer:** Upon request, the contractor shall submit to the Superintendent of Milwaukee Water Works the manufacturer's certification verifying the conformance of the sleeves and components to the requirements and test pressure of this specification.