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Product Name :

Sluice Gate with Tappings

Product Code :

SLE/EFM/22



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Description :

Sluice Gate with Tappings (Product Code: SLE/EFM/22) is a flume accessory that lets students measure the water pressure acting on the face of a sluice gate. Ten pressure tappings run across the gate face, so the pressure distribution can be read directly and related to the flow rate and the upstream depth. It is intended for use with a flume (not included) in civil engineering and irrigation hydraulics labs, and is manufactured by **Jain Scientific Equipments Pvt Ltd (ScienceLab)**, Ambala, a scientific laboratory equipment manufacturer.

Specifications

Parameter	Detail
Type	Sluice gate for flume experiments
Pressure tappings	Ten, across the face of the gate
Investigations	Pressure changes across the gate face; variation of pressure with flow rate and depth
Used with	A flume, not included

Typical Use

The gate is installed across the flume with a set opening beneath it, and each tapping is connected to a manometer or pressure display. At a given discharge, students read the upstream depth and the pressure head at every tapping, then plot pressure against position down the gate face. Near the top of the water the readings follow the hydrostatic line, but closer to the gate lip the pressure drops below hydrostatic as the flow accelerates towards the opening — a result that simple textbook assumptions miss.

By changing the flow rate and gate opening, the class sees how the distribution and the total force on the gate change with depth, and can compare the measured force with a hydrostatic estimate. Flush the tapping lines to clear air bubbles before each run, since trapped air gives false readings, and allow the upstream level to settle after every adjustment.

Manufacturer

The gate is produced by **Jain Scientific Equipments Private Limited**, an Ambala, Haryana manufacturer operating under the trade name **ScienceLab**. Our company profile explains more about the company and its product lines.

Related Laboratory Equipment

Items used with the gate in the same open-channel practicals:

- Meter Flume — a recirculating flume to install the gate in; confirm fitting with us
- Manometer, Glass — for reading pressure heads at the tappings
- Energy Dissipation — studies the fast flow and jump downstream of control structures
- Trapezoidal Flume — measures the discharge passing under the gate

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