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**Product Name :**  
Free Torsional Vibrations

**Product Code :**  
LBNY-0005-1400003



#### **Description :**

This product is part of a range that explores free vibrations in simple one degree of freedom systems. This product includes a rotating disc or rotor at the end of a slender rod. You can compare this with the mass-spring system, except it replaces mass with the rotor's mass moment of inertia and the spring with the twisting of the rod. A back panel fixes to the Test Frame. The panel holds two vertical runners. This product fits to the sturdy Test Frame for study or demonstration. A bushing ensures the rotation remains along the axis of the rod, and supports the rotor during setup. The runners hold a chuck that securely grips a specimen rod at any position along its length. The bottom of the rod fixes to a rotor that is free to rotate.

#### **Technical Specification :**

It introduces students to key scientific terms such as:  
Polar moment of area  
Simple harmonic motion  
Mass moment of inertia  
Frequency of oscillation  
Shear modulus  
Phase difference between displacement and its derivatives.

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