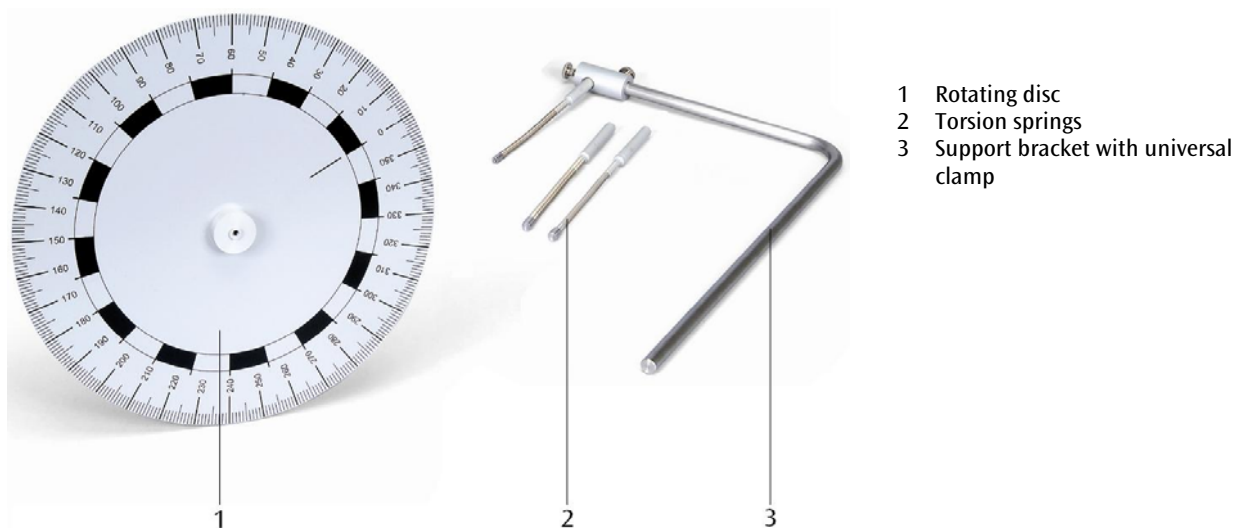


Supplementary Kit for Rotating System on Air Bed U8405690

Instruction Sheet

08/08 ALF



1. Description

The supplementary kit for the rotating system on air bed (U8405680) is designed for the study of frictionless rotational motion with a larger rotating disc.

The rotating disc has an angular scale pattern on its underside, which can be detected by a laser reflection sensor (U8533380) in order to trace the rotational motion in conjunction with an interface to a computer.

Because of the large diameter of the rotating disc it is also possible to perform time measurements with a mechanical stop-watch.

2. Equipment supplied

- 1 Rotating disc with angular scale
- 1 Support bracket
- 1 Universal clamp
- 1 Set of coupling springs with magnet

3. Technical data

Rotating disc diameter:	350 mm
Moment of inertia of rotating disc:	2.2 g/m ² approx.
Typical duration of oscillations:	20 s to 2 min
Coupling springs:	1 N, 2 N, 5 N

3. Operation

- To set up the basic apparatus, see the instruction sheet for U8405680.

Setting up a torsional oscillator (see Fig. 1)

- Fix the universal clamp to the support bracket.
- Fit the support bracket into the supporting tube's base.
- Place the large rotating disc on the air-bearing unit and turn it to zero (0°).
- Fix a torsion spring into the universal clamp and connect it to the magnet on the multiple pulley.
- Turn the rotating disc through a measured angle from its rest position and then let it go so that it starts oscillating.

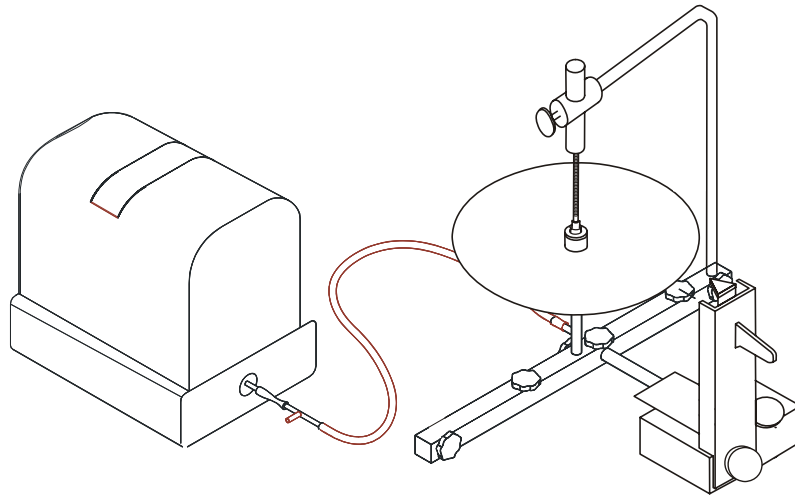


Fig. 1 Set-up for a torsional oscillator.



Fig. 2 Experiment set-up for determining moment of inertia of transverse beam with additional masses, using a laser reflection sensor (U8533380) and a digital counter (U8533341).