Flumes

Flumes for measuring water flows

Feb 04

ARMATEC

PRODUCT DESCRIPTION

A range of flumes constructed in corrosion resistant fibreglass for a variety of flows and uses.

- **Trapezoidal** - compact, flat bottom, low flows.
- **Parshall** - large flows.
- **Palmer Bowlus** - compact, wide flow range.

Please consult ARMATEC for our recommendation for the best choice for your particular application.

TRAPEZOIDAL FLUMES

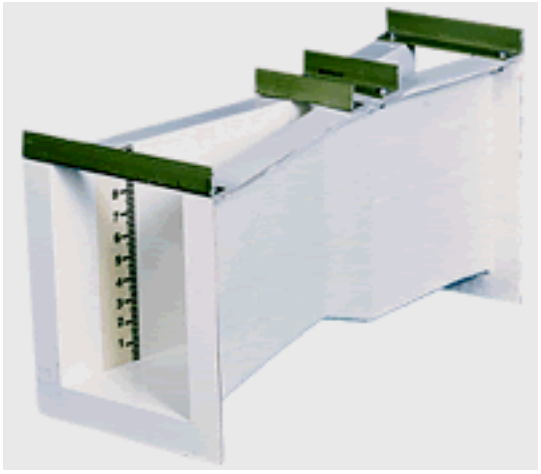
Trapezoidal flumes offer accuracy at a wide flow range and are particularly suited for smaller flows under 100 cubic metres per hour. They have a flat floor with no hydraulic jump so are particularly suited to flows with solids such as mixed sewers.

PARSHALL FLUMES

Parshall flumes offers low head loss which results in less effect on the flow being monitored. They have a high degree of self cleaning capability and are able to withstand relatively high degrees of submergence without affecting the rate of flow. They are ideal for measuring a wide range of flow rates, especially larger flows over 100 cubic meters per hour.

PALMER BOWLUS FLUMES

Palmer Bowlus flumes are typically very compact and portable and are often used for retrofitting in an existing pipeline and are sized according to the pipe size they are being fitted to.



Parshall flume ideal for larger flows.

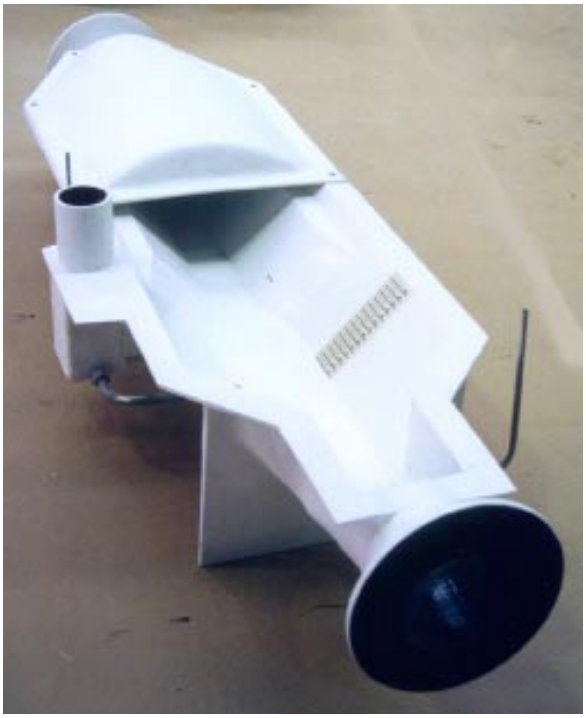
USES

- Trade waste sewers.
- Municipal sewers.
- Mixed sewers.
- Effluent drains.
- Dairy factory waste streams.
- Gravity flow non-pressure lines.

AVAILABILITY

All flumes are manufactured in New Zealand by ARMATEC Environmental Ltd in fibreglass based on either isophthalic polyester or vinyl ester resins depending on the chemicals handled.

All flumes are available as individual units or they can be supplied pre-installed in a full fibreglass manhole ready for placing in the ground. Please contact ARMATEC for full details.



Trapezoidal flume is compact and ideal for smaller flows.

ARMATEC Environmental Ltd

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LEVEL MEASUREMENT OPTIONS

The liquid flowrate is determined by measuring the height of the standing wave formed in the flume. This can be measured in either or both of two ways:

- **With Bubbler in Still Well**: Air is bubbled into the base of the still well connected to the throat of the flume. A pressure sensor on the air bubbler pump gives the measurement of the height of the standing wave.
- **Ultrasonically in Flume Throat**: An ultrasonic level measuring device located directly above the throat is ideal for permanent installations requiring continuous data logging.

WET SAMPLING

Flumes are often supplied with fittings to enable continuous wet sampling to be done. When combined with the flow measurement the unit can be used to confirm compliance with local trade waste bylaws.

BENEFITS OF USING FIBREGLASS

Fibreglass is an ideal material for flumes as it lends itself well to a one piece jointless moulding of the complex shapes involved in a flume. All flumes are made from accurately formed moulds so all flumes are identical to the same high level of accuracy.

Fibreglass has been used for many years in the field of fluid handling, particularly in the transportation and storage of corrosive fluids. This is due to the superior mechanical and chemical properties over conventional materials.

- **Fibreglass will not craze or go brittle.**
- **Does not leach and will not delaminate.**
- **Impact resistant.**
- **Low weight to strength ratio.**
- **Resistant to most chemicals.**
- **Unlimited shaping abilities.**
- **Short manufacturing time.**
- **Long lifespan.**
- **Intrinsically water tight.**

Two Parshall flumes mounted in an all fibreglass manhole for installation in a dairy factory.

Parshall Flume pre-installed in an all fibreglass manhole being installed in a waste water pipeline during a 9-hour shutdown.

ArmaFlume TZ-150 in operation in a manhole. Measuring and sampling tubes permanently attached so when connecting sampler, personnel do not need to enter the manhole.

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