

Nordic Comfort Products A/S  
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NORGE

## Testing of office work chairs according to EN 1335-1, -2, -3 (3 appendices)

<b>Customer:</b>	Nordic Comfort Products A/S
<b>Test object/ID:</b>	Office work chair/R20 Pro
<b>Test method:</b>	EN 1335-1:2000 Office furniture - Office work chair - Part 1: Determination of dimensions EN 1335-2:2009 Office furniture - Office work chair - Part 2: Safety requirements EN 1335-3:2009 Office furniture - Office work chair - Part 3: Test methods
<b>Scope:</b>	Complete test
<b>Date of test:</b>	2016-01-26 – 2016-05-02
<b>Test result:</b>	The tested object passed the test Dimensions according to EN 1335-1: Type A Information of use has not been assessed
<b>Reservation:</b>	The test results in this report apply only to the particular Equipment Under Test (EUT)
<b>Test environment:</b>	23 ± 2°C and 50 ± 5% relative humidity
<b>Additional information:</b>	

### SP Technical Research Institute of Sweden Sustainable Built Environment - Wood Technological Assessment

Performed by

Examined by

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#### Appendices

1. Test result (4 pages)
2. Description of test object (1 page)
3. Pictures (1 page)

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Appendix 1

**Test result**

Abbreviations: N/A = Not applicable  
N/T = Not tested

**Table 1**

<b>1.</b>	<b>General requirements</b>	<b>EN 1335-2</b>	<b>Result</b>
1.1	<p>Distance between accessible movable parts shall be either <math>\leq 8</math> mm or <math>\geq 25</math> mm in any position during movement</p> <p>Accessible corners shall be rounded with minimum 2 mm radius</p> <p>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</p> <p>Edges of handles shall be rounded with minimum 2 mm radius in the direction of the force applied</p> <p>All other edges shall be free from burrs and shall be rounded or chamfered</p> <p>Ends of accessible hollow components shall be closed or capped</p> <p>Movable and adjustable parts shall be designed so that injuries and inadvertent operation are avoided</p> <p>It shall be possible to operate the adjusting devices from sitting position in the chair</p> <p>Load bearing parts shall not come loose unintentionally</p> <p>All parts which are lubricated to assist sliding (greasing, lubricating, etc.) shall be designed to protect users from lubricant stains when in normal use</p>	4.1	Pass
1.2	Information for use	5	Not assessed

**Table 2**

<b>2.</b>	<b>Stability</b>	<b>EN 1335-3</b>	<b>Result</b>
2.1	Front edge overturning	7.1.1	Pass
2.2	Forwards overturning	7.1.2	Pass
2.3	Forwards overturning for chairs with footrest	7.1.3	N/A
2.4	Sideways overturning for chairs without arm rests	7.1.4	Pass
2.5	Sideways overturning for chairs with arm rests	7.1.5	N/A
2.6	Rearwards overturning	7.1.6	Pass
2.7	Rearwards overturning for chairs with adjustable back rest inclination	7.1.7	Pass

Appendix 1

**Table 3**

<b>3.</b>	<b>Strength, durability (safety)</b>	<b>EN 1335-3</b>	<b>Cycles</b>	<b>Load EN 1335-2</b>	<b>Result</b>
3.1	Seat front edge - Static load test	7.2.1	10	1600 N	Pass
3.2	Seat and back – Static load test	7.2.2	10	Seat: 1600 N Back: 560 N	Pass
3.3	Foot rest – Static load test	7.2.6	10	1300 N	N/A
3.4	Seat and back - Position A	7.3.1	120 000	1500 N	Pass
3.5	Seat and back - Position C-B	7.3.1	80 000	Seat: 1200 N Back: 320 N	Pass
3.6	Seat and back - Position J-E	7.3.1	20 000	Seat: 1200 N Back: 320 N	Pass
3.7	Seat and back - Position F-H	7.3.1	20 000	Seat: 1200 N Back: 320 N	Pass
3.8	Seat and back - Position D-G	7.3.1	20 000	1100 N	Pass
3.9	Armrests – Fatigue testing	7.3.2	60 000	400 N	N/A
3.10	Armrests – Vertical static load (Before stability test)	7.3.3	5	750 N	N/A
3.11	Armrests – Vertical static load (After stability test)		5	900 N	N/A
3.12	Rolling resistance	7.4		≥ 12 N	Pass

