

## H-6311 Torsion Test Demonstrator

### *Purpose*

The Hampden **Model H-6311** Torsion Test Demonstrator allows the student to examine the torque-transmitting behavior of various materials such as aluminum, steel and copper. The relationship between torque and angle of twist can be examined. The behavior of specimens made of the same materials, but of different geometric cross sections, can be compared. Maximum torsional shearing stress of specimens can be calculated using strain gauges.

### *Description*

The base unit consists of two vertical columns, the lower specimen clamp, twist arm and the scale track with the degree scale. The upper part of the unit contains a torsion multiplier lever system, a force gauge and upper specimen clamp.

The unit accepts specimens ranging from 1/16" to 3/16" in diameter and 6", 12" and 18" in length.

Specimens include:

#### **Copper:**

1/8" and 3/16" dia., 9", 15" and 21" long

#### **Steel:**

1/8" and 3/16" dia., 9", 15" and 21" long

#### **Aluminum:**

1/8" and 3/16" dia., 9", 15" and 21" long



**Model H-6311** Torsion Test Demonstrator  
Dimensions: 21"H x 19"W x 14"D

### *Experiment Capabilities*

- Measurement of Strain
- Integration of the failure mechanisms of brittle and ductile materials
- Determination of the magnitude of torque required to twist a given specimen
- Comparison of the shear-rigidity ratio for two different materials.

All Hampden units are available for operation at any voltage or frequency