Furniture testing centre is accredited by Lithuanian National Accreditation Bureau for tests of furniture safety, furniture materials and determination of formaldehyde content
Certificate No. LA.01.060

TEST REPORT No. BBC 23-247

21 06 2023
Vilnius

Determination of strength, durability and safety for
Charlie sofa 46

Customer	Johanson Design AB
Address of customer	Anders Anderssons väg 7, 285 35 Markaryd, Sweden
Application for test	A 23-110-3, date 15 05 2023
Date of receive test object	15 05 2023, sampling was made by the Customer
Manufacturer name	Johanson Design AB
Indication of normative document	EN 16139:2013 including corrigendum EN 16139:2013/AC:2013, EN 1728:2012 including corrigendum EN 1728:2012/AC:2013, EN 1022:2018
Date of test	08 06 2023 (beginning) 20 06 2023 (end)

Conclusion
Charlie sofa 46 **complies** with the standard EN 16139:2013 including corrigendum EN 16139:2013/AC:2013 (Furniture – Strength, durability and safety – Requirements for non-domestic seating) level of test severity L1 requirements.

Test object
Charlie sofa 46 with soft seat and backrest. Frame made of plywood and covered with paper cover, backrest supporting part made of metal tubular components. Base of seat is made of zig-zag springs. Soft part is padded with foam and covered with fabric. There are 4 plastic feet (40x30x10) mm fixed at the bottom of seating with two screws (Ø5x28) mm each.
External dimensions are: width 600 mm, depth 750 mm, height 770 mm. Seat height 455 mm, depth 515 mm. Description is for general information.

LIETUVOS RESPUBLIKA Viešoji įstaiga "FURNITEST" VILNIUS

Figure 1. *Charlie sofa 46*

Normative documents and test methods

EN 16139:2013 including corrigendum EN 16139:2013/AC:2013 Furniture – Strength, durability and safety – Requirements for non-domestic seating.

EN 1728:2012 including corrigendum EN 1728:2012/AC:2013 Domestic furniture. Seating. Test methods for the determination of strength, and durability.

EN 1022:2018 Furniture - Seating - Determination of stability.

LIETUVOS RESPUBLIKA
Viešoji įstaiga
"FURNITEST"
VILNIUS

Unless otherwise stated, the following tolerances are applicable:

- forces ± 5% of the nominal force;
- velocities ± 5 % of the nominal velocity;
- masses ± 1 % of the nominal mass;
- dimensions ± 1 mm of the nominal dimension;
- angles: ± 2° of the nominal angle.

The accuracy for the positioning of loading pads ±5 mm.

Charlie sofa 46 was stored in the laboratory room before the tests were performing. The tests were carried out in normal indoor ambient conditions at the temperature of (20±5)°C.

Test apparatuses

Apparatus 111 P certificate No. 21, apparatus 115 P certificate No. 8, apparatus 194 MP certificate No. 27, apparatus 241 MP certificate No. 22, apparatus 645 MB certificate No. 1.

Table 1. *Charlie sofa 46* test results

Clause, Standard	Test and method, loads	Requirements	Test results	Pass/Fail, N/A, N/T*
4 Safety, EN 16139:2013 including corrigendum EN 16139:2013/AC:2013		**EN 16139:2013 including corrigendum EN 16139:2013/AC:2013**		
4.1	**General**			
4.1	All parts of the seating with which the user comes into contact, during intended use This requirement is met when:	shall be designed to ensure that physical injury and damage are avoided, 4.1		
	- accessible corners	shall be rounded or chamfered, 4.1	no remarks	pass
	- edges of 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	no remarks	pass
	- the edges of handles in the direction of the force applied	shall be rounded or chamfered, 4.1		N/A
	- all other edges accessible during use	shall be free from burrs and rounded or chamfered, 4.1	no remarks	pass
	- ends of hollow components	shall be closed or capped, 4.1		N/A
	Movable and adjustable parts	shall be designed so that injuries and inadvertent operation are avoided, 4.1		N/A
	Load bearing part of the seating to come loose unintentionally	shall not be possible, 4.1	no remarks	pass
	All parts that are lubricated to assist sliding	shall be designed to protect users from lubricant stains when in normal use, 4.1		N/A
4.2	**Shear and squeeze points**			
4.2.1	Shear and squeeze points when setting up and folding	unless 4.2.2 or 4.2.3 are applicable, because the user can be assumed to be in control of his movements and to be able to cease applying the force immediately on experiencing pain.		N/A
	The edges of parts moving relative to each other and creating shear and squeeze points	shall be as specified in 4.1, 4.2.1		
4.2.2	Shear and squeeze points under influence of powered mechanisms	shall be no shear and squeeze points created by parts of the seating, 4.2.2		N/A

