

TRUMBULL

Trumbull Manufacturing

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PLASTIC METER PIT LIDS 40,000 LBS. LOAD RATING (AASHTO H20)

Suggested Specifications

Materials - Meter pit lids shall be molded of a composite polymer 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 ductile iron (65-45-12). 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 cast iron 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.

To prevent elongation or excessive wear to the hole in the lid, the shank of the pentagon bolt shall not bear directly upon the plastic lid but shall be installed with a full length metal sleeve made of a bronze bearing alloy. A bearing washer shall be installed between the pentagon head of the locking bolt and the lid. The washer shall be red brass, UNS C83600 (B584).

Mounting of Antenna - The underside of the lid shall have 3 posts to permit the attachment of an antenna mounting bracket. Each post shall have a brass insert into which a stainless screw shall be threaded to retain the 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 40,000 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 40,000 lbs. using a 9" x 9" plate for one minute. There shall be no cracks or permanent deformation greater than 1/8". 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. 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 new plastic lids fit neatly and flush 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.