



Email : [sales@laboratoryinstrumentindia.com](mailto:sales@laboratoryinstrumentindia.com)

**Product Name :**  
Two Phase Flow Demonstrator

**Product Code :**  
LBNY-0005-1910002



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#### **Description :**

Two Phase Flow occurs when a gas is flowing in a confined space with a liquid. The flow profile and geometry in this instance varies widely as a function of the liquid and gas material properties as well as the flow rates through the pipeline. The Two Phase Flow Demonstrator apparatus is a small scale flow loop that can demonstrate Two Phase Flow phenomena in pipes at a variety of liquid and gas flow rates. It is important that the process operator understand the basics of Two Phase Flow Demonstrator in pipelines, especially as it pertains to the formation of the destructive slug flow regime. Certain flow regimes can be destructive to facility piping, and should be avoided where possible. The destructive effects of these flow regimes can be managed through the use of various piping geometries.

The air and water flow rates are continuously variable over a wide range of flow rates. This allows the operator to observe a wide range of two-phase flow regimes using this demonstrator. The Two Phase Flow Demonstrator is mounted on a movable cart for ease of movement and storage. Two Phase Flow Demonstrator uses air and water to create different flow regimes in the process piping. Air is supplied to the system by a low pressure blower, and water is supplied through a centrifugal pump.

#### **Technical Specification :**

Working fluids air and water  
Horizontal pipe run with liquid trap  
Vertical pipe run with gas lift or combined flow option  
Regenerative air blower  
Averaging Pitot for air flow rate indication  
Water storage tank  
Centrifugal pump for water stream

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3 Clear PVC process pipe runs

Horizontal pipe run

Rotameter for water fluid flow rate indication

Complete unit mounted on a utility size cart for ease of movement and storage

Approximate overall dimensions 80 x 60 x 120 cm high (32 x 24 x 48 high).



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