

## Bifilar Trifilar Suspension Bridge Apparatus (EDC-TM-126)

### EXPERIMENTAL DATA:

- Effect of thread length on the oscillation period.
- Regulate the mass moment of inertia.



### DESCRIPTION:

In a bifilar suspension, the pendulum body is suspended over two threads. The pendulum body oscillates in a plane purely translationally without rotation. This kind of pendulum can be considered as a mathematical pendulum. In a trifilar suspension with three threads, the pendulum body is set in a torsional vibration. The torsional vibration can be used to determine the moment of inertia by experiment.

### SPECIFICATIONS:

- Well-made base plate.
- Study of the vibration behavior of various pendulum bodies in bifilar and trifilar suspension.
- Study of a mathematical pendulum (bifilar) and a physical pendulum (trifilar).
- Choice of three pendulum bodies: beam, cylinder, circular ring.
- Change the thread length with a clamping device.
- Stopwatch to measure the oscillation period.
- Determine the mass moment of inertia.

### DIMENSIONS AND WEIGHT:

- L x W x H (mm): 350 X 450 X 350 approx.
- Weight: 12 kg approx.

### SCOPE OF DELIVERY:

- 1 x EDC-TM-126.
- 1 x Instructional Manual.

### TECHNICAL DATA:

- Pendulum bodies:
  - Beam:
    - L X W X H: 40 x 40 x 160mm.
    - Mass: 2kg.
- Cylinder:
  - Diameter: 160mm.
  - Height: 19mm.
  - Mass: 3kg.
- Circular ring:
  - Outer diameter: 160mm.
  - Inner diameter: 100mm.
  - Height: 41mm.
- Mass: 4kg.
- Thread length: up to 2000mm.
- Stopwatch: 1/100s.

