SCIENTICO INDIA
Manufacturer & Exporter · Ambala, Haryana, India

PRODUCT DATA SHEET
Catalogue reference for product evaluation

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Bernoulli’s Principle Module | FluidoSurge-X 358

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

Product Overview

A CE-certified fluid dynamics apparatus for experimental verification of Bernoulli's theorem and pressure-velocity relationships, manufactured by Scientico India to ISO 9001:2015 standards. Supplied with calibration certificate, operation manual, and complete export documentation. Designed for Fluid Mechanics laboratories in engineering colleges and technical institutions.

View this product online: https://scienticoindia.com/product/bernoullis-principle-module-fluidosurge-x-358/



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

Technical Specifications

Duct Geometry

Parameter	Specification
Total Duct Length	320 mm
Convergent Length	80 mm
Convergent Width	40 mm
Divergent Length	200 mm
Divergent Width	76 mm

Measurement System

Parameter	Specification
Pressure Measurement	Static and total pressure
Instrument	Pitot-static tube
Pressure Display	16 tube manometers (via trainer)
Mounting	Quick release fasteners

Key Features

Key Features

- Demonstration of Bernoulli’s principle in steady flow

- Verification of continuity equation
- Measurement of static and total pressures
- Determination of dynamic pressure from measured data
- Venturi-shaped duct for controlled cross-section variation
- Movable Pitot-static tube for pressure distribution analysis
- Quick installation on compatible aerodynamics trainer

Applications

- Fluid mechanics laboratories
- Aerodynamics training and education
- Demonstration of pressure–velocity relationships
- Study of converging and diverging duct behavior
- Experimental validation of Bernoulli's equation

Construction & Design Details

The module consists of a precisely shaped duct with convergent and divergent sections to create predictable velocity variation. The Pitot-static tube is positioned centrally within the flow channel and can be moved along the duct length to measure pressure distribution at various cross-sections. Static pressure is measured via lateral openings, while total pressure is measured at the forward-facing opening of the Pitot-static tube. The module attaches securely to the aerodynamics trainer using quick release fasteners.

Experiments

- Investigation of the continuity equation
- Verification of Bernoulli's principle
- Determination of dynamic pressure
- Calculation of flow velocity from pressure measurements
- Study of pressure and velocity distribution along a Venturi duct

Required for Operation

- Aerodynamics Trainer FluidoSurge-X 348

Standard Scope of Delivery

- 1 Experimental Unit
- 1 Set of Hoses
- 1 Instruction Manual

Export & Supply Capability

SCIENTICO manufactures the Bernoulli's Principle Module FluidoSurge-X 358 for engineering institutions and research laboratories. The system is suitable for domestic and international supply with export packing and documentation provided as required.

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 principle does this module demonstrate?
It demonstrates Bernoulli's principle and the continuity equation in steady airflow.

Q2. How are pressures measured?
Using a centrally located Pitot-static tube connected to tube manometers on the trainer.

Q3. How is dynamic pressure determined?
Dynamic pressure is calculated as the difference between total and static pressure.

Q4. Can velocity distribution be studied?
Yes. By moving the Pitot-static tube along the duct, pressure and velocity distribution can be analyzed.

Q5. Is this a standalone unit?
No. It requires the Aerodynamics Trainer FluidoSurge-X 348 for operation.