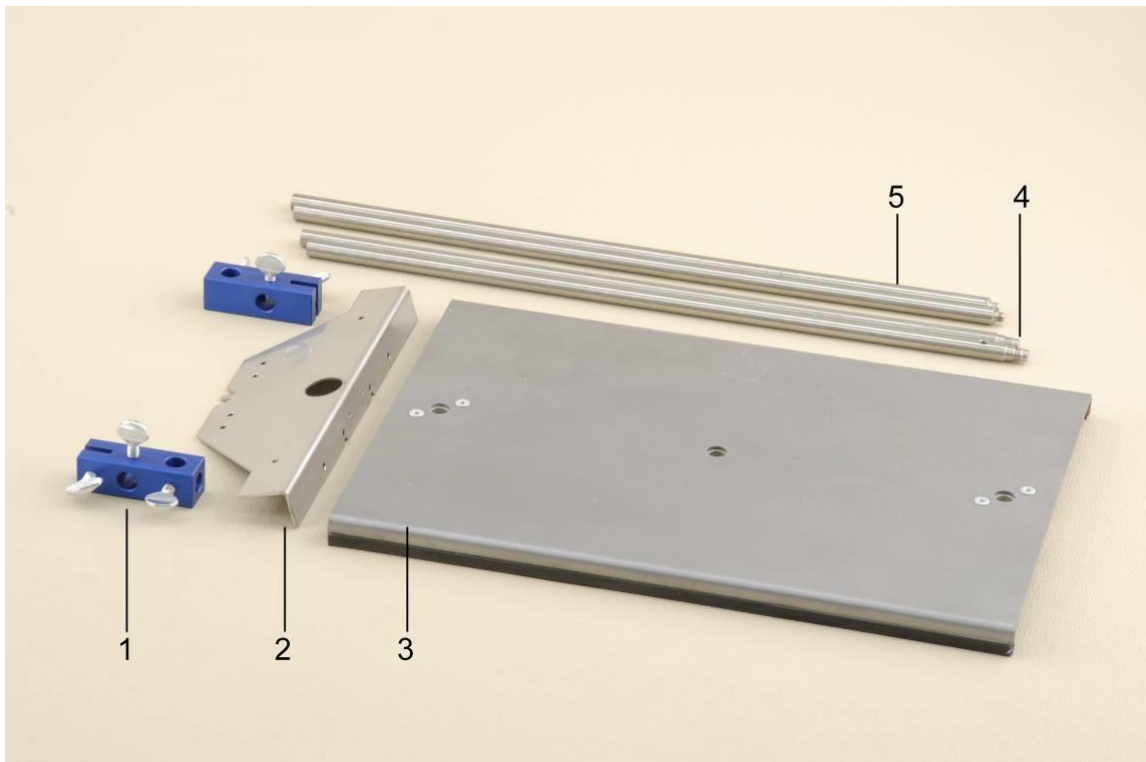


## Stand Equipment “Mechanical Oscillations” 1012849

### Instruction manual

10/16 TL/ALF



- 1 SW double clamp
- 2 SW cross bar
- 3 SW base plate

- 4 Stand rod with external thread
- 5 Stand rod with internal and external thread

### 1. Description

Stand equipment for simple, easily understood and stable experiment set-ups, e.g. for investigating mechanical oscillations and waves using sensors from the Sensors “Mechanical Oscillations” set, 230 V, 50/60 Hz (1012850) or 115 V, 50/60 Hz (1012851).

Includes the SW base plate as a secure base that will not tip, with three specially threaded sockets for attaching stand rods with external and internal threads in such a way that they cannot lean over and with the capability of being

extended using a second rod with external thread. Two double clamps are provided for attaching the SW cross bar or additional stand rods of 10 mm diameter.

The SW cross bar acts as a multi-functional mounting piece to be placed between rods screwed into the base plate and designed for setting up a Wilberforce pendulum, a physical pendulum or a string pendulum in conjunction with the dynamic force sensors from the sensors set.

## 2. Contents

- 1 SW base plate
- 2 Stand rods with internal and external thread
- 2 Stand rods with external thread
- 2 SW double clamps
- 1 SW cross bar

## 3. Technical data

### Base plate

- Dimensions: 345 x 245 x 15 mm
- Weight: 2.1 kg
- Material: Steel sheet, 2 mm, coated
- Threaded sockets: 3

### Stand rods

- Dimensions: 400 mm x 10 mm diam.
- Weight: 0.25 kg each
- Material: Stainless steel, non-magnetic

### Cross bar

- Dimensions: 275 x 75 x 20 mm
- Weight: 0.18 kg
- Material: Stainless steel sheet, 2 mm

### Double clamps

- Dimensions: 60 x 20 x 20 mm
- Weight: 0.064 kg each
- Material: Aluminium, anodised

### General data

- Max. height of set-up: 780 mm

## 4. Operation

### 4.1 Set-up without sensors

The following additional equipment is necessary in order to set up a coil spring pendulum:

- 1 Stand rod, 280 mm, 10 mm diam. 1012848
- 1 Coil spring, 1 weight

- Screw the stand rods with both external and internal threads into the outer threaded sockets of the base plate.
- Extend both rods by screwing rods with external thread only onto the ends of them.
- Attach double clamps near the top of both stand rods and turn them to point inwards.
- Set up stand rod, 280 mm, 10 mm diam.
- Suspend a coil spring and weight from the top.

