

Product Name :
Rolling Disc On Inclined Plane**Product Code :**
ELABBFA0022**Description :**

Rolling Disc On Inclined Plane

Technical Specification :

Rolling Disc On Inclined Plane Features Low cost, effective teaching. Self-contained. Bench mounted. Measurement of moment of inertia by rolling and oscillation. Three year warranty. Range of Experiments To determine and compare the moment of inertia of a disc by three methods:- Motion down a plane. Oscillating pendulum. Calculation. Description The moment of inertia of a rolling object is the rotary analogy of mass and governs the rotary acceleration. It can be determined in three ways; by rolling, oscillation or calculation. All should ideally give the same result but the student can be introduced to differences caused by different experimental techniques A pair of machined rails form an inclined track for a disc rolling on a spindle through its center. The inclination of the track can be readily altered by raising an end fitted with a height bar. Two discs are supplied; the larger has a diameter of 150mm and a thickness of 22.5mm, whilst the smaller is 100mm by 20mm. This enables two moments of inertia to be used. The moments of inertia of the discs are determined from the time taken for the disc to roll down the slope. They may also be found from a subsidiary experiment using an oscillating pendulum in which the disc spindles are supported on knife edge bearings and a pendulum is attached to the shaft. The moments of inertia are estimated from the periodic time of the assembly. This equipment is part of a range designed to both demonstrate and experimentally confirm basic engineering principles. Great care has been given to each item so as to provide wide experimental scope without unduly complicating or compromising the design. Each piece of apparatus is self-contained and compact. Setting up time is minimal, and all measurements are made with the simplest possible instrumentation, so that the student involvement is purely with the engineering principles being taught. A complete instruction manual is provided describing the apparatus, its application, experimental procedure and typical test results.

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