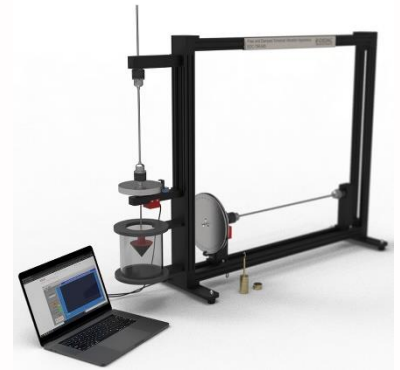


Free and Damped Torsional Vibration Apparatus (EDC-TM-045)

EXPERIMENTAL DATA:

- Natural frequency of a rotary oscillator.
- Influence of torsional stiffness, mass and damping.



DESCRIPTION:

Torsional vibration is angular vibration that occurs about the axis of a shaft. Excessive torsional vibration can lead to failures of such items as shafts, couplings, fans, gears, engine dampers, and compressor oil pumps. These failures typically occur at a 45-degree angle to the shaft axis.

Torsional Vibration Dampers absorb rotational vibrations in internal combustion engines. The dampers are particularly effective in conjunction with decoupled pulleys, which keep crankshaft irregularities away from the belt drive and auxiliaries.

Using this apparatus, students can perform both the free and damped torsional vibration experiments. Software is available for Data Acquisition and Control Function.

SPECIFICATIONS:

- Torsion bars with different diameter, freely selectable length.
- Mass disks with chuck.
- Bearing blocks with ball bearing and chuck.
- Oil damper for damped vibration.

TECHNICAL DATA:

- Torsional bars diameter:
 - 3mm.
 - 5mm.
 - 6mm.
- Mass Disks:
 - Diameter: 150mm.
 - 2.8kg approx.
 - Diameter: 230mm/
 - 4.9kg approx.
- Clamping chuck: 0.5mm to 12mm.

DIMENSIONS AND WEIGHT:

- L x W x H (mm): 1300 X 350 X 1100 approx.
- Weight: 22 kg approx.

SCOPE OF DELIVERY:

- 1 x EDC-TM-045.
- 1 x Instructional Manual.

