

Intertek Consumer Goods GmbH · Würzburger Straße 152 · 90766 Fürth · Germany

**Flokk AS**  
Drammensveien 145,  
0277 Oslo,  
Norway

Fürth, 21 February 2025

## TEST REPORT No. FUHLFP2024-05690

Date sample received: 06 August 2024  
Period of testing: 06 August 2024 – 21 February 2025  
Technical Director: Kerstin Scharrer

**Test Item:** “Vancouver Lite” series

**Test:** Safety tests to EN 16139, test level 1

### Determination:

The “Vancouver Lite” series, selected samples “VL3 H”, “VL1 V”, “VL2,5 V”, “VL2 V” have been tested in accordance with EN 16139 (test level 1) and the current state of the art.

The 4 submitted models do represent all characteristics of the whole “Vancouver Lite” series which also includes further models “VL2 H”, “VL2.5H”, “VL3 V”, “VL1 H”, “VL W1”, “VL W2”, “VL W2.5” and “VL W3”, which were not necessary to submit for testing.

In summary, the general and mechanical safety requirements **were met**.

Technical data and results as well as detailed test conditions and requirements are contained in the following pages.

Reviewed by:

**Intertek Consumer Goods GmbH**



Laborleitung Hardlines / Lab Manager Hardlines  
Frank Urbich

Tested by:

**Intertek Consumer Goods GmbH**



Sachverständiger / Technical Expert  
Anh Vu (Vincent) Nguyen

### Product identification:

Test sample: Armchair and sofas  
Model name: Vancouver Lite

Manufacturer: Flokk sp.z.o.o  
UL Górnicza 8  
62-700 Turek  
Poland

Number of test samples: 1 piece of each VL3 H, VL1 V, VL2,5 V, VL2 V  
Distributor: Flokk AS  
Delivered on: 06.08.2024  
Delivered by: Flokk sp.z.o.o

### Product documents:

Instructions for use

### Scope of the investigations:

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

### Legend:

Abbreviations:

\* = Test method is not part of the accreditation scope  
\*\* = Outsourcing  
n.a. = not applicable  
n.t. = not tested  
n.d. = not determinable (< LoQ)  
LoQ = limit of quantification  
CS = Combined sample  
P = passed  
F = failed

### Applicability of test results:

Tolerances unless otherwise specified the following tolerances apply:

The tests specify the use of forces. However, masses may be used. In that case, as equivalent for 10 N a mass 1 kg can be calculated.

The test results refer solely to the samples tested.

The digital pictures shown in this report are for additional information only and are not part of this report.



## Test equipment list

The test equipment list contains a list of the measuring tools used and measuring equipment, gauges, templates and load weights that were used in accordance with the scope of the investigations.

Testing machines and devices as well as any connections that are necessary for the performance of tests are not an integral part of the test equipment list.

The following test equipment were available for testing in accordance with the scope of the investigations:

Clause	Test equipment	Equipment no.
General test	Ruler	PM_HL_18.321
General test	Scale	PM_HL_18.314
General test	Band ruler 3000 mm	PM_HL_18.376
General test	Calliper	PM_HL_17.070
Strength and durability test	Load cell 5 kN	PM_HL_18.358
Strength and durability test	Load cell 5kN	PM_HL_18.359
Strength and durability test	Load cell 5kN	PM_HL_18.360
Strength and durability test	Load cell 5 kN	PM_HL_18.361
Strength and durability test	Load cell 2 kN	PM_HL_18.362
Strength and durability test	Load cell 5,5 kN	PM_HL_18.363
Strength and durability test	Seat dummy	PM_HL_18.199
Stability	Pull-Push-Gauge	PM_HL_17.026
Stability	Stability Table	PM_HL_18.107
Stability	Protractor	PM_HL_18.226
Stability	Stamp	PM_HL_18.108
Stability	Armrest stamp	PM_HL_18.051
Stability	Load disc 10 Kg	PM_HL_18.234
Stability	Load disc 10 Kg	PM_HL_18.233
Stability	Load disc 10 Kg	PM_HL_18.235
Stability	Load disc 10 Kg	PM_HL_18.238
Stability	Load disc 10 Kg	PM_HL_18.230
Stability	Load disc 5 Kg	PM_HL_18.369
Stability	Load disc 2,5 Kg	PM_HL_17.345
Stability	Load disc 0,5 Kg	PM_HL_18.263
Stability	Load disc (wood)	PM_HL_18.216
Stability	Load disc (wood)	PM_HL_18.217
Stability	Load disc (wood)	PM_HL_18.218
Stability	Load disc (wood)	PM_HL_18.219
Stability	Load disc (wood)	PM_HL_18.220
Stability	Load disc (wood)	PM_HL_18.221
Stability	Load disc (wood)	PM_HL_18.222
Stability	Load disc (wood)	PM_HL_18.223
Stability	Load disc (wood)	PM_HL_18.224
Stability	Load disc (wood)	PM_HL_18.225



Clause	Test equipment	Equipment no.
Stability	Load disc (wood)	PM_HL_18.226
Stability	Load disc (wood)	PM_HL_18.227
Stability	Load disc (wood)	PM_HL_18.228
Stability	Load disc (wood)	PM_HL_18.229
Loading point template - A-B	Measurement template	PM_HL_18.109



## General Testing

### Technical characteristics

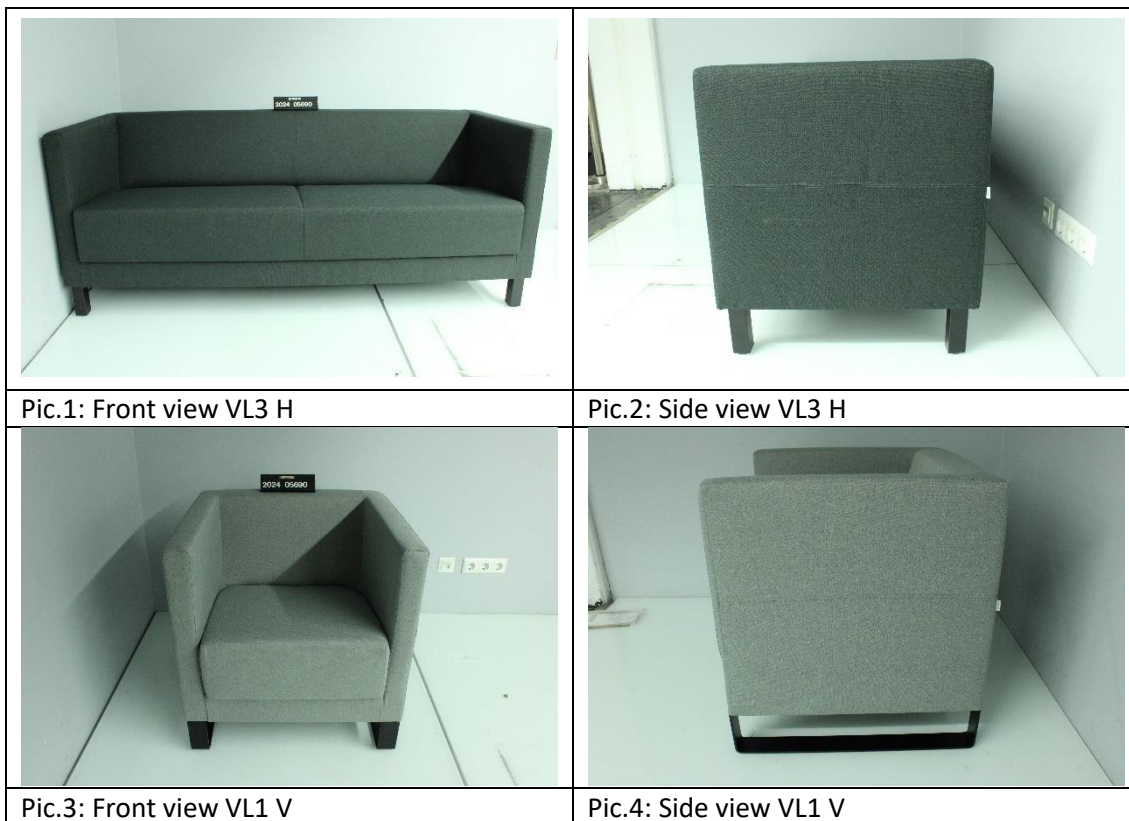
#### General dimensions

Parameters	VL1 H	VL2 H	VL2.5 H	VL3 H	VL1 V	VL2 V	VL2.5 V	VL3 V
Depth (mm):	680	680	680	680	680	680	680	680
Height (mm):	710	710	710	710	710	710	710	710
Width mm):	700	1230	1500	1780	700	1230	1500	1780
Net weight (kg):	23.5	32	36	42.5	27.5	36	40	46.5

#### Product description:

Armchairs and sofas (in three sizes) come on metal cantilever and metal or wooden legs

