SCIENTICO INDIA
Manufacturer & Exporter · Ambala, Haryana, India

PRODUCT DATA SHEET
Catalogue reference for product evaluation

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Multi-Purpose Teaching Flume (Length 5 m) | FluidoSurge-X 240

Category: Fluid Mechanics · **Country of Origin:** India

Product Overview

The Multi-Purpose Teaching Flume is a large-scale laboratory flume designed for teaching and experimental studies in hydraulic engineering and open-channel flow. Made by Scientico India, ISO 9001:2015 certified, and supplied with a calibration certificate and operation manual.

View this product online: https://scienticoindia.com/product/multi-purpose-teaching-flume-length-5-m-fluidosurge-x-240/



Request a model-specific quotation
Include quantity and delivery country.

Technical Specifications

Parameter	Specification
Apparatus Type	Open channel teaching flume
Experimental Section Length	5 m
Flow Cross Section (W x H)	150 x 360 mm ± 2 mm
Side Wall Material	Tempered glass
Wetted Materials	Stainless steel, glass reinforced plastic
Inclination Adjustment Range	-0.5% to +2.5%
Inlet Condition	Flow-optimized, low-turbulence
Model Mounting	6 evenly spaced threaded holes
Water Circuit	Closed
Inclinometer	Magnetic
Inclinometer Range	-90° to 0° to +90°
Tank Capacity	600 L
Pump Power Consumption	2.2 kW
Maximum Flow Rate	300 L/min
Maximum Head	13 m

Key Features

Key Features

- 5 m long experimental section for extended open-channel studies
- Tempered glass side walls for excellent visual access
- Smoothly adjustable flume inclination for slope simulation
- Closed water circuit with tank, pump, rotameter, and manual flow control
- Low-turbulence inlet for stable and uniform flow
- Corrosion-resistant construction for long-term laboratory use
- Rapid and secure installation of hydraulic models

Applications

- Hydraulic engineering teaching and training
- Study of uniform and non-uniform open-channel flow
- Investigation of hydraulic jump and energy dissipation
- Flow over weirs, gates, and control structures
- Velocity distribution and momentum studies
- Sediment transport and transient flow experiments using accessories

Construction & Design Details

The experimental section is constructed using corrosion-resistant materials, with tempered glass side walls for unobstructed observation. The inlet element conditions the flow to minimize turbulence. The flume inclination is smoothly adjustable to simulate varying channel slopes. Multiple threaded mounting points allow fast and secure installation of experimental models along the flume bed.

Experiments

- Uniform and non-uniform discharge
- Flow transition and hydraulic jump
- Energy dissipation in stilling basins
- Flow over sharp-crested, broad-crested, and ogee-crested weirs
- Discharge under gates and flow-measuring flumes
- Local losses due to obstacles and piers
- Transient flow including waves and vibrations
- Sediment transport studies

Data Acquisition Software (Optional)

Optional DAQ software developed in the NITM LabVIEW™ environment supports data acquisition, processing, and reporting on Windows systems. The software enables precise measurement and calculation of experimental parameters, visualization using tables and graphs, and generation of comprehensive CSV reports containing measured and calculated data.

Standard Scope of Delivery

- 1 experimental flume
- 1 set of standard accessories
- 1 instruction manual

Export & Supply Capability

SCIENTICO manufactures the Multi-Purpose Teaching Flume FluidoSurge-X 240 for engineering institutes, technical universities, and research laboratories. The system is suitable for domestic and international supply. Export packing, documentation, and accessory configuration are provided as per customer and destination requirements.

Ordering & Delivery

- Send the product name, quantity, delivery country and destination with your enquiry.
- Production schedule, freight, payment terms and export documents are confirmed in the written quotation.

Frequently Asked Questions

Q1. What is the length of the experimental section?
The experimental section length is 5 m.

Q2. Can the flume slope be adjusted?
Yes. The inclination can be adjusted from -0.5% to +2.5%.

Q3. What materials are used for wetted components?
All wetted components are made from corrosion-resistant materials such as stainless steel and glass reinforced plastic.

Q4. Are control structures included as standard?
Yes. A set of standard control structures and measuring instruments is supplied.

Q5. Is digital data acquisition supported?
Yes. Optional DAQ hardware and software are available for data logging and analysis.

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