



*H-Type Flume*

## Measuring and Controlling Stormwater Runoff in Any Environment

### Flumes

Stormwater flumes are used in various applications to measure and control the flow of water, helping to manage stormwater runoff effectively and prevent flooding, erosion, and water pollution. Some common applications are in urban drainage systems, where they monitor and regulate stormwater drainage networks including water flow from streets, parking lots, and other impervious surfaces. Flumes are often used in water treatment plants to measure and control the flow of stormwater and wastewater, ensuring proper treatment and discharge. In agricultural settings, they help manage stormwater runoff and irrigation water, preventing soil erosion, nutrient loss, and water pollution.

ParkUSA, a Northwest Pipe Company, manufactures flumes in many styles, including the Parshall, Palmer-Bowlus, or H-Type designs. A control system can be incorporated to automatically measure and monitor the flow rate. This enables real-time data collection and analysis to help optimize stormwater management.

### Advantages

- Minimal head loss and hydraulic gradient between inlet and outlet
- Third-party tested by Southwest Research Institute
- Durable precast concrete construction for strength and long-lasting performance
- Scalability customized to suit project requirements
- Can be used with multiple inlets
- Factory-assembled for quick and efficient installation

### Applications

- Urban drainage systems
- Watershed management
- Flood control structures
- Water treatment facilities
- Agricultural fields
- Road and highway drainage
- Construction sites



*Parshall Flume*



*Palmer Bowlus Flume*



## How It Works

A stormwater flume is designed to measure the flow rate of water passing through an open channel or pipe. A flume can include various flow monitoring devices such as staff gauges, ultrasonic sensors, pressure transducers, and electronic totalizers. Our flumes are built within a precast concrete structure that supports direct burial and enables seamless inlet and outlet pipe connections, ensuring proper flow management and measurement within the system.

ParkUSA flumes are a comprehensive and efficient solution for managing stormwater runoff. They provide accurate flow measurement with minimal maintenance. An automated control system offers additional security and remote access.



Full product catalog available at [request.parkusa.com](http://request.parkusa.com)

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## System Components

**Staff Gauge:** Visually indicates the water depth within the flume.

**Ultrasonic Sensor:** A non-contact device that measures water depth within the flume by emitting ultrasonic waves.

**Pressure Transducer:** Measures water pressure within the flume, which can be used to calculate water depth.

**Electronic Totalizer:** Receives water depth data from a level measurement device and calculates the total flow volume over time.

**Flume Platform:** Provides a safe, slip-resistant surface for workers during maintenance or system calibration.

**Hatchway Entry:** A hatchway entry allows personnel to access the flume for maintenance, inspection, and calibration. The hatch is designed for secure closure to prevent unauthorized access or debris infiltration.

**Ventilation:** Essential for maintaining a safe working environment within the flume structure.



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