Spiral Spring Vibration Apparatus

(EDC-TM-118)

EXPERIMENTAL DATA:

- Study the natural frequency of a spring-mass system.
- Study the rigidity of a helical spring.
- Examine the effect of mass and mass distribution.

DESCRIPTION:

In this apparatus two universal joints connected to each other by an intermediate shaft. This combination is referred to as the cardan shaft or the universal joint shaft. Universal joint shafts are joint shafts that transfer a torque and a rotational motion. A universal joint combines two non-aligned shafts. In a universal joint, the torque and the speed are non-uniformly transmitted. This non-uniform transmission is called the gimbal error.

SPECIFICATIONS:

- Examine vibrations on a spring-mass system.
- Lever with sliding mass to deflect the helical spring.
- Adaptable distance of the mass to the rotation axis.
- Angle scale for reading the angle of deflection.
- Stopwatch to measure the oscillation.
- Regulate the natural frequency and the spring stiffness.
- Wall mounting.

DIMENSIONS AND WEIGHT:

- L x W x H (mm): 300 X 250 X 280 approx.
- Weight: 7 kg approx.

SCOPE OF DELIVERY:

- 1 x EDC-TM-118.
- 1 x Instructional Manual.

TECHNICAL DATA:

- Helical spring:
  - Cross-section: 10x1mm.
  - Spring length: approx. 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.