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Testing of Coda chair with gas spring

(1 appendix)

Summary

Coda chair with gas spring meet the requirements for strength and safety according to EN 1729:2012.

1 Introduction

On behalf of Nordic Comfort Products A/S, a Coda chair with gas spring has been tested at SP in accordance with EN 1729:2012 Furniture - Chairs and tables for educational institutions – Part 2: Safety requirements and test methods, size 7.

2 Test specimen



Figure 1 Coda chair with gas spring

Seat height: 420 – 600 mm
Base: Five-spoke base made of moulded plastic, gas spring
Seat shell: Moulded plastic
Castors: Ø50 mm

Stability dimension (EN 1335-1:2000 clause 6.18) = 254 mm

The test specimen was selected by the customer and arrived at SP 2013-04-30.

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3 Test methods and test procedure

The test was carried out according to EN 1729:2012 Furniture – Chairs and tables for educational institutions – Part 2: Safety requirements and test methods and EN 1022:2005 Domestic furniture – Seating – Determination of stability.

Dimensions and size mark according to EN 1729-1:2006 has not been tested.
The chair is tested as size 7 according to EN 1729-2:2012.

The test was carried out in climate $23 \pm 2^\circ \text{C}$ and $50 \pm 5\%$ relative humidity.
The test methods are explained in table 1-3.
The test was carried out 2013-05-21 – 2013-06-13.

4 Results

Table 1

1.	General requirements	EN 1729	Req. fulfilled
1.1	Components or parts accessible during normal use shall have no burrs, sharp edges or sharp points.	4 a-c	Passed
1.2	The distance between moving parts accessible during normal use shall be kept to $\leq 8 \text{ mm}$ or $\geq 25 \text{ mm}$ in any position during movement	4 d	Passed
1.3	With the exception of setting up or folding tables and chairs, there shall be no accessible gaps $> 8 \text{ mm}$ and $< 25 \text{ mm}$ created during normal movements and actions	4 e	Passed
1.4	Adjustment controls shall not operate inadvertently or accidentally	4 f	Passed
1.5	Open ends and feet of tubular components shall be capped or otherwise closed	4 g	N/a
1.6	Parts shall not be detachable without the use of an appropriate tool	4 h	Passed
1.7	Parts which are lubricated shall be covered in order to avoid staining	4 i	N/a

Table 2

2.	Stability	EN 1729	Req. fulfilled
2.1	Forwards stability.	5.2.2	Passed
2.2	Sideways stability of chairs without armrests	5.2.3.1	Passed
2.3	Sideways stability of chairs with armrests	5.2.3.2	N/a
2.4	Rearwards stability	5.2.4	Passed
2.5	Rearwards stability, chairs with backrest inclination	5.2.5	N/a
2.6	Forwards stability for seating with footrest.	5.2.1	N/a

Table 1

3.	Strength, durability	EN 1729	Cycles	Load size 7	Req. fulfilled
3.1	Seat and back static load test	5.3.2	10	Seat: 2000 N Back: 700 N	Passed
3.2	Seat and back fatigue test	5.3.3	100 000	Seat: 1250 N Back: 300 N	Passed
3.3	Seat front edge fatigue test	5.3.4	50 000	800 N	Passed
3.4	Leg sideways static load test	5.3.5	10	Under frame: 600 N Seat: 1600 N	N/a
3.5	Leg forward static load test	5.3.6	10	Under frame: 600 N Seat: 1600 N	N/a
3.6	Seat impact test	5.3.7	10	Drop height 300 mm	Passed
3.7	Back impact test	5.3.8	10	Drop height 620 mm	Passed
3.8	Foot rail static load test	5.3.9	10	1300N	N/a
3.9	Drop test	5.3.10	5	Drop height 600 mm	Passed
3.10	Foot rail fatigue test	5.3.11	50 000	1000N	N/a
3.11	Armrest vertical static load test	5.3.12	10	600N Overload 900N	N/a

5 Conclusion

At the end of the test, the tested piece did not exhibit any faults, fractures or other damage judged to affect its safety and functions when used in accordance with EN 1729:2012.

The test results apply solely to the specimen tested.

SP Technical Research Institute of Sweden Wood Technology

Performed by

Examined by

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Appendix

1. Pictures (1 pages)

Appendix 1

Pictures



Figure 2 Coda chair, side view

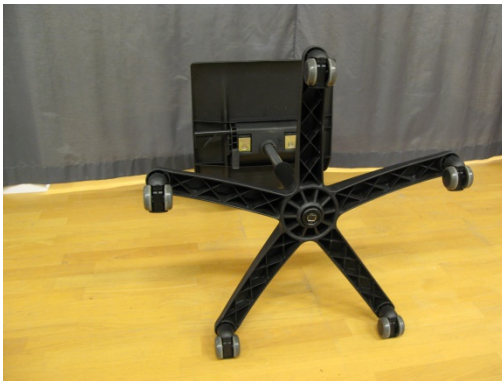


Figure 3 Coda chair, viewed from underneath



Figure 4 Coda chair, seat shell from underneath