

# Test report

Report No.:  
865122-8



**DANISH  
TECHNOLOGICAL  
INSTITUTE**

Gregersensvej 1  
DK-2630 Taastrup  
+45 72 20 20 00  
info@teknologisk.dk  
www.teknologisk.dk

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Init: JJOH/JHA

Order no.: 865122

Number of appendices: 2

**Assignor:** Normann Copenhagen ApS, Østerbrogade 70, DK-2100 København Ø

**Item :** Form Chair Stacking

**Sampling:** The test material was sampled by the assignor and received at the Danish Technological Institute on 2019-09-23.

**Period:** The testing was carried out from 2019-09-30 to 2019-11-01.

**Test method:** EN 16139:2013, Furniture - Strength, durability and safety - Requirements for non domestic seating  
EN 16139 Test severity L2: Extreme use: E.g. in night-clubs, police stations, transport terminals, sport changing rooms, prisons, barracks (non-controlled areas).  
Additional information is given in appendix B.

**Results:** **Failed on clause(s) 4.3.3.**  
The results are shown in appendix A.

**Terms:** Accredited testing was carried out in compliance with international requirements (EN/ISO/IEC 17025:2005) and in compliance with Danish Technological Institute's General Terms and Conditions regarding Commissioned Work accepted by Danish Technological Institute. The test results apply to the tested products only. This report may be quoted in extract only if the laboratory has granted its written consent.

**Date/place:** 2019-11-04, Danish Technological Institute, Taastrup, Building and Construction

**Signature:**

Jesper Bruhn Johansen  
Test responsible

Jan Hansen  
Co-signatory



**DANAK**

TEST Reg.nr. 2



## Test of Model: Form Chair Stacking

*Loading according to test severity EN 16139 level L2.*

Test no.	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 1335			N/A
4.3.3	Non swivelling chairs	EN 1022			Not passed
Comment	Tilts at front edge				
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, 6.4	10 10	Seat: 2000 N Back: 700 N	Passed
6.1.2	Seat front edge static load	EN 1728, 6.5	10	Seat: 1600 N	Passed
6.1.3	Vertical load on back rests	EN 1728, 6.6	10	Seat: 1800 N Back: 900 N	Passed
6.1.4	Foot rest static load test	EN 1728, 6.8	10		N/A
6.1.4	Leg rest static load test	EN 1728, 6.9	10		N/A
6.1.5	Arm rest sideways static load test	EN 1728, 6.10	10		N/A
6.1.6	Arm rest downwards static load test	EN 1728, 6.11	5		N/A
6.1.7	Vertical upwards static load on arm rests	EN 1728, 6.13	10		N/A
6.1.8	Combined seat and back durability test	EN 1728, 6.17	200000 200000	Seat: 1000 N Back: 300 N	Passed
6.1.9	Seat front edge durability test	EN 1728, 6.18	100000	800 N	Passed
6.1.10	Arm rest durability test	EN 1728, 6.20	60000		N/A
6.1.11	Foot rest durability test	EN 1728, 6.21	100000		N/A
6.1.12	Leg forward static load test	EN 1728, 6.15	10	Edge: 560 N (Seat: 1800 N)	Passed
6.1.13	Legs sideways static load test	EN 1728, 6.16	10	Edge: 620 N (Seat: 1800 N)	Passed
6.1.14	Seat impact test	EN 1728, 6.24	10	300 mm	Passed
6.1.15	Back impact test	EN 1728, 6.25	10	330 mm / 48 °	Passed
6.1.16	Arm Impact Test	EN 1728, 6.26	10		N/A
6.1.17	Drop test (multiple seating)	EN 1728, 6.27.1	2 x 5		N/A
6.1.18	Auxiliary writing surface static load test	EN 1728, 6.14			N/A
6.1.19	Auxiliary writing surface durability test	EN 1728, 6.22	20000		N/A
7	Information for use	EN 16139, 7			N/A



## Information required by EN 16139:2013

### European Standards used:

EN 16139:2013 - Furniture - Strength, durability and safety - Requirements for non-domestic seating

EN 1728/AC:2012 - Domestic furniture - Seating - Test methods - Determination of strength and durability

EN 1022:2005 - Domestic furniture - Seating - Determination of stability

EN 1335:2009 - Office furniture - Office work chair - Part 3: Test methods

### Details of tested seating:

<b>Model:</b>	Form Chair Stacking			<b>Type:</b>	Chair		
<b>Length:</b>	570 mm	<b>Depth:</b>	500 mm	<b>Height:</b>	800 mm	<b>Weight:</b>	5.9 kg
<b>Materials:</b>	Metal, plastic						

### Details of defects observed before testing:

None.

### Details of any deviations from this standard:

None.

### Any variation from the specified temperature range:

None.

### Test result:

See appendix A.

### Name and address of the test facility:

Danish Technological Institute, Gregersensvej, Taastrup 2630, Denmark

### Date of test:

2019-09-30 to 2019-11-01

### Photo of the received sample:

