

MILLENNIUM METALS, INC TEST REPORT

SCOPE OF WORK

WIND DRIVEN RAIN RESISTANCE TESTING OF MMI 26 GA OFF RIDGE VENT WITH DETACHABLE
BAFFLE

REPORT NUMBER

H7685.03-450-18 R1

TEST DATE

11/29/17

ISSUE DATE

12/18/17

REVISED DATE

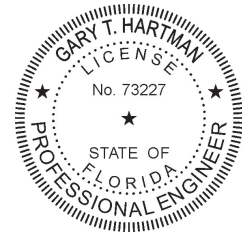
03/14/18

RECORD RETENTION END DATE

11/29/27

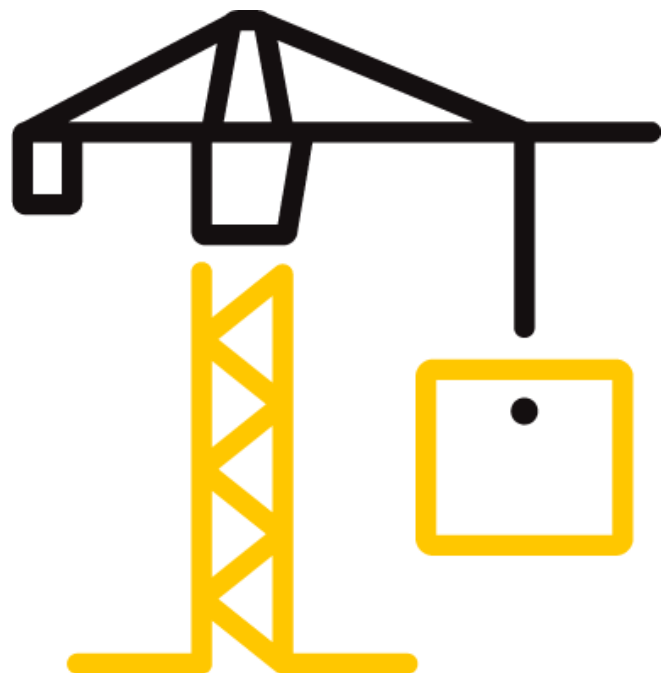
PAGES

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Gary T. Hartman
Digital Signature by Gary T. Hartman

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TEST REPORT FOