



Hegewald & Peschke

Meß- und Prüftechnik GmbH

Product information

Electromechanical test axes

Fast – Precise – Variable



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Field of application:

- Material testing (e.g. textiles, foams, plastics, metal)
- Furniture testing (e.g. chairs, tables, beds, doors, drawers)
- Component testing (e.g. springs, hinges, fittings, rollers)

Operating modes:

- Endurance tests
- Fatigue tests
- Functional tests (including tip-on mechanisms and soft-close functions)
- Static tensile, compression, bending, peel tests

Technical possibilities:

- Loads up to 20 kN
- Strokes up to 500 mm stroke with spindle drive (other parameters on request)

Also available with belt drive for larger strokes (see flyer "Electromechanical linear axes")



Advantages:

- High control precision
- Variable stroke and load level
- Low noise
- Modular and flexible test systems - "from the single test rig to the all-rounder".
- Easy integration and variable arrangement in test fields - great flexibility in test set-up and test sequence in combination with our test software
- Standard-compliant testing according to DIN EN ISO, BIFMA, BS, NEN, GB or individual test sequences can be set up (test templates)

Advantages of electromechanical actuators compared to pneumatic test axes:

- In addition to continuous load also complex, fast function tests are possible, e.g.: tip-on or soft-close mechanisms
- High speeds up to 1.6 m/s
- Force/displacement/speed controlled
- High-precision control and regulation processes
- Resolution with 24 bit ($\pm 8,388,608$ digits)
- 64 bit measured value processing
- No compressed air required

Test software

With the help of the testing software, it is possible to define movement sequences widely freely. This also includes switching between different speeds during the movement and reacting to events, such as reaching defined positions or forces, time marks, etc. For this purpose, specific programme blocks are processed one after the other. These can in turn be called up cyclically. The test data can be evaluated internally, logged or exported. In addition, test sequences and test results are securely stored and managed in the SQL database.

A convenient search function allows quick finding and compiling as well as statistical evaluation of different tests. Thus, statistics and complaints can be easily processed.

Further advantages of coupling to testing software:

- Single-axis and multi-axis tests; Simple and complex test sequences
- without programming knowledge
- Integration of external sensors as measured or controlled variables (temperature or noise level sensors, light barriers, etc.)
- Connection to Outlook, e.g. as monitoring of the test sequence with e-mail in case of test abort



Mechanical construction:

Load cell with quick release coupling

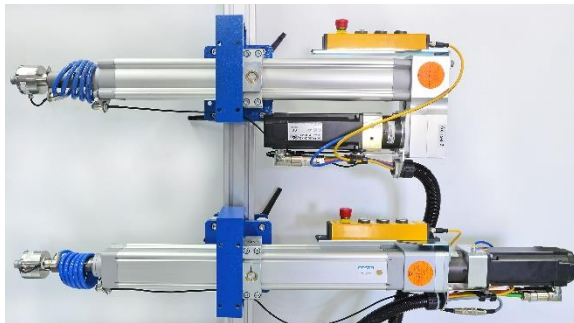
Manual control for manual positioning with emergency stop



Movement adapter for mounting on profiles in the test field

AC drive with displacement encoder

Designs (motor axial or parallel to the cylinder):



Application examples:

Installation of electromechanical test axes in a test field (41-046-2x1)

- Variable load ranges and stroke lengths
- Flexible integration based on a modular system for test fields

Example: Seat/backrest test



Electromechanical test axis in a temperature/climate chamber (41-046-284)

Example: Testing of car doors or car bodies



The test facility consists of an electric actuator and the control station with control, cooling and heating system.

The enclosure is connected to an air supply and exhaust system that is used depending on the temperature/humidity.

- Temperature range: -20°C to +80°C

Individual test stand for quality monitoring of office chair frames e.g. Smart-Spring technology (41-046-285)

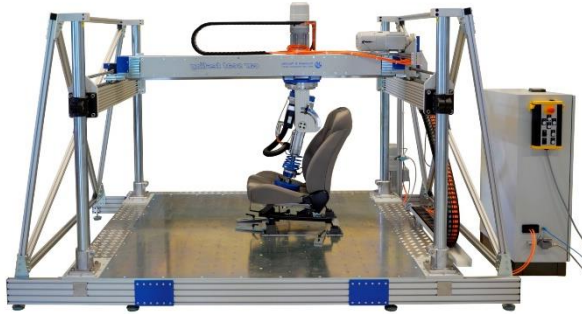
- Product-specific special test solution
- Compact test stand for vertical tests on chair components



- Determination of physical and technological property values during mechanical stressing of Smart Spring form elements
- Force and displacement measurement
- Angle measurement with two inductive displacement transducers



Test rig for car seats (41-046-280)



- Vertical and horizontal tests on car seats: Test axis manually 360° rotatable and mounted 0 - 90° swivelling under the crossbar suspended from its carriage



- 3 incremental path measuring systems for the axes X, Y and Z
- 2 angle scales for the manually adjustable swivel units
- Path measurement via motor encoder for the test axis

Single-spindle special testing machine
inspekt S 5 kN (10-012-907)



- Application e.g. foam compression test according to
 - ASTM D 3574-B1,
 - DIN ISO 3386-1 (DIN 53577),
 - ISO 1798 (DIN 53571)
 - ISO 2439 (DIN 53576)
 - DIN 53579-1

Test rig for fitting tests on hinges and flap mechanisms (41-041-425)



- Servomotor-driven swivel unit (height-adjustable)
- Swivel range 0° to 180
- With load cell for recording the torque and angle measuring system

Test rig for 90° peel tests on solar modules (10-012-050)



- Testing of the adhesion and bonding strength between coated surfaces and their rigid carrier layer as well as various composite materials by means of a 90° peel test among others according to DIN EN ISO 8510-1