

# TRUMBULL

**Trumbull Manufacturing**

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## **PLASTIC METER PIT LIDS, 20,000 LBS. LOAD RATING 12-1/4", 12-5/8" AND 15" DIAMETERS**

### Suggested Specifications

Materials - Meter pit lids shall be molded of a high impact copolymer resin and shall allow radio waves to pass through the lid with optimal RF transparency. The lids shall be black in color and have the words WATER METER molded into the lid in raised letters. The lids shall be secured to the existing frames by means of a worm gear assembly. Locking mechanisms relying on springs are not acceptable. The worm shall be molded of glass filled nylon. The pentagon locking bolt shall be machined from Manganese Bronze UNS C86400 (B584). The pentagon head of the bolt shall measure 27/32" from point to flat, for use with the socket of a standard AWWA pentagon key. The shank of the pentagon bolt and the opening in the worm shall be square to reduce localized stress on the bolt. The worm gear assembly shall be retained with a stainless steel machine screw to facilitate field replacement. Swedging, pinning or peening of pentagon bolts is not acceptable.

Washers of UHMWPE shall be installed under the pentagon head of the locking bolt and also on the underside of the lid, above the worm gear.

Mounting of Antenna - The underside of the lid shall have 3 posts to permit the attachment of an antenna mounting bracket. The mounting bracket shall be made of HDPE and sized to fit the type of radio transmitter used. Or, if the antenna will be surface mounted, there shall be a recess in the top of the lid to prevent the antenna from creating a trip hazard. Prior approval of a sample or drawing is required.

Load Rating – All lids shall be capable of withstanding a traffic load of 20,000 lbs., tested in accordance with AASHTO M-306. The Supplier of lids shall submit a test report from an independent testing laboratory which shall be accredited by the American Association for Laboratory Accreditation. The test report shall document a successful proof load test of 20,000 lbs. for 60 seconds using a 9" x 9" plate. In the event a 9" x 9" plate would transfer load directly to the frame, a smaller plate shall be used so none of the test load is supported by the frame. There shall be no cracks or permanent deformation greater than 1/8". The test report shall fully disclose the AASHTO M-306 test procedures and type of test equipment used.

Matching new lids with existing frames. The City has existing cast iron lids and frames that have been installed over many decades. It is the objective that all plastic lids fit flush and neatly in the different types of frames in the water system. Preference will be given to suppliers who can demonstrate that their lids will best fit the existing frames.

Lids for all sizes shall be furnished by one supplier and be manufactured by Trumbull Manufacturing, Youngstown, Ohio, or approved equal.