**Moment of inertia / Steiner’s theorem**  1.3.28-01

**Principle:**
The period of vibration of a circular disc which performs torsional vibrations about various parallel axes, is measured. The moment of inertia of the disc is determined as a function of the perpendicular distance of the axis of rotation from the centre of gravity.

**What you can learn about…**
- Rigid body
- Moment of inertia
- Centre of gravity
- Axis of rotation
- Torsional vibration
- Spring constant
- Angular restoring force

**What you need:**
- Rotation axle 02415.01 1
- Disk with diametrical holes 02415.07 1
- Transparent spring balances, 2 N 03065.03 1
- Light barrier with counter 11207.30 1
- Power supply 5 V DC/2.4 A with 4 mm plugs 11076.99 1
- Tripod base - PASS- 02002.55 1
- Barrel base - PASS- 02006.55 1
- Rule, plastic, 200 mm 09937.01 1

**Complete Equipment Set, Manual on CD-ROM included**

**Tasks:**
1. Determination of the angular restoring constant of the spiral spring.
2. Determination of the moment of inertia of a circular disc as a function of the perpendicular distance of the axis of rotation from the centre of gravity.

Moment (torque) of a spiral spring as a function of the angle of rotation.