



Labofa/Cobra Chair
Environmental Certificates 2011



Labofa Munch A/S
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Test Report

Material: Model: Cobra
Type: Chair with gas spring. Lab.no.: 271135 C

Sampling: The test material was sampled by the client and received at the Danish Technological Institute 10-07-2008.

Method: DS/EN 1729-1:2008 Furniture - Chairs and tables for educational institutions - Part 1: Functional dimensions. Tested according to Annex A, 'Functional dimensions for chairs and tables with an inclination between -5° and $+5^{\circ}$ and matching tables', like size 6 (blue).
DS/EN 15373:2007 Furniture - Strength, durability and safety - Requirements for non-domestic seating. Loading according to test level 2. Domestic use. The following clauses 5.1, 5.2.2, 5.2.3, 5.3.2, 5.4, 6.1.1, 6.1.2, 6.1.4, 6.1.10, 6.1.12, 6.1.16, 6.1.19, 6.1.20, 6.2, 7.

Period: The test was carried out in the period 20-08-2008 to 01-09-2008.

Result: Model Cobra meets the requirements stated in the above mentioned standards. Individual results appear from Appendices 1, 2, and 3.

Storage: The test material will be destroyed after 2 months, unless otherwise agreed.

Terms: The test was performed according to the rear side conditions, which are according to the guidelines laid down by DANAK (The Danish Accreditation). The testing is only valid for the tested specimen. The test report may only be extracted, if the laboratory has approved the extract.

2008-10-02 Danish Technological Institute, Wood and Textile, Taastrup

Thomas Høyrup

Lars Hansen

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**Test of Model: Cobra
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Measured according to DS/EN 1729-1:2008 Annex A, 'Functional measurements for chairs and tables with an inclination between -5° and +5° and matching tables as size 6 (blue).

Testing	Requirements	Measured	Result
Annex A.1 general requirements			Passed
The height of the seat (h8)	460 mm	532 mm	Passed
The effective depth of the seat (t4)	420 ± 20 mm	400 mm	Passed
Min. seat width (b3)	Min. 380 mm	390 mm	Passed
Min. depth of the seat (t7)	Min. 370 mm	410 mm	Passed
The height of the front point of the back - Point S (h6)	200 - 230 mm	214 mm	Passed
The min. height of the back (h7)	Min. 100 mm	370 mm	Passed
The min. width of the back (b4)	Min. 330 mm	360 mm	Passed
The horizontal min. radius of the back (r2)	Min. 300 mm	300 mm	Passed
The inclination of the back (beta)	95° to 110°	°	Not applicable
The height of the tabletop (h1)	760 ± 10 mm	0 mm	Not applicable
The min. depth of the tabletop (t1)	Min. 500 mm	0 mm	Not applicable
Min. length of the tabletop per person	Min. 600 mm	0 mm	Not applicable
Min. horizontal distance between front legs/construction (per person)	Min. 500 mm	0 mm	Not applicable
Legroom (annex A.3)			Not applicable
Requirements for adjustable chairs and tables (annex A.4)			Not applicable

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**Test of Model: Cobra
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Tested according to DS/EN 15373:2007. Loading according to test level 2.

