

Johanson Design AB
Anders Anderssons väg 7
285 35 MARKARYD
SWEDEN

Testing of Rib 08 armchair

(1 appendix)

1 Introduction

On behalf of Johanson Design AB, SP has carried out a limited test on Rib 08 armchair in accordance with EN 16139:2013 Furniture - Strength, durability and safety - Requirements for non-domestic seating, level 1.

2 Test specimen



Figure 1 Rib 08 armchair

| | |
|--------------|--------------------------|
| Dimension: | W=53 cm, D=52 cm, H=80cm |
| Seat height: | 46 cm |
| Frame: | Steel tube 16 mm |
| Armrests: | Steel tube 12 mm |
| Seat: | Pressed polyester/felt |
| Other info: | - |

The test specimen was selected by the customer and arrived at SP 2014-07-07.

SP Technical Research Institute of Sweden

Postal address
SP
Box 857
SE-501 15 BORÅS
Sweden

Office location
Västeråsen
Brinellgatan 4
SE-504 62 BORÅS

Phone / Fax / E-mail
+46 10 516 50 00
+46 33 13 55 02
info@sp.se

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3 Test methods and test procedure

Testing of stability and mechanical strength on armrest has been performed according to EN 16139:2013 Furniture – Strength, durability and safety – Requirements for non-domestic seating, level 1 and EN 1022:2005 Domestic furniture – Seating – Determination of stability.

Scope and test methods are explained in table 1 – 3.

The test was carried out in a climate of 23±2°C and 50 ±5% relative humidity.
The test was carried out 2014-07-09 – 2014-08-28.

4 Results

Table 1

| 1. | General requirements | EN 16139 | Req. fulfilled |
|------|--|----------|----------------|
| 1.1 | Accessible corners shall be rounded or chamfered. | 4.1 | Passed |
| 1.2 | Edges of the seat, back rest and arm rests which are in contact with the user when sitting in the chair shall be rounded or chamfered. | 4.1 | Passed |
| 1.3 | Edges of handles shall be rounded or chamfered in the direction of the force applied. | 4.1 | N/A |
| 1.4 | All other edges shall be free from burrs and rounded or chamfered. | 4.1 | Passed |
| 1.5 | Ends of hollow components shall be closed or capped. | 4.1 | Passed |
| 1.6 | Movable and adjustable parts shall be designed so that injuries and inadvertent operation are avoided. | 4.1 | N/A |
| 1.7 | It shall not be possible for any load bearing part of the seating to come loose unintentionally. | 4.1 | Passed |
| 1.8 | All parts which are lubricated to assist sliding shall be designed to protect users from lubricant stains when in normal use. | 4.1 | N/A |
| 1.9 | No shear and squeeze points when setting up and folding. | 4.2.1 | N/A |
| 1.10 | No shear and squeeze points under influence of powered mechanism. | 4.2.2 | N/A |
| 1.11 | No shear and squeeze points during use. | 4.2.3 | Passed |

Table 2

| 2. | Stability | EN 1022 | Req. fulfilled |
|-----|---|---------|----------------|
| 2.1 | Forwards overbalancing. | 6.2 | Passed |
| 2.2 | Forwards overturning for seating with footrest. | 6.3 | N/A |
| 2.3 | Sideways overbalancing, all seating without arms. | 6.4 | N/A |
| 2.4 | Sideways overbalancing, all seating with arms. | 6.5 | Passed |
| 2.5 | Rearwards overbalancing, all seating with backs. | 6.6 | Passed |

Table 3

| 3. | Strength, durability (armrests) | Reference EN 1728 | Cycles | EN 16139 level 1 | Req. fulfilled |
|----------------|--|----------------------|--------|-------------------------|-------------------|
| 3.5 | Arm sideways static load test. | 6.10 | 10 | 400 N | Passed |
| 3.6 | Arm downwards static load test. | 6.11 | 5 | 750 N | Passed |
| 3.7 | Vertical upwards static load on arm rests for stackable seating | 6.13.2 | 10 | 250 N | Passed |
| 3.7 Annex B | Vertical upwards static load on arm rests for seating which may be moved when occupied | 6.13.2 | 10 | 1200 N | N/A |
| 3.16 | Arm impact test. | 6.26 | 10 | 210/38 mm/ ^o | Passed |

The test results apply solely to the specimen tested.

SP Technical Research Institute of Sweden Wood Technology

Performed by

Examined by

Hans Eriksson

Bengt-Åke Andersson

Appendix

1. Pictures (1 page)

Appendix 1

Pictures**Figure 1** Armrests on Rib 08 armchair**Figure 2** Armrests on Rib 08 armchair