

ALUMINTECHNO JLLC TEST REPORT

SCOPE OF WORK

NYC DOH FALLS PREVENTION PROGRAM TESTING ON W62 IN-SWING CASEMENT WINDOW

REPORT NUMBER

I8780.02-525-44 R0

TEST DATE(S)

11/26/18

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TEST REPORT FOR ALUMINTECHNO JLLC

Report No.: I8780.02-525-44 R0

Date: 11/05/19

REPORT ISSUED TO

ALUMINTECHNO JLLC

Selitskogo str.12-211

220075 FEZ "Minsk"

Minsk Region, Minsk Area

Republic of Belarus

SECTION 1

SCOPE

Intertek Building & Construction (B&C) was contracted to perform testing in accordance with City of New York Department of Health Falls Prevention Program, Chapter 12-11, *Specifications for Window Guards for Other Than Double Hung Windows*, on Series/Model W62 casement window. Results obtained are tested values and were secured by using the designated test method(s). Testing was conducted at Intertek test facility in Farmingdale, NY. This report does not constitute certification of this product nor an opinion or endorsement by this laboratory.

This product was originally tested as Series/Model W62 In-swing Casement Window, and is a reissue of the original Report No. I8780.01-525-44. This report is reissued in the name of AluminTechno JLLC through written authorization.

For INTERTEK B&C:

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TITLE:	Technician
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DATE:	11/05/19

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SECTION 2

SUMMARY OF TEST RESULTS

Product Type: In-Swing Casement Window

Series/Model: W62

TITLE	SPECIMEN #1	SPECIMEN #2
Vent opening prior to loading	3-1/2"	3-1/2"
150 lbs applied for 60 seconds at the middle of the pull stile	PASS 3-3/4" max. opening	PASS 3-7/8" max. opening
Vent opening after loading	3-1/2"	3-3/4"

SECTION 3

TEST METHOD(S)

The specimens were evaluated in accordance with the following:

City of New York Department of Health Falls Prevention Program, Chapter 12-11,
Specifications for Window Guards for Other Than Double Hung Windows

SECTION 4

MATERIAL SOURCE/INSTALLATION

Test specimens were provided by the client. Representative samples of the test specimen(s) will be retained by Intertek B&C for a minimum of four years from the test completion date.

The specimen was anchored to Intertek's AWS testing wall using clamps to hold test specimen in place during loads.

SECTION 5

EQUIPMENT

- Load Cell: WLE032
- Calibration Due date: 10/8/19
- 5' solid sphere: WLE160
- Tape measure: standard tape measure



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LIST OF OFFICIAL OBSERVERS

NAME	COMPANY
Dmitry Avramenko	Alutech
Michael Hendriks	Intertek B&C
Freddy Durand	Intertek B&C

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TEST SPECIMEN DESCRIPTION

Product Type: In-swing casement window

Series/Model: W62

Test Specimen #1

OVERALL AREA:	WIDTH		HEIGHT	
	millimeters	inches	millimeters	inches
2.0 m ² (22.0 ft ²)				
Overall Size	1086	42.75"	1886	74.25"
Vent Size	997	39.25"	1797	70.75"

Test Specimen #2

OVERALL AREA:	WIDTH		HEIGHT	
	millimeters	inches	millimeters	inches
8.1 m ² (8.8 ft ²)				
Overall Size	587	23.125"	1387	54.625"
Vent Size	498	19.625"	1298	51.125"

The following descriptions apply to all specimens.

Frame Construction:

FRAME MEMBER	MATERIAL	DESCRIPTION
All members	Aluminum	Extrusion(W62.0103E). Two piece extruded aluminium profile thermally broken using two mechanically crimp I strut layers.
	JOINERY TYPE	DETAIL
All Corners	Mitered	Aluminum Keyed on all corners sealed with silicone inside and mechanically crimped in place

Sash Construction:

SASH MEMBER	MATERIAL	DESCRIPTION
All members	Aluminum	Extrusion (W62.0222E). Two peace extruded aluminium profile thermally broken using two mechanically crimp I strut layers.
	JOINERY TYPE	DETAIL
All Corners	Mitered	Aluminum Keyed on all corners sealed with silicone inside and mechanically crimped in place

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Weatherstripping:

DESCRIPTION	QUANTITY	LOCATION
Rubber goose neck gasket (FRK51)	1 Row	Center plane of frame
Rubber Glazing gasket (FRK29-01)	1 Row	Sash interior side high frame leg
Rubber Glazing bead wedge gasket (FRK36)	1 Row	Interior side of glazing between glazing bead.
Rubber wedge hollow gasket (FRK98)	1 Row	Interior leg of vent

Glazing: *No conclusions of any kind regarding the adequacy or inadequacy of the glass in any glazed test specimen(s) can be made.*

GLASS TYPE	SPACER TYPE	INTERIOR LITE	EXTERIOR LITE	GLAZING METHOD
1" IG	0.75" Aluminum box	0.125" Annealed	0.125" Annealed	Dry glazed. Interior installed onto weather gasket shimmed in place with rubber glazing blocks. Window utilized Aluminum Glazing bead with rubber wedge gasket to seal window.

