

Nordic Comfort Products A/S
P.O. Box 3
N-8640 HEMNESBERGET
Norway

Testing of R10 office work chair

(1 appendix)

Summary

R10 office work chair meets the requirements for strength and security according to EN 1335-2:2009 and EN 1335-3:2009.

1 Introduction

On behalf of Nordic Comfort Products A/S, a R10 office work chair has been tested at SP in accordance with EN 1335:2009 Office furniture - Office work chair - Part 2: Safety requirements and Part 3: Test methods

2 Test specimen



Figure 1 R10 office work chair

Base:	Five-spoke base made of moulded plastic
Seat and backrest:	Moulded plastic, upholstery
Castors:	Ø50 mm
Mechanism:	Free float, with independent adjustment for back and seat
Seat height:	Adjustable height with gas spring
Seat:	Tiltable, locking function, possible to move in depth
Backrest:	Tiltable and adjustable in height

The test specimen was selected by the customer and arrived at SP 2013-09-11.

SP Technical Research Institute of Sweden

Postal address
SP
Box 857
SE-501 15 BORÅS
Sweden

Office location
Västeråsen
Brinellgatan 4
SE-504 62 BORÅS

Phone / Fax / E-mail
+46 10 516 50 00
+46 33 13 55 02
info@sp.se

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3 Test methods and test procedure

The test was carried out according to EN 1335:2009 Office furniture - Office work chair - Part 2: Safety requirements and Part 3: Test methods.

The test was carried out in a climate of 23±2°C and 50 ±5% relative humidity. The test methods are explained in table 1 – 4.

The test was carried out 2013-10-23 – 2013-11-26.

4 Results

Table 1

1.	General requirements	EN 1335-2	Result
1.1	Distance between accessible movable parts shall be either ≤ 8 mm or ≥ 25 mm in any position during movement	4.1 a	Passed
1.2	Accessible corners shall be rounded with minimum 2 mm radius	4.1 b	Passed
1.3	Edges of the seat, back rest and arm rests which are in contact with the user when sitting in the chair shall be rounded with minimum 2 mm radius	4.1 c	Passed
1.4	Edges of handles shall be rounded with minimum 2 mm radius in the direction of the force applied	4.1 d	Passed
1.5	All other edges shall be free from burrs and shall be rounded or chamfered	4.1 e	Passed
1.6	Ends of accessible hollow components shall be closed or capped	4.1 f	Passed
1.7	Movable and adjustable parts shall be designed so that injuries and inadvertent operation are avoided.	4.1.2	Passed
1.8	It shall be possible to operate the adjusting devices from sitting position in the chair	4.1.2	Passed
1.9	Load bearing parts shall not come loose unintentionally	4.1.3	Passed
1.10	All parts which are lubricated to assist sliding (greasing, lubricating, etc.) shall be designed to protect users from lubricant stains when in normal use	4.1.4	Passed
1.11	Information for use	5.	Not assessed

Table 2

2.	Strength, durability (safety)	EN 1335-3	Cycles	Load	Result
2.1	Seat front edge - Static load test	7.2.1	10	1600 N	Passed
2.2	Seat and back – Static load test	7.2.2	10	Seat: 1600 N Back: 560 N	Passed
2.3	Foot rest – Static load test	7.2.6	10	1300 N	N/A
2.4	Seat and back - Position A	7.3.1	120 000	1500 N	Passed

2.	Strength, durability (safety)	EN 1335-3	Cycles	Load	Result
2.5	Seat and back - Position C-B	7.3.1	80 000	Seat: 1200 N Back: 320 N	Passed
2.6	Seat and back - Position J-E	7.3.1	20 000	Seat: 1200 N Back: 320 N	Passed
2.7	Seat and back - Position F-H	7.3.1	20 000	Seat: 1200 N Back: 320 N	Passed
2.8	Seat and back - Position D-G	7.3.1	20 000	1100 N	Passed
2.9	Armrests – Fatigue testing	7.3.2	60 000	400 N	N/A
2.10	Armrests – Vertical static load (Before stability test)	7.2.3	5	750 N	N/A
2.11	Armrests – Vertical static load (After stability test)	7.2.3	5	900 N	N/A
2.12	Rolling resistance \geq 12 N	7.4			Passed

Table 3

3	Functional tests	EN 1335-3	Cycles	Load	Result
3.1	Armrests – Vertical static load (front edge)	7.2.4	5	450 N	N/A
3.2	Armrests – Horizontal static load	7.2.5	10	400 N	N/A
3.3	Swivel test	7.3.3	120 000	Pos. A 60 kg Pos. B 35 kg	Passed
3.4	Foot rests – Fatigue test	7.3.4	50 000	900 N	N/A
3.5	Castor and chair base durability	7.3.5	36 000	Pos. A 110 kg	Passed

Table 4

4.	Stability	EN 1335-3	Result
4.1	Front edge overturning.	7.1.1	Passed
4.2	Forwards overturning	7.1.2	Passed
4.3	Forwards overturning for chairs with footrest	7.1.3	N/A
4.4	Sideways overturning for chairs without arm rests	7.1.4	Passed
4.5	Sideways overturning for chairs with arm rests	7.1.5	N/A
4.6	Rearwards overturning	7.1.6	Passed
4.7	Rearwards overturning for chairs with adjustable back rest inclination	7.1.7	Passed

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 1335:2009.

The test results apply solely to the specimen tested.

SP Technical Research Institute of Sweden Wood Technology

Performed by

Examined by

Bengt-Åke Andersson

Stefan Lindskog

Appendix

1. Pictures (1 page)

Appendix 1

Pictures



Picture 1 R10, side view



Picture 2 R10, from behind



Picture 3 R10, underneath



Picture 4 R10, underneath