

**Product Name :**  
Free and Forced Torsional Vibrations

**Product Code :**  
TN993



**Description :**

Free and Forced Torsional Vibrations

**Technical Specification :**

Free and Forced Torsional Vibrations

The unit is perform the following experiments and investigations:

Learning Objectives / Experiments:

- Determine the torsional stiffness of a torsion bar
- Determine the mass moments of inertia
- Decay behaviour of torsional vibrations
- Determine the damping in torsional vibrations
- Forced torsional vibrations, resonance
- Torsional vibration systems with multiple masses
- Two-mass torsional oscillator
- Three-mass torsional oscillator

Specifications:

- Experimental unit for investigating torsional vibrations and torsional stiffness
- 3 mass disks
- 4 freely positionable ball-bearing-mounted units with clamping chucks
- Sealed oil damper
- Exciter unit with drive crank; exciter amplitudes 1,4°, 1,8°, 2,4°
- 4 rotary angle sensors, 0,03v/°

Electrical exciter control unit for setting and displaying the exciter frequency and for powering the rotary encoder  
Software for data acquisition via usb under windows 7, 8.1, 10  
Including PC1 Computer-System with 21" TFT-Monitor Win 10 engl.

Technical Data:

Torsion bar

1300mm

Ø=6mm

Stainless steel

Rigidity: 1,0Nm/rad/m

Mass disks

Ø=150mm, 2,7kg

Ø=228mm, 4,8kg

Exciter frequency: 1...20Hz

Damper coefficient: 0,25...3,5Nm/rad/s

230V, 50Hz, 1 phase

230V, 60Hz, 1 phase; 120V, 60Hz, 1 phase

Dimensions and Weight

Length x Width x Height: 1400x410x400mm

Weight: 50kg

## Naugralabequipments

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