Test	Test Method	Cycles	Loading	Result
5.1 General	EN 15373, 5.1			Passed
5.2.2 Shear and squeeze points under influence of powered mechanisms	EN 15373, 5.2.2			Passed
5.2.3 Shear and squeeze points during use	EN 15373, 5.2.3			Passed
5.3.2 Swivelling chairs	EN 15373, 5.3.2			Passed
5.3.3 Non swivelling chairs	EN 15373, 5.3.3			Not applicable
5.4 Rolling resistance of the unloaded chair	EN 15373, 5.4			Passed
6.1.1 Seat and back static load test	EN 1728:2000, 6.2.1	10 10	Seat: 1600 N Back: 560 N	Passed
6.1.2 Seat front edge static load test	EN 1728:2000, 6.2.2	10	Seat: 1600 N	Passed
6.1.3 Additional seat and back static load test for tilting chairs, reclining chairs and loungers	EN 1728:2000, 6.3.1			Not applicable
6.1.3 Additional seat and back static load test for tilting chairs, reclining chairs and loungers	EN 1728:2000, 6.3.2	10		Not applicable
6.1.4 Vertical static load on back	EN 15373, A.2	10	Back: 600 N Seat: 1300 N	Passed
6.1.5 Foot rail/foot rest and leg rest static load test	EN 1728:2000, 6.4			Not applicable
6.1.6 Arm sideways static load test	EN 1728:2000, 6.5			Not applicable
6.1.7 Wing sideways static load test	EN 1728:2000, 6.5			Not applicable
6.1.8 Arm downwards static load test	EN 1728:2000, 6.6			Not applicable
6.1.9 Vertical upwards static load on arm rests	Annex A.1			Not applicable
6.1.10 Seat and back fatigue test	EN 1728:2000, 6.7	100.000 100.000	Seat: 1000 N Back: 300 N	Passed
6.1.11 Seat and back fatigue test for seating furniture with tilt and part recliner function	EN 1728:2000, 6.9.1			Not applicable
6.1.11 Seat and back fatigue test for seating furniture with tilt and part recliner function	EN 1728:2000, 6.9.2			Not applicable
6.1.12 Seat front edge fatigue test	EN 1728:2000, 6.8	50.000	1000 N	Passed
6.1.13 Arm fatigue test	EN 1728:2000, 6.10			Not applicable
6.1.14 Leg rest fatigue test	EN 1728:2000, 6.11			Not applicable
6.1.15 Foot rail fatigue test	EN 15373, A.5			Not applicable
6.1.16 Leg forward static load test	EN 1728:2000, 6.12	10	Edge: 500 N	Passed
6.1.17 Leg sideways static load test	EN 1728:2000, 6.13			Not applicable
6.1.18 Diagonal static base load test	EN 1728:2000, 6.14			Not applicable

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**Test of Model: Cobra
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Test	Test Method	Cycles	Loading	Result
6.1.19 Seat impact test	EN 1728:2000, 6.15	10	Height: 240 mm	Passed
6.1.20 Back impact test	EN 1728:2000, 6.16	10	330 mm / 48°	Passed
6.1.21. Arm impact test	EN 1728:2000, 6.17			Not applicable
6.1.22 Drop test (multiple seating)	EN 1728:2000, 6.18			Not applicable
6.1.23 Auxiliary writing surface static load test	EN 15373, A.3			Not applicable
6.1.24 Auxiliary writing surface fatigue test	EN 15373, A.4			Not applicable
6.2 Strength and durability requirements	EN 15373, 6.2			Passed
7 Information for use	EN 15373. 7			Passed

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Photos



The general conditions pertaining to assignments accepted by Danish Technological Institute shall apply in full to the technical testing and calibration at Danish Technological Institute and to the completion of test reports and calibration certificates within the relevant field.

Danish Accreditation (DANAK)

DANAK was established in 1991 in pursuance of the Danish Act No. 394 of 13 June 1990 on the promotion of Trade and Industry.

The requirements to be met by accredited laboratories are laid down in the "Danish Agency for Trade and Industry's ("Erhvervsfremme Styrelsens") Statutory Order on accreditation of laboratories to perform testing etc. and GLP inspection. The statutory order refers to other documents, where the criteria for accreditation are specified further.

The standards DS/EN ISO/IEC 17025 "General requirements for the competence of testing and calibration laboratories" and DS/EN 45002 "General criteria for the assessment of testing laboratories" describe fundamental criteria for accreditation. DANAK uses guidance documents to clarify the requirements in the standards, where this is considered to be necessary. These will mainly be drawn up by the "European co-operation of Accreditation (EA)" or the "International Laboratory Accreditation Co-operation (ILAC)" with the purpose of obtaining uniform criteria for accreditation. In addition, DANAK draws up Technical Regulations with specific requirements for accreditation that are not contained in the standards.

In order for a laboratory to be accredited it is, among other things, required:

- that the laboratory and its personnel are not subject to any commercial, financial or other pressures, which might influence their technical judgement

- that the laboratory operates a documented quality system
- that the laboratory has at its disposal all items of equipment, facilities and premises required for correct performance of the service that it is accredited to perform
- that the laboratory management and personnel have technical competence and practical experience in performing the service that they are accredited to perform
- that the laboratory has procedures for traceability and uncertainty calculations
- that accredited testing or calibration is performed in accordance with fully validated and documented methods
- that the laboratory keeps records, which contain sufficient information to permit repetition of the accredited test or calibration
- that the laboratory is subject to surveillance by DANAK on a regular basis
- that the laboratory shall take out an insurance, which covers liability in connection with the performance of accredited services

Reports carrying DANAK's logo are used, when reporting accredited services and show that these have been performed in accordance with the rules for accreditation.

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