

# TM 110.01

## Supplementary set - inclined plane and friction



The illustration shows the parts of TM 110.01 without rail.

### Description

#### ■ measurement and demonstration of spring deflection, inclined plane and mechanical friction

Supplementary set TM 110.01 extends the scope of experiments which can be performed with TM 110 with the issues: elastic deflection of a helical spring, forces on the inclined plane and friction.

The inclined plane is provided by an aluminium rail. For friction experiments, a friction body is used which has side faces prepared for different friction conditions.

All parts are clearly laid out and well protected on a storage system. The storage systems are stackable, providing for space-saving storage.

### Learning objectives/experiments

- elastic deflection of a helical spring (Hooke's law)
- dynamic friction as a function of the normal force, contact area and surface properties of the friction body
- determination of the friction coefficient
- rolling friction
- forces on the inclined plane

### Specification

- [1] supplementary set for experimental unit TM 110
- [2] experiments relating to Hooke's law: friction and inclined plane
- [3] friction body which can be set up to give 3 different surface options
- [4] rail forming the inclined plane
- [5] steel helical spring
- [6] storage system to house all parts

### Technical data

#### Helical spring

- spring constant: approx. 0,95N/cm
- max. load: 25N

#### Aluminium friction body

- LxWxH: 110x40x40mm
- dead-load: 5N
- 2 sides with different sized areas
- 2 sides with different surface roughnesses

#### Aluminium rail, anodised

- LxWxH: 800x50x10mm

LxWxH: 160x103x75mm (storage system)

Weight: approx. 5kg

### Scope of delivery

- 1 supplementary set
- 1 storage system
- 1 set of instructional material

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Required accessories

TM 110                      Fundamentals of statics