

## Weirs

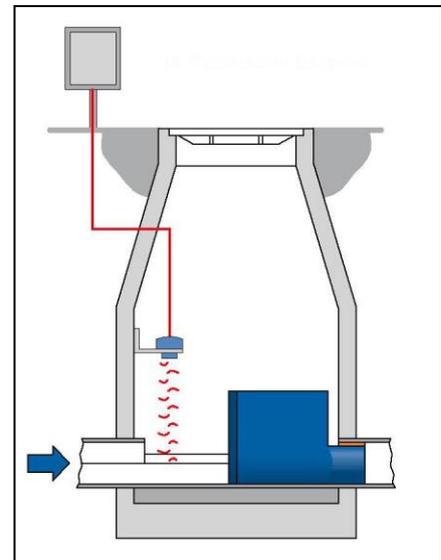
Weirs are used to constrict the profile of a river or a channel. Upstream and downstream water levels are decoupled and you can measure the flow rate or effluent quantity with the help of the water level. A typical example is the venturi channel.

### Manhole flume

The Manhole flume is a low head loss, self-cleaning flow measurement device especially designed to easily fit into standard manholes.

No enlargement of the manhole riser or lid is necessary. The flume adapts to any standard waste water conveyance pipe. This flume allows accurate measurement over an unsurpassed flow range when compared to other inserts. The upstream approach and throat velocities significantly reduce solids deposition.

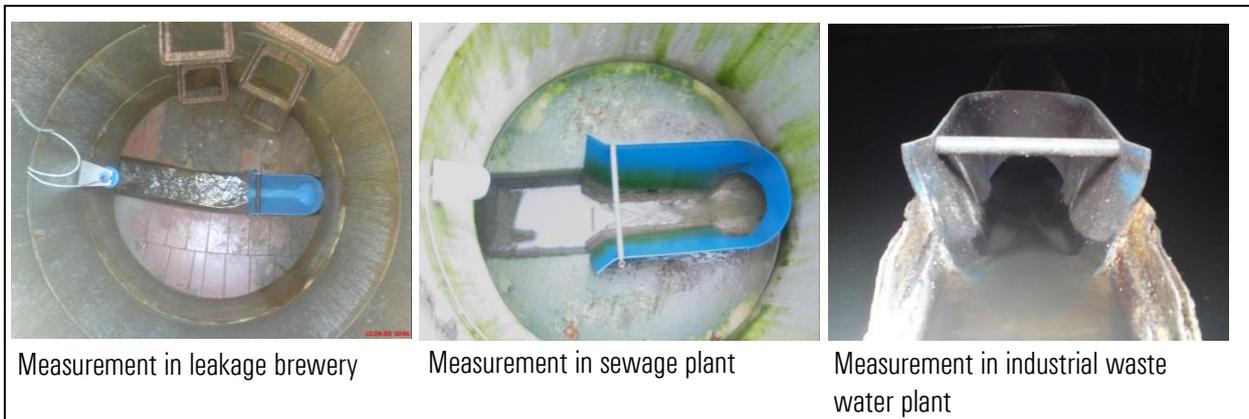
Due to the proportional head rise/flow rate characteristics for all Manhole flumes, the unit can be used in conjunction with a Badger Meter model iSonic 2000 ultrasonic flow meter to compute the flow rate.



### Sizing

Selection of a Manhole flume is dependent on manhole pipe size. Flumes are available for pipe sizes 100, 150, 200, 250 and 300 mm (4", 6", 8", 10" and 12") to accommodate a large percentage of metering applications. The flume's design allows accurate monitoring of extremely low flow while having excellent rangeability, much greater than other insert flumes.

### Applications



### Parshall flumes

The Parshall flume is one of a large class of open channel primary elements known as critical flow venturi flumes. A distinguishing characteristic of the Parshall flume is the downward sloping invert of the throat. This feature gives the Parshall flume its ability to operate at higher ratios of downstream to upstream head than any other such device.

The Parshall flume is a monolithic fiberglass reinforced polyester structure to assure maximum strength and accuracy of dimension while minimizing installation time. Its weight is light, the installation easy and there is no need for special tools. Its short length makes the installation possible in areas, where further constructions are limited.

### Sizing

Selection of a Parshall flume should be made on expected flow rates or on the maximum flow rate and on the width of influent and effluent channel. For single point measurement to be valid, the design hydraulic gradient must insure that free flow conditions exist at all flow rates.



### Applications



Spring measurement



Drinking water measurement



Water measurement