

## SPECIFICATION FOR PARSON MANHOLE INSERTS

### 1. SCOPE

- 1.1 Contractor shall furnish PARSON MANHOLE INSERTS as called for in the specification.
- 1.2 The PARSON MANHOLE INSERT shall effectively reduce or prevent surface water inflow through manhole covers. The insert shall also prove effective in keeping grit, sand, salt, chemical spills, foreign objects, road oils, etc. from entering the manhole and collection system lines.
- 1.3 PARSON MANHOLE INSERTS shall be manufactured by Parson Environmental Products, Inc., P.O. Box 25, Wernersville, PA 19565, 800-356-9023.

### 2. MATERIAL & DESIGN

- 2.1 The PARSON MANHOLE INSERT shall be manufactured from corrosion proof material suitable for atmospheres and conditions commonly found in wastewater collection systems.
- 2.2 The PARSON MANHOLE INSERT shall be manufactured from High Density, high molecular weight Polyethylene Copolymer material that meets ASTM Specification Designation D1248 Class A, Category 5, Type III. This material shall have superior stress crack resistance, combined with high impact strength.
- 2.3 The PARSON MANHOLE INSERT shall have a minimum impact brittleness temperature of -180°F in accordance with ASTM D746-70.
- 2.4 Softening temperature shall be 254°F, meeting all requirements of ASTM D1525-70.
- 2.5 The PARSON MANHOLE INSERT shall have a tensile strength of 3800 psi and an elongation factor of 800%, meeting all requirements of ASTM D638-71A.
- 2.6 The thickness of the PARSON MANHOLE INSERT shall be a uniform 1/8".
- 2.7 The PARSON MANHOLE INSERT shall be manufactured to dimensions provided by the purchaser to allow easy installation within the manhole frame.

### 3. VENTING

- 3.1 The insert shall have one of the following systems for relieving gas and/or vacuum pressure from the manhole:
  - 3.2 Two 3/16" ventilation holes are installed 180° apart, approximately 1" from the top of the insert, to allow for constant ventilation. This "no valve" method of ventilation should not be affected by grit accumulation, nor have any moving parts subject to corrosion. The venting system shall not allow water to completely fill the insert, which during cold weather could freeze and lift the manhole cover.
  - 3.3 An alternative ventilation system utilizes one valve manufactured of a Polypropylene Ethylene compound. The valve material shall be unaffected by temperatures within a range of -70°F to 350°F. The valve body and components shall be corrosion and wear resistant and be designed to release gas pressure at approximately 1 psi.

### 4. GASKET (optional)

- 4.1 The insert shall have a closed-cell neoprene gasket installed upon the insert rim by the manufacturer.

### 5. MEASUREMENT

- 5.1 The PARSON MANHOLE INSERT shall be manufactured to fit the manhole frame rim upon which the manhole cover rests. Exact measurements shall be required from the purchaser.
- 5.2 Instructions and measuring diagrams will be made available to the purchaser, to insure a proper fit of the PARSON MANHOLE INSERT within the manhole frame.

### 6. INSTALLATION

- 6.1 The manhole frame rim shall be cleaned of all dirt and debris before placing the PARSON MANHOLE INSERT upon the rim.
- 6.2 The PARSON MANHOLE INSERT shall be fully seated around the manhole frame rim.
- 6.3 The manhole cover is replaced as before, and the installation is complete.

### 7. REMOVAL

- 7.1 The PARSON MANHOLE INSERT shall have a corrosion resistant 1" heavy weight polypropylene strap installed for easy removal and re-installation into the manhole frame.

### 8. ACCEPTANCE

- 8.1 Completed installations must meet engineer's approval.

### 9. TESTING

- 9.1 After installation of the PARSON MANHOLE INSERT, the ventilation hole style shall not allow more than 5 gallons of inflow per 24 hours and the valve style should not allow more than 1 gallon per 24 hours.