

Product Name :
 Model of Sedimentation Tank

Product Code :
 Environmental0003



Description :

Model of Sedimentation Tank

Technical Specification :

Model of Sedimentation Tank Water is taken from the laboratory mains supply and is fed to the settling tank via a flow meter. For studies of sedimentation, a slurry is prepared in a sump tank and pumped via a specially designed flow meter to join the fresh water stream just before entry to the settling tank. A well-mixed slurry of known concentration and flow enters the tank uniformly under an inlet weir. This may be comparatively analysed by the Imhoff cone technique or more accurately by drying and weighing. The sump tank is continually agitated by a flow sparge device to prevent settling of solids during an experiment. For hydraulic tracer and visualisation studies, an accurate dye injection system is provided. A known volume of dye solution is injected just before the entry to the settling tank.

Technical Details

Settling tank: 1000 x 400 x200mm

Sediment sump tank capacity: 120 litres

Water flow meter range: 0.5-5l/min

Sediment suspension flow meter range: 0-2l/min

Pump flow rate: 25l/min at 5m head

Motor: 0.1kW

Ordering Specification

- A rigid acrylic settling tank of 80L capacity can be fed by a mains water or a slurry supply. Slurry is pumped from a 120L sump tank via a centrifugal pump. A sparging device in the sump tank keeps the slurry in suspension.
- Both supplies are fitted with a flow meter. Mains water flow meter range 0.5 – 5.0 litres/min; slurry flow meter range 0 – 2 litres/min.
- A dye injection system is incorporated to allow hydraulic tracer and flow visualisation studies.
- Measuring flow regimes using a dye tracer and comparison of these with idealised flow models.
- Effect of variables such as flow rate and baffle position on flow regimes.
- Measurement of sediment removal efficiencies.

Recommended Accessories

Atico Sedimentation Studies Apparatus to characterise settling regimes of selected suspension

Precipitated calcium carbonate

Balances

Colorimeter – 7 narrow band-pass filters covering wavelengths 450 to 700nm

Services Required**Electrical supply:**

220-240V/1ph/50Hz

120V/1ph/60Hz

Water supply: 22 litres/min @ 1 bar

Overall Dimensions

Height: 1.55m

Width: 1.90m

Depth: 0.60m

Shipping Specification

Volume: 2.9m³

Gross weight: 310kg

Electrical and Electronics

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