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Customer	Flok AS Fridtjof Nansens vei 12 0369 Oslo, Norway		
Customer contact	Product & Brand Concept v/ Christian Eide Lodgaard		
Test item	RH Logic 200/220		
Serial No.	--		
Order No.	2019-01-18-001		
Date of receipt.	2019-01-18		
Testing commenced / finished	2019-02-06 / 2020-02-03		
Performing Laboratory.	Flok AS, test 275 Sundveien 201 7374 Røros, Norway +47 72 40 72 00		
Accredited by.	Norsk Akkreditering Postboks 155 Bedriftssenter 2001 Lillestrøm +47 64 84 86 00	Accreditation No.: Accreditation valid from: Accreditation valid to:	Test 275 2013-04-18 2023-02-16
Tested according to.	BS 5459-2:2000 + A2:2008		
Test result.	The test item passed the test specifications		
Tested by:	Approved by:		
2020-02-11	Christian Andersson Product tester	2020-02-11	Ole Eliassen Quality manager
Date	Name Position	Sign.	Date Name Position Sign.
Additional information. The test results refer only to the sample tested. RH Logic 200 is an identical chair apart from a lower backrest height. Seat mechanism of tested sample was marked with «Chair 9, week 2" Sample was tested with gaslift 4T NPR on customer request.			
Abbreviations	P	=Passed	
	F	=Failed	
	NA	=Not applicable	
	NT	=Not tested	

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Estimated uncertainty measurement		
Measurement	Description	Uncertainty (N)
A.6.2.1	Forwards overturning	3,37
A.6.2.1.2	Sideways overturning for chairs without arms	2,74
A.6.2.2	Sideways overturning for armchairs	2,43
A.6.3.1	Rearwards overturning	5,67
A.6.4	Rearwards overturning of tilting and reclining chairs.	6,84
All relevant	All load cells used during mechanical testing.	<12

The given expanded uncertainty U , is the result of the multiplication of the standard uncertainty u , and coverage factor $k=2$, which for a normal distribution equals to a probability of $\approx 95\%$.

Decision rules employed by the laboratory, unless inherent in the requested specification or standard:

Chair measurements. A result is compliant when the measured value is within the requirement (i.e. less or equal to an upper limit, greater or equal to a lower limit) , without taking into consideration the measurement uncertainty.

Stability, strength and durability. A result is compliant when the measured value including the expanded measurement uncertainty is within the requirement (i.e. less or equal to an upper limit, greater or equal to a lower limit).

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Brief description of the test item upon receipt.

Office work chair, model RH Logic 220, item with armrests and headrest.

- Adjustable seat height, seat depth and back rest inclination using levers on the RH side of the seat.
- Adjustable tilt tension using a knob on the LH side of the seat.
- Tilt can be locked using a lever on the LH side of the seat.
- Arm rest are adjustable in height, width and with a top that can be rotated.

The following information was supplied by customer:

- Model choice – Standard
- Foam – Standard foam.
- Gas lift – 4T black.
- Foot base – 5T black.
- Castors – Ø65mm hard braked when unloaded.



Remarks:

No remarks upon receipt.

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Remarks:

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Standard: **BS 5459-2:2000 + A2:2008**

I Scope

This part of BS 5459 specifies performance requirements and test methods for the structural safety and stability of office pedestal seating when used by persons weighing up to 150 kg, or when used for up to 24 hours a day, including chairs for use with tables and desks higher than those specified in BS EN 527-1.

This Part of BS 5459 also specifies requirements and test methods for type approval of bases, columns, seat actions, back stems and locking devices.

NOTE 1 BS EN 1335-2 and BS EN 1335-3 contain requirements and test methods for office pedestal seating which is intended for use for up to 8 hours a day by persons weighing up to 110 kg.

This standard does not apply to office visitors' chairs.

NOTE 2 Office visitors' chairs are chairs used in the office environment which are not classed as office work chairs and which are used for long or short meetings or consultations, as well as for reading, writing, listening and waiting.

