

FLUID DYNAMICS BENCHES AND FLOW MEASURING DEVICES



Non contractual photo

SERVICE :

DIMENSIONS : 1850 X 650 X 1200 MM

WEIGHT : 40KG

REFERENCE : EX410

The EX410 Fluid Dynamics study bench allows to verify the fundamental laws of hydraulics in closed conduits. It generates different types of permanent flows for the quantitative study of changes in pressure losses as a function of flow.

The EX410 has a venturi and a pitot tube for the study of flow measurement methods. The experiments are conducted on PVC pipes and standard commercial components.

Possible experiences :

- Study of the losses of load distributed along pipe of diameter and different matter.
- Studies of singular pressure losses: diaphragm; bends at 90 ° small radius and large radius; elbows at 45 °; T-fitting; sudden narrowing; sudden enlargement
- Flow measurement using a calibrated diaphragm, Pitot tube, venturi
- Visualization of the laminar-turbulent transition

Technical specifications :

The EX410 bench consists of a base on which the components to be studied are fixed. All piping and singularities are in series and represent a length of about 8.5m. On each component are set pressure points. They are connected to a vertical multimanometer with a millimeter or U-tube scale.

Composition of the bench :

- Two pipes of 1 m length useful. With 3 pressure taps
- Elbows at 45 °, 90 ° small radius and large radius
- T-fitting
- Shrinkage / abrupt enlargement
- Calibrated diaphragm
- Pitot tube
- Venturi
- Flow regulating valve and 2 woodworking valves for circuit selections, an outlet vaneau
- Jar and tube for dye injection
- Each element is removable and replaceable.
- The EX410 bench has a manometric panel consisting of 19 piezometric tubes and a panel with 3 U-tubes. The 3 U-tubes are connected to the flow measuring devices, the calibrated diaphragm, the venturi and the Pitot tube.
- The EX410 bench can be placed on a table or worktop (not supplied).

OPTIONS :

Option 1: EX402B water supply module: tank and pump Option 2. The EX408B module can be used with the EX402B module for volumetric flow measurement with: graduated tank and chromometer (not supplied) Option 3. the EX404 hydraulic channel with a length of 0.8 m. It comes with a set of models: (bridge stack, spillway, venturi, thick profiled threshold). It is adaptable on the EX410 bench (not inclinable) or be mounted on an independent support, it is then tilting $\pm 4^\circ$. It comes with a set of valves and connecting hoses to the EX402B & EX408B supply system.