SCIENTICO INDIA
Manufacturer & Exporter · Ambala, Haryana, India

PRODUCT DATA SHEET
Catalogue reference for product evaluation

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Coanda Effect Demonstration Unit | FluidoSurge-X 364

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

Product Overview

The is an experimental unit designed to demonstrate the Coanda effect in the context of pneumatic logic elements. Manufactured by SCIENTICO, it is intended for use with the aerodynamics trainer and is suited to fluid mechanics and aerodynamics laboratory programmes in engineering institutions. 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/coanda-effect-demonstration-unit-fluidosurge-x-364/



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

Technical Specifications

Parameter	Value
Nozzle Outlet Width	0 – 50 mm
Nozzle Outlet Length	100 mm
Pivoting Element Range	0° – 90°
Sliding Wedge Range	0 – 70 mm
Channel Configuration	Y-shaped with two outlets
Scales	Vertical, horizontal, and radial
Construction	Transparent plate with adjustable elements
Mounting	Quick-release fasteners onto FluidoSurge-X 348
Scope of Delivery	1 Experimental Unit, 1 Instructional Manual
Required Base Unit	FluidoSurge-X 348 Aerodynamics Trainer

Key Features

Key Features

- Demonstrates the Coanda effect on a functional pneumatic logic element
- Y-shaped transparent channel allows direct visual observation of airflow switching
- Adjustable channel contours via pivoting elements (0°–90°) and sliding wedge (0–70 mm)

- Vertical, horizontal, and radial scales for precise, repeatable element positioning
- Control jet inlet enables study of the amplification effect in pneumatic systems
- Attaches to the FluidoSurge-X 348 trainer via quick-release fasteners for fast setup
- Includes instructional manual with guided experimental procedures

Applications

- Undergraduate and postgraduate fluid mechanics laboratory programmes
- Aerodynamics and pneumatics modules in mechanical and aerospace engineering
- Demonstration of wall attachment and boundary layer entrainment principles
- Study of pneumatic logic and fluidic control systems
- Research and experimental work on flow switching and contour-dependent behaviour
- Industrial training programmes covering pneumatic control fundamentals

Construction and System Design

The FluidoSurge-X 364 is built around a transparent plate that allows unobstructed observation of internal airflow. The Y-channel incorporates a lateral control jet inlet, two diverging outlets, and adjustable geometry components including a pivoting element and a vertical sliding wedge. Calibrated scales in three orientations, vertical, horizontal, and radial, enable precise, reproducible configuration of the channel geometry. The unit is designed to mount directly onto the FluidoSurge-X 348 aerodynamics trainer using quick-release fasteners, ensuring accurate alignment and stable operation without tools.

Export and Supply Capability

SCIENTICO manufactures and supplies the FluidoSurge-X 364 for engineering institutions and laboratory distributors internationally. The unit is packaged for safe transit and supplied with a complete instructional manual. Enquiries from international distributors, procurement departments, and institutional buyers are welcomed.

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 Coanda effect and how does the FluidoSurge-X 364 demonstrate it?
The Coanda effect is the tendency of a fluid jet to adhere to a nearby curved or flat surface rather than continuing in a straight path. The FluidoSurge-X 364 demonstrates this by directing airflow through a Y-shaped channel where the geometry can be adjusted to observe how the flow attaches to and follows the channel walls.

Q2: What equipment is required to operate the FluidoSurge-X 364?
The FluidoSurge-X 364 is an accessory unit and requires the SCIENTICO FluidoSurge-X 348 aerodynamics trainer for operation. It mounts onto the base trainer using quick-release fasteners.

Q3: What experiments can be conducted with this unit?
The unit supports two principal experiments: investigation of wall-guided airflow as a demonstration of the Coanda effect, and familiarisation with the operating principle of pneumatic logic elements, including the amplification effect produced by a weaker control jet switching a stronger primary flow.

Q4: How are the channel contours adjusted on the FluidoSurge-X 364?
The channel geometry is modified using a pivoting element with a range of 0° to 90° and a sliding wedge with a travel range of 0 to 70 mm. Vertical, horizontal, and radial scales are provided on the transparent plate for accurate, repeatable positioning.

Q5: Is the FluidoSurge-X 364 suitable for international laboratory supply?
Yes. SCIENTICO manufactures and exports the FluidoSurge-X series to engineering institutions and authorised distributors internationally. The unit is supplied with an instructional manual and packaged for safe international transit.

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