

Material Specification – 25 for METER PITS, DOMES, AND LIDS

1. GENERAL

Meter pits, domes, and lids shall be manufactured in accordance with the following requirements.

2. METER PIT

Meter pits shall be constructed as cylindrical concrete or plastic pits that are 24 inches in diameter and 52 to 78 inches deep with a metal dome or bell housing double lid of frost proof construction that fits a 20 inch ID concrete or plastic meter pit top ring.

The meter pit shall consist of a 24 inch nominal diameter by a 48 inch high cylinder of concrete or plastic with at least two units. The base unit shall have two doghouse cutouts that are 3 inches wide by 4 inches high and located 180 degrees apart to accommodate the service line tubing. The top unit shall have a shelf or tapered design to support a standard dome or bell housing with a 20 inch nominal diameter.

A. **Concrete Meter Pits:** Concrete meter pits shall consist of a combination of two to four precast concrete rings that total 48 inches in height; the top ring shall not exceed 12 inches in height. The rings shall have a 2 inch minimum wall thickness and be suitably reinforced to minimize breakage during installation and use. The rings shall be constructed of concrete in accordance with these Specifications and ASTM C 478.

B. **Plastic Meter Pits:** Plastic meter pits shall be of a two-piece design with a nominal 24 inch diameter by 36 inch high base unit and a 12 inch top unit that tapers from a 24 inch diameter to accept a standard 20 inch diameter dome unit. The units shall be constructed of Linear Medium Density Polyethylene (LMDP) with a wall thickness of no less than 0.6 inches at the top of the base unit and 0.65 inches at the bottom of the base unit. The top unit shall have a minimum thickness of 0.7 inches.

The assembled meter pit shall be able to bear a 20,000 pound vertical load when distributed evenly over the top rim of the top unit. The meter pit shall be able to withstand a 200 pound lateral load applied with a 4-inch square plate positioned 1 inch below the top of the pit with a maximum deflection of 1 inch. The base unit shall have a 3 inch flange at the bottom of the base unit, and a molded flange near the top of the base section to resist settling and provide additional resistance to deformation from lateral loads during backfilling. The meter pit shall be black on its exterior and bright white on its interior. The manufacturer's name and model number shall be cast or printed on each piece. Grade adjustment rings from the same manufacturer shall be used to raise the top of the pit to grade or accommodate the plumb pit to angled grades.

3. METER PIT DOME

The meter pit dome or bell housing shall be made of gray CI in accordance with ASTM A 48, Class 35B. It shall have a nominal 20 inch bottom diameter that tapers to a nominal 12 inch diameter opening at the top with a height of 10 to 12 inches. The dome or bell housing shall have an inside lip to support an inner frost lid and an upper lip to accommodate the locking mechanism of the meter pit lid. When installed on a meter pit top ring, the dome shall be rated for AASHTO H 20 highway loading plus impact not to exceed 20,000 pounds, tested in accordance with AASHTO M306 without any damage or permanent deformation.

4. METER PIT LID

The cap type top lid shall be CI in accordance with ASTM A 48, Class 35B or high-impact, no-break Hydrozone HD composite or other approved fiber-reinforced polymer material. The CI lid shall have a center hole that is 2 inches in diameter to accept the AMR device. Composite lids shall be capable of withstanding a temperature range from minus 40°F to 90°F and shall be resistant to ultraviolet light degradation. Top lids shall be furnished with a worm-gear locking bolt with a large five-sided brass nut. The lid shall be rated for AASHTO H 20 highway loading plus impact not to exceed 20,000 pounds and shall be tested in accordance with AASHTO M306 without any damage or permanent deformation. Meter pit lids shall have the words Denver Water Meter cast or imprinted on them.

5. INNER FROST LID

The inner frost lid shall be molded of high-density polyethylene. The frost lid shall be 12-inch diameter and at least 1/8 inch thick. The frost lid shall be dish-shaped with a recess that is 2 to 3 inches deep with three to five 1/4 inch diameter drainage holes located around the edge of the recessed area. There shall be a 1/4 inch wide notch the full width of the top lip and a lifting tab that projects 2 inches inward with a 9/16 inch or larger hole.

6. ACCEPTABLE MANUFACTURERS AND MODELS

Concrete Meter Pits	
Manufacturers	Models
Copeland Precast, Inc.	
Oldcastle Precast	
Precast Concepts	
Plastic Meter Pit – Potable	
Manufacturers	Models
Carson Industries (Oldcastle Enclosure Solutions)	0024-48B Body B-W 2 MsHI (Denver Water)
Plastic Meter Pit – Nonpotable	
Manufacturers	Models
Carson Industries (Oldcastle Enclosure Solutions)	0024-48B Body B-P 2 MsHI (Denver Water)

Meter Pit Dome	
Manufacturers	Models
Bingham & Taylor	IFLW20DWM
Sigma Corporation	MBSW3DTH-35
Star Pipe Products	MB1014W

Meter Pit Lid	
Manufacturers	Models
EJ	Composite Lid Denver Model (1200 Series)
Nicor, Inc.	Composite Lid 125SDENI

Potable Meter Pit Extensions (Off-Grade)	
Manufacturers	Models
Carson Industries (Oldcastle Enclosure Solutions)	0020-7 B Ext B-W, 0020-15 B Ext B-W, 0020-22 B Ext B-W
Nonpotable Meter Pit Extensions (Off-Grade)	
Manufacturers	Models
Carson Industries (Oldcastle Enclosure Solutions)	0020-7 B Ext B-P, 0020-15 B Ext B-P, 0020-22 B Ext B-P

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