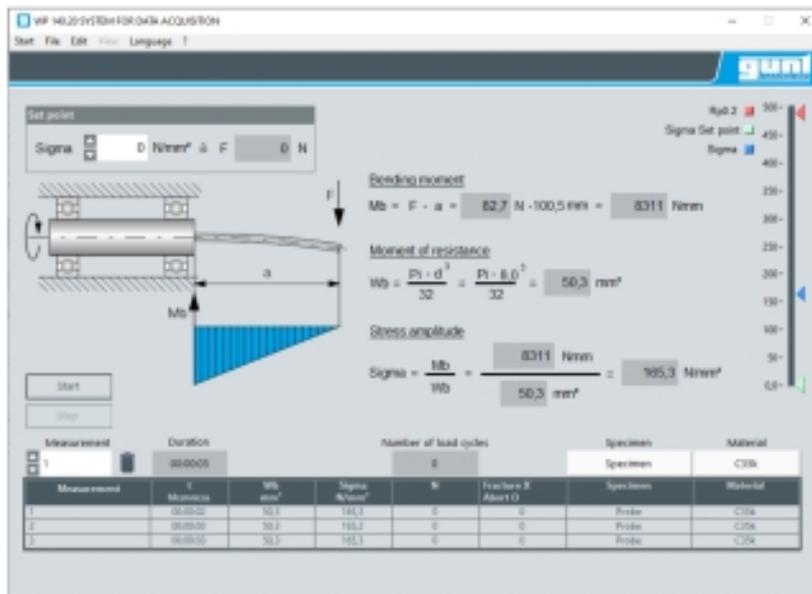


# WP 140.20

## System for data acquisition



### Learning objectives/experiments

- performing bending fatigue tests (fatigue strength test)
- processing, display and saving of data
- output of stress-number curve (alternating stress amplitude over endurance)

### Specification

- [1] data analysis for WP 140
- [2] recording, processing and saving of data for bar load and number of load cycles
- [3] output of stress-number curves
- [4] strain gauge force sensors
- [5] GUNT software for data acquisition via USB under Windows 10

### Technical data

Strain gauge force sensor

- mounted in full bridge
- measuring range: 0...400N

Measuring amplifier

- 8x analogue in, 2x analogue out
- 20x digital in/out

230V, 50Hz, 1 phase

230V, 60Hz, 1 phase

120V, 60Hz, 1 phase

UL/CSA optional

LxWxH: 365x320x155mm (measuring amplifier)

Weight: approx. 2kg

### Description

#### ■ electronic data acquisition and evaluation of bending fatigue tests (fatigue strength test)

This system for data acquisition is an addition to the experimental unit WP 140. The software processes the measuring values for force and number of turns until the test sample breaks (number of load cycles). The stress-number curve is calculated using these data and displayed in colours on the computer screen. The curves can be saved and printed.

A specially designed loading device fitted with strain gauges for force measurement will be supplied.

When the software is started on a PC (not included), it detects automatically the connected amplifier. The measured values can be transmitted directly to a PC via USB.

### Required for operation

PC with Windows

### Scope of delivery

- 1 load spindle with sensor
- 1 measuring amplifier
- 1 GUNT software + USB cable
- 1 manual

# **WP 140.20**

## **System for data acquisition**

Required accessories

WP 140                  Fatigue strength test