

TRACHTE BUILDING SYSTEMS TEST REPORT

SCOPE OF WORK

TESTING 12' BY 7' MODEL 944NL ROLLING STEEL DOOR PER ASTM E330/E330M-14
(PROCEDURE A)

REPORT NUMBER

103667677MID-001BR0

TEST DATE(S)

10/22/18 - 10/25/18

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10/30/18

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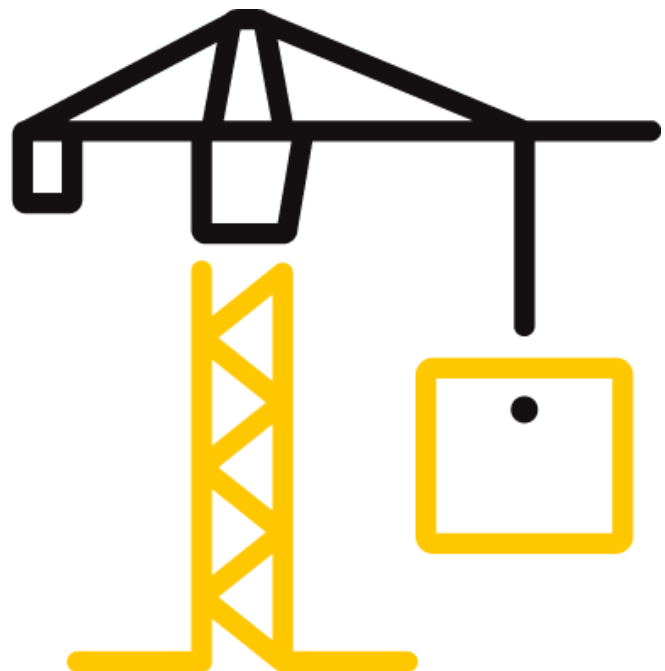
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TEST REPORT FOR TRACHTE BUILDING SYSTEMS

Report No.: 103667677MID-001BR0

Issue Date: 10/30/18

REPORT ISSUED TO

TRACHTE BUILDING SYSTEMS

314 Wilburn Road

Sun Prairie, WI 53590

SECTION 1

SCOPE

Product: 12' by 7' Model 944NL Rolling Steel Door

Intertek Building & Construction (B&C) was contracted by Trachte Building Systems of Sun Prairie, WI to evaluate their 12' by 7' Model 944NL Rolling Steel Door in accordance with ASTM E330/E330M-14, *Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights, and Curtain Walls by Uniform Static Air Pressure Difference (Procedure A)*. Results obtained are tested values and were secured by using the designated test method. Testing was conducted at the Intertek B&C test facility in Middleton, Wisconsin.

This report does not constitute certification of this product nor an opinion or endorsement by this laboratory. This report may not be used for Intertek certification.

SECTION 2

SUMMARY OF TEST RESULTS

SAMPLE #	SUSTAINED UNIFORM LOAD
1	+37/-33 psf
2	+35 psf

For INTERTEK B&C:

COMPLETED BY:	Russ Burt	REVIEWED BY:	Andrew Holstein, Ph.D.
TITLE:	Senior Associate Engineer Intertek B&C	TITLE:	Engineering Team Lead Intertek B&C
SIGNATURE:	 Digitally signed by Russ Burt	SIGNATURE:	
DATE:	10/30/18	DATE:	10/30/18

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SECTION 3

TEST METHODS

The specimens were evaluated in accordance with the following:

ASTM E330/E330M-14, *Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights, and Curtain Walls by Uniform Static Air Pressure Difference (Procedure A)*

SECTION 4

MATERIAL SOURCE

The samples for testing were not independently selected by an Intertek representative. The samples were received at the Intertek Middleton, WI facility on October 15, 2018 and labeled as MID1810151433-001. The rolling steel door assemblies were installed into a lumber test buck by Trachte Building Systems representative Jeremy Beck. Refer to the product photos in Section 10 and drawings in Section 11.

SECTION 5

LIST OF OFFICIAL OBSERVERS

NAME	COMPANY
Jeremy Beck	Trachte Building Systems
Mike Kasten	Trachte Building Systems
Russ Burt	Intertek B&C
Andrew Holstein	Intertek B&C

SECTION 6

TEST PROCEDURE

ASTM E330/E330M-14 Procedure A Uniform Structural Load

The samples were evaluated for uniform structural loading with each load step being maintained for ten seconds. Deflections were measured at three locations over a 143-inch span along a horizontal line 36" above the base of the sample. Net deflections/permanent sets were calculated as the average of the end movements subtracted from the midpoint movement. Loads were applied and measured with a structural control panel (ICN: 005702). Deflections were measured with linear transducers (ICN: 62692, 62261, and 63666).

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SECTION 7**TEST SPECIMEN DESCRIPTION**

General- The sample under evaluation was a live axle vertically rolling steel door- door axle rotates in bracket during operation. The finished opening size of the assembly was 12' wide by 7' high.

