

# TEST REPORT

Performance Testing Services

**PTS Test Report: 3271**

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Revision: Release

Test Report Date: 03/27/13  
 Sample Receipt Date: 03/11/13  
 Sample Receipt Cond.: Normal  
 Test Start Date: 03/11/13  
 Test Completion Date: 03/27/13

**Customer:** Jerry Vetter  
 Ivars USA  
 2803 S. Taylor Drive  
 Sheboygan, WI 53081

## 1.0 Scope

To validate the Ivars Malika Guest Chair to the applicable requirements of ANSI/BIFMA X5.1-2011.

## 2.0 Product Description

Sample ID	Description	Qty
3271-1 3271-2	Ivars Malika Guest Chairs.	2



3271-1



3271-2

## 3.0 Summary

When tested to the applicable sections of ANSI/BIFMA X5.1-2011, the samples met all of the applicable requirements.

## 4.0 Test Results

Sample ID	ANSI/BIFMA X5.1-2011 Test Description & Acceptance Criteria	Met Criteria?	Comments/Notes
3271-1	<b>Section 6 Backrest Strength Test – Static – Type II/III</b> <i>Functional Load</i> A functional load applied once shall cause no loss of serviceability to the chair. <i>Proof Load</i> A proof load applied once shall cause no sudden and major change in the structural integrity of the chair. Loss of serviceability is acceptable.	Yes	Functional Load = 150 lbf for 1 minute. Proof Load = 250 lbf for 1 minute.

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## 4.0 Test Results cont.

Sample ID	ANSI/BIFMA X5.1-2011 Test Description & Acceptance Criteria	Met Criteria?	Comments/Notes
3271-1	<b>Section 8 Drop Test – Dynamic</b> <u>Functional Load</u> <i>There shall be no loss of serviceability.</i> <u>Proof Load</u> <i>There shall be no sudden and major change in the structural integrity of the chair. Loss of serviceability is acceptable.</i>	Yes	Functional Load = 225 lbs – 6” drop. Proof Load = 300 lbs – 6” drop.
3271-2	<b>Section 11 Seating Durability Tests – Cyclic</b> <i>There shall be no loss of serviceability to the chair after completion of both the impact and load-ease tests.</i>	Yes	-140,000 cycles total. -1.2” drop height.
3271-1	<b>Section 12.3.1 Rear Stability Test for Type III Chairs</b> <i>The chair shall not tip over when the Fmin calculated force is applied.</i>	Yes	-Actual force to tip = 55.4 lbf. -Fmin = [1.1 (47-18” seat height)] = 31.9 lbf min. -Chair was loaded with 6 disks.
3271-1	<b>Section 12.4 Front Stability</b> <i>The chair shall not tip over as the result of the 4.5 lbf force application.</i>	Yes	-Force to tip = 23.16 lbf (4.5 lbf min. required).
3271-2	<b>Section 13 Arm Strength Test – Vertical – Static</b> <u>Functional Load</u> <i>A functional load applied once shall cause no loss of serviceability.</i> <u>Proof Load</u> <i>A proof load applied once shall cause no sudden and major change in the structural integrity of the unit. Loss of serviceability is acceptable.</i>	Yes	Left arm tested.  Functional Load = 169 lbf @ 1 minute. Proof Load = 253 lbf @ 1 minute.
3271-2	<b>Section 14 Arm Strength Test – Horizontal – Static</b> <u>Functional Load</u> <i>A functional load applied once shall cause no loss of serviceability.</i> <u>Proof Load</u> <i>A proof load applied once shall cause no sudden and major change in the structural integrity of the unit. Loss of serviceability is acceptable.</i>	Yes	Right arm tested.  Functional Load = 100 lbf @ 1 minute. Proof Load = 150 lbf @ 1 minute.
3271-1	<b>Section 16 Backrest Durability Test - Cyclic Type II/III</b> <i>There shall be no loss of serviceability.</i>	Yes	120,000 cycles total (80K center, 20K each offset).
3271-1	<b>Section 18 Leg Strength Test – Front &amp; Side Application</b> <u>Functional Load</u> <i>Functional load(s) applied once in each direction shall cause no loss of serviceability.</i> <u>Proof Load</u> <i>Proof load(s) applied once in each direction shall cause no sudden and major change in the structural integrity of the chair. Loss of serviceability is acceptable.</i>	Yes	<u>Front &amp; Side Leg Loads</u> Functional Loads Applied = 75 lbf for 1 minute. Proof Loads Applied = 113 lbf for 1 minute.
3271-2	<b>Section 21 Arm Durability Test – Cyclic</b> <i>There shall be no loss of serviceability.</i>	Yes	60,000 cycles.

All testing performed from 03/11/13 to 03/27/13 with temperature and humidity ranges at 22.1-26.7°C/32-39%RH.

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THIS TEST SUMMARY REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL ONLY WITH PERFORMANCE TESTING SERVICES APPROVAL.  
TEST RESULTS IN THIS TEST SUMMARY REPORT RELATE ONLY TO THE SPECIFIC TEST SAMPLE(S) LISTED!

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## 4.1 Test Photos



Section 6



Section 8



Section 11



Section 12



Section 13



Section 14

Section 16

Section 18

Section 21

## 5.0 Test Equipment Used

Equipment#	Serial Number	Description	Calibration Due
426	PTS	Measuring Rule – 36"	08/13/13
409	Z9205D066	Shimpo Digital Force Gauge – 50 lbf	04/21/13
431	PTS	Front Stability Fixture	07/13/13
435	PTS	Stability Loading Disks w/support fixture	08/03/13
416	124838	Load Cell w/cond. – 1000 lbf	Verify/Cal. before use
418	212769	Load Cell w/cond. – 1000 lbf	Verify/Cal. before use
414	124829	Load Cell w/cond. – 1000 lbf	Verify/Cal. before Use
PTS	PTS	25 lb & 50 lb weights/bags	06/01/13
411	M111130	Load Cell w/cond. – 500 lbf	Verify/Cal. before use
412	124857	Load Cell w/cond. – 1000 lbf	Verify/Cal. before use
402	Y9803D032	Shimpo Digital Force Gauge – 500 lbf	03/15/15
419	31-038-3	Digital Protractor	10/10/13

Approved By: \_\_\_\_\_

Kirk Craymer  
Test Engineer