BME 332
Biomaterials and Biomechanics Lab

# Lab 5
# Hydraulics Bench Experiment

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## Aim of this Experiment

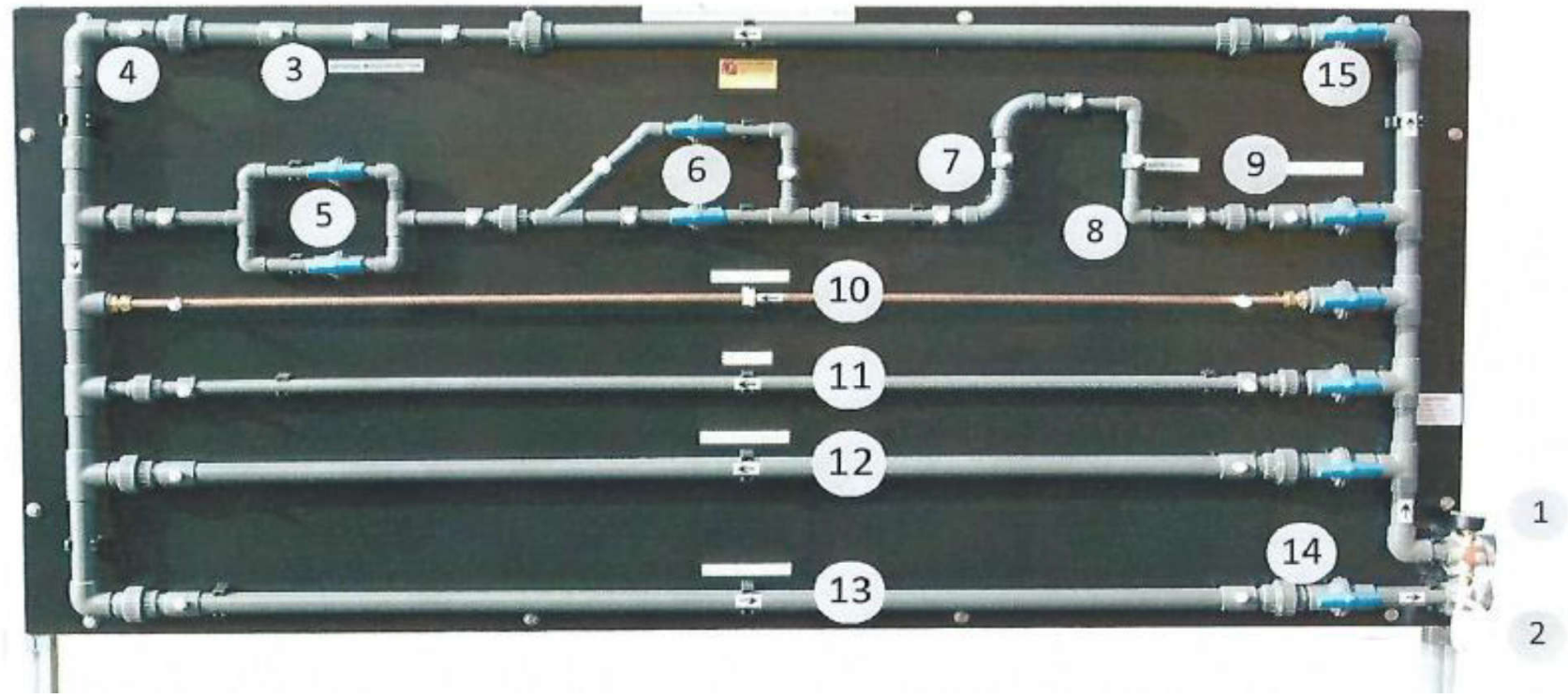
- The hydraulic bench experiment allows the examination of pressure losses in different diameter straight length pipes, demonstration of the pressure drop across a sudden constriction and demonstration of pressure drop in short and long elbows.

## Experimental Setup

The HB100 is an essential item needed for the experimental use of the majority of the HB100 range. It features a large capacity **water tank** and a powerful centrifugal **pump** that can deliver a continuous recirculated water supply to the various modules within the range. A flow **return pipe**and **extension tube**allows the bench to be run without an optional module affixed to its top surface and ensure any water splashing is avoided.

The unit is to be used in the laboratory and requires a source of water and drain. These are required to initially fill the **water tank** and for occasional changing of the **tank** water. After placing the unit in its intended location then **4wheels** should be locked by operating the foot brakes.

**Tank** should be filledapproximately half full with clean fresh water and tablets, which help the purification of water, must be placed in the **tank** (Add additional water if necessary to the **tank** if the drain extension tube is not submerged).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**Capabilities of Hydraulics Bench Experiment**

1.Examination of Pressure Losses in Different Diameter Straight Length Pipes
2.Demonstration of the Pressure Drop across a Sudden Constriction
3.Demonstration of Pressure Drop in Short and Long Elbows