Hegewald & Peschke
Meß- und Prüftechnik GmbH

Application flyer

Testing of foam materials

Testing solutions for soft and hard polymer foams

zertifiziert nach DIN EN ISO 9001
TÜV CERT
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Universal testing machines with various accessories

Compression test on flexible foams

Possible test procedures:

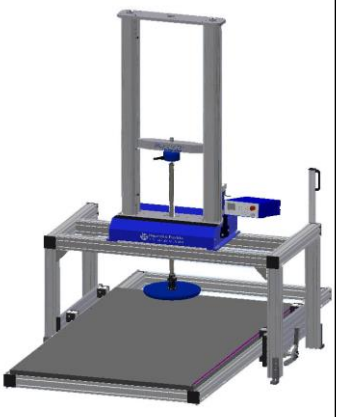
- Determination of compression properties and compression hardness acc. to DIN EN ISO 3386
- Determination of indentation hardness acc. to DIN EN ISO 2439, DIN 53577, DIN 53579

Suitable accessories for compression testing:

- Load cell displacement unit for eccentric compression testing at different points on the specimen
- Large movable compression plate for supporting the specimen
- Round compression pad for load application

Universal testing machines with widened test area for different specimen sizes

Option: lead-through in the lower crosshead for testing large test specimens underneath the machine
(10-030-907)

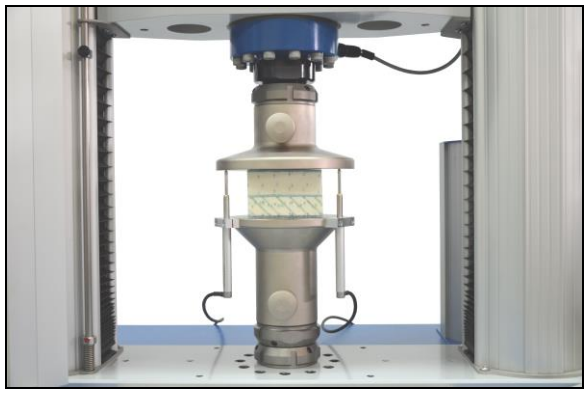


Compression tests on hard foam

Possible test procedures:

- Determination of compressive strength, deformation, compressive load and compressive modulus acc. to DIN EN ISO 844

Optional: Connection of displacement transducers to the compression platen for deformation measurement



Tensile tests on polymer foams

Possible test procedures:

- Determination of tensile strength and elongation at break acc. to DIN EN ISO 1798
- Determination of tear strength acc. to DIN EN ISO 8067

Creep tests on 3D-printed plastic foams

Possible test procedures:

- Creep tests to determine the creep behaviour under constant load
- Relaxation tests
- Compression tests

Special testing systems for foam testing

Combined testing system for ageing tests and hardness measurements on foams

(41-026-030)

- Ageing test according to EN ISO 3385: Determination of fatigue by constant-load pounding (fatigue test)
- Hardness measurement according to EN ISO 2439/EN ISO 3386: Determination of hardness using the indentation method
- Standards-based setup of test sequences using LabMaster material testing software

Testing machine for ageing tests on foams

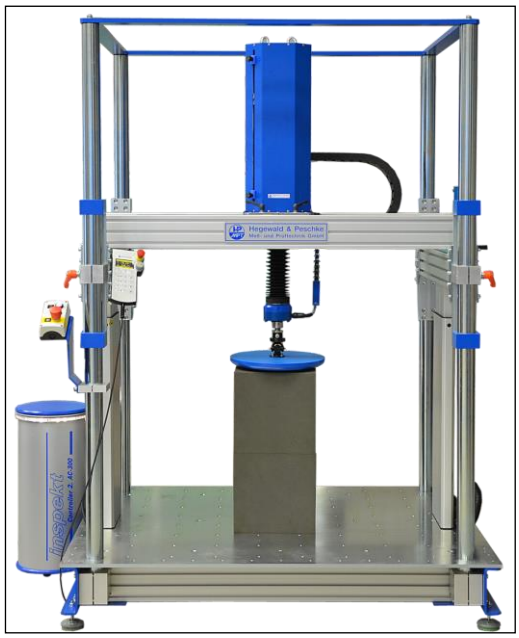
(41-026-023)

