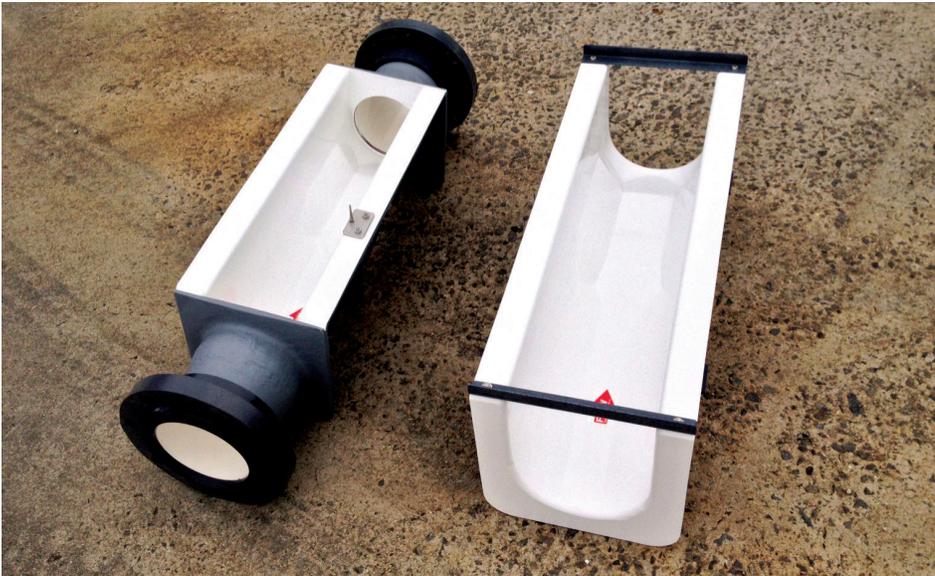


# PALMER-BOWLUS FLUMES



The Palmer-Bowlus Flume is a class of long-throated flumes developed in the 1930's for measuring municipal sewage in existing conduits with minimal site requirements, other than suitable slope.

Now the second most common class of flume used - behind only the Parshall flume - the PalmerBowlus flume is most often used to measure municipal sewage or industrial discharges.

Unlike other classes of flumes, the Palmer-Bowlus flume is available in a range of configurations, including:

- Permanent Style with Approach
- Short Section Style with Approach
- Permanent Style without Approach
- Insert Style
- Cutback Style

The primary differences between the configurations is how the flume is to be installed (whether in a pipe - Insert / Cutback styles - or inline with a pipe - Permanent / Short Section styles) and whether or not an approach section is present.

## APPLICATIONS



- Industrial Discharge
- Municipal Sewer Flows
- Cross Jurisdiction Flows
- Sewage Treatment Plants
- Spring Discharge
- Well Pumping Tests

## CUSTOMIZATION



Openchannelflow offers a wide range of mounting, connection, and flow / level measurement accessories to help you customize your flume to your specific site needs.

## Proprietary Design

Unlike standardized flumes like the Cutthroat, HS / H / HL, Parshall, or RBC, the Palmer-Bowlus flume is proprietary to each flume manufacturer. While an industry standard does exist (ASTM D 5390), the standard is for the general class of Palmer-Bowlus flumes and not for a specific design. It is common, however, for most Palmer-Bowlus flumes to have a u-channel cross-section with a trapezoidal shaped throat.

As no design standard exists, the discharge characteristics of one manufacturer's Palmer-Bowlus flume should not be assumed to be identical to those of another manufacturer.

Being a long-throated flume, discharge relationships for intermediate or non-standard sized Palmer-Bowlus flumes can be generated.

## Application

Palmer-Bowlus flumes are usually sized the same as the pipe from which they are to measure flow. However, to achieve maximum accuracy, the size of the flume should be determined by the anticipated flow rate.

It is not uncommon, therefore, to see a Palmer-Bowlus flume one size larger or smaller applied to a given line size. It is unusual, however, to see more than a one size difference between the flume size and the pipe size due to the transitions necessary to accomplish this.

Palmer-Bowlus flumes do have a smaller useful range of flow rates than a Parshall flume, and the resolution is not as good as that of a Parshall flume, but these limitations are generally outweighed by lower cost and ease of installation.

As with other long-throated flumes, Palmer-Bowlus flumes do have high (85%) submergence rates, making them a good choice in applications where submergence is of concern.

## MOUNTING



- *Free-Standing*
- *Earthen Channel*
- *Packaged Metering Manholes*
- *Above Grade Enclosures*

## FLOW/LEVEL



- *Staff Gauges*
- *Stilling Wells*
- *Bubbler Tubes*
- *Ultrasonic Sensor Brackets*

## END CONNECTIONS



- *Pipe Stubs*
- *Flanges*
- *Caulking Collars*
- *Wing Walls*