

## HYDRAULICS BENCH ACCESSORIES

This apparatus is to be used with Hydraulics Bench such as HB100 or HB100N (both are separately supplied) for a water supply and flow measurement. Instruction manual is also included.

### HB 024 OSBORNE REYNOLDS APPARATUS



#### GENERAL DESCRIPTION:

This equipment provides laminar, transitional, and turbulent flow as predicted by Osborne Reynolds. It is to be used with Hydraulics Bench i.e. HB100 or HB100N (separately supplied).

It consists of a removable clear acrylic cylinder with an adjustable overflow pipe. Water is admitted at the bottom of the tank through a diffuser and stilling materials, and is discharged via a bell mouth transparent vertical test pipe with a flow control valve at the end. Flow rate is measured by a measuring cup. A dye injection system is installed on top of the acrylic cylinder tank and flow patterns in the pipe can be observed against a white background plate.

#### EXPERIMENT CAPABILITIES:

- Visualization of laminar, transition and turbulent flow
- Determination of the critical Reynolds number

#### TECHNICAL DATA:

- Length of test pipe : 720 mm
- Dye reservoir : 1 ea.
- Measuring cup : 1 L
- Software for data display and analysis by computer (separately supplied).

#### OPTIONAL EQUIPMENT:

- HB 024-020 Water heating unit.  
Water viscosity is controlled by its temperature. The heating unit consists of:
  - Insulated heating tank with heater
  - Temperature control unit
  - Power supply: 220 V, 1 Ph, 50 Hz or as required
- Other optional equipment, please contact manufacturer (essom@essom.com)

**Net (unassembled) Shipping Dimensions WxLxH** : 36 x 35 x 120 cm  
**Net Weight** : Approx. 10 kg