SCIENTICO INDIA
Manufacturer & Exporter · Ambala, Haryana, India

PRODUCT DATA SHEET
Catalogue reference for product evaluation

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Pipes Losses Apparatus | FluidoSurge-X 341

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

Product Overview

The Pipes Losses Apparatus is a laboratory system designed to investigate frictional pressure losses in pipe flow. Manufactured by SCIENTICO, the apparatus enables controlled study of how pipe material, diameter, surface roughness, and flow velocity affect pressure loss in incompressible fluid 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/pipes-losses-apparatus-fluidosurge-x-341/



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

Technical Specifications

Parameter	Specification
Apparatus Type	Pipe friction and pressure loss study unit
Number of Pipe Sections	4
Pipe Section Length	1000 mm
Flow Medium	Water
Flow Measurement	Rotameter
Pressure Measurement	Differential pressure meter
Mounting	Clear panel on movable frame
Pipe Selection	Individual ball valves
Water Connections	Quick-release couplings

Pipe Sections

Pipe Section	Material	Diameter
Section 1	Transparent plastic	20 x 1.5 mm
Section 2	Steel	1/2 inch
Section 3	Copper	18 x 1 mm
Section 4	Copper	15 x 1 mm

Measuring Ranges

Parameter	Range
Flow Rate	150 to 1600 L/h
Differential Pressure	-350 to +350 mbar

Key Features

Key Features

- Study of friction-induced pressure losses in pipe flow
- Four straight pipe sections with different materials and diameters
- Commercially standard pipe components
- Accurate pressure measurement using annular pressure chambers
- Differential pressure meter with digital display
- Clear panel layout for easy observation
- Compact, movable laboratory frame

Applications

- Fluid mechanics laboratory experiments
- Study of pipe friction losses
- Analysis of surface roughness effects
- Investigation of diameter and velocity influence on pressure loss
- Comparison of experimental results with theoretical predictions

Construction & Design Details

The apparatus is built on a rigid, movable frame supporting a clear mounting panel. Four straight pipe elements are securely installed and connected via ball valves, allowing individual selection during experiments. Pressure tapping points are designed as annular chambers to ensure accurate and representative pressure measurement along the measuring length. Quick-release couplings simplify connection to laboratory water supply and return lines.

Experiments

- Measurement of pressure loss in straight pipes
- Comparison of pressure losses in pipes of different materials
- Study of the influence of pipe diameter on pressure drop
- Investigation of flow velocity effects on friction losses
- Experimental verification of theoretical pipe flow equations

Data Acquisition Software (Optional)

Optional software developed in the NITM LabVIEW™ environment, supports data acquisition, processing, and reporting on Windows systems. The software enables graphical representation of flow rate versus pressure loss, data logging, and export of measured and calculated values in CSV format.

Standard Scope of Delivery

- 1 experimental module
- 1 differential pressure meter
- 1 instruction manual

Export & Supply Capability

SCIENTICO manufactures the Pipes Losses Apparatus FluidoSurge-X 341 for engineering colleges, technical universities, and research laboratories. The equipment is suitable for domestic and international supply. Export packing and documentation are provided according to 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 purpose of FluidoSurge-X 341?
It is used to study frictional pressure losses in straight pipe flow.

Q2. How many pipe sections are included?
Four pipe sections with different materials and diameters are included.

Q3. How is flow rate measured?
Flow rate is measured using a rotameter.

Q4. How is pressure loss measured?
Pressure loss is measured using a differential pressure meter connected to annular pressure chambers.

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

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