



To study the behavior of fluids in open channels and closed conduits, performing a wide range of experiments with open channel or closed conduit.

The feature that the channel is completely transparent allows optimal viewing of hydraulic flow.

Also, as mentioned, the equipment allows the experiments as a closed conduit as using a cover a completely airtight conduit is achieved.

The pitot tube disposition along the entire length of the channel provides information about the operating pressure in 6 points. The values of the pressure are given in multitube manometer included.

The computer allows both water buildup in the inlet tank and the outlet tank using gates.

LEARNING OBJECTIVESOpen Channel:

- Study of flow through open channels, measuring variables such as:
 - Height of water.
 - Speed at different points of a cross section.
- Study of uniform flow, gradually varied flow and behavior of surface profiles.
- Study and use of landfill sites for the thin-walled flow measurement.
 - Rectangular weir without lateral contraction.
- Using dumps and study of thick wall for flow measurement.
 - Rectangular weir.
- Analysis and study of flow under doors.
 - Vertical gate.
- Study of the hydraulic jump.
- Analysis of flow over spillways of dams.

Closed channel:

- Obtaining the static, dynamic and total pressure in a channel operating as closed pipe.
- Study of flow through a closed channel of constant section.
- Study of flow through a closed tapered, study of Bernoulli's equation.

TECHNICAL DATA

- Channel section (Width x Depth): 77 x 150 mm.
- Channel length: 1130 mm.
- Methacrylate channel for a clear visualization of the behavior of the water with the different plants.
- Gates in the inlet and outlet tanks for easy control of the height of the water sheet.
- Calming the flow of water into the inlet tank.
- Cover on the top of the channel for an easy exchange of the difernetes landfills.
- The channel hearth can be modified in height to alter the cross section of the channel when it works as a closed channel.
- Structure in anodized aluminum, with wheels which facilitates its handling.
- Approximate dimensions of the equipment: 2000 x 500 x 1500 mm.

INCLUDED ACCESSORIES:

- Multimanometer.
- Landfill thick wall.
- Landfill thin wall.
- Dam spillway.

REQUIREMENTS

- Hydraulic Bench FL 01.4, FL 01.5 or FL 01.6