

Requester:	Versa Tables 14105 Avalon Blvd. Los Angeles, CA 90061
Contact Name / Number:	Jonathan Spicer / 310-353-7100 ext. 107
Dates Tested:	10/12/09 -10/21/09
Date Submitted:	10/22/09
Technician:	Jon Roblin, Jason Wisniewski
Customer Request I.D.	N/A

Scope: To test the 72" x 30" Freedom Drafting table for BIFMA compliance. The 72" x 30" table was used for testing as it was deemed to be the worst case size. Model is also available in a 60" x 30" size.

Requested Tests:

<u>Test Name</u>	<u>Requirement</u>
Stability Under Vertical Load Test	ANSI/BIFMA X5.5-2008, Section 4.3
Concentrated Functional Load Test	ANSI/BIFMA X5.5-2008, Section 5.2
Distributed Functional Load Test	ANSI/BIFMA X5.5-2008, Section 5.3
Concentrated Proof Load Test	ANSI/BIFMA X5.5-2008, Section 5.4
Distributed Proof Load Test	ANSI/BIFMA X5.5-2008, Section 5.5
Top Load Ease Cycle Test	ANSI/BIFMA X5.5-2008, Section 6
Desk/Table Unit Drop Test	ANSI/BIFMA X5.5-2008, Section 7
Leg Strength Test*	ANSI/BIFMA X5.5-2008, Section 8
Cycle Test for Extendible Elements Deeper Than Wide	ANSI/BIFMA X5.5-2008, Section 10.2
Extendible Element Retention Impact and Durability Test	ANSI/BIFMA X5.5-2008, Section 11
Extendible Element Rebound Test	ANSI/BIFMA X5.5-2008, Section 12
Pull Force Test	ANSI/BIFMA X5.5-2008, Section 19

* Due to leg construction and attachment identical to that of the Vision Drafting table, the results are reported as part of Test Report AFT-00383.

Product Description:

<u>Specimen</u>	<u>Description</u>	<u>Supplier</u>
1	72" x 30" Freedom Drafting table (p/n VISDT7230)	Versa Tables

This report shall not be reproduced, except in full, without written permission from Advanced Furniture Testing, Inc. Results contained within this report only apply to the actual product tested under the testing conditions documented in this report.



Test Request Number: AFT-00382

12764 Greenly Street
Suite 20
Holland, MI 49424
PH 616-928-0791
FAX 616-928-0792
www.furnituretest.com



Page 2 of 13

Summary:

<u>Test Name</u>	<u>Results</u>
Stability Under Vertical Load Test	Passed
Concentrated Functional Load Test	Passed
Distributed Functional Load Test	Passed
Concentrated Proof Load Test	Passed
Distributed Proof Load Test	Passed
Top Load Ease Cycle Test	Passed
Desk/Table Unit Drop Test	Passed
Leg Strength Test*	Passed
Cycle Test for Extendible Elements Deeper Than Wide	Passed
Extendible Element Retention Impact and Durability Test	Passed
Extendible Element Rebound Test	Passed
Pull Force Test	Passed

* Due to leg construction and attachment identical to that of the Vision Drafting table, the results are reported as part of Test Report AFT-00383.

Test Results:

1. Stability Under Vertical Load Test:

Testing was performed per ANSI/BIFMA X5.5-2008, Section 4.3.

Notes:

- Temperature / humidity 72° F / 45 RH%.
- 125 lb. load applied through a 12" disc.
- Disc position 1" in from the front edge, centered side to side.
- Test then repeated with the disc located 1" from the rear edge.
- See Photos 1 and 2 for set up.



Photo 1

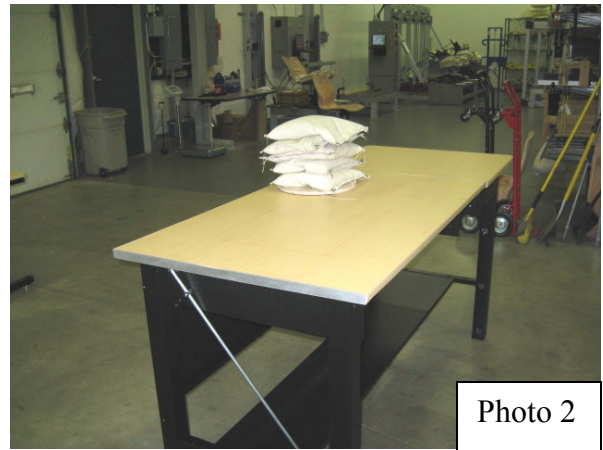


Photo 2

<u>Specimen</u>	<u>Location</u>	<u>Observations</u>
1	Front edge	Unit did not tip over.
	Rear edge	Unit did not tip over.

