



# Hegewald & Peschke

Meß- und Prüftechnik GmbH

## Application flyer

# Testing of wood materials



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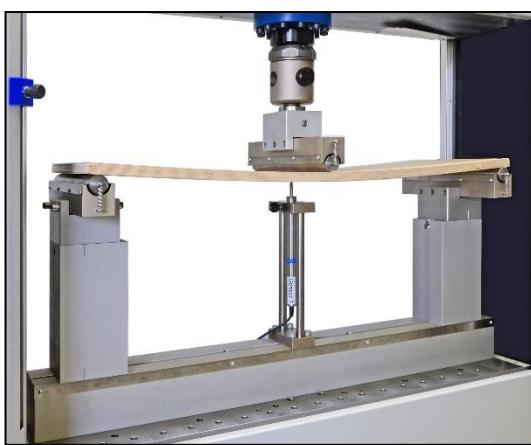
## Bending tests

### 3-point bending test according to DIN 52186



- Determination of bending strength, bending stress and deflection
- Visualisation of the test results as a load-deflection curve
- Determination of the bending modulus of elasticity

### 3-Point bending test according to DIN EN 789 and DIN EN 310 with 1 measuring probe:

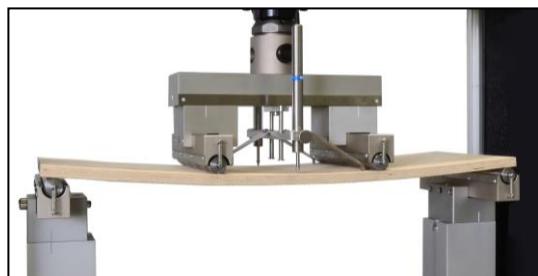


### 4-point bending test according to DIN EN 789 and DIN EN 310 with 1 measuring probe



- Shear load stable load cell for high shear force and bending moment stability

### 4-point bending test according to DIN EN 789 with 2 measuring probes:



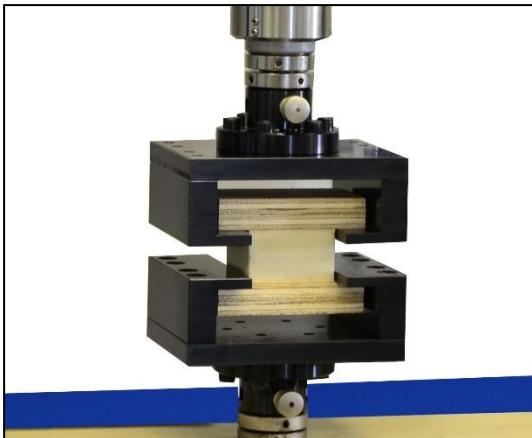
- Incremental position probes for measuring deflection in accordance with EN 789.
- Results:
  - Maximum deflection until failure
  - Bending stiffness
  - Modulus of elasticity in bending

### Selection of standards for bending tests on wood

<b>EN 789</b>	Timber structures - Test methods
<b>DIN EN 320</b>	Wood-based materials; flexural modulus of elasticity and flexural strength
<b>DIN 52186</b>	Testing of wood; bending test
<b>DIN EN 408</b>	Timber structures - Structural timber and glued laminated timber
<b>ISO 13061</b>	Physical and mechanical properties of wood

## Tensile tests & shear tests

Tensile tests on chipboard and fibreboard according to DIN EN 319



- Movable tensile fixture for square test specimens for determining the tensile strength perpendicular to the panel plane acc. to DIN EN 319

Tensile test  
acc. to DIN EN 408



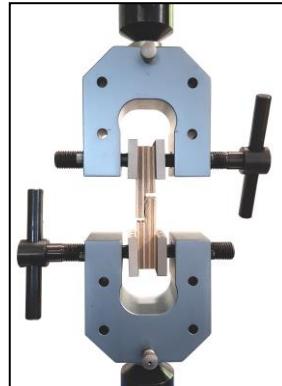
Tensile test  
acc. to DIN EN 311



- Determination of the modulus of elasticity in tension parallel to the fibre

- Movable tensile fixture for chipboard to determine the lift-off strength acc. to DIN EN 311
- Calculation of the lift-off strength of the surface as quotient of breaking force and surface area

Tensile shear test  
according to DIN EN 314 und DIN EN 205



Shear test  
Acc. to EN 789



Shear test acc. to  
DIN 52187 and EN 14080



- Determination of shear modulus & shear strength

## Selection of standards for tensile and shear tests on wood

<b>EN 789</b>	Timber structures - Test methods
<b>DIN EN 319</b>	Chipboard and fibreboard; tensile strength
<b>DIN 52187</b>	Testing of wood; shear strength
<b>DIN EN 311</b>	Wood-based materials - Lifting strength
<b>ISO 13061</b>	Physical and mechanical properties of wood
<b>DIN EN 314</b>	Plywood - Quality of bonding
<b>DIN 52188</b>	Testing wood, tensile strength

## Selection of standards for compression tests on wood

<b>DIN 52192</b>	Compression tests transverse to the grain direction
<b>DIN 52185</b>	Compression tests parallel to the grain direction
<b>ISO 13061</b>	Physical and mechanical properties of wood



## Hardness testing

### Universal testing machine with hardness tester



- Brinell hardness test acc. to ISO 13061-12, DIN EN ISO 6506
- Hardness test acc. to Janka acc. to ASTM D143

## Single-spindle testing machine inspekt Vario with movable load axis



## Special testing machines for wood testing

### Special testing machine inspekt S 400 kN/ 150 kN / 10 kN



- Suitable for tensile shear tests, compression tests and bending tests on structural components.
- Height: 6500 mm
- 3 working chambers:
  - lateral working space  $\pm 150$  kN 350 mm deep
  - middle workspace  $\pm 400$  kN 900 mm wide
  - lateral working space  $\pm 10$  kN 350 mm deep

- Testing of floor elements for compressive and bending loads
- Load application possible at any point of the floor field
- For testing different heights, the test area can be adjusted by an electric motor
- Inductive measuring probes for exact determination of deflection

## Universal test rigs for components made of wood



- Durability, fatigue and functional tests on wooden components and furniture
- Load application with electric or pneumatic actuators