

# FT 200

## Forming by bending



The illustration shows experimental setup in a vice (not included in the scope of delivery).

### Description

- permanent deformation of flat bars
- measurement of deformation forces

The experimental setup enables fundamental experimentation in the mechanics of deformation. Flat rods can be permanently deformed by means of a simple bending device. The necessary deformation work, e.g. to produce a 90° angle, is recorded in the experiment using a force measurement system.

A range of different materials and bend radii can be investigated using this experiment. The experiments should be conducted in a workshop environment, as the bending device has to be clamped into a vice. A suitable force measuring device and a wide range of specimens are supplied.

### Learning objectives/experiments

- deformation experiments on flat sections
- measurement of the deformation force
  - ▶ influence of bend radius, bend angle, material

### Specification

- [1] experimental setup for deformation experiments on flat sections
- [2] bending device for insertion in a vice
- [3] device to measure the deformation forces
- [4] rotatable moulding to allow for 4 different bend radii
- [5] deformation forces on the lever up to 200N

### Technical data

Bending device

- lever length: 500mm
- bend angle scale: 15...90°

Bend specimens

- cross-section: 10x6mm
- material: steel, copper, brass, aluminium

Force measuring device: 200N

Bend radii: R1, R2, R4, R8

LxWxH: 640x120x100mm

Weight: approx. 10kg

### Required for operation

1 vice

### Scope of delivery

- 1 bending device with lever and moulding
- 1 force measuring device
- 1 set of specimens
- 1 set of instructional material