Requirement: *The unit shall not tip over. If an extendible element opens during the test and prevents the unit from tipping over due to contact with the test platform, the unit does not meet the acceptance criteria*

Equipment:	Tape measure (TD-029)
------------	-----------------------

2. Concentrated Functional Load Test:

Testing was performed per ANSI/BIFMA X5.5-2008, Section 5.2.

Notes:

- Temperature / humidity 74° F / 35 RH%.
- Two 200 lb. loads applied through 12" discs centered 36" apart, 1" in from the front edge.
- Drawer load: (12" w x 3.5" h x 15.25" d) x 0.017 = 10.8. 11 lbs. used.
- Drawer loaded and open during test.
- Load applied for 60 minutes.
- See Photo 3 for set up.



<u>Specimen</u>	<u>Load (lbs.)</u>	<u>Time (min.)</u>	<u>Observations</u>
1	2 x 200	60	No loss of serviceability. Pull force = 9.0 lbs.

Requirement: *There shall be no loss of serviceability. Upon completion of the test, the extendible member(s) shall meet the pull force requirements of Section 19.*

Equipment:	Tape measure (TD-029), Stopwatch (TD-002), Force gage (TD-007) Scale (TD-008)
------------	--

3. Distributed Functional Load Test:

Testing was performed per ANSI/BIFMA X5.5-2008, Section 5.3.

Notes:

- Temperature / humidity 74° F / 35 RH%.
- 204" of perimeter x 1.5 = 306 lbs.
- Load applied on a line 8" in from the edge around the entire perimeter.
- Drawer loaded and open during test (see Section 2 for calculation).
- Load applied for 60 minutes.
- See Photo 4 for set up.



Photo 4

<u>Specimen</u>	<u>Load (lbs.)</u>	<u>Time (min.)</u>	<u>Observations</u>
1	306	60	No loss of serviceability. Pull force = 8.5 lbs.

Requirement: *There shall be no loss of serviceability. Upon completion of the test, the extendible member(s) shall meet the pull force requirements of Section 19.*

Equipment:	Tape measure (TD-029), Stopwatch (TD-002), Force gage (TD-007) Scale (TD-008)
------------	--

4. Concentrated Proof Load Test:

Testing was performed per ANSI/BIFMA X5.5-2008, Section 5.4.

Notes:

- Temperature / humidity 74° F / 35 RH%.
- Two 300 lb. loads applied through 12" discs centered 36" apart, 1" in from the front edge.
- Drawer loaded and closed during test (see Section 2 for calculation).
- Load applied for 15 minutes.
- See Photo 5 for set up.



<u>Specimen</u>	<u>Load (lbs.)</u>	<u>Time (min.)</u>	<u>Observations</u>
1	2 x 300	15	No sudden and major change in structural integrity.

Requirement: *There shall be no sudden and major change in structural integrity of the product. Loss of serviceability is acceptable.*

Equipment:	Tape measure (TD-029), Stopwatch (TD-002), Scale (TD-008)
-------------------	---

5. Distributed Proof Load Test:

Testing was performed per ANSI/BIFMA X5.5-2008, Section 5.5.

Notes:

- Temperature / humidity 74° F / 35 RH%.
- 204" of perimeter x 2.3 = 469 lbs.
- Load applied on a line 8" in from the edge around the entire perimeter.
- Drawer loaded and closed during test (see Section 2 for calculation).
- Load applied for 15 minutes.
- See Photo 6 for set up.



Photo 6

<u>Specimen</u>	<u>Load (lbs.)</u>	<u>Time (min.)</u>	<u>Observations</u>
1	469	15	No sudden and major change in structural integrity.

Requirement: *There shall be no sudden and major change in structural integrity of the product. Loss of serviceability is acceptable.*

Equipment:	Tape measure (TD-029), Stopwatch (TD-002), Scale (TD-008)
-------------------	---

6. Top Load Ease Cycle Test:

Testing was performed per ANSI/BIFMA X5.5-2008, Section 6.

