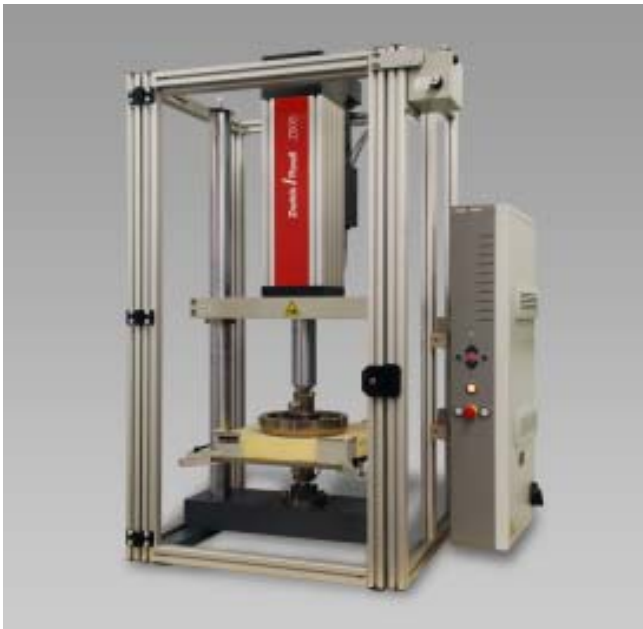


## Product Information

### Dynamic fatigue test bench for soft elastic foams



Dynamic fatigue test bench 5 kN



Drawing dynamic fatigue test bench

#### Description of functionality

This testing system performs dynamic fatigue tests on soft elastic foams, carried out as per the relevant standards, e.g. ISO 3385 and ASTM D 3574, or in compliance with the specifications set by automobile manufacturers. Such tests encompass three parts in all:

- First, the specimen thickness and the indentation hardness of the conditioned foam are determined after a recovery time.
- The fatigue testing is performed: depending on the specification at hand, anywhere between 8,000 and 150,000 cycles may be carried out typically.
- Finally, both the height and hardness losses are measured in a separate cycle test.

The test results produces information concerning the mechanical wear of the foam as might occur if used in car seats, for example.

The heart of the test bench is an electro-mechanical testing actuator which whilst moving at a speed of up to 30 m/min, generates the necessary load. A built-in force measurement feature together with the measurement and control electronics *testControl* ensures that the prescribed force thresholds are strictly observed during testing.

This test equipment can do much more than merely perform the fatigue cycles. Equipped with suitable compression platens or indentation tooling, this device can also be used to determine the indentation or crush hardness of specimens and offers the full range of functionality of a traditional universal testing machine.

**Product Information**

Dynamic fatigue test bench for soft elastic foams

**Technische Daten**

<b>Electro-mechanical testing actuator</b>		<b>EZ001</b>	<b>EZ005</b>
Fmax (tensile/compression)	[kN]	1	5
Max. test speed	[mm/min]	30,000	30,000
	[mm/s]	500	500
Resolution of position	[ $\mu$ m]	0.81	0.4069
Repetition accuracy of position	[ $\mu$ m]	$\pm 6$	$\pm 8$
Overall weight (ca.)	[kg]	220	395
Max. piston stroke	standard [mm]	180	200
	alternative [mm]	380	400
Ambient temperature	[ $^{\circ}$ C]	+10 ... +35	+10 ... +35
Air humidity	[%]	20 ... 90	20 ... 90

<b>Digital measurement and control electronics</b>			
Acquisition rate, internal	[Hz]	500	500
Transmission rate to PC, adjustable	[Hz]	100 (optional 500)	100 (optional 500)
Electrical connections (PH, N, PE)	[V]	120/230 (50/60 Hz)	400 / 3Ph (50/60 Hz)