#### Photo documentation:



	
<p>Pic.5: Front view VL2,5 V</p>	<p>Pic.6: Side view VL2,5 V</p>
	
<p>Pic.7: Front view VL2 V</p>	<p>Pic.8: Side view VL2 V</p>

## Technical Tests

Test method/Requirements	Test parameter/Results	Verdict
<p><b>Strength, durability, and safety according to EN 16139:2013, Level 1</b></p> <p><b>Safety</b></p> <p>The seating shall be so designed, that the injury risk of the user is minimized.</p> <p>All accessible components shall be so designed, that a physical injury and other hazards are avoided.</p> <p>This requirement is fulfilled, if:</p> <ul style="list-style-type: none"> <li>a) all accessible corners are rounded or chamfered;</li> <li>b) the edges of the seat, back and armrest which the user is in contact with during sitting, are rounded or chamfered;</li> <li>c) the edges of the handles in direction of the application are rounded or chamfered;</li> <li>d) all other edges are free of burrs, rounded or chamfered</li> <li>e) ends of hollow tubulars are covered or capped.</li> </ul> <p>Movable and adjustable components are so designed, that injuries and unintended operation are avoided.</p> <p>No load bearing component of the seating shall get loosened which is intended to be rigid.</p> <p>All components, which are lubricated for a better gliding, shall be so designed, that the user is protected against soiling during intended use.</p>	<p>All accessible corners are rounded and chamfered</p> <p>mentioned edges are rounded or chamfered</p> <p>No handle</p> <p>No burrs</p> <p>Open hollow tubulars components are covered</p> <p>No moveable nor adjustable parts</p> <p>No loosened load bearing component</p> <p>Protected against soiling</p>	<p>P</p> <p>P</p> <p>n.a.</p> <p>P</p> <p>P</p> <p>P</p> <p>P</p> <p>P</p>
<p>Note: None</p>		

Test method/Requirements	Test parameter/Results	Verdict
<p><b>4.2 Shear and squeeze points</b></p> <p><b>4.2.1 Shear and squeeze points when setting up and folding</b></p> <p>Unless 4.2.2 or 4.2.3 are applicable, shear and squeeze points that are created only during setting up and folding, including tipping seat actions, are acceptable, because the user can be assumed to be in control of his/her movements and to be able to cease applying the force immediately upon experiencing pain. The edges of parts moving relative to each other and creating shear and squeeze points shall be as specified in 4.1.</p> <p><b>4.2.2 Shear and squeeze points under influence of powered mechanism</b></p> <p>With the exception of tipping seats there shall be no shear and squeeze points created by parts of the seating operated by powered mechanisms, e.g. springs and gas lifts.</p> <p><b>4.2.3 Shear and squeeze points during use</b></p> <p>There shall be no shear and squeeze points created by forces applied during normal use as well as during normal movements and actions</p> <p><b>Stability</b></p> <p>The seating shall not overturn under the following conditions:</p> <p>a) by pressing down on the front edge of the seat surface in the median plane; b) by applying a load on the seat surface via the front corner; c) by leaning sideways on an item of seating with or without arm rests; d) by leaning against the back rest; e) by sitting on the front edge of the seat; f) by loading the foot rest.</p> <p>The requirement is considered to be met if the seating complies with EN 1022:2018.</p>	<p>No setting up or folding</p> <p>No shear and squeeze points</p> <p>No shear and squeeze points</p> <p>No overturn</p> <p>No overturn</p> <p>No overturn</p> <p>No overturn</p> <p>No overturn</p> <p>No footrest</p>	<p>n.a.</p> <p>P</p> <p>P</p> <p>P</p> <p>P</p> <p>P</p> <p>n.a.</p>
Note: None		



Test method/Requirements	Test parameter/Results	Verdict
<p><b>Safety of the construction</b></p> <p>The following tests described in Table 1 are considered to be relevant to safety: Test No.: 1, 2, 4, 6, 7, 8, 9, 10, 12, 13, 14. Seating is considered to satisfy the safety requirements if, on completion of the relevant tests, the chair satisfies all requirements.</p> <p><b>Safety, strength and durability requirements</b></p> <p>The chair shall be constructed to ensure that it does not create a risk of injury to the user of the chair under the following conditions:</p> <ul style="list-style-type: none"> <li>- sitting on the seat, both centrally and off-centre;</li> <li>- moving forward, backwards, and sideways while sitting in the chair;</li> <li>- leaning over the arm rests;</li> <li>- pressing down on the arm rests while getting up from the chair.</li> </ul> <p>These safety, strength and durability requirements are fulfilled when during and after testing in accordance with Table:</p> <p>a) there are no fractures of any member, joint or component;</p> <p>b) there are no loosening of joints intended to be rigid;</p> <p>c) no major structural element is significantly deformed;</p> <p>d) the chair fulfils its functions after removal of the test loads.</p> <p>The stability requirements are fulfilled when after testing in accordance with Table 1 the seating does not overturn.</p>	<p>See table 1</p> <p>See table 1</p> <p>no fracture</p> <p>no loosening</p> <p>no significant deformation</p> <p>full functioning</p> <p>no overturn after testing</p>	<p>P</p> <p>P</p> <p>P</p> <p>P</p> <p>P</p> <p>P</p>
<p>Note: None</p>		



