



Four Design A/S
Faaborgvej 14
DK-5854 Gislev

Order no. 645486-1
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Appendices 2
Initials laha/prni/hbs

Gregersensvej
DK-2630 Taastrup
Tel. +45 72 20 20 00
Fax +45 72 20 20 19

info@teknologisk.dk
www.teknologisk.dk

Test Report

Material: Model: Four Cast 2 Wheeler RB

| | | | | | |
|------------|-----------------------|--------|--------|---------|--------|
| Type: | Chair | | | | |
| Length: | 660 mm | Width: | 660 mm | Height: | 937 mm |
| Weight: | 7,55 Kg | | | | |
| Materials: | 5,64 mm plastic shell | | | | |

Sampling: The test material was sampled by the client and received at the Danish Technological Institute 27-04-2015.

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

Clauses 4.1, 4.2.3, 4.3.2, 4.4, 5, 6.1.1, 6.1.2, 6.1.3, 6.1.8, 6.1.9, 6.1.12, 6.1.13, 6.1.14, 6.1.15.

L2: Extreme use: E.g. in night-clubs, police stations, transport terminals, sport changing rooms, prisons, barracks (non-controlled areas).

Period: The testing was carried out from 27-04-2015 to 03-07-2015.

Result: Model Four Cast 2 Wheeler RB fulfils the requirements in EN 1335-2:2009 and EN 16139:2013.
Loading according to Test severity L2.
Individual results appear from Appendix 1.

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

Terms: The test has been performed according to the attached conditions, which are according to the guidelines laid down by DANAK (The Danish Accreditation). The testing is only valid for the tested specimen. The test report may only be extracted, if the laboratory has approved the extract

03-07-2015, Danish Technological Institute, Wood Technology, Taastrup



Lars Hansen
Test responsible



Per A. Nielsen
Co-reader

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Test of model: Four Cast 2 Wheeler RB

Loading according to Test severity L2.

| 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 1335-2:2009 | | | Passed |
| 4.3.3 Non swivelling chairs | EN 1022 | | | N/A |
| 4.4 Rolling resistance of the unloaded chair | EN 16139, 4.4 | | | Passed |
| 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: 2000 N Back: 700 N | Passed |
| 6.1.2 Seat front edge static load | EN 1728:2012, 6.5 | 10 | Seat: 1600 N | Passed |
| 6.1.3 Vertical load on back rests | EN 1728:2012, 6.6 | 10 | Back: 900 N Seat: 1800 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 | | | N/A |
| 6.1.6 Arm rest downwards static load test | EN 1728:2012, 6.11 | | | N/A |
| 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 | 200000 200000 | Seat: 1000 N Back: 300 N | Passed |
| 6.1.9 Seat front edge durability test | EN 1728:2012, 6.18 | 100000 | 800 N | Passed |
| 6.1.10 Arm rest durability test | EN 1728:2012, 6.20 | | | N/A |
| 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: 620 N) (Seat: 1800 N) | Passed |
| 6.1.13 Legs sideways static load test | EN 1728:2012, 6.16 | 10 | Edge: 760 N) (Seat: 1800 N) | Passed |
| 6.1.14 Seat impact test | EN 1728:2012, 6.24 | 10 | 300 mm | Passed |
| 6.1.15 Back impact test | EN 1728:2012, 6.25 | 10 | 330 mm / 48° | Passed |
| 6.1.16 Arm Impact Test | EN 1728:2012, 6.26 | | | N/A |
| 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 |

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| Test | Test Method | Cycles | Load | Result |
|--|--------------------|--------|------|--------|
| 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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Test of model: Four Cast 2 Wheeler RB

Photo



The general conditions pertaining to assignments accepted by Danish Technological Institute shall apply in full to the technical testing and calibration at Danish Technological Institute and to the completion of test reports and calibration certificates within the relevant field.

Danish Accreditation (DANAK)

DANAK was established in 1991 in pursuance of the Danish Act No. 394 of 13 June 1990 on the promotion of Trade and Industry.

The requirements to be met by accredited laboratories are laid down in the "Danish Agency for Trade and Industry's ("Erhvervsfremme Styrelsens") Statutory Order on accreditation of laboratories to perform testing etc. and GLP inspection. The statutory order refers to other documents, where the criteria for accreditation are specified further.

The standards DS/EN ISO/IEC 17025 "General requirements for the competence of testing and calibration laboratories" and DS/EN 45002 "General criteria for the assessment of testing laboratories" describe fundamental criteria for accreditation. DANAK uses guidance documents to clarify the requirements in the standards, where this is considered to be necessary. These will mainly be drawn up by the "European co-operation of Accreditation (EA)" or the "International Laboratory Accreditation Co-operation (ILAC)" with the purpose of obtaining uniform criteria for accreditation. In addition, DANAK draws up Technical Regulations with specific requirements for accreditation that are not contained in the standards.

In order for a laboratory to be accredited it is, among other things, required:

- that the laboratory and its personnel are not subject to any commercial, financial or other pressures, which might influence their technical judgement

- that the laboratory operates a documented quality system
- that the laboratory has at its disposal all items of equipment, facilities and premises required for correct performance of the service that it is accredited to perform
- that the laboratory management and personnel have technical competence and practical experience in performing the service that they are accredited to perform
- that the laboratory has procedures for traceability and uncertainty calculations
- that accredited testing or calibration is performed in accordance with fully validated and documented methods
- that the laboratory keeps records, which contain sufficient information to permit repetition of the accredited test or calibration
- that the laboratory is subject to surveillance by DANAK on a regular basis
- that the laboratory shall take out an insurance, which covers liability in connection with the performance of accredited services

Reports carrying DANAK's logo are used, when reporting accredited services and show that these have been performed in accordance with the rules for accreditation.



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Test Report

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| | | | | | |
|------------|--------------------|--------|--------|---------|--------|
| Type: | Chair | | | | |
| Length: | 660 mm | Width: | 660 mm | Height: | 976 mm |
| Weight: | 7,6 Kg | | | | |
| Materials: | 6 mm Plastic shell | | | | |

Sampling: The test material was sampled by the client and received at the Danish Technological Institute 27-04-2015.

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

Clauses 4.1, 4.2.3, 4.3.2, 4.4, 5, 6.1.1, 6.1.2, 6.1.3, 6.1.8, 6.1.9, 6.1.12, 6.1.13, 6.1.14, 6.1.15.

L2: Extreme use: E.g. in night-clubs, police stations, transport terminals, sport changing rooms, prisons, barracks (non-controlled areas).

Period: The testing was carried out from 27-04-2015 to 03-07-2015.

Result: Model Four Cast 2 Wheeler FC fulfils the requirements in EN 1335-2:2009 and EN 16139:2013.
Loading according to Test severity L2.
Individual results appear from Appendix 1.

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

Terms: The test has been performed according to the attached conditions, which are according to the guidelines laid down by DANAK (The Danish Accreditation). The testing is only valid for the tested specimen. The test report may only be extracted, if the laboratory has approved the extract

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| 4.4 Rolling resistance of the unloaded chair | EN 16139, 4.4 | | | Passed |
| 5 Strength and durability requirements | EN 16139, 5 | | | Passed |
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| 6.1.3 Vertical load on back rests | EN 1728:2012, 6.6 | 10 | Back: 900 N Seat: 1800 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 | | | N/A |
| 6.1.6 Arm rest downwards static load test | EN 1728:2012, 6.11 | | | N/A |
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| 7 Information for use | EN 16139, 7 | | | N/A |

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