

# Test Report

Report No.: 104848-16



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Jha/jnas/hbs  
Order no.:  
No. of appendices: 2

**Item:** Model: J39

Type:	Chair				
Length:	450mm	Width:	490mm	Height:	770mm
Weight:	4,56kg				
Materials:	Lacquered beech, papercord				

**Sampling:** The test material was sampled by the client and received at the Danish Technological Institute 12-04-2022.

**Method:** ANSI/BIFMA X5.4-2020 American National Standard For Office Furnishings – Public and Lounge Seating

**Period:** The testing was carried out from 25-04-2022 to 13-06-2022.

**Result:** Model J39 fulfils the requirements of ANSI/BIFMA X5.4-2020

Individual results appear from Appendix 1.

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

**Terms:** Accredited testing was carried out in compliance with international requirements (EN/ISO/IEC 17025:2005) and in compliance with Danish Technological Institute's General Terms and Conditions regarding Commissioned Work accepted by Danish Technological Institute. The test results apply to the tested products only. This report may be quoted in extract only if the laboratory has granted its written consent.

**Date/place:** 15-06-2022, Danish Technological Institute, Wood and Biomaterials, Taastrup

**Signature:** Test responsible

Co-signatory



## Testing of Model: J39

### ANSI/BIFMA X5.4

Test		Result										
<b>5</b>	<b>Backrest Strength Test – Horizontal – Static (backrest height: &gt;200 mm)</b>											
	Functional load: 667 N x 1 min. Proof load: 1112 N x 10 sec.	Passed										
<b>6</b>	<b>Backrest Strength Test – Vertical – Static (backrest thickness. &gt;50 mm)</b>											
	Functional load: 890 N x 1 min. Proof load: 1334 N x Min. 10 sec.	N/A										
<b>7</b>	<b>Backrest Durability Test – Horizontal – Cyclic</b>											
	Seat constant load: 109 kg Force on back: 334 N x 120,000 cycles	Passed										
<b>8</b>	<b>Backrest Durability Test – Vertical – Cyclic (backrest thickness: &gt;50 mm)</b>											
	Force on back: 890 n x 10,000 cycles	N/A										
<b>9</b>	<b>Arm Strength Test – Horizontal – Static (all units with arms)</b>											
	Functional load: 445/592 N x 1 min. inward + outward Proof load: 667/890 N x 10 sec. inward + outward	N/A										
<b>10</b>	<b>Arm Strength Test – Vertical – Static</b>											
	Functional load: 890/750 N x 1 min. Proof load: 1135/1125 N x Min 10 sec.	N/A										
<b>11</b>	<b>Arm Durability Test for Multiple Seating Units – Horizontal – Cyclic</b>											
	Force on arm: 445 N x 50,000 cycles	N/A										
<b>12</b>	<b>Arm Durability Test for Multiple Seating Units – Vertical – Cyclic</b>											
	Force on arm: 667 N x 10,000 cycles	N/A										
<b>13</b>	<b>Arm Durability Test for Single Seat Units – Angular – Cyclic</b>											
	Force on (each) arm: 400 N x 60,000 cycles	N/A										
<b>14</b>	<b>Seating Durability Test – Cyclic</b>											
	Impact test back: 57 kg x 100,000 cycles (Weight in seat(s) not being tested: 109 kg)	Passed										
<b>15</b>	<b>Drop Test – Dynamic</b>											
	Functional load: 102 kg impact test bag – drop from 152 mm Proof load: 136 kg impact test bag – drop from 152 mm	Passed										
<b>16</b>	<b>Leg Strength Test</b>											
<b>16.3</b>	<b>Front Load Test</b>											
	Functional load: 334 N x 1 min. Proof load: 503 N (max. 667 N) x Min. 10 sec.	Passed										
<b>16.4</b>	<b>Side Load Test</b>											
	Functional load: 334 N x 1 min. Proof load: 503 N (max. 667 N) x Min. 10 sec.	Passed										
<b>17</b>	<b>Unit Drop Test – Dynamic</b>											
	<table border="1"> <thead> <tr> <th>Unit weight</th> <th>Drop height</th> </tr> </thead> <tbody> <tr> <td>&lt;45 kg (100 lbs)</td> <td>180 mm (7.1 in.)</td> </tr> <tr> <td>45–90 kg (100-200 lbs)</td> <td>120 mm (4.7 in.)</td> </tr> <tr> <td>90-136 kg (200-300 lbs)</td> <td>60 mm (2.4 in.)</td> </tr> <tr> <td>&gt;136 kg (300 lbs)</td> <td>N/A</td> </tr> </tbody> </table>	Unit weight	Drop height	<45 kg (100 lbs)	180 mm (7.1 in.)	45–90 kg (100-200 lbs)	120 mm (4.7 in.)	90-136 kg (200-300 lbs)	60 mm (2.4 in.)	>136 kg (300 lbs)	N/A	Passed
Unit weight	Drop height											
<45 kg (100 lbs)	180 mm (7.1 in.)											
45–90 kg (100-200 lbs)	120 mm (4.7 in.)											
90-136 kg (200-300 lbs)	60 mm (2.4 in.)											
>136 kg (300 lbs)	N/A											

## Testing of Model: J39

Test		Result
<b>18</b>	<b>Caster/Unit Base Durability Test – Cyclic</b>	
	Seat constant load: 122 kg On surface with obstacles: 500 cycles On surface without obstacles: 25,000 cycles Pull force on caster: 22 N x 1 min	N/A
<b>19</b>	<b>Swivel Test – Cyclic</b>	
	Seat constant load: 122 kg 90° rotation x 120,000 cycles	N/A
<b>20</b>	<b>Tilt/rocker/glider Mechanism Test – Cyclic</b>	
	Seat constant load: 109 kg Back tilt: 200,000 cycles	N/A
<b>21</b>	<b>Stability Tests</b>	
<b>21.3</b>	Rear stability: 6 discs (non-tilting unit)	Passed
<b>21.4</b>	13 discs (tilting unit)	
<b>21.5</b>	Force on back: $F = 0.1964 (1195-H)$ (H = seat height in mm)	
<b>21.6</b>	Front stability: Units <36.3 kg: Seat load: 600 N-pull force 20 N Units >36.3 kg: Pull force: 142 N-45° angle	
<b>22</b>	<b>Tablet Arm Load Ease Test – Cyclic</b>	
	25 kg x 100,000 cycles	N/A
<b>23</b>	<b>Tablet Arm Load Test – Static</b>	
	68 kg downward x 1 min.	N/A
<b>24</b>	<b>Structural Durability Test – Side-to-Side - Cyclic</b>	
	Seat constant load: 109 kg Push/pull force: 334 N x 25,000 cycles	Passed
<b>25</b>	<b>Cycle Test for Recliners – Backrest and/or Legrest Mechanism Durability</b>	
	Backrest constant load: 56 kg Seat constant load: 56 kg Legrest constant load: 12 kg Legrest + back: 25,000 cycles each	N/A
<b>26</b>	<b>Legrest Strength Test – Static Load</b>	
	Seat constant load: 112 kg/56 kg Load on legrest: 13.6 kg (no retraction)	N/A
<b>27</b>	<b>Footrest Static Load Test for Stools – Vertical</b>	
	Functional load: 445 N x 1 min (in <b>two</b> opposite directions) Proof load: 1334N x 10 sec.	N/A
<b>28</b>	<b>Footrest Durability Test for Stools – Vertical Cyclic</b>	
	Force on footrest: 890 N x 50,000 cycles	N/A

N/A – Not applicable

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## Testing of Model: J39

### Photo

