



**Warminster Fiberglass**  
Water and Wastewater Treatment Products  
Keeping Americas' Water Clean

## **SECTION 11206 PALMER-BOWLUS FLUMES**

### **PART 1 GENERAL**

#### **1.1 SECTION INCLUDES**

- A. Palmer-Bowlus flumes.

#### **1.2 RELATED SECTIONS**

- A. Section 03300 - Cast-In-Place Concrete.
- B. Section 11208 - Metering Manholes.

#### **1.3 REFERENCES**

- A. ASTM D 638 - Standard Test Method for Tensile Properties of Plastics.
- B. ASTM D 790 - Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials.
- C. ASTM D 2583 - Test Method for Indentation Hardness of Rigid Plastics by Means of a Barcol Impressor.

#### **1.4 SUBMITTALS**

- A. Submit under provisions of Section 01300.
- B. Product Data: Test results of fiberglass reinforced plastic laminate.
- C. Shop Drawings Show:
  - 1. Critical dimensions, jointing and connections, fasteners and anchors.
  - 2. Materials of construction.
  - 3. Sizes, spacing, and locations of structural members, connections, attachments, openings, fasteners, and loads.
- D. Manufacturer's installation instructions.

#### **1.5 DELIVERY, STORAGE, AND HANDLING**

- A. Store products indoor and protect from construction traffic and damage.

### **PART 2 PRODUCTS**

#### **2.1 MANUFACTURER**

Warminster Fiberglass  
P.O. Box 188  
Southampton PA 18966-0188  
725 County Line Road  
Phone: 215-953-1260 | Fax: 215-357-7893



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A. Provide products manufactured by Warminster Fiberglass Company; P.O Box 188, Southampton PA 18966-0188; ASD. Tel. (215) 953-1260, Fax. (215) 357-7893. <http://www.warminsterfiberglass.com/>

B. Requests for substitution will be considered in accordance with provisions of Section 01600.

C. Substitutions: Not permitted.

## 2.2 PALMER-BOWLUS FLUMES

A. Material: One-piece, fiberglass reinforced plastic; smooth inside surfaces, free of irregularities; 3/16-inch wall thickness.

1. Tensile strength (ASTM D 638): 14,000 psi.
2. Flexural strength (ASTM D 790): 25,000 psi.
3. Flexural modulus (ASTM D 790): 1,000,000 psi.
4. Barcol hardness (resin-rich surface) (ASTM D 2583): 40.
5. Chemical resistant resin: \_\_\_\_\_.
6. Temperature limit: 150 degrees F.
7. Temperature limit: 200 degrees F.

B. Flume Type: Provide flumes of the following type(s):

1. Permanent type: Provide brackets for anchoring to concrete.
2. Insert type: For insertion into existing half section of pipe.
3. Cutback-exit type: For placement in discharge pipe leaving manhole.
4. Dual range nested flumes where indicated.

C. Size(s): Indicated on the drawings.

D. Accessories:

1. Bushing for ultrasonic transponder mounting stand.
2. Integral stilling well, 8-inches diameter.
3. Integral stilling well, 10-inches diameter.
4. Staff gauge graduated in feet, with 1-inch divisions per foot.
5. Staff gauge graduated in feet, with 50 equal divisions per foot.
6. Staff gauge graduated in meters, with 10-millimeter divisions per meter.
7. Staff gauge graduated in GPM.
8. Staff gauge graduated in MGD.
9. Inlet and outlet transition or pipe flanges.
10. Molded-in bubbler tube.
11. Molded-in Drexelbrook track.

## PART 3 EXECUTION

### 3.1 EXAMINATION

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A. Verify that dimensions are correct and project conditions are suitable for installation. Do not proceed with installation until unsatisfactory conditions have been corrected.

### **3.2 INSTALLATION**

A. Install products in accordance with manufacturer's instructions.

B. Ensure that products are installed plumb and true, free of warp or twist, within tolerances specified by the manufacturer and as indicated in the contract documents.

C. Set flumes at proper elevation as indicated on drawings.

D. Install flumes in true level position, both laterally and with the stream.

E. Embed flumes in concrete; place concrete in stages or internally brace flume walls to eliminate possibility of bowing and to ensure complete contact without voids. Temporarily secure flumes until concrete has hardened.

### **3.3 ADJUST AND CLEAN**

A. Clean surfaces in accordance with manufacturer's instructions.

B. Remove trash and debris, and leave the site in a clean condition.

**END OF SECTION**

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