



VENTURY EFFECT, BERNOULLI AND CAVITATION



DL DKL061

Complete system designed to study :

- theoretical and practical aspects of Venturi effect;
- Bernoulli's theorem, including the observing and the application of related aspects in practical fields as industry, agriculture and leisure;
- Use of Venturi tube applied to cavitation phenomenon, concept used to change the pressure conditions inside a tank.

This is a complete and independent system that grants an exhaustive study the aspects related to Bernoulli and Venturi's theorems.

PERFORMABLE EXPERIMENTS

With this system, it is possible to perform the following experiments:

- Bernoulli's theorem demonstration along a Venturi tube.
- Pressure loss calculation in a Venturi tube.
- Flow determination through the use of the static volumetric system.
- Diaphragm calibration and utilization to determine the flow value.
- Identification and utilization of practical applications of the Venturi effect:
 - Utilization as suction pump for liquids mixture; industrial applications, fertilizer and water mixture for irrigation etc.
 - Mixture of water and air; hydro-massage.
 - Use of Venturi tube as a flow meter.
- Study of cavitation identifying the pressure, relevant temperature and flow levels.
- Reduction of the pressure inside the tank in order to obtain cavitation phenomenon and observe new conditions.



FLUID MECHANICS



TECHNICAL DATA

Inner diameters:

- Main piping:
 - inner diameter = 21.2mm
 - outer diameter = 25mm

Pressure test points:

- The system features quick fittings with double closure.

Pressure gauges:

- Six columns water gauge, measure range 0.6 m.
- Digital differential pressure gauges ($\pm 7000\text{mbar}$).
- Include Bourdon manometer, measure range 0 / 25m water column.
- Bourdon vacuum gauge, measure range: -76 cm Hg / 25 m water column.

Requirements:

Single Phase Power Supply