Table 1. *(continued)*

Clause, Standard	Test and method, loads	Requirements	Test results	Pass/Fail, N/A, N/T*
4.2.3	Shear and squeeze points during use	shall be no shear and squeeze points created by forces applied during normal use as well as during normal movements and actions, 4.2.3	no remarks	pass
4.3.3 Stability, EN 16139:2013 with corrigendum EN 16139:2013/AC:2013		**EN 16139:2013 with corrigendum EN 16139:2013/AC:2013, 4.3.3, 5 The seating shall fulfil the relevant requirements of EN 1022:2018**		
Annex B, B.1 All seating other than loungers, table B.1, Loads – All other seating, EN 1022:2018				
7.3.1, EN 1022:2018	1. Forwards overturning - force F_1 of 600 N, - force F_2 of 20 N	the seating shall not overturn, 7.2 EN 1022:2018, 4.3.1	no remarks	pass
7.3.2, EN 1022:2018	2. Forwards overturning for seating with foot rests - force F_1 of 600 N, - force F_2 of 20 N			N/A
7.3.3, EN 1022:2018	3. Corner stability - force F_1 of 300 N		no remarks	pass
7.3.4, EN 1022:2018	4. Sideways overturning, all seating without arms - force F_1 of 600 N, - force F_2 of 20 N, - 1 cycle		no remarks	pass
7.3.5, EN 1022:2018	5. Sideways overturning, all other seating - force F_1 of 250 N, - force F_2 of 350 N, - force F_3 of 20 N			N/A
7.3.6, EN 1022:2018	6. Rearwards overturning, all seating with back rests - force F_1 of 600 N, - height of loaded seat above the floor of 380 mm, - force F_2 of 177 N		no remarks	pass
6 Safety, strength and durability, EN 16139:2013 including corrigendum EN 16139:2013/AC:2013, table 1, level of test severity L1		**EN 16139:2013 including corrigendum EN 16139:2013/AC:2013, level of test severity L1, 5**		
6.4 EN 1728:2012	1. Seat and back static load test - seat: force of 1600 N, - back: force of 560 N (min. force of 410 N) - 10 times	safety, strength and durability requirements are fulfilled when during and after testing: a) there are no fractures of any member, joint or component; b) there are no loosening of joints intended to be rigid; c) no major structural element is significantly deformed; d) the seating fulfils its functions after removal of the test loads, 5	no remarks	pass
6.5 EN 1728:2012	2. Seat front edge static load test - force of 1300 N, - 10 times		no remarks	pass
6.6 EN 1728:2012	3. Vertical static load on back - seat load of 1300 N, - force of 600 N, - 10 times		no remarks	pass

Table 1. *(continued)*

Clause, Standard	Test and method, loads	Requirements	Test results	Pass/Fail, N/A, N/T*
6.8, 6.9 EN 1728:2012	4. Foot rest and leg rest static load test - force of 1300 N - 10 times	safety, strength and durability requirements are fulfilled when during and after testing: a) there are no fractures of any member, joint or component; b) there are no loosening of joints intended to be rigid; c) no major structural element is significantly deformed; d) the seating fulfils its functions after removal of the test loads, 5		N/A
6.10 EN 1728:2012	5. Arm sideways static load test - force of 400 N - 10 times			N/A
6.11 EN 1728:2012	6. Arm downwards static load test - force of 750 N, - 5 times			N/A
6.13.1 6.13.2 EN 1728:2012	7. Vertical upwards static load on arm rests - seat load of 250 N, - lift 10 times during ≥ 10 s			N/A
6.17 EN 1728:2012	8. Seat and back durability test - seat force of 1000 N - back force of 300 N - 100 000 cycles		no remarks	pass
6.18 EN 1728:2012	9. Seat front edge durability test - force of 800 N, - 50 000 cycles		no remarks	pass
6.20 EN 1728:2012	10. Arm durability test - force of 400 N, - 30 000 cycles			N/A
6.21 EN 1728:2012	11. Foot rest durability test - force of 1000 N - 50 000 cycles			N/A
6.15 EN 1728:2012	12. Leg forward static load test - seat load of 1000 N, - force of 500 N - 10 times			N/A
6.16 EN 1728:2012	13. Leg sideways static load test - seat load of 1000 N, - force of 400 N, - 10 times			N/A
6.24 EN 1728:2012	14. Seat impact test - drop height of 240 mm, - 10 times		no remarks	pass
6.25 EN 1728:2012	15. Back impact test - height of fall 210/38 mm/º, - 10 times		no remarks	pass
6.26 EN 1728:2012	16. Arm impact test - height of fall 210/38 mm/º, - 10 times			N/A
6.27.1 EN 1728:2012	17. Drop test (multiple seating) - drop height: not applicable for level L1, - 2 x 5 times			N/A
6.14 EN 1728:2012	18. Auxiliary writing surface static load test - force of 300 N, - 10 times			N/A
6.22 EN 1728:2012	19. Auxiliary writing surface durability test - force of 150 N - 10 000 cycles,			N/A

Table 1. *(end)*

Clause, Standard	Test and method, loads	Requirements	Test results	Pass/Fail, N/A, N/T*
7 Information for use EN 16139:2013 including corrigendum EN 16139:2013/AC:2013		**EN 16139:2013 including corrigendum EN 16139:2013/AC:2013**		
7	Information for use	shall be available in the language of the country in which it will be delivered to the end user. It shall contain at least the following details: a) information regarding the intended use; b) if the chair is fitted with adjusting mechanisms: instruction for operating the adjusting mechanisms; c) assembly instructions, where applicable; d) instruction for the care and maintenance of the chair; e) if the seating is fitted with castors: information on the choice of castors in relation to the floor surface; f) if the seating is fitted with adjustment mechanisms comprising an energy accumulator, an additional note is required pointing out that only instructed personnel may replace and maintain adjustment mechanisms containing energy accumulators	Information for use was not provided	N/T
Remarks, comments				

*N/A: not applicable for this product design, N/T: not tested

Head of furniture testing centre Manvydas Mickus

Tests were carried by the engineer Laimonas Staškūnas

LIETUVOS RESPUBLIKA Viešoji įstaiga "FURNITEST" VILNIUS