



### DESCRIPTION:

A fabricated quadrant is mounted on a balance arm, which pivots on knife edges. The knife edges coincide with the center of the arc of the quadrant. This means that when the quadrant is immersed, the only force that gives rise to a moment about the knife edges is the hydrostatic force acting on the end face of the quadrant. The balance arm incorporates a hanger for the weights supplied and an adjustable counterbalance. This assembly is mounted on top of an acrylic tank, which may be levelled by adjusting screwed feet. Correct alignment is indicated on a circular spirit level mounted on the base of the tank. An indicator attached to the side of the tank shows when the balance arm is horizontal. Water is added to the tank via a flexible tube and may be drained through a valve in the side of the tank. The water level is indicated on a scale on the side of the quadrant.

Sensor for hydrostatic force and sensor for height measurement. Data acquisition system with USB connection to PC.

### Technical Details:

- Tank Capacity: 6 Liters
- Distance between suspended mass and fulcrum: 285 mm
- Cross sectional area of the quadrant:  $7.5 \times 10^{-3} \text{ m}^2$
- Total depth of completely immersed quadrant: 160 mm
- Height of the fulcrum above quadrant: 100 mm

### Experiment:

- To determine the hydrostatic thrust acting on a plane surface immersed in water when the surface is partially submerged or fully submerged.
- To determine the position of the line of action of the thrust and to compare the position determined by experiment with the theoretical position.

Note: Specifications are subject to change, Photos shown above are Indicative, Actual Product can Vary.



Export Sales: +91-9829132777  
India Sales: +91-9588842361



IT-2013, Ramchandrapura Industrial Area,  
Sitapura Extension, Jaipur-302022, India.



info@tesca.in  
www.tescaglobal.com