Clause	Test description	Test parameters	Result
A.5.1	Fore-and-aft safety	Seat load V_1 : for chairs with full back inclination, θ , of 75° or less 1500 N x sin θ for other chairs 1400 N Back load H_1 : for chairs with full back inclination, θ , of 75° or less 1500 N x cos θ for other chairs 400 N Load applied to front edge V_2 1400 N Maximum number of cycles 500000	P ¹
A.5.2	Seat impact	Drop height 350 mm	P
A.5.3	Back impact	Drop height 330 mm Angle 48°	P
A.5.4	Drop	Drop height for leg length < 200 mm 250 mm for leg length \leq 200 mm 450 mm	P
A.5.5	Side-to-side safety	Downward vertical load 1200 N Maximum No. of cycles 250000	P
A.6.2.1	Forward overturning for all chairs, and sideways overturning for chairs without arms.	Downward vertical force 600 N Horizontal force 20 N	P ²
A.6.2.2	Sideways overturning for armchairs	Downward vertical force on seat 250 N Downward vertical force on arm 350 N Horizontal force 20 N	P ³
A.6.3.1	Rearward overturning	Downward vertical force on seat 600 N Overturning force F : for chairs with $h \leq 720$ mm 80 N for chairs with $h < 720$ mm 285.7 [1 - (h/1000)] N	P ⁴
A.6.3.2	Accidental rearward overturning	See A.6.3.2 in test specification	P ⁵
A.6.4	Rearward overturning of tilting and reclining chairs	13 discs	P ⁶
A.7.2	Arm sideways static load	Outward horizontal force 600 N	P
A.7.3	Arm downward static load	Downward vertical force 1200 N	P ⁷
A.7.4	Arm impact	Angle 48°	P ⁷
A.7.5	Chair swivelling	Downward vertical force 1200 N Number of cycles 100000	P
A.7.6	Seat height adjustment	Downward vertical force 1200 N Number of cycles 10000	P

This test report shall not be reproduced except in full, without written approval of the performing laboratory.

This test report only relates to the items mentioned on page 1 as test item.

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Clause	Test description	Test parameters	Result
A.7.7	Footrest fatigue	Downward vertical force Number of cycles	1200 N 200000 NA
A.7.8	Durability of controls	Force	100 N P
A.7.9	Locking device fatigue	Back load H_1 Number of cycles	(see A.5.1 in test specification) 500000 P
A.8	Type approval of columns, bases, actions, back stems and locking devices	See Tables A.3 to A.7 in test specification	NT
A.9	Test report	The test report shall include the following: a) the number and date of this British Standard, i.e. BS 5459-2:2000; b) details of the item tested, or, for components that are type-tested, details of the component and its mounting; c) details of any defects found during the inspection before testing; d) details of any defects found during the inspection after testing; e) whether the chair overturned during the stability test; f) details of any damage that does not impair the function of the chair, and the number of test cycles at which it occurred; g) details of any deviation from the test procedures, including any reduction in loads to prevent overturning.	INFO

Remarks.

- 1) Pivoting shaft in seat mechanism broke after 160.745 cycles. The chair was still functional and considered to have passed the test according to clause 4.6.2.
- 2) Chair overturns at 64,4N
- 3) Chair overturns at 24,7N
- 4) Chair overturns at 251,5N Requirement 144,2
- 5) Chair overturns at 146,3mm
- 6) Chair does not overturn at 14 ISO discs.
- 7) Armrest marked with "30"

End of test report

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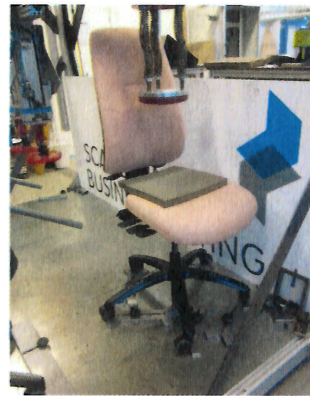
Annex I – Photo documentation



A.5.1



Rearward stability after A.5.1



A.5.2



A.5.3



A.5.4



A.5.5



A.6.2



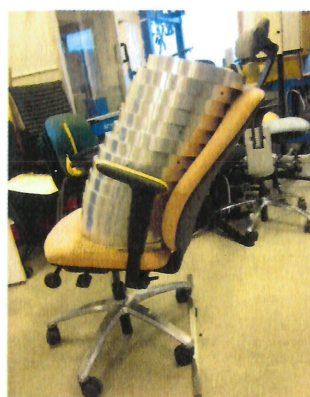
A.6.2



A.6.3



A.6.3.2



A.6.4



A.7.2

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A.7.3



A.7.4



A.7.5



A.7.6