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Product Name :
Archimedes Principle Trainer Apparatus

Product Code :
LBNY-0005-1330001



Description :

The Archimedes principle states: The magnitude of the force equals the weight of the fluid that the object displaces. An alternative method of measuring the buoyancy force is to measure the amount of fluid displaced when the object is floating in the fluid tank. The level before and after immersion is monitored using the integral scale on the outside of the fluid tank. Test object shapes are solid cylinder, cube, sphere and cone are supplied as standard, there are also three identical shapes that are made from different materials, these are aluminium, brass and steel. The change in position of the counter weight gives rise to a reduced moment thus indicating the magnitude of the buoyancy force being applied to the object. Each test object is water proofed to avoid inaccuracies of results and corrosion over time. When the test objects are suspended the moment lever arm is brought to the horizontal by moving the balance hanger and monitoring the small spirit level until level. When the test object is lowered into the fluid the counterweight is adjusted to bring the moment lever arm back to the horizontal. The fluid tank can be filled with water or another medium, i.e. anti-freeze, oil etc. The samples attach to the moment lever arm using a cord and lowered into the fluid tank by lowering the cord accordingly, a scale on the lever arm allows the user to also record the amount of distance the shape has been lowered.

Technical Specification :

Test objects in beachwood are sphere, cone, cylinder and cube.
Metal Test objects in aluminium, brass and steel.
Fluid tank 1000ml scale, 20ml increments.
Weights supplied 1x 1N, 4x 0.2N, 2x 0.1N.

External Capabilities:

Force variation with variation in test fluid.

Working out density, calculating displaced volume.
Demonstration of Archimedes Principle Buoyancy force & moment calculations.
Determination of weight of fluid displaced for different test object volumes.



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