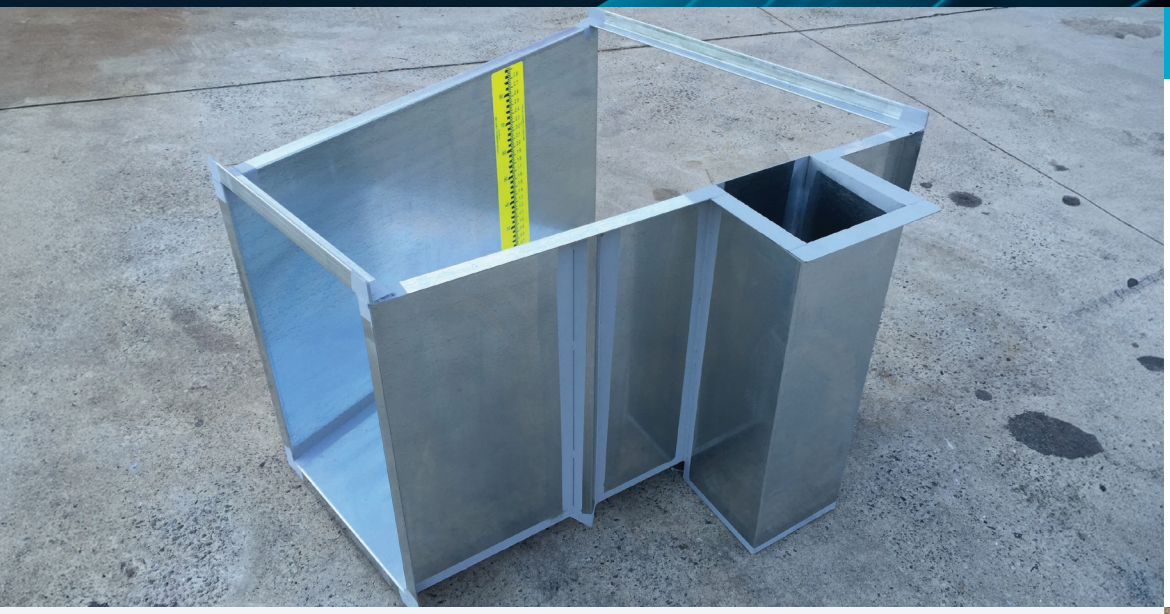
FLOW SOLUTIONS

Montana Flumes (Short Parshall)

OPENCHANNELFLOW



APPLICATIONS

- *Water Rights*
- *Irrigation*
- *Stormwater*
- *Landfill Leachate*
- *Acid Mine Discharge*
- *Surface Waters*
- *Edge-of-Field Studies*
- *Mine Dewatering*
- *Dam Seepage Monitoring*
- *Feedlot Runoff*

The Montana Flume is a modification of the popular Parshall flume. The Montana flume removes the extended throat and discharge sections of the Parshall to create a flume that is lightweight, easy to transport, and economical to fabricate.

Under free-flow condtions, the Montana flume uses the same discharge equations as the Parshall flume. Lacking the throat and discharge sections of the Parshall, the Montana flume is not for use where it may become submerged due to down-stream conditions - flow must freely spill off the end of the flume.

Openchannelflow offers Montana flumes in:

- Aluminum
- Galvanized Steel
- Fiberglass
- Stainless Steel

Montana flumes are available in the following throat sizes:

- 1-inch to 144-inches
- (2.54 to 365.8 cm)

Montana flumes are rarely used in sizes greater than 48-inches due to the need to elevate the flume to ensure free-spilling discharge.

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Openchannelflow manufacturers 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.

STANDARDIZATION

The Parshall flume - from which the Montana flume is derived - is a defined and standardized flume.

As a result, the Montana 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 (from which the Montana flume is derived) 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.

While Montana flumes could be fabricated to match those sizes, in practice it is uncommon to see Montana flumes larger than 48-inches.

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

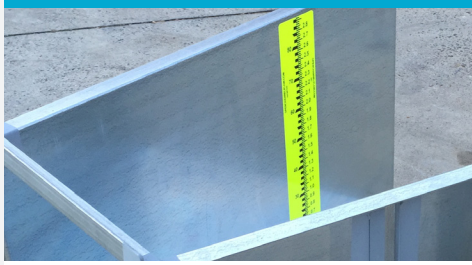
CUSTOMIZATION

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

MOUNTINGS

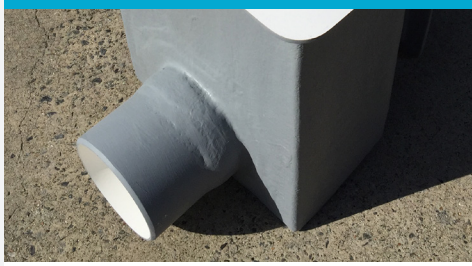
- *Free-Standing*
- *Earthen Channel*
- *Packaged Metering Manholes*
- *Above Grade Enclosures*

FLOW / LEVEL



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

END CONNECTIONS (INLET)



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