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Product Name :

Bernoulli's Theorem

Product Code :

SLE/EFM/10



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Description :

The **Bernoulli's Theorem** apparatus (Product Code: SLE/EFM/10) demonstrates the exchange between pressure and velocity as water passes through a horizontal Venturi tube. Manometer tubes held vertically on a scaled panel show the pressure head at points along the tube, so students can see pressure fall in the throat and recover downstream. Built with plastic materials and corrosion-resistant finishes, it is manufactured by **Jain Scientific Equipments Pvt Ltd (ScienceLab)**, Ambala, as lab equipment for college and polytechnic fluid mechanics practicals.

Specifications

Parameter	Detail
Main components	Horizontal Venturi tube, downstream flow-control valve and manometer tubes
Manometer panel	Holds the tubes vertically, with a scale behind them for direct reading of water levels
Manifold	Common manifold above the tubes with an air pressure-control valve
Datum adjustment	Hand-pump connected to the air valve above the manometer tubes
Flow control	Downstream valve, so it causes no upstream turbulence
Base	Adjustable feet
Materials	Plastic materials and corrosion-resistant finishes throughout

Typical Use

After levelling the base on its adjustable feet, students open the flow-control valve to set a steady flow and read the water level in each manometer tube against the panel scale. The heads drop towards the narrow throat of the Venturi, where velocity is highest, and rise again as the section widens. Using the measured flow and the tube cross-sections, the class calculates velocity head at each station and checks whether the total head stays constant, as Bernoulli's equation predicts, or falls slightly because of friction.

Placing the control valve downstream keeps the approach flow undisturbed, so the readings reflect the Venturi itself rather than turbulence from a partly closed valve. If the water levels sit too high or too low on the scale, a hand-pump on the manifold air valve brings them back to a convenient datum. For engineering educational equipment in India, this apparatus also introduces the Venturi meter as a practical flow-measuring device, a topic students revisit in pump and pipe-network work. Drain the tubes after use and keep the panel scale clean.

Manufacturer

This apparatus is manufactured in Ambala, Haryana, by Jain Scientific Equipments Private Limited, whose ScienceLab brand covers fluid mechanics, physics and wider laboratory teaching equipment. Our company profile tells you more about who we are.

Rela

Appa