Specimen #1:

LOCATION	QUANTITY	DAYLIGHT OPENING		GLASS BITE
		millimeters	inches	
Center of Sash	1	841 x 1641	33.125" x 64.625"	1/2"

Specimen #2:

LOCATION	QUANTITY	DAYLIGHT OPENING		GLASS BITE
		millimeters	inches	
Center of Sash	1	343 x 1143	13.5" x 45"	1/2"

Drainage:

DRAINAGE METHOD	SIZE	QUANTITY	LOCATION
Weeps Holes	1/4" tall x 1" long	2	5-1/2" off each end of Sill

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Hardware:

DESCRIPTION	QUANTITY	LOCATION
Weather Deflector	1	Exterior of bottom rail of sash.
Roto Euro groove Multi point lock system	1	Lock stile with 3 locking points
Keepers	3	Lock jamb of window frame
Aluminium euro groove Hinges	2	One at top and bottom of sash

All specimens:

Limit Stop Device: The device allowed for a 3-5/8" vent opening. 2 limit stop devices were fastened to the sash. One limit device was fastened at the head of sash and head of frame. The second Device was located at the bottom rail of sash and to the frame.

MATERIAL	DESCRIPTION	ATTACHMENT
Steel	"MASTER" Limit Device ART. A1203A.68	2 SS #10 self-tapping safety screws were used to fasten Limit device to sash frame and 2 screws were utilized to fasten the other end of device to frame.

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TEST RESULTS

The temperature during testing was 17.8°C (64°F). The results are tabulated as follows:

Test Specimen #1:

TITLE OF TEST	RESULTS	MAXIMUM ALLOWED
Vent opening prior to loading	3-1/2"	4-1/2" max.
150 lbs applied for 60 seconds at the Top of the sash lock stile	PASS 3-5/8" max. opening	No passage of a solid 5" sphere
Vent opening after loading	3-1/2"	4-1/2" max.

TITLE OF TEST	RESULTS	MAXIMUM ALLOWED
Vent opening prior to loading	3-1/2"	4-1/2" max.
150 lbs applied for 60 seconds at the middle of the sash lock stile	PASS 3-3/4" max. opening	No passage of a solid 5" sphere
Vent opening after loading	3-1/2"	4-1/2" max.

TITLE OF TEST	RESULTS	MAXIMUM ALLOWED
Vent opening prior to loading	3-1/2"	4-1/2" max.
150 lbs applied for 60 seconds at the bottom of the sash lock stile	PASS 4" max. opening	No passage of a solid 5" sphere
Vent opening after loading	3-3/4"	4-1/2" max.

Observations: At no time during the test was a 5" solid sphere able to pass through the opening. Upon completion of testing there was no damage or permanent deformation to the window or limit stops.

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SECTION 8

TEST RESULTS (CONTINUED)

Test Specimen #2:

TITLE OF TEST	RESULTS	MAXIMUM ALLOWED
Vent opening prior to loading	3-5/8"	4-1/2" max.
150 lbs applied for 60 seconds at the Top of the sash lock stile	PASS 4" max. opening	No passage of a solid 5" sphere
Vent opening after loading	3-3/4"	4-1/2" max.

TITLE OF TEST	RESULTS	MAXIMUM ALLOWED
Vent opening prior to loading	3-1/2"	4-1/2" max.
150 lbs applied for 60 seconds at the middle of the sash lock stile	PASS 3-7/8" max. opening	No passage of a solid 5" sphere
Vent opening after loading	3-3/4"	4-1/2" max.

TITLE OF TEST	RESULTS	MAXIMUM ALLOWED
Vent opening prior to loading	3-1/2"	4-1/2" max.
150 lbs applied for 60 seconds at the bottom of the sash lock stile	PASS 3-5/8" max. opening	No passage of a solid 5" sphere
Vent opening after loading	3-1/2"	4-1/2" max.

Observations: *At no time during the test was a 5" solid sphere able to pass through the opening. Upon completion of testing there was no damage or permanent deformation to the window or limit stops.*

SECTION 9

CONCLUSION

The specimens tested successfully met the performance requirements of the City of New York Department of Health Falls Prevention Program, Chapter 12-11.

The original Report No. is I8780.01-525-44. This report is reissued in the name of AluminTechno JLLC through written authorization.

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SECTION 10

PHOTOGRAPHS



Photo No. 1
Specimen #1



Photo No. 2
Specimen #2

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Photo No. 3
Specimen #2 Showing Sash Opened Detail



Photo No. 4
Typical Limit Arm Fastening to Frame Detail

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Photo No.5

5" Sphere Test During Mid Span Load Test

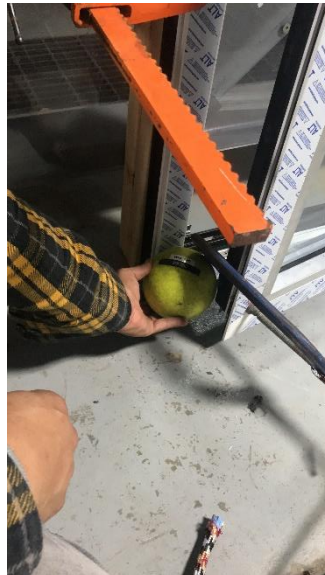


Photo No.6

5" Sphere Test at the Lower Corner Load Test

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Photo No. 7

Digital Read Out of 150lb Load Applied During Test of All Locations



Photo No.8

Measuring Max Opening of Sash With No Load



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SECTION 11 DRAWINGS

The test specimen drawings have been reviewed by Intertek B&C and are representative of the test specimen(s) reported herein. Test specimen construction was verified by Intertek B&C per the drawings. Any deviations are documented herein or on the drawings.

Note: *Complete drawings packet on file with Intertek B&C.*



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SECTION 12

REVISION LOG

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0	11/05/19	N/A	Original Report Issue