

## Fiberglass & Steel Flumes or Weirs

We represent multiple companies that manufacture fiberglass or steel flumes of many varieties. We have provided flumes to hundreds of organizations and individuals throughout the world. If you are in need of a primary measuring device we can assist you in selecting the most appropriate device for your needs. We also offer data logging devices that can be added to a flume or weir to record and totalize your water usage or delivery. Below you will see a brief description and images representing a few of the options available.



**Parshall** flumes measure the flow in open channels and non-pressurized pipelines. Typical applications include:

- Irrigation water & agricultural runoff
- Sanitary & storm sewer discharges
- Industrial process discharge
- Snow melt
- Holding pond overflow

Available in Steel or Fiberglass



**Palmer-Bowlus** flumes are a compact design, originally developed to easily measure the flow of wastewater. They are also suitable for measuring other flows such as:

- Storm sewer discharges
- Industrial process discharge
- Irrigation water
- Holding pond overflow

Palmer-Bowlus flumes are available with various approach section lengths. In applications where a full approach section is not integral to the flume, the upstream piping forms the approach section. Available in fiberglass only.

**H flumes** were originally developed to measure agricultural water runoff. Additional applications include: irrigation water; snow melt; holding pond overflow; industrial process discharge; sanitary & storm sewer discharge.

H flume sizes cover a wide range of flows.  
 HS flumes are used to measure low flows.

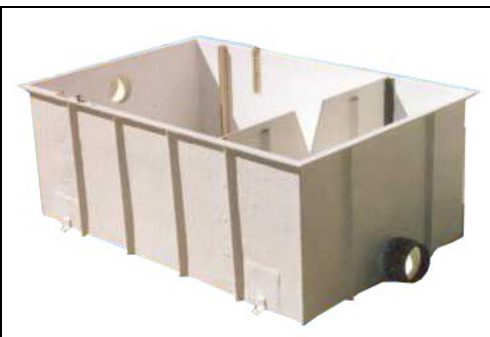
H flumes are designed for use with an approach box immediately upstream of the flume. The boxes should have the same width & height as the flume and sufficient length to allow the flow to be evenly distributed across the width of the box. The approach section can be supplied by Free Flow or formed in the field. The inlet end of the approach box can be supplied open, or with a bulkhead and with pipe flanges or couplings to match upstream piping.





**Ramp Flumes** are a low cost water measurement device, a flume built for easy installation and accuracy. The Ramp Flumes are built from high grade 16 gauge galvanized steel and will resist most corrosive environments. The design utilizes rigid flanges and bracing to allow the use of soil as a backfill during installation.

Installation of the Ramp Flumes is simple and straight forward. The ramp flume must be level from end to end and side to side. The Ramp Flumes can be transported to the installation site by hand horse, truck or ATV. The large ramp flumes are heavy and will require excavation equipment for lifting and site preparation. The Ramp Flumes does not require surveying or complicated excavation for installation.



**Weir plates and Weir boxes** are designed for high accuracy open channel flow measurement. Typical applications include the measurement of irrigation water; industrial process discharge; wastewater treatment plant discharge and holding pond overflow. The V notch, sharp crested weir is one of the most precise discharge measuring devices, suitable for a wide range of open channel flows. The prefabricated weir box provides the necessary upstream channel dimensions required for fully contracted weir operation and maximum accuracy. Weir plates are available separately for installation in a channel fabricated by customer. Available in fiberglass or steel.

### Other types of flumes:



#### Cutthroat Flumes

In the mid-1960's the Utah State University Water Research Laboratory began development on a new type of flume for use in flat gradient channels. The result was the Cutthroat flume, so named due to the absence of a parallel-wall throat section (as on the Parshall flume). Commonly used in stream gauging and agricultural applications, the use of the Cutthroat flume is now expanding into sanitary and flow splitting applications.

#### Trapezoidal Flumes

Trapezoidal flumes allow a relatively large flow rate to be measured with a small change in head. The flat bottom simplifies installation into existing channels. Debris accumulation upstream of the flume and in the flume is also reduced. Long streamlined approach sections are not required. Flow testing has shown that relatively abrupt channel transitions to the flume can be present with little effect on accuracy. The V Notch Trapezoidal flumes permit downstream conditions which result in a high degree of submerged flow before the standard discharge tables must be corrected.