Notes:

- Temperature / humidity 70 - 74° F / 35 - 37 RH%.
- 200 lb. load applied through a 16" bag.
- Bag position 1" in from the front edge, centered side to side.
- Load applied without impact and removed once per cycle.
- Drawer loaded and closed during test (see Section 2 for calculation).
- 10,000 cycles at a rate of 19 cycles per minutes.
- See Photo 7 for set up.



Photo 7

<u>Specimen</u>	<u>Cycles</u>	<u>Observations</u>
1	0	Test begun. Pull force = 6.8 lbs.
	10,000	No loss of serviceability. Pull force = 7.3 lbs.

Requirement: *There shall be no loss of serviceability. Before and after the cycling test, the extendible member(s) shall meet the pull force requirements of Section 19.*

Equipment:	Test Machine (TM-003), Tape measure (TD-011), Stopwatch (TD-002) Scale (TD-008), Force gage (TD-007)
------------	---

7. Desk/Table Unit Drop Test:

Testing was performed per ANSI/BIFMA X5.5-2008, Section 7.

Notes:

- Temperature / humidity 72° F / 45 RH%.
- Specimen placed at the midpoint of adjustment.
- Based on table weight (154 lbs.), each end of the table dropped from a height of 4.7".
- Pretest pull force = 7.3 lbs.
- See Photo 8 for set up.



Photo 8

<u>Specimen</u>	<u>End Raised</u>	<u>Observations</u>
1	Right	No loss of serviceability.
	Left	No loss of serviceability. Pull force = 5.2 lbs.

Requirement: *There shall be no loss of serviceability. Before and after the drop test, the extendible member(s) shall meet the pull force requirements of Section 19.*

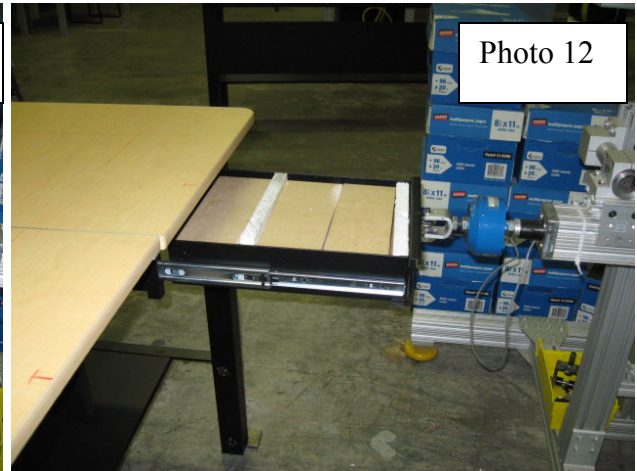
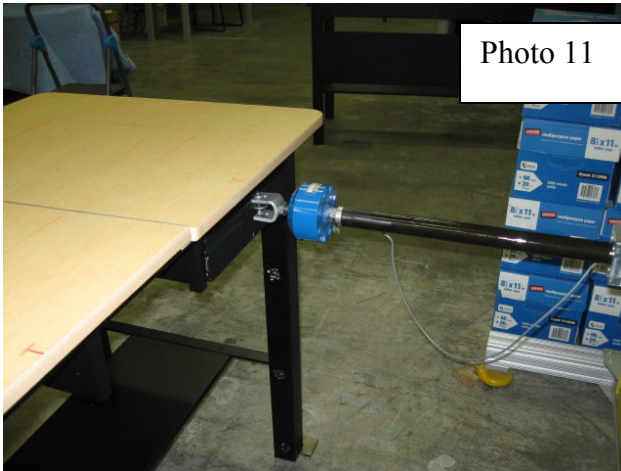
Equipment:	Tape measure (TD-029), Scale (TD-008), Force gage (TD-007)
------------	--

8. Cycle Test for Extendible Elements Deeper Than Wide:

Testing was performed per ANSI/BIFMA X5.5-2008, Section 10.2.

Notes:

- Temperature / humidity 70 - 72° F / 34 - 36 RH%.
- Drawer load: 11 lbs. (see Section 2 for calculation).
- Drawer open and closed once per cycle.
- Test rate: 11 cpm.
- See Photos 11 and 12 for set up.



