

Product Name :
Coil Spring Vibrations

Product Code :
TN131



Description :

Coil Spring Vibrations

Technical Specification :

Coil Spring Vibrations

In helical springs, the spring force is generated by the elastic deformation of a metal band wound in an Archimedean spiral. If a mass is attached to the spring, we refer to it as a spring–mass system. The resistance that the spring presents opposite of the elastic deformation is known as spring stiffness. It is a characteristic variable of the spring.

The unit is perform the following experiments and investigations:

Learning Objectives / Experiments:

- Determine the rigidity of a helical spring
- Determine the natural frequency of a spring-mass system
- Investigate the effect of mass and mass distribution

Specification:

- Investigate vibrations on a spring-mass system
- Lever with sliding mass to deflect the helical spring
- Adjustable distance of the mass to the rotation axis
- Angle scale for reading the angle of deflection
- Stopwatch to measure the oscillation period
- Determine the natural frequency and the spring stiffness
- Bracket for wall mounting

Technical Data:

Helical spring

Cross-section: 10x1mm

Spring length: 800mm

Inner radius: 10mm

Outer radius: 50mm

Winding distance: 8,5mm

Sliding mass: 2x 0,5kg

Distance from mass to rotation axis

36...150mm

Deflection angle

Max. 360°

Graduation: 1°

Stopwatch: 1/100s

Dimensions and Weight

Length x Width x Height: 250x200x360mm

Weight: 6kg

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