Curtain- Roll-formed 26 gauge Grade 80 galvanized steel

Door Guides- 18 gauge hot-dipped galvanized steel with polypropylene guide runners

Spring Assembly- Helical torsion

Axle- 1-5/16" O.D. structural steel tubing

Lock- Steel and zinc cast steel slide lock

Door Brackets- 14 gauge hot-dipped galvanized steel

Bottom Bar Assembly- 22 gauge galvalume

Door Bottom Backup Angle- 12 gauge hot-dipped galvanized steel

Drums- 18 gauge zinc-coated steel (9-5/8" diameter by 1-1/4" wide)

Door Stops- 12 gauge zinc-coated steel

Mounting Fasteners- Door Brackets: 5/16" by 1-5/8" wood lag screws Door Guides: #14 by 1-1/2" wood lag screws

Wind Locks- Nylon secured to door curtain with two 3/16" stainless steel rivets (18 used on 7' door)

Refer to the product photos in Section 10 and drawings in Section 11.

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SECTION 8

TEST RESULTS

Deflections were measured at three locations over a 143-inch span along a horizontal line 36" above the base of the sample.

Sample #1

UNIFORM LOAD (psf)	DEFLECTION UNDER LOAD (inches)	PERMANENT SET (inches)
+10	6.29	0.06
+20	9.96	0.24
+25	10.63	0.27
+28	10.76	0.29
+31	11.10	0.31
+34	11.47	0.32
+37	11.92	0.32
-10	6.56	0.07
-25	11.47	0.48
-30	12.30	0.80
-33	13.16	3.94

Sample #2

UNIFORM LOAD (psf)	DEFLECTION UNDER LOAD (inches)	PERMANENT SET (inches)
+15	8.75	0.14
+30	11.07	0.22
+35	11.82	1.04
+40	Curtain released from guide prior to reaching test pressure	

SECTION 9

CONCLUSION

After testing in accordance with Procedure A of ASTM E330/E330M-14, the samples exhibited the deflection behavior tabulated in Section 8 of this report.

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SECTION 10

PHOTOGRAPHS



Photo No. 1
Wind lock



Photo No. 2
Door Brackets/Spring Assembly

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Photo No. 3
Door Guide



Photo No. 4
Interior View-Test Setup



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Middleton, Wisconsin 53562

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SECTION 11

DRAWINGS

SPECIFICATIONS:

PART 1 - MATERIAL:

1.01 Door Guides: Door guides are to be manufactured from 18 gauge (0.047" min.) ASTM A-653 steel, hot dipped galvanized per ASTM A-924 (G-40). Edges covered with polypropylene runners for smooth operation.

1.02 Door Curtain: Door curtains are to be manufactured from 26 gauge (0.018" min.) Grade 80 steel per ASTM A-653, hot dipped galvanized per ASTM A-924 (G-40). Equipped with SpaceGuard latch, Steel and Zinc cast part, with powder coating finish. Secured with 3 - $\frac{3}{8}$ " Jam Nuts

1.03 Door Bracket: Door brackets are to be manufactured from 14 gauge (0.075") ASTM A-653 steel, hot dipped galvanized per ASTM A-924. Brackets to include grease packed ball bearing.

1.04 Bottom Bar Assembly: Door bottom bar to be roll formed from 22 gauge (0.030" min.) ASTM A1011 galvalume, hot dipped, min. yield of 50 ksi. Door backup angle to be manufactured from 12 gauge ASTM A-653 steel, hot dipped galvanized per ASTM A-924 (G-40).

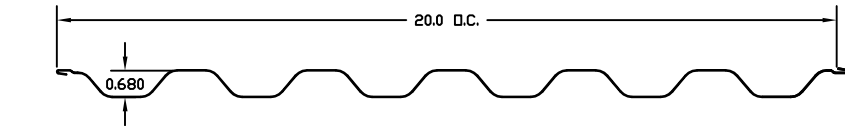
1.05 Door Curtain Windlock: Door curtain windlocks are located as required to meet specific windload & manufactured from Black Nylon 6/6. Each windlock secured to the door curtain with two 3/16" stainless steel rivets. (18 windlocks as tested on 7 ft. tall door)

PART 2 - TESTING:

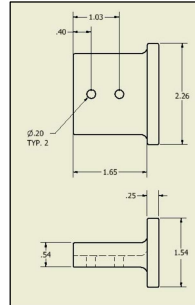
2.01 General: Structural Performance under Uniform Load per ASTM E 330 to safely resist a positive or negative wind load as noted below. A test load of 1.5 x design load has been used.
Design Load = +25/-22 PSF

PART 3 - EXECUTION:

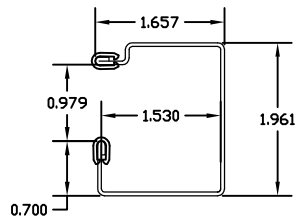
3.01 General: Trac-Rite rolling steel doors shall be installed following Trac-Rite assembly instructions.



