

FREE AND FORCED VORTEX

Mod. HB14/EV

DESCRIPTION

The equipment has been designed to study the characteristics of free and forced vortices inside a cylinder of acrylic material. The free vortex is generated by water discharging through an interchangeable orifice available at the base of the cylinder and the resulting profile is measured with a series of graduated rods placed at a known distance from the centre of the tank. The forced vortex is induced by a blade at the base of the cylinder which is rotated by two jets of water. The speed at any point in the free or forced vortices may be measured with 3 Pitot tubes placed at different distances from the centre.



TRAINING PROGRAM:

- Understanding the difference between free and forced vortex
- Determining the surface profile of a forced vortex
- Determining the surface profile of a free vortex

TECHNICAL CHARACTERISTICS:

- Tank diameter: 250 mm
- Tank height: 300 mm
- Orifice diameters: 8, 12, 16, 24 mm
- Distance from centre of vortex height measuring probes: 0, 30, 50, 70, 90 and 110 mm
- Pitot tubes at: 15, 25, 30 mm radius
- Inlet tubes diameters: 9, 12.5 mm
- Inlet tubes inclination:
 - 60° for diameter of 9 mm
 - 15° for diameter of 12.5 mm

Dimensions: 400 × 400 × 700 (h) mm

Weight: 19 kg

REQUIRED

HYDRAULIC BENCH MOD. HB/EV OR HB-E/EV

- NOT INCLUDED -

or water supply (@2 bar) and drain



SUPPLIED WITH

THEORETICAL-EXPERIMENTAL HANDBOOK



OPTIONAL

SPREADSHEET SOFTWARE

For fluid mechanics equipment
Mod. SW-HB14/EV

