

Test Report

Revision 1

Report No.: 807608-2



**DANISH
TECHNOLOGICAL
INSTITUTE**

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Order no.: 807608
No. of appendices: 3

Assignor: Four Design A/S
Faaborgvej 14
DK-5854 Gislev

Subject: Model: Four Cast2 One with Loop Armrests Return - also covers without armrests and without return

Type:	Chair				
Length:	520 mm	Width:	595 mm	Height:	845 mm
Weight:	7.6 kg				
Materials:	Plastic Swivel base				

Sampling: The test material was sampled by the client and received at the Danish Technological Institute 16-04-2018.

Method: **EN 1335-2:2009** Office furniture - Office work chair - Part 2: Safety requirements section 7.3.3 and **EN 1335-3:2009** Office furniture - Office work chair - Part : Test methods.
CEN/TR 1335-4 Office Furniture - Office Work Chair - Part 4: Clarifications to EN 1335-1:2000 (dimensions)
EN 1022:2005 Domestic furniture - Seating - Determination of stability.
EN 16139:2013 Furniture - Strength, durability and safety - Requirements for non-domestic seating. Clauses 4.1, 4.2.3, 4.3.2, 5, 6.1.1, 6.1.2, 6.1.3, 6.1.5, 6.1.6, 6.1.8, 6.1.9, 6.1.10, 6.1.12, 6.1.13, 6.1.14, 6.1.15, 6.1.16.
L1: General use: E.g. in office buildings, showrooms, public halls, function rooms, cafés, restaurants, canteens, banks, bars.

Period: The testing was carried out from 16-04-2018 to 28-05-2018.

Result: Model Four Cast2 One fulfils the requirements of EN 1335-2:2009, EN 1335-3:2009, CEN/TR 1335-4, EN 1022:2005 and EN 16139:2013. Loading according to Test severity L1.
Individual results appear from Appendix 1.

Storage: The test material will be destroyed after 1 month, unless otherwise agreed.

Terms: The accredited test was carried out according to DANAK's general conditions see www.danak.dk and according to the General Terms and Conditions regarding Commissioned Work Accepted by the Danish Technological Institute, which apply at the time of signing the agreement. The test is only valid for the tested specimen. The test report may only be extracted, if the laboratory has approved the extract.

Note: Rev. 1 due to addition of sec. 7.3.3 of EN 1335-2/3/4.

Date/place: 28-05-2018, Danish Technological Institute, Wood and Biomaterials, Taastrup
Replaces report dated 09-05-2018

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Test of Model: Four Cast2 One

EN 1335		
4.1	General design requirements	
	Test	Result
	4.1.1 Corners and edges, trapping, pinching and shearing	N/T
	4.1.2 Adjusting devices	N/T
	4.1.3 Connections	N/T
	4.1.4 Avoidance of soiling	N/T
4.3	Stability during use	
	Test	Result
	EN 1335-3:2009 7.1.1 Front edge overbalancing	N/T
	EN 1335-3:2009 7.1.2 Forwards overbalancing	N/T
	EN 1335-3:2009 7.1.3 Forwards overbalancing for chairs with footrest	N/T
	EN 1335-3:2009 7.1.4 Sideways overturning for chairs without armrests	N/T
	EN 1335-3:2009 7.1.5 Sideways overbalancing for chairs with arm rests	N/T
	EN 1335-3:2009 7.1.6 Rear wards overturning for chairs without back rest inclination	N/T
	EN 1335-3:2009 7.1.7 Rearwards overturning for chairs with adjustable back rest inclination	N/T
4.4	Rolling resistance for the unloaded chair	
	Test	Result
	The castors are of identical construction	N/T
4.5	Strength and durability	
	Test	Result
	EN 1335-3:2009 7.2.1 Seat front edge static load test	N/T
	EN 1335-3:2009 7.2.2 Combined seat and back rest static load	N/T
	EN 1335-3:2009 7.3.1 Seat and back durability	N/T
	Step 1 - Loading Point A	120.000
	Step 2 - Loading Point C Loading Point B	80.000
	Step 3 - Loading Point J Loading Point E	20.000
	Step 4 - Loading Point F Loading Point H	20.000
	Step 5 - Loading Point D and G Alternating	20.000
	EN 1335-3:2009 7.2.6 Foot rest static load test	N/T
	EN 1335-3:2009 7.3.2 Arm rest durability	N/T
	EN 1335-3:2009 7.2.3 Arm rest downward static load test - central - Functional load	N/T
	EN 1335-3:2009 7.2.3 Arm rest downward static load test - central - Overload	N/T
5	Information for use	
-	Functional tests	
	Test	Result
	EN 1335-3:2009 7.2.4 Arm rest downward static load test - front	N/T
	EN 1335-3:2009 7.2.5 Arm rest sideways static load test	N/T
	EN 1335-3:2009 7.3.3 Swivel test	Passed
	EN 1335-3:2009 7.3.4 Foot rest durability	N/T
	EN 1335-3:2009 7.3.5 Castor and chair base durability	N/T

