

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	Section 6 Backrest Strength Test – Static – Type II/III <u>Functional Load</u> <i>A functional load applied once shall cause no loss of serviceability to the chair.</i> <u>Proof Load</u> <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.</i>	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	Section 8 Drop Test – Dynamic <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	Section 11 Seating Durability Tests – Cyclic <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	Section 12.3.1 Rear Stability Test for Type III Chairs <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	Section 12.4 Front Stability <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	Section 13 Arm Strength Test – Vertical – Static <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	Section 14 Arm Strength Test – Horizontal – Static <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	Section 16 Backrest Durability Test - Cyclic Type II/III <i>There shall be no loss of serviceability.</i>	Yes	120,000 cycles total (80K center, 20K each offset).
3271-1	Section 18 Leg Strength Test – Front & Side Application <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 & Side Leg Loads</u> Functional Loads Applied = 75 lbf for 1 minute. Proof Loads Applied = 113 lbf for 1 minute.
3271-2	Section 21 Arm Durability Test – Cyclic <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.

Performance Testing Services 5241 Edgeway Suite B Allendale, MI 49401 (616) 895-1244 Fax: (616) 895-1244

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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

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