



P5377

ELECTRICAL GYROSCOPE

APPLICATIONS

- ◆ Experiments on fundamentals of gyroscopic motion
- ◆ Demonstrates relationships between gyro speed and torque, precession and nutation
- ◆ Investigates behaviour of a suspended gyroscope

FEATURES

- ◆ Adjustable masses to produce balance, and positive and negative torque position
- ◆ Removable gyroscope for demonstration of nutation effects
- ◆ Variable speed motor mounted in a dual axis bearing. (Permits precession and torque movements.)
- ◆ Separate hand-held optical tachometer
- ◆ Includes spreadsheet discs files for data analysis

DESCRIPTION

Cussons P5377 Electrical Gyroscope has been designed to demonstrate the relationships between gyroscopic speed, gyroscopic inertia, external applied torque and precession. This is particularly important for attitude measurement in moving vehicles (including aircraft and ships).

Cussons Electrical Gyroscope consists of a powerful variable speed low inertia, low voltage d.c. motor, with a speed range of up to approximately 5000 rev/min. The rotational direction may be reversed. A separate hand-held optical tachometer is provided for accurate measurement of the gyroscope rotor speed.

Facility to apply torque to the system is provided by two rods located along the rotor axis on which three 150g adjustable masses may be positioned.

The gyroscope may be removed from the outer gimbal to allow demonstration of a suspended pendulum gyroscope. A 3m long extension cable is provided so that the gyroscope can be operated whilst attached to a beam or hand-held.

TENDER SPECIFICATION

Gyroscope assembly comprising of disc rotor of approximately 150 mm diameter mounted on a low voltage d.c. motor and furnished with pivot bearings and counter masses, complete with support column, and integral power pack for bench mounting and supplied complete with Cussons P4740 Hand-Held Optical Tachometer.

SERVICES

The gyroscope requires a 220/240 voltage single phase 50/60Hz electrical supply. Other voltages to special order.

DIMENSIONS

60 cm long x 34 cm wide x 76 cm high
Weight: 23 Kg