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Test of Model: Four Cast2 One

Loading according to Test severity L1.

Test	Test Method	Cycles	Load	Result
4.1 General	EN 16139, 4.1			Passed
4.2.2 Shear and squeeze points under influence of powered mechanisms	EN 16139, 4.2.2			N/A
4.2.3 Shear and squeeze points during use	EN 16139, 4.2.3			Passed
4.3.2 Swivelling chairs	EN 1022			Passed
4.3.3 Non swivelling chairs	EN 1022			N/A
4.4 Rolling resistance of the unloaded chair	EN 16139, 4.4			N/A
5 Strength and durability requirements	EN 16139, 5			Passed
6.1.1 Seat static load and back static load test	EN 1728:2012, 6.4	10 10	Seat: 1600 N Back: 560 N	Passed
6.1.2 Seat front edge static load	EN 1728:2012, 6.5	10	Seat: 1300 N	Passed
6.1.3 Vertical load on back rests	EN 1728:2012, 6.6	10	Back: 600 N Seat: 1300 N	Passed
6.1.4 Foot rest static load test	EN 1728:2012, 6.8			N/A
6.1.4 Leg rest static load test	EN 1728:2012, 6.9			N/A
6.1.5 Arm rest sideways static load test	EN 1728:2012, 6.10	10	400 N	Passed
6.1.6 Arm rest downwards static load test	EN 1728:2012, 6.11	5	750 N	Passed
6.1.7 Vertical upwards static load on arm rests	EN 1728:2012, 6.13			N/A
6.1.8 Combined seat and back durability test	EN 1728:2012, 6.17	100000 100000	Seat: 1000 N Back: 300 N	Passed
6.1.9 Seat front edge durability test	EN 1728:2012, 6.18	50000	800 N	Passed
6.1.10 Arm rest durability test	EN 1728:2012, 6.20	30000	400 N	Passed
6.1.11 Foot rest durability test	EN 1728:2012, 6.21			N/A
6.1.12 Leg forward static load test	EN 1728:2012, 6.15	10	Edge: 500 N) (Seat: 1000 N)	Passed
6.1.13 Legs sideways static load test	EN 1728:2012, 6.16	10	Edge: 400 N) (Seat: 1000 N)	Passed
6.1.14 Seat impact test	EN 1728:2012, 6.24	10	240 mm	Passed
6.1.15 Back impact test	EN 1728:2012, 6.25	10	210 mm / 38°	Passed
6.1.16 Arm Impact Test	EN 1728:2012, 6.26	10	210 mm / 38°	Passed
6.1.17 Drop test (multiple seating)	EN 1728:2012, 6.27.1			N/A
6.1.18 Auxiliary writing surface static load test	EN 1728:2012, 6.14			N/A
6.1.19 Auxiliary writing surface durability test	EN 1728:2012, 6.22			N/A
7 Information for use	EN 16139, 7			N/A

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Photo

