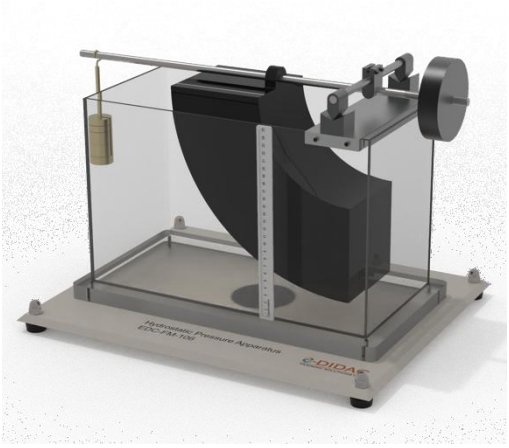
Center of Pressure Apparatus (EDC-FM-106CP)

EXPERIMENTAL DATA:

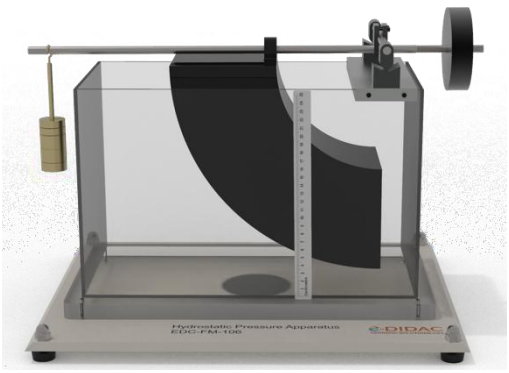
- Pressure exerted on an effective area in a liquid at rest
- Lateral force of the hydrostatic pressure
- Determination of the resulting compressive force



DESCRIPTION:

This experimental unit offers students to study hydrostatic pressure in liquids via typical experiments. As the weight of fluids exerts a pressure, when at rest, that is called as hydrostatic pressure or gravitational pressure. This pressure is applied on any area that is in communication with the fluid, exerting a force that is proportional to the size of the area. The effect of the hydrostatic pressure of water can be clearly shown at different water levels and angles of inclination.

This equipment allows the moment caused by a fluid thrust on a wholly or partially submerged plane surface to be measured directly. The experimental unit consists of a transparent, tilting water tank with a scale for measuring volumes. Another scale is used to adjust the angle of inclination of the water tank. A PVC quadrant is mounted on a balance arm pivoted on knife edges which coincide with the quadrant center. When the quadrant immerses in water, there are hydrostatic forces. The balance arm has an adjustable counter balance and weights with a hanger. The quadrant is mounted on top of a clear acrylic tank which allows water to be admitted and drained to a required level by a valve.



SCOPE OF DELIVERY:

- 1 experimental unit
- 1 set of weights
- 1 set of tools
- 1 set of instructional materials

DIMENSIONS AND WEIGHT:

- Minimum dimensions: 400 x 500 x 450 mm (L x W x H)
- Maximum weight: 12kg

TECHNICAL DATA:

Water Tank:

- Inclination angle: 0° to 90°
- Capacity: 0 to 1.8L
- Scale range: 0 to 250mm
- Maximum effective area: 75 x 100mm

Lever Arm System:

- Maximum length: 250mm
- Includes a set of calibrated weights:
  - 1x 2.5N
  - 1x 2N
  - 2x 1N
  - 1x 0.5N