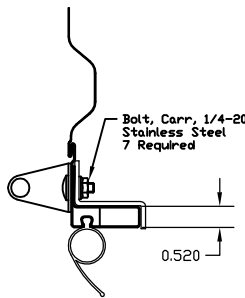
DOOR PANEL



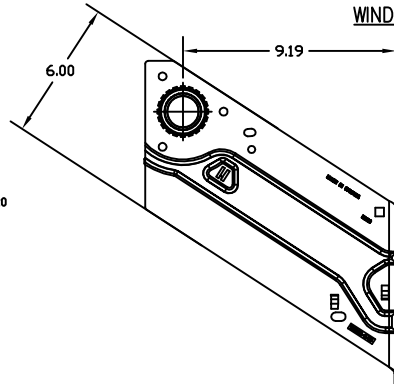
WINDLOCK



GUIDE DIMENSIONS -
LH SHOWN



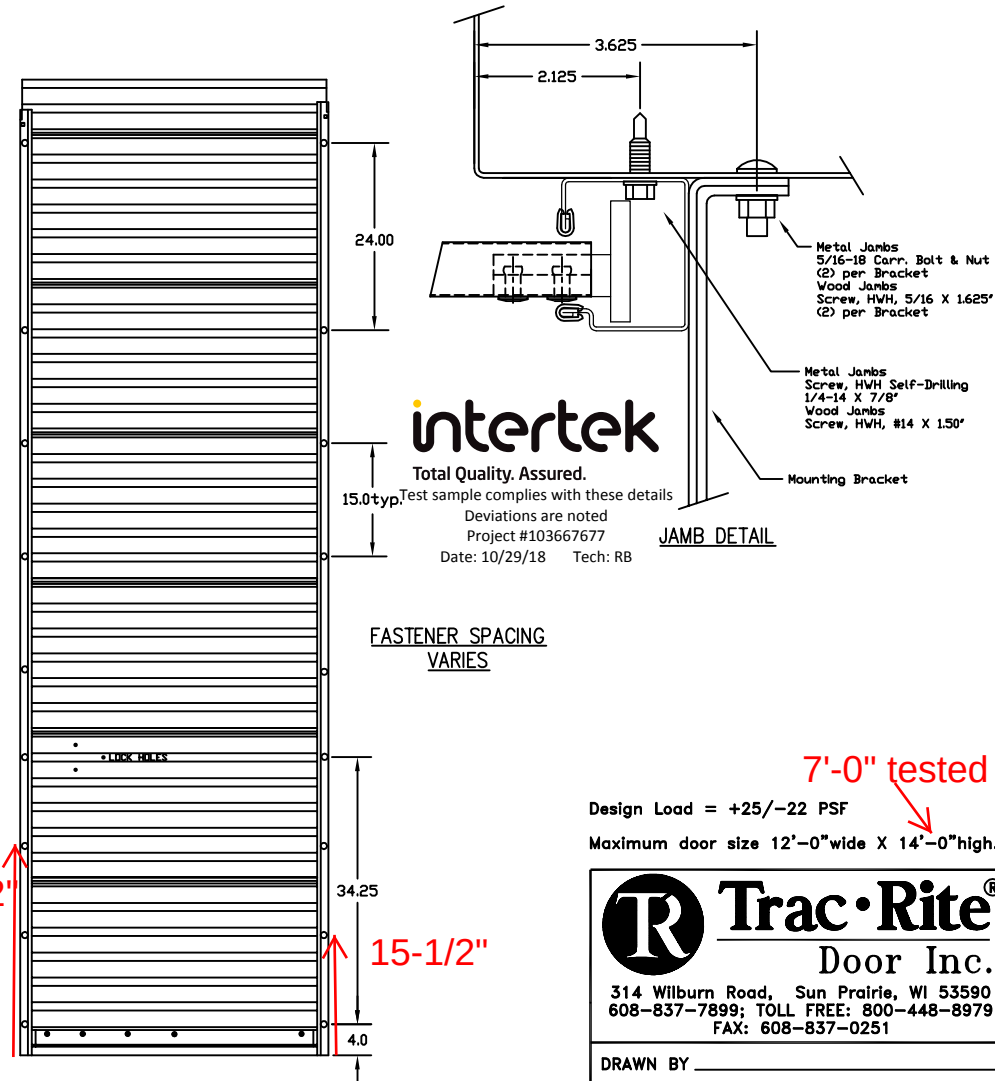
BOTTOM BAR ASSEMBLY



DOOR MOUNTING BRACKET

MODEL 944NL ROLLING CURTAIN DOOR

944NL, 12'-0"



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Trac-Rite®
Door Inc.
314 Wilburn Road, Sun Prairie, WI 53590
608-837-7899; TOLL FREE: 800-448-8979
FAX: 608-837-0251

DRAWN BY _____
CHECKED BY _____ SCALE: None
DATE _____ SHEET _____ OF _____
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SECTION 12

REVISION LOG

REVISION #	DATE	PAGES	REVISION
0	10/30/18	N/A	Original Report Issue