**Table 1: Safety, strength and durability tests**

Test	EN 1728	Loading <sup>a</sup>	Level 1	Verdict
Seat and back static load test	6.4	Seat Back	10 times with 1.600 N 10 times with 560 N	P P
Static load test	6.5	Seat front edge	10 times with 1.300 N	P
Vertical static load on back <sup>b</sup>	6.6	Seat load Back	1.300 N 10 times with 600 N	P
Static load test	6.8	Foot rest/leg rest	10 times with 1.300 N	n.a.
Sideways static load test	6.10	Arm rests	10 times with 400 N	P
Downwards static load test	6.11	Arm rests	5 times with 750 N	P
Vertical upwards static load	6.13	Seat load Arm rests	250 N 10 times	P
Seat and back durability test	6.17	Seat Back <sup>c</sup>	100.000 cycles with 1.000 N 100.000 cycles with 300 N	P P
Durability test	6.18	Seat front edge	50.000 cycles with 800 N	P
Durability test	6.20	Arm rests	30.000 cycles with 400 N	P
Durability test	6.21	Foot rest / leg rest	50.000 cycles with 1.000 N	n.a.
Leg forward static load test	6.15	Seat load Legs	1.000 N 10 times with 500 N	P
Leg sideways static load test	6.16	Seat load Legs	1.000 N 10 times with 400 N	P
Seat impact test	6.24	Drop height	10 times of 240 mm	P
Back impact test	6.25	Height of fall Fall angle	10 times of 210 mm or 10 times of 38°	P
Arm impact test	6.26	Height of fall Fall angle	10 times of 210 mm or 10 times of 38°	P
Drop test (multiple seating)	6.27.1	Drop height	2 x 5 times of 450 mm <sup>d</sup>	n.a.
Static load test	6.14	Auxiliary writing surface	10 times with 300 N	n.a.
Durability test	6.22	Auxiliary writing surface	10.000 cycles with 150 N	n.a.

<sup>a</sup> Seat load on parts not undergoing test: 750 N.

<sup>b</sup> The test is only applicable for chairs without head/neck rest and for chairs with a height of the backrest < 1 000 mm above ground

<sup>c</sup> No minimum force defined

<sup>d</sup> only level 2

Test	EN 1728	Loading	Level 1	Verdict
Drop test for stacking seating	6.27.1	Drop height	10 times of 210 mm	n.a.
Backward fall test	6.28	cycles	5	P
Drop test from the height of a table	6.27.3	Front leg: Rear leg:	5 times with 600 mm 5 times with 600 mm	n.a. n.a.

**Table 3: Loads, Masses and Cycles of stability tests**

Test description	Loads	Result	Cycles	Verdict
Overturning over the front corner	$M_1 = 30 \text{ kg}$	300 N	1	P
Overturning over the front edge	$F_1 = 600 \text{ N}$ $F_2 = 20 \text{ N}$	$F_2 > 50 \text{ N}$	1	P
Overturning over the front edge for seating with footrest	$F_1 = 600 \text{ N}$ $F_2 = 20 \text{ N}$	--	1	n.a.
Overturning over the side edge for seating without armrests	$F_1 = 600 \text{ N}$ $F_2 = 20 \text{ N}$	--	1	n.a.
Overturning over the side edge for seating with armrests	$F_1 = 250 \text{ N}$ $F_2 = 350 \text{ N}$ $F_3 = 20 \text{ N}$	$F_3 > 50 \text{ N}$	1	P
Overturning backwards for seating with backrest inclination	$F_1 = 600 \text{ N}$ $F_2 =$  If seating Height < 720 mm (0,2857 * (1 000 -Seating height in mm   If seating height > 720 mm  $F_2 = 157 \text{ N}$	$F_2 > 200 \text{ N}$	1	P
tilting backrest	13 load discs	13 load discs	1	n.a.

Test method/Requirements	Test parameter/Results	Verdict
<p><b>User manual</b></p> <p>The user manual has to be provided in the language of the country, in which the seating is distributed to the end-user. It shall contain at least the following information:</p> <p>a) Intended use;                      b) Instructions for the use of adjustment features, if applicable                      c) Assembling instruction, if applicable;                      d) Maintenance instructions;                      e) If the chair is equipped with castors:                          Instructions on the choice of castors related to the floor covering;                      f) If the chair is equipped with an energized seat height adjustment feature an additional information is required, that only trained professionals may change or repair the energized seat height adjustment feature.</p>	<p><b>Requirements met</b></p> <p>Chairs available by specialist shop</p> <p>Office / lounge available</p> <p>no assembly required across homepage</p> <p>no castor</p> <p>no height adjustment feature</p>	<p></p> <p>P</p> <p>P</p> <p>P</p> <p>P</p> <p>n.a.</p> <p>n.a.</p>
<p>Note: None</p>		

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