

Universal Testing Rig for Beds, Seating and Upholstered Furniture, and Tables, 2 Test Axes, 1 Drop Test



The universal testing rig is designed for testing beds, seating furniture, tables, and upholstery acc. to EN1725. The test rig includes 2 pneumatic test axes and 1 drop tester, seat impactor load pads, load cells, and extensive testing and evaluation software. The test rig can be upgraded with 2 additional pneumatic test axes and drop weights to perform tests acc. EN 527-3, EN 581-2-3, EN 1728, EN 1730, EN 1335, BS 5459, BIFMA X5.1, as well as other current national and international standards.

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 2.4 x 2.4m, ca. 2m high, made from 80x80 R&K light weight profiles, screwed and stiffened on the corners with gusset plates
- 1 horizontal profil as crosshead for taking the cylinder, crosshead easily relocatable because of roll guides
- 2 vertical profiles as crosshead for taking the drop tester, crosshead easily relocatable because of roll guides
- 1 additional horizontal profil as crosshead for taking a cylinder for tests with horizontal load, crosshead easily relocatable because of roll guides
- the box frame is based on 4 base plates 1200 x 1200mm, 12mm thick, material galvanised steel, drill pattern with thread M 10
- 2 pneumatic test axles load/position controlled, piston diameter 63mm, stroke 500mm, test load up to 1500N, load cell 5kN

The test axles are mounted to the vertical profiles and relocatable along the length of the profile.

- 1 mounting set for the drop tester; includes a height-adjustable console, which is to fasten on one side at two vertical profiles 80x80 and moved with a manually operated spindle.
- 1 drop tester, 136 kg x 500 mm, position-controlled
- 2 load cells 5kN integrated in the axles
- Arbitrary number of cycles
- 2 loading pads round diameter 100mm, fix clamp
- 2 loading pads round diameter 200 mm gimbal clamp
- 1 seat shape with gimbal clamp
- 1 seat-impactor
- fixing material for the chair test

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