

PARSHALL FLUMES



The Parshall Flume is a class of short-throated flumes whose development began in 1915 by Dr. Ralph Parshall, then of the U.S. Soil Conservation Service.

Originally intended as a more accurate modification of the Venturi flume to measure irrigation and surface water flows, the Parshall flume has become the most widely used flume for measuring industrial discharges, municipal sewage, and influent / effluent flows at wastewater treatment plants.

Parshall flumes from Openchannelflow meet the exacting requirements of:

- ASTM D 1941
- ISO 9826
- JIS B7553
- Bureau of Reclamation Water Measurement
- Manual and are designed to accurately measure sub-critical, open channel flows to within +/- 3-5%.

Throat sizes from 1-inch to 144-inches [2.54 to 365.8 cm] for flow rates from 0.0033 to 518.7 CFS [0.0921 to 14,690 l/s] are available from Openchannelflow in a wide range of materials and configurations.

APPLICATIONS

- *Water Rights*
- *Irrigation*
- *Headworks*
- *Treated Effluent*
- *Sanitary Collection Systems*
- *Industrial Discharge*
- *Stormwater*
- *Landfill Leachate*
- *Acid Mine Discharge*
- *Surface Waters*
- *Edge-of-Field Studies*
- *Mine Dewatering*
- *Dam Seepage Monitoring*
- *Feedlot Runoff*
- *Spring Discharge*

MATERIALS



- *Aluminum*
- *Galvanized Steel*
- *Fiberglass (FRP / GRP)*
- *Lexan*
- *PVC*
- *Stainless Steel*

Standardization

As a defined and standardized flume, the Parshall flume does not generally require field calibration or special rating.

So long as the flume is installed correctly, the flow is well formed and under sub-critical / open channel conditions, the published rating tables / equations can be used without further concern or effort on the user's part.

Even data from installations where settling of the flume has occurred or submergence due to downstream conditions is present can be normalized by correction factors determined by exhaustive laboratory research.

Empirical Device

While the Parshall flume is standardized, it is also a device that is empirical in nature - the flumes are not scale models of each other. 22 sizes of Parshall flume have been developed - from 1-inch to 50-feet [2.54 to 15.24 m] to cover a wide range of applications and flow rates.

The discharge characteristics of non-standard sizes have not been investigated under laboratory conditions and their use is strongly discouraged.

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.

Openchannelflow manufactures the widest selection of flumes for the measurement of water and wastewater. Accurate and cost effective, Openchannelflow flumes are highly customizable and built to withstand the most demanding of applications.

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*