<u>Specimen</u>	<u>Cycles</u>	<u>Observations</u>
1	0	Test begun. Pull force = 7.2 lbs.
	50,000	No loss of serviceability. Pull force = 5.1 lbs.

Requirement: *There shall be no loss of serviceability. Before and after the cycling test, the extendible member(s) shall meet the pull force requirements of Section 19. After the cycle test, the extendible elements, if applicable shall meet the interlock test requirements of Section 13.*

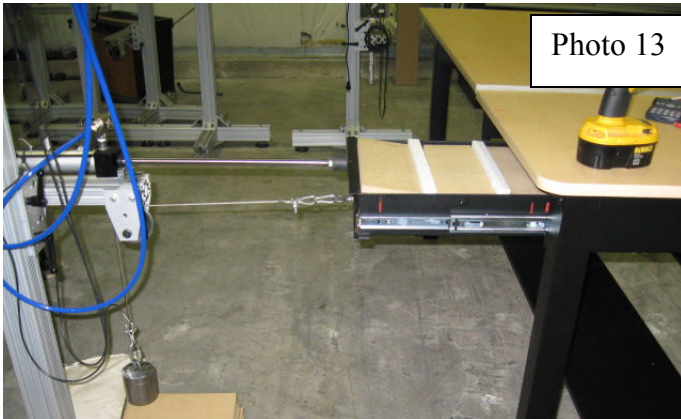
Equipment:	Test Machine (TM-0010), Tape measure (TD-011), Stopwatch (TD-002) Scale (TD-008), Force gage (TD-007)
------------	---

9. Extendible Element Retention Impact and Durability Test:

Testing was performed per ANSI/BIFMA X5.5-2008, Section 11.

Notes:

- Temperature / humidity 71° F / 35 RH%.
- Drawer load: 11 lbs. (see Section 2 for calculation).
- Test weight: 6.5 lbs. (1.5 lbs. + 5 lbs.)
- 5 cycles with drawer traveling from 1.5" from fully closed to full extension with the test weight restrained at 80% of full extension.
- 15,000 cycles with the drawer traveling from 2" from fully opened to full extension with the weight unrestrained.
- Test rate: 20 cpm.
- See Photo 13 for set up.



<u>Specimen</u>	<u>Pull Force (lbs.)</u>	<u>Cycles</u>	<u>Observations</u>
1	7.3	0	Test begun with weight restrained.
		5	No loss of serviceability.
		0	Test begun with weight unrestrained
	7.2	15,000	No loss of serviceability.

Requirement: *There shall be no loss of serviceability or disengagement of the extendible element from the unit. After performing the Retention Tests, the extendible element shall meet the pull force requirements of Section 19.*

Equipment:	Tape measure (TD-029), Test machine (TM-018), Scale (TD-008) Force gage (TD-007), Stop watch (TD-002)
------------	--

10. Extendible Element Rebound Test:

Testing was performed per ANSI/BIFMA X5.5-2008, Section 12.

Notes:

- Temperature / humidity 71° F / 47 RH%.
- Drawer load: 11 lbs. (see Section 2 for calculation).
- The spring force gage was placed two inches from the front of the drawer face.
- The loaded drawer was forced against the spring force gage to a force of 11 lbs. and released allowing the drawer to slam shut.
- Any rebound observed was recorded.
- See Photo 14 for set up.



<u>Specimen</u>	<u>Cycle</u>	<u>Rebound (in.)</u>	<u>Pull Force (lbs.)</u>
1	-	-	5.4
	1 through 5	0.0	5.5

Requirement: *There shall be no loss of serviceability. The rebound position of the extendible element shall not exceed 38 mm (1.5 in.) from its closed position after each of the five closings.*

Equipment:	Spring Scale (TD-001), Scale (TD-008), Tape measure (TD-029) Force gage (TD-007)
------------	---

11. Pull Force Test:

Testing was performed per ANSI/BIFMA X5.5-2008, Section 19.

Notes:

- Temperature / humidity 74° F / 35 RH%.
- Drawer load: 11 lbs. (see Section 2 for calculation).
- See Photo 15 for set up.



<u>Specimen</u>	<u>Pull Force (lbs.)</u>
1	9.0

Requirement: *The applied force shall not exceed 50N (11.2 lbs.).*

Equipment:	Scale (TD-008), Tape measure (TD-011), Force gage (TD-007)
------------	--