

**1. Range of Application**

- The universal Tensile and Pressure Testing System TC 550 is designed for testing different materials and components.

**2. Specification Micro-Tensile-Machine**

**2.1 Functional Principle**

- A high precision linear unit moves the sample mounting along the horizontal axis with a maximum travel of 50mm and a resolution of up to 1 µm
- The resulting pressure is recorded against the distance by a calibrated force sensor operating independent of its own compliance
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- A wide range of composites can be tested thanks to the integrated scalable loading- and burst-detection

**2.2 Software**

- The included software package provides for an easy operation and offers features such as
  - simulation of different loadings
  - various analysing functions
  - graphical representation of the results
- The system is fitted with a report function; that way, results can be transferred automatically to Microsoft office software
- The TC 550 allows for testing tensile force, compressive force, static force and dynamic force cycles (with/without dwell at the turning points). In addition to that, several test series can be compared directly and analysed graphically
- Specific analysing functions can be implemented into the software upon customer's request
- All the parameters are adjustable and clearly arranged: force – speed – dwell - cycles
- Direct graphic and digital measuring display
- Comparison of test series



**3. Maintenance – Overload Protection**

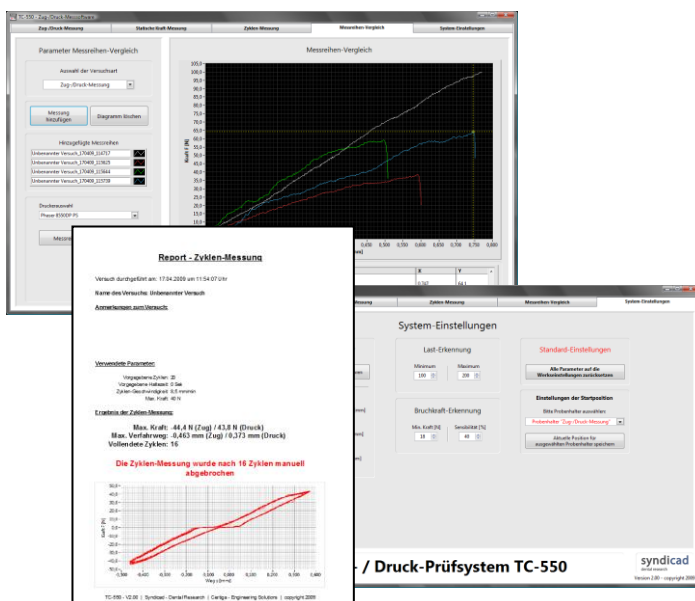
- The mechanical components and drives are sealed, maintenance-free and without exception of premium brand
- The drive is designed for up to 1,5 kN, the force sensor for up to 1kN load
- All components are stainless
- The software and the electronics eliminate the user's risk of injury and the risk of destruction of the mechanics due to faulty operation.

**4. Technical Data**

- Electrical potential 100 - 240 V<sub>≈</sub> / (47 - 60 Hz)
- PC-connection USB 2.0
- Operating system Windows XP / Vista / 7
- Tensile / pressure strength max. 500N
- Overload-Protection 1000N
- Travel 50 mm
- Speed 0,5 - 10 mm/min
- Resolution of the travel 0,5 µm / 0,1 N
- Reproducibility < 0,1 %
- Dimensions 400 mm x 300 mm
- Height 170 mm
- Weight 25 kg

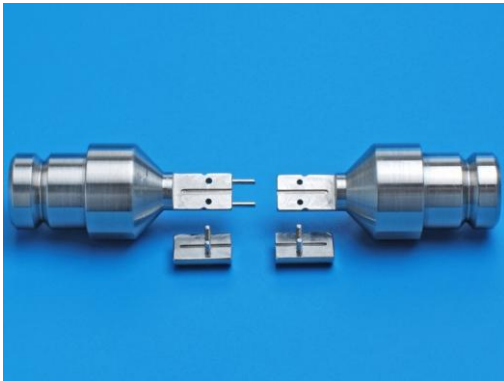
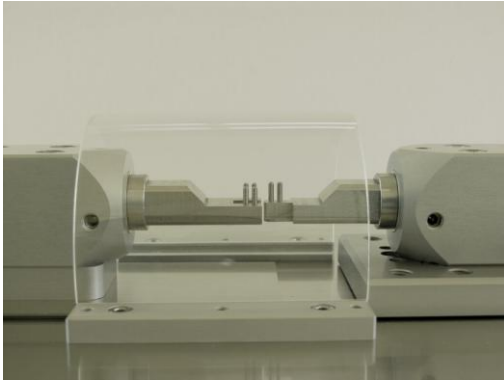
**5. Please Note**

- Force sensors and mechanical drives (selective wear) are not suitable for oscillation measurements and/or long term measurements. The static holding force per cycle is limited to 1 hour and the frequency to 1 Hz in order to avoid fatigue or defect of the force sensor.
- A test control unit for special oscillation measurements is under way.



### 6. Customized Sample-Mountings

- A broad range of accessories including different clamping devices and customized sample-mountings completes the package. Thus the testing system can be applied in many branches and with a customized range of functions



### 7. Additional Devices

- Calibrated force measurement devices with external sensors to check the present machines

