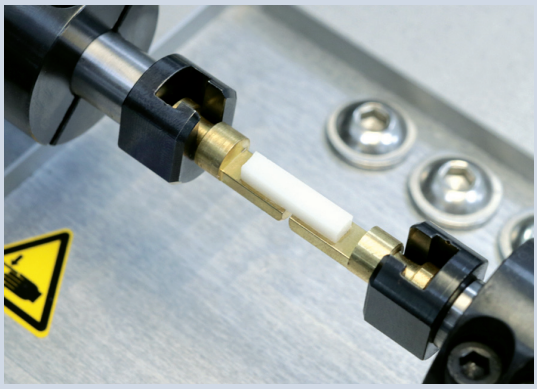
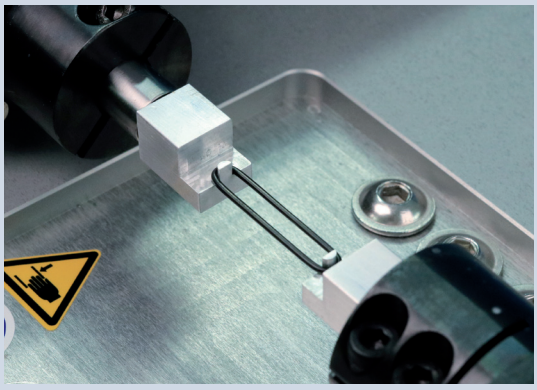
MICRO-TENSILE-DEVICE

MTD-500

TESTING OF

- TENSION
- COMPRESSION
- RETENTION
- CYCLIC LOADING
- YOUNG MODULUS
- RELAXATION
- O-RINGS AND OTHER ELASTIC COMPONENTS





SD Mechatronik
Dental Material Testing Systems

BASIC FEATURES

- Material testing with low/medium loads and high precision
- Low maintenance, ultra-precision servo drive
- Position control with optical linear encoder
- Protective door to minimize risk by flying particles/debris
- Easy exchange of specimen holders for different applications
- Horizontal load axis
- Elongation measurement not affected by load cell

USER INTERFACE AND SOFTWARE FEATURES

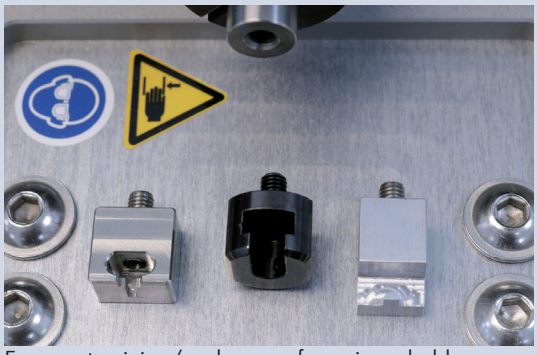
- Easy to operate graphical user interface
- Graphical and numerical display of results
- Quick positioning function for routine tests
- Different testing modes:
  - Tension
  - Compression
  - Real-Time force and position display (Relaxation tests, Shrinkage rate etc.)
  - Cyclic loading (option)
- Display of trend data
- Data saving and export
- Software update via Internet

OPTIONS

- Different load cells
- Different displacement sensor resolutions
- Cycling loading mode
- Customized specimen holders
- Customized testing workflow for integration in production lines
- Traceable force calibration

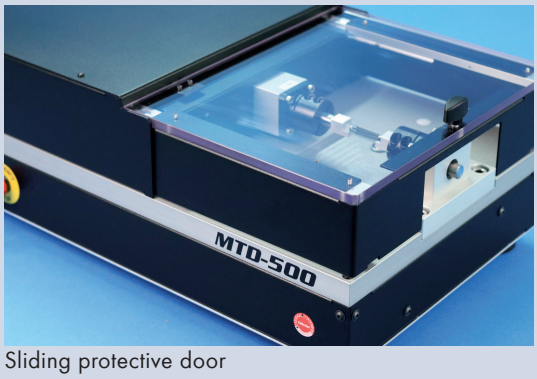
TECHNICAL DATA

• Load range (Tension & Compression) / Resolution	500 N / 0.2 N 1 kN / 0.5 N (option) 100 N / 0.05 N (option)
• Reproducibility of load cell	0.05 %
• Axis travel	45 mm
• Displacement sensor resolution	0.5 µm 50 nm (option) 0.1 µm (option)
• Speed range	0.1 - 1000 mm/min.
• Max. simulation frequency (Cyclic loading mode)	5 Hz
• Dimensions (Width x depth x height)	600 x 400 x 200 mm
• Weight	20 kg
• Power supply	230 V~, 50 Hz, max. 200 W 110 V~, 60 Hz (option)
• Max. environmental temperature	40°C

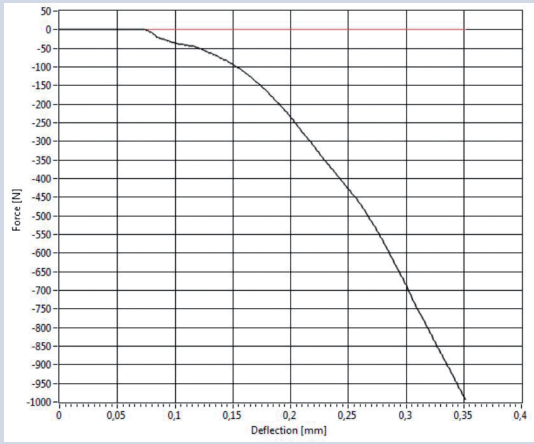


Easy customizing/exchange of specimen holders

Loading jig with preparation aid



Sliding protective door



Easy recording of force-deflection data

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