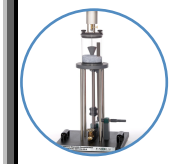

Obsorne Reynolds Demonstration Apparatus Vertical Tube Type (SMT-FM-09A)

This Osborne Reynolds Demonstration Apparatus is used to display laminar and turbulent flows. The experimental unit consists of a transparent pipe section through which water flows, with flow-optimised inlet. A valve can be used to adjust the flow rate in the pipe section. Ink is injected into the flowing water. A layer of glass beads in the water tank ensures an even and low-turbulence flow.

During the experiment it is possible to observe the transition from laminar to turbulent flow after a limiting velocity. The Reynolds number is used to assess whether a flow is laminar or turbulent. With SMT-FM-09-A the streamlines during laminar or turbulent flow are displayed in colour with the aid of an injected contrast medium (ink). The experimental results can be used to determine the critical Reynolds number.

This unit can be operated by Laboratory supply of with ESOLS Hydraulic Bench (SMT-FM-100).

Technical Specifications

Specifications:

- Vertical Tube Type.
- Compact size, easy to use and handle.
- Vertical PMMA pipe section.
- Visualisation of laminar and turbulent flow in the Osborne Reynolds experiment.
- Water as flowing medium and ink as contrast medium.
- Water tank with glass beads to stabilise the flow.
- Flow rate in the pipe section can be adjusted via a valve.
- Flow rate determined by SMT-FM-100 base module.
- Water supply using SMT-FM-100 base module or via laboratory supply.

Web: http://www.esolsengineering.com, Email: esolsengineering@gmail.com

Technical Data:

- Water tank:
  - Transparent PMMA
  - Capacity: 3L.
- Pipe section:
  - Length: 850mm.
  - Inside diameter: 10.
- Tank for ink:
  - Transparent PMMA
  - Capacity: approx. 250mL.
- LxWxH: 400x400x1350mm.
- Weight: approx. 15kg.

Accessories (Included)

All necessary Flexible pipes and fittings.
Instruction Manual

Operating Conditions

Laboratory Temperature: 5ºC to 40ºC

Note:

This product may produce small splashes of water in use, so you must use it at a safe distance from electrical supplies. ESOLS recommends approximately 2.0 m.

Experimental Data:

- Study of the laminar, transition and turbulent regime.
- Study of the velocity profile, reproducing the Osborne- Reynolds's experiment.
- Reynold's number calculation.

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