**Table 4**

<b>4</b>	<b>Functional tests</b>	<b>EN 1335-3</b>	<b>Cycles</b>	<b>Load</b>	<b>Result</b>
4.1	Armrests – Vertical static load (front edge)	7.2.4	5	450 N	N/A
4.2	Armrests – Horizontal static load	7.2.5	10	400 N	N/A
4.3	Swivel test	7.3.3	120 000	Pos. A 60 kg Pos. B 35 kg	Pass
4.4	Foot rests – Fatigue test	7.3.4	50 000	900 N	N/A
4.5	Castor and chair base durability	7.3.5	36 000	Pos. A 110 kg	Pass

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The dimensions are reported in table 5-8. The dimensions are given in millimetres, unless specified otherwise. Measured values outside the requirements for A-type chairs are given in bold italics. The index refers to EN 1335-1.

**Table 5**

Dimensions	index	Type A				Results
		(-) allow.	Min.	Max.	(+) allow.	
<b>SEAT</b>						
Seat height - Adjustment range	a	yes no	400 120	510	yes yes	400 - 525 125
Seat depth - Adjustment range	b	yes no	400 50	420	yes yes	400 - 450 50
Depth of seat surface	c	no	380		yes	455
Seat width	d	no	400		yes	480
Inclination of seat surface - Adjustment range	e	yes no	-2° 6°	-7°	yes yes	(-2°) – (-9°) 7°

**Table 6**

Dimensions	index	Type A				Results
		(-) allow.	Min.	Max.	(+) allow.	
<b>BACK REST</b>						
Height of the back supporting point “S” above the seat surface - Adjustment range	f	yes no	170 50	220	yes yes	170 - 245 125
Height of back pad – adjustable in height – non-adjustable	g	no no	220 260		yes yes	520 -
Height of the upper edge of back rest above the seat surface	h	no	360		yes	555 - 630
Back rest width	i	no	360		yes	455
Hor. radius of the back rest	k	no	400		yes	> 400
Backrest inclination adjustment range	l	no	15°		yes	15°

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**Table 7**

Dimension	index	Type A				Results
		(-) allow.	Min.	Max.	(+) allow.	
<b>ARM REST</b>		(-) allow.	Min.	Max.	(+) allow.	
Length of arm rest	n	no	200		yes	N/A
Width of arm rest	o	no	40		yes	N/A
Height of arm rest above seat	p					
- non-adjustable		no	200	250	no	N/A
- adjustable		yes	200	250	yes	N/A
Distance from the front of the arm rest to the edge of the seat surface	q	no	100		yes	N/A
Clear width between armrests	r	Yes	460	510	Yes	N/A

**Table 8**

Dimension	index	Type A				Results
		(-) allow.	Min.	Max.	(+) allow.	
<b>UNDERFRAME</b>		(-) allow. <td>Min.</td> <td>Max.</td> <td>(+) allow. <td></td> </td>	Min.	Max.	(+) allow. <td></td>	
Maximum offset of the under frame	s	yes		415	no	380
Stability dimension	t	no	195		yes	243

## Appendix 2

**Description of test object**

Test object/ID: Office work chair/R20 Pro

**Dimensions**

Seat height: 400 – 525 mm

Mass: 20.1 kg

**Components**

Base: 5 winged swivel base in plastic

Seat: Moulded plywood and flexible foam

Backrest: Moulded plastic and flexible foam

Armrest: -

Castors: Ø50 mm

**Functions:**

Seat: Tilttable , adjustable in depth and height

Backrest: Tilttable and adjustable in height

Sampling: The test object was selected by the customer

Date of arrival at  
SP test laboratory: 2015-12-28

Observed defects before testing: No defects

### Appendix 3

#### Pictures



**Figure 1**



**Figure 2**



**Figure 3**



**Figure 4**