

## Moments of inertia of different bodies / Steiner's theorem 1.3.28-01



## What you can learn about ...

- Rigid body
- Moment of inertia
- Centre of gravity
- Axis of rotation
- Torsional vibration
- Spring constant
- Angular restoring force

## 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.

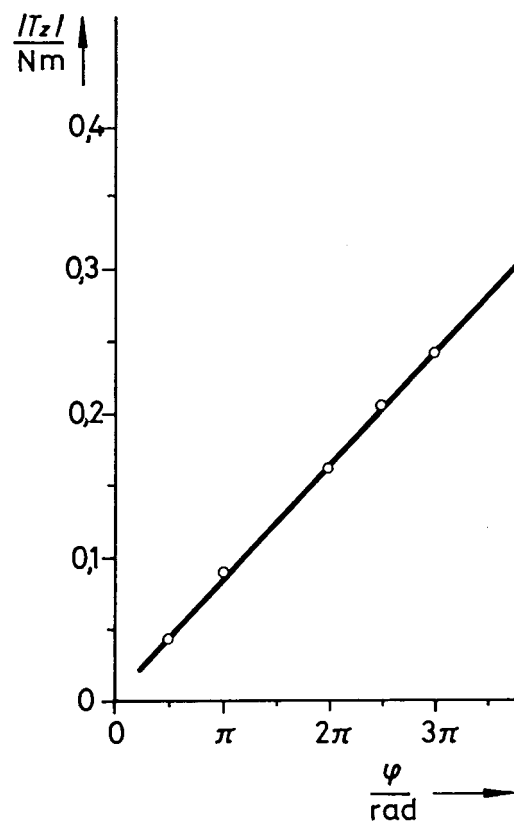
## What you need:

Rotation axle	02415.01	1
Disk, w. diametrical holes	02415.07	1
Spring balance, transparent, 2 N	03065.03	1
Light barrier with Counter	11207.30	1
Power supply 5 V DC/0.3 A	11076.99	1
Tripod base -PASS-	02002.55	1
Barrel base -PASS-	02006.55	1
Rule, plastic, $l = 200$ mm	09937.01	1

Complete Equipment Set, Manual on CD-ROM included  
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## 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.