

Product Name :
Crank And Connecting Rod Apparatus

Product Code :
ELABBTM0014



Description :

Crank And Connecting Rod Apparatus

Technical Specification :

Crank And Connecting Rod Apparatus Features Low cost, effective teaching Self-contained Bench mounted Measurement of crank angle and slider position Conventional slider crank mechanism Velocity and acceleration by graphical differentiation Variable crank length Variable connecting rod length Three year warranty Range of Experiments To determine the relationship between crank angle and stroke To study the effect of changing the a) crank radius b) connecting rod length To investigate by graphical differentiation the relationship between angular and linear speeds and accelerations of the mechanism To construct velocity and acceleration diagrams for the mechanism Comparison of experimental results with theoretical predictions Description The apparatus shows the relationship between crank shaft rotation and piston displacement, for a fixed "cylinder". The crank length is adjustable, and the connecting rod length can be varied. Crankshaft rotation is measured by a rotating protractor scale and piston displacement is shown on a sliding scale. The equipment may be mounted vertically for demonstration purposes, or flat on the bench for experimental use. 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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