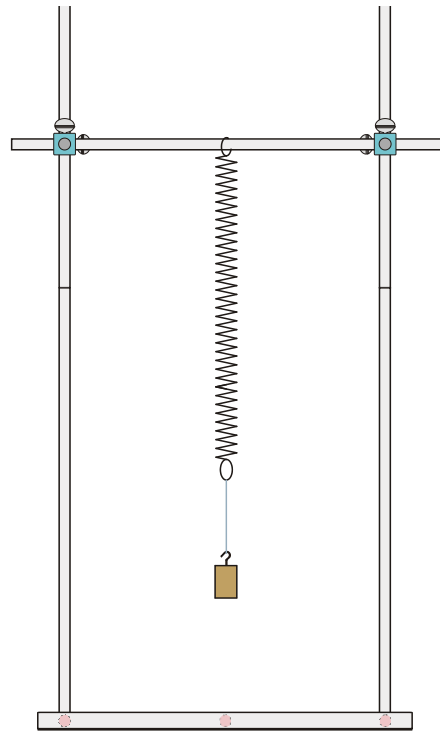


Fig 1 Set-up for coil spring pendulum without sensors

### 4.2 Set-up for mechanical pendulums with sensors

The following additional equipment is necessary in order to carry out the experiments:

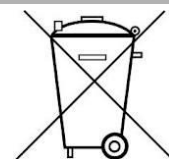
- 1 Sensors "Mechanical Oscillations" @230V 1012850
- or
- 1 Sensors "Mechanical Oscillations" @115V 1012851
- 1 USB Oscilloscope 2x 50 MHz 1017264
- 1 PC, operating system Win XP, Vista, Win 7
- or
- 1 Analogue oscilloscope 2x 30 MHz 1002727
- 1 Supplementary Kit "Wilberforce Pendulum" 1012844
- or
- 1 Supplementary Kit "String Pendulum" 1012854
- or
- 1 Supplementary Kit "Physical Pendulum" 1012853

Notes on assembly:

See instruction manuals for the pendulums listed.

## 5. Disposal

- Packaging and components should be disposed of, where necessary, at local recycling centres.



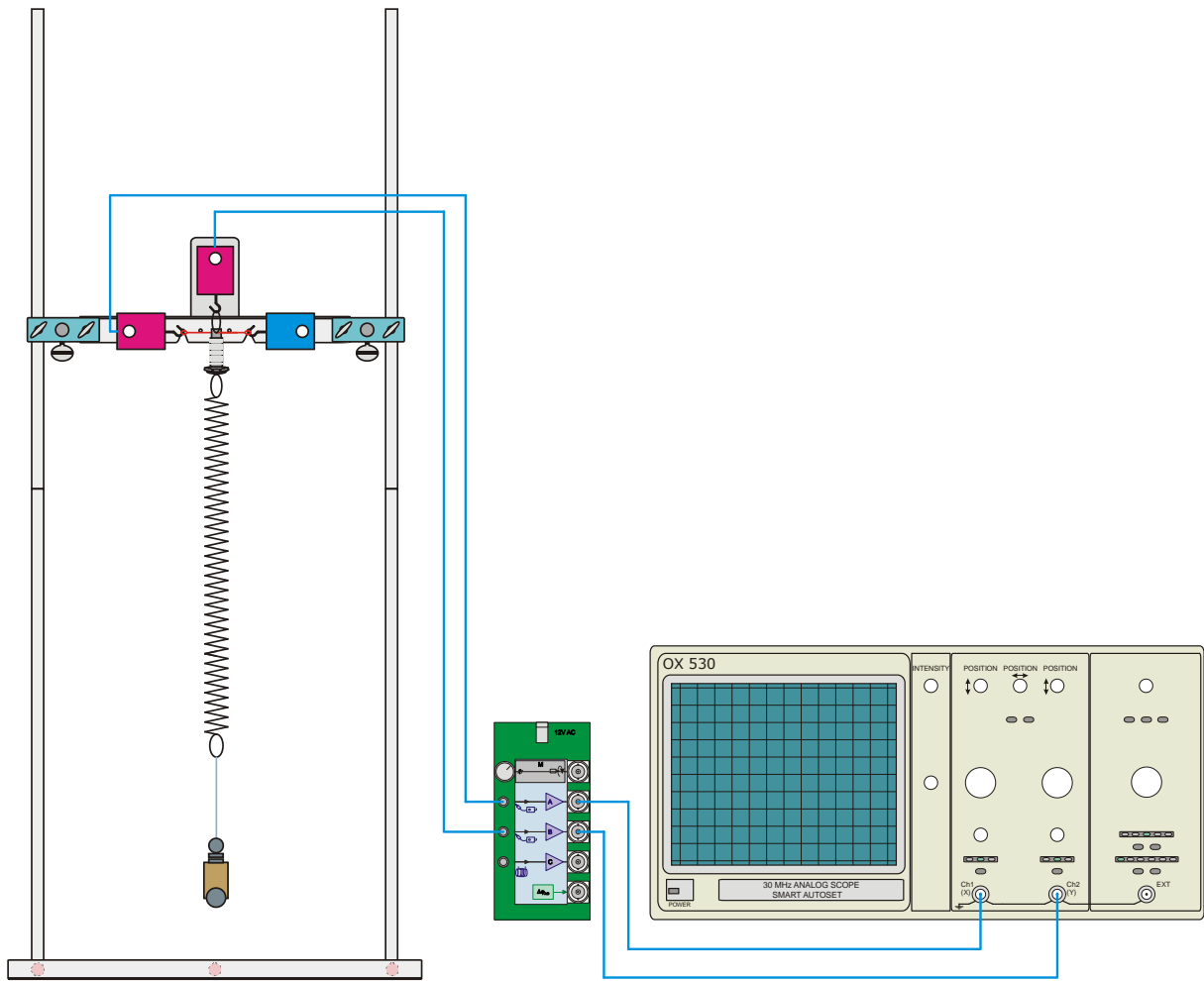


Fig 2 Set-up for a Wilberforce pendulum with sensors