- Ageing test in accordance with EN ISO 3385 and DIN 53574
- Flexible adjustment of the test specimen height 20 to 90 mm
- Setup and execution of the standard-compliant test sequence via PLC control

Test rig for foams and upholstered furniture

Test frame with an inspekt S 5 kN single-spindle load unit (10-012-920)

- Tensile or compressive loading possible
- Lateral displacement of the load unit by ±400 mm possible
- Height adjustment by 600 mm possible
- Stroke: 500 mm



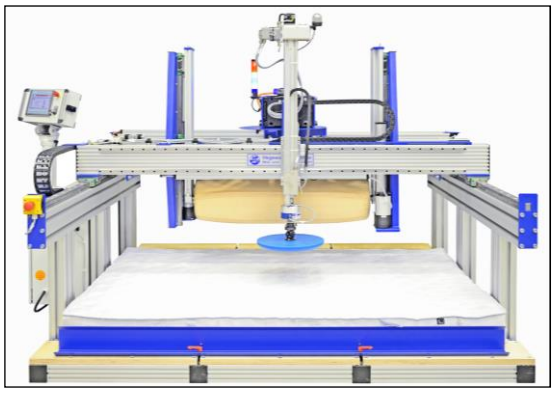
Test rig for foam compression testing

Portal load frame with central load unit inspekt S 5 kN (10-012-907)

Possible test procedures:
Testing of soft-elastic foams:

- Hardness testing on finished parts, indentation test on moulded parts acc. to DIN 53579
- Determination of indentation hardness acc. to ASTM D 3574-B1
- Determination of compressive stress-strain properties according to EN ISO 3386

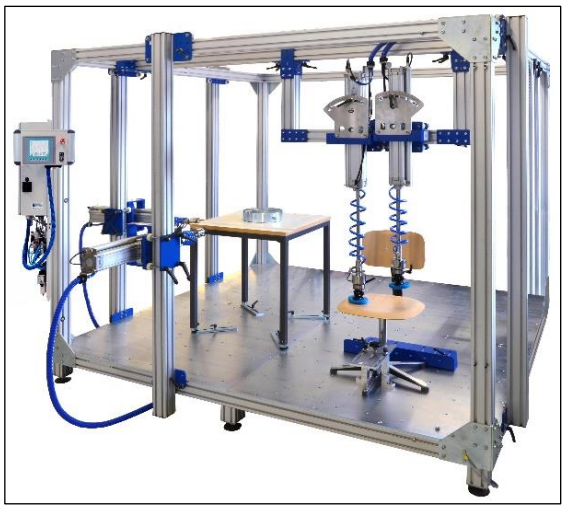
Test rig for testing the durability and hardness of mattresses acc. to EN 1957 (40-830-160)



- High rigidity of the test platform with movable fixing elements
- Testing of hardness and fatigue strength possible without manipulating the mattress
- Also available as a stand-alone test stand for fatigue or hardness tests
- Automatic lifting of the test roller after the end of the test
- Hardness testing device can be freely positioned over length and width

Universal test fields for furniture and component testing

- Modular principle for flexible and standard-compliant realisation of customer-specific requirements
- Pneumatic and electrical test axes for dynamic fatigue, ageing and functional tests
- 2 different control concepts:
  - Calmar Pro - a software-based control concept that also allows multiple tests to be performed independently of each other
  - Calmar One - a PLC-based control concept that is easy and convenient to operate and enables faster processing of the test task thanks to shorter cycle times



Testing machines for spring testing

- Compression testing machines with compression plates
- Optionally with mandrel for guiding the spring (feed-through through travelling crosshead)