

Product Name :
Free & Forced Vortices

Product Code :
NEGEMG140



Description :

Free & Forced Vortices

The apparatus comprises a clear acrylic cylinder on a plinth designed to produce and measure free and forced vortices. The free vortex is generated by water discharging through an interchangeable orifice in the base of the cylinder and the resulting profile is measured using a combined caliper and depth scale. The forced vortex is induced by a paddle in the base of the cylinder which is rotated by jets of water.

The profile of the forced vortex is determined using a series of depth gauges. Velocity at any point in the free or forced vortices may be measured using the appropriate Pitot tube supplied. Dye crystals (not supplied) may be used to demonstrate secondary flow at the base of the free vortex.

Experimental Capabilities:

- Understanding the difference between free and forced vortices
- Determining the surface profile of a forced vortex
- Determining the surface profile and total head distribution of a free vortex
- Visualisation of secondary flow in free vortex

Specifications:

- Cylindrical vessel with four inlet/outlet ports for free and forced vortices
- Three interchangeable orifices and paddle wheel to fit in base of tank
- Measuring bridge with adjustable pointers and internal caliper to measure vortex dimensions
- Tank diameter: 245mm
- Height to overflow point: 180mm
- Orifice diameters: 8, 16 and 24mm
- Forced vortex measuring probes
- Distance from centre: 0, 30, 50, 70, 90 and 110mm
- Pitot tubes having measuring Point (nose) at: 15, 25 and 30mm radius
- Inlet tubes: 9 and 12.5mm diameter

Naugra Export

Website: www.naugraexport.com, **Email:** sales@naugraexport.com

Address: 6148/6, Guru Nanak Marg, Ambala Cantt, Haryana, India, **Phone:** +91-0171-2643080, 2601773