

Universal Testing Rig for Seating Furniture, Tables, and Upholstered Furniture with 4 Test Axes



The universal testing rig is designed for testing seating furniture, tables, and upholstery according to EN 527-3, EN 581-3, EN 1335, BS 5459, and BIFMA X5.1, as well as other current national and international standards. It includes 4 pneumatic test axes, load plates, load cells, and extensive testing and evaluation software.

All axes are mounted on roller bearings carried by the different profiles. This ensures that the different kinds of furniture can be tested at any place within the testing bay.

The hole pattern in the base plate of the testing rig enables quick and flexible clamping of specimens. The test axes each have their own controllers assembled in the immediate vicinity, which are operated from a PC via CAN-bus and work synchronised.

They are supplied by a central supply terminal, which can carry up to 5 pneumatic test axes. Central supply terminal and PC are positioned on a separate moveable framework. Via a USB interface on a PC or notebook the data, control commands, and software settings are transmitted via the central supply terminal to the pneumatic test axes.

Part of the test stand is our **extensive testing and evaluation software** for the system software Windows 2000 or XP.

Included:

- box frame 2.4m x 2.4m, 2m high, made from 80x80 R&K light weight profiles, screwed and stiffened on the corners with gusset plates
- 2 vertical and 1 horizontal profiles as crosshead for taking the cylinder; crosshead easily relocatable due to roll guides
- 1 roller guided girders for crossbeam
- 4 base plates 1250mm x 1250mm, 12mm thick, material: galvanised steel, with borehole pattern M10
- 2 pneumatic test axes, load or load/position controlled, piston diameter 63mm, stroke 500mm, test load up to 1500N, load cell 5kN
- 2 pneumatic test axes, load or load/position controlled, piston diameter 80mm, stroke 500mm, test load up to 2500N, load cell 5kN
- The test axes can be installed on the vertical or horizontal profiles or on the girders and can be moved along the complete length of the profiles.
- 4 load cells 5kN integrated in the axes
- Operating pressure and cylinder limit switch control
- Number of cycles and course of load can be set arbitrarily in the PC software
- 2 load plates, round, diameter 50mm, gimbal clamp
- 2 load plates, round, diameter 100mm, gimbal clamp
- 1 load plate, 300 x 250 for back rest according to DIN 4551, gimbal clamp
- 1 load plate, 250 x 200 for back rest according to EN 1335, gimbal clamp
- 1 load plate, butt form according to EN 1728, gimbal clamp
- 1 set of arm rest load plates
- 1 set of fastening and blocking elements for tables and seating furniture

1 supply terminal for 5 test axes

The supply terminal is used as a connector for up to 5 test axes. It converts the CAN-protocol to USB and therefore is the connection to the PC.

The cables for connecting the test axes are built-in. Furthermore it contains a central emergency stop, which can shut off all axes in a hazardous situation. The air conditioning consisting of filter, switch-on-valve and distributor is also situated on the supply terminal. The test axes can be attached via hoses with quick disconnect couplers.

1 Framework for supply terminal, PC, keyboard and screen, moveable

Framework for supply terminal made from aluminium profiles for installing a supply terminal and setting it up separately next to the test bench.

It stands on fixable plastic wheels and can thus be used as a moveable or stationary system.

On the backside of the supply terminal there is a table approx. 1000mm above the ground to carry a TFT-display, keyboard and mouse. Below the tabletop is storage to carry the PC. A gap in the tabletop allows cable feedthrough. The framework is designed as a standing workstation for test bench configuration.

- Accessories for the CAN-Bus and PC connection via USB interface