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Testing of Quickly folding table (1 appendix)

1 Introduction

By commission of Lammhults Möbel AB, a Quickly folding table has been tested by SP in accordance with Möbelfakta requirement 4.2.2 Tables for public locations, issue 0202.

2 Test specimen

Frame: Ø30 mm steel tube, foldable
Tabletop: 25 mm light weight wood block board. Beech veneer

The test specimen was selected by the client and arrived at SP on 29-03-2006.

3 Test methods and test procedure

Before testing the test specimen was conditioned for one week in a climate of $23^{\circ}\text{C} \pm 2^{\circ}\text{C}$ and $50\% \pm 5\%$ relative humidity, in accordance with the standards. Testing was also carried out in this climate.

The test methods are explained in Appendix 1 in accordance with Möbelfakta requirement 4.2.2 Tables for public locations, issue 0202.

The test was carried out over the period 18–25-04-2006.

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4 Results

The result is reported in Appendix 1.

At the end of the test, the piece of furniture tested did not exhibit any faults, fractures or other damage judged to affect its safety when used in accordance with SS-ENV 12521.

At the end of the test, the piece of furniture tested did not exhibit any damage or deformation which is expected to affect its function or appearance.

The test results apply solely to the specimen tested.

SP Swedish National Testing and Research Institute
Building Technology and Mechanics - Wood Technology

Per-Erik Petersson
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Appendix

Test report dated July 7, 2006 (4 pages).

4.2.2 Contract use - Tables


1.	General requirements	Safety	Strength/ Durability (performance)	References: Requirements
1.1	Components or parts accessible during normal use shall have no burrs, sharp edges or sharp points.	x ✓	-	ENV 12521. Clause 4.1
1.2	There shall be no open ended tubes.	x ✓	-	ENV 12521. Clause 4.1
1.3	Shear and squeeze points. The distance between moving parts accessible during normal use shall be kept to ≤ 8 mm or ≥ 25 mm in any position during movement.			ENV 12521. Clause 4.2
1.3.1	Shear and squeeze points when setting up and folding. The requirements in 1.3 are not applicable when shear and squeeze points are created only when setting up and folding.	x	-	ENV 12521. Clause 4.2.1
1.3.2	Shear and squeeze points under the influence of powered mechanisms. The requirements in 1.3 are applicable to all moving parts created by parts operated by powered mechanisms, including springs.	x	-	ENV 12521. Clause 4.2.2
1.3.3	Shear and squeeze points under body weight are not acceptable if unintentional movement of the parts may occur so that a hazard is created by the weight of the user.	x	-	ENV 12521. Clause 4.2.3
1.4	Shear and squeeze points shall not be created by normal movements and actions, e.g. to move the table by lifting or adjusting it. All lubricated parts shall, when in normal use, be designed to protect from contact with the lubricant.	-	x	Möbelfakta ²⁾

TEST RECORD FOR APPLICATION FOR MÖBELFAKTA CERTIFICATE

Appendix 1

4.2.2 Contract use - Tables

	Cont. General requirements	Safety	Strength/ Durability (performance)	References: Requirements
1.5	<p><u>Knock-down furniture / assembly instructions.</u> Parts or components being parts of a knock-down furniture shall be so prepared that the assembly can be done without any difficulties and in a reliable way. When the assembly requires an instruction it shall be easy to understand and be instructive. The instruction shall by a list, a diagram or in an other way make it possible to control that all parts or components are supplied. The instructions shall be provided in the official language(s) of the country where the product is sold.</p>	-	x	Möbelfakta ²⁾
	Stability	Safety	Strength / Durability (performance)	References: Requirements / Test method
2.	<p>The table shall not overturn. The stability requirements shall be fulfilled before and after the tests specified in clause 3 – Safety and Strength and Durability (performance).</p>	√		Möbelfakta ²⁾ / EN 1730. Clause 6.7
2.1	Main surface	x	- V1 = 200 N V2 = 400 N	
2.2	Ancillary surface	x	- V1 = 100 N V2 = 200 N	


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4.2.2 Contract use - Tables

3.	Safety, strength and durability (performance)	Cycles	Forces / loads (Normal height table) *	Forces / loads (Low table)**	Safety	Strength / Durability (performance)	References: Requirements / Test methods
3.1	<u>Horizontal static load test</u>						Möbelfakta ²⁾ / EN 1730. Clause 6.2
	Direction A-B	10	600 N	400 N	x ✓	- 1)	
	Direction D-C	10	300 N	200 N	x ✓	- 1)	
3.2	<u>Vertical static load test</u>						Möbelfakta ²⁾ / EN 1730. Clause 6.3
	Main surface	10	1250 N	1250 N	x ✓	- 1)	
	Ancillary surface	10	350 N	350 N	x	- 1)	
3.3	<u>Vertical fatigue test</u> Concerns pedestal and cantilever tables only.	10 000	500 N	500 N	x	- 1)	Möbelfakta ²⁾ / EN 1730. Clause 6.5
3.4	<u>Horizontal fatigue test</u>	10 000	450 N	300 N	x ✓	- 1)	Möbelfakta ²⁾ / EN 1730. Clause 6.4
3.5	<u>Drop test</u>	5	300 mm	200 mm	- ✓	x	Möbelfakta ²⁾ / EN 1730. Clause 6.8

* In accordance with ENV 12521. Clause.3: A normal height table has a height of ≥ 60 cm.


** In accordance with ENV 12521. Clause.3: A low table has a height of < 60 cm.

✓ The test has been completed without any remarks

⊗ The requirement is not fulfilled

1) When assessing the test results the "Criteria of defects" in accordance with "Strength and durability (performance)", below, shall also be considered.

2) The requirement is given by Möbelfakta as no requirement is given in other standards e.g. CEN- or ISO standards.


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4.2.2 Contract use - Tables

Assessment of results – criteria of defects:

Result:

Clause 3.1 Horizontal static load test, direction A-B 200 mm.

Clause 3.1 Horizontal static load test, direction C-D 36 mm.

Clause 3.2 Vertical static load test 18 mm.

Safety:

After carrying out the tests, the tested piece of furniture shall not demonstrate any ruptures, fractures or other damage that can affect the safe use of the article as per ENV 12521. This also implies that after the testing there shall be no burrs, sharp edges or sharp points. See clause 1.1.

Strength and durability (performance):

After carrying out the tests the tested piece of furniture did not demonstrate any ruptures, fractures or other damage that can affect the durability or appearance as:

- Fracture of any member, component or joint.
- Loosening of any joint intended to be rigid, which can be demonstrated by hand pressure.
- Deformation or wear of any part or component such that it's functioning is impaired.
- Loosening of any means of fixing components.
- Any movable part that no longer open or close freely, or catches that do not operate properly.

Normative references:

EN 1730:2000. Domestic furniture – Tables – Test methods for the determination of strength, durability and stability.

ENV 12521:2000. Domestic furniture – Tables – Mechanical and structural safety requirements.