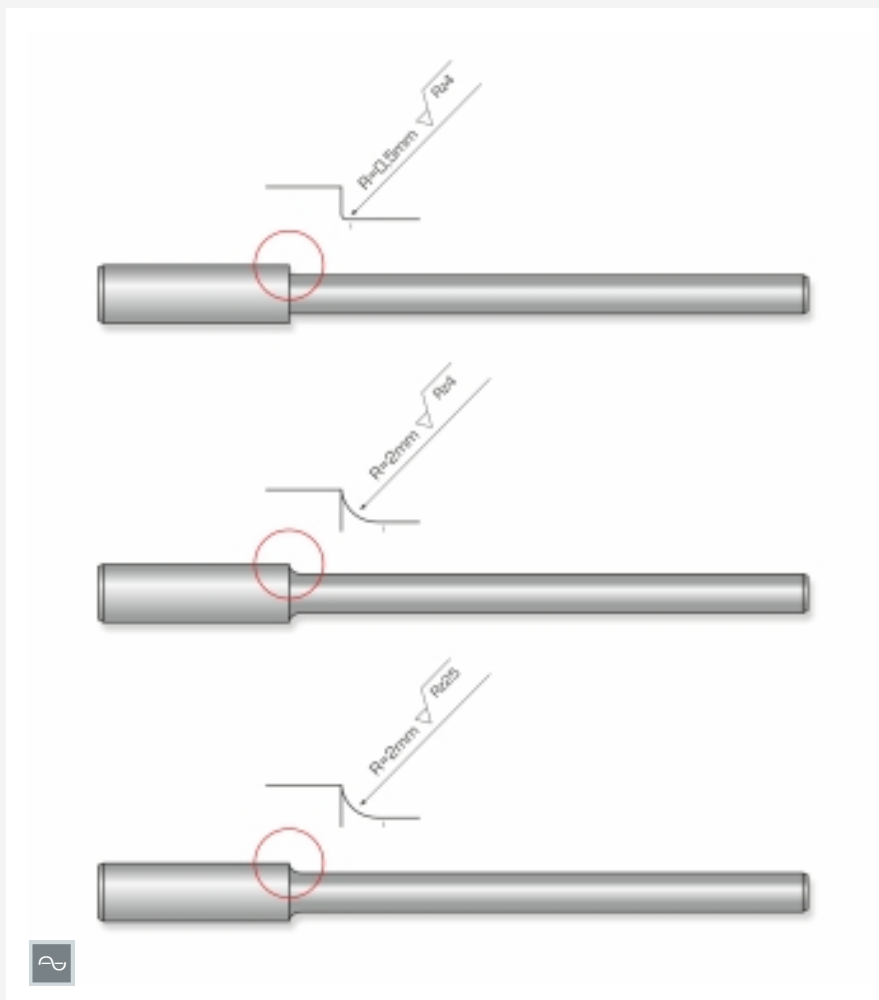


## WP 140.01

### Set of 3 specimens, various fillet radii, St



#### Learning objectives/experiments

- with WP 140: fatigue testing of bars under reverse bending stress
- influence of different fillet radii and qualities of surface finish on fatigue strength

#### Specification

- [1] fatigue strength testing under reversed bending stress
- [2] 3 specimens made of steel C45
- [3] 2 fillet radii and 2 different qualities of surface finish on the shaft shoulder
- [4] accessory for WP 140 Fatigue strength test

#### Technical data

- 3 specimens, steel
- bar diameter:  $\varnothing$  8mm
- bar total length: 146mm
- fillet radii: R2 and R0,5
- quality of surface finish of the radii
  - ▶ Rz4,0
  - ▶ Rz25
- clamping pin:  $\varnothing$  12x40mm

Weight: approx. 250g

#### Scope of delivery

- 1 set of specimens

#### Description

##### ■ specimens made of steel for reversed bending stress on the WP 140 experimental unit

This set of specimens is available as an accessory for the WP 140 experimental unit.

The specimens have circular cross-sections. The shaft shoulder between the bar and the clamping pin has a different fillet radius. In addition to the different radii, the quality of the surface finish is also different. In this way the influence of these features can be optimally investigated. Each specimen has clamping pin for clamping.

In the experiment, the cantilever-mounted and rotating cylindrical specimen is subjected to a single force. The load on the specimen corresponds to a cantilever bending beam. The specimen is subjected to a pure reverse bending stress and breaks after a certain number of load cycles because of material fatigue.

The set contains three specimens made of steel.

## **WP 140.01**

### **Set of 3 specimens, various fillet radii, St**

Required accessories

WP 140                  Fatigue strength test