



Hegewald & Peschke

Meß- und Prüftechnik GmbH

Product information

Test stands for child cycle seats according to DIN EN 14344

Test equipment for stability and fatigue testing



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Field of application:

Testing of child seats for cycles according to DIN EN 14344

- Vertical test according to DIN EN 14344 paragraph 8.9.3.5.2
- Side test according to DIN EN 14344 paragraph 8.9.3.5.3
- Transverse stiffness test according to DIN EN 14344 paragraph 8.9.3.6

Side test (Fig. 1)

- Oscillation of the seat from side to side with a sinusoidal movement over horizontal axis
- Mounting of the test specimen on a solid luggage carrier replica
 - Laterally tiltable
 - Height adjustable
 - Alternative mounting options on request
- Movement of the support via a linkage with a connecting rod from a gear motor with eccentric disk
- Swivel angle ± 10
- Convenient operation via PLC control (Fig. 4)
- Duration of the standard-compliant test: approx. 14 hours (50,000 cycles at a frequency of 1 Hz according to DIN EN 14344)

In accordance with the specification in the standard, the stroke in the resonance case can be increased by 23%. In this case, the speed is reduced from 1/s to 0.9/s.

Transverse stiffness test (Fig. 1)

- Test conditions similar to those for lateral testing
- Monitoring of the allowed deflection of the test specimen on both sides by light barriers (Fig. 2)
- Manual adjustment of the light barriers before the start of the test
- Triggering of the light barriers is only indicated (no switch-off)
- Duration of the standard-compliant test: approx. 2 min (100 cycles according to DIN EN 14344)

Models:

- Double test stand for vertical, lateral and transverse stiffness testing
- Single test stand for vertical testing
- Single test stand for lateral and transverse stiffness testing



Fig. 1: Testing device for lateral and transverse stiffness testing



Fig. 2: Light barriers for monitoring the deflection

Vertical test (Fig. 3)

- Oscillation of the seat in sinusoidal motion in vertical direction
- Drive by vertically guided slider
 - Direct movement from a geared motor by eccentric
 - Stroke: ± 5 mm
- Convenient operation via PLC control (Fig. 4)
- Duration of the standard-compliant test: approx. 2 hours (50,000 cycles according to DIN EN 14344)



Fig. 3: Test device for vertical testing

Technical data:

- Dimensions W1850 x D1250 x H2100 [mm].
- Electrical connection: 3NPE 400 VAC, 2,5 kVA, 50 Hz, back-up fuse 16A

Operation of the test stand via touchscreen with PLC control system

- Input of nominal number of cycles and possibly additional test parameters (e.g. swivel angle)
- Display of set speed and actual number of cycles
- Automatic stop after reaching the target number of cycles
- Both test units of the double test stand can be operated simultaneously and independently of each other.

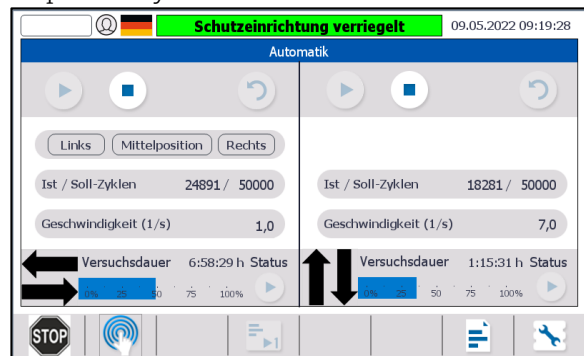


Fig. 4: Touch screen for operating the test stand - display during running test

Scope of delivery:

- Double test stand for lateral testing / transverse stiffness testing and vertical testing, incl. control and touch panel operating unit
- Protective enclosure on all sides with double hinged door at the front and electrical locking system
- Luggage carrier replica for test specimen mounting
- Cylindrical holder D22, D28, D40 as handlebar shaft/frame replica for test specimen holder

Required accessories (not included):

- Weight bags for standardized loading of the test specimen
- Mounting accessories for other types of fastening of the test specimen



Other test equipment for testing children's cycle seats

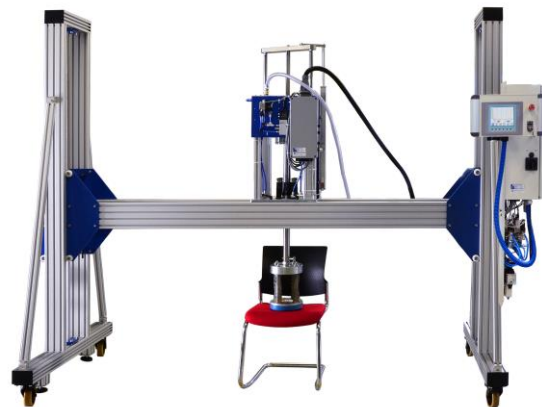
Tensile testing machines



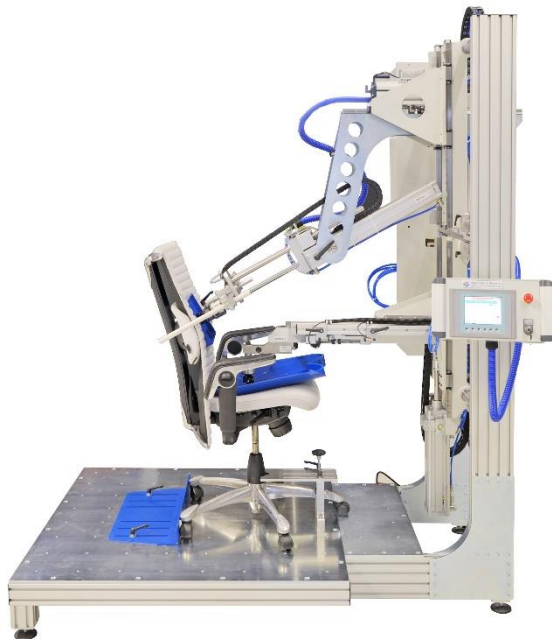
Test probes



Impact and drop test portal



Test rig for seat and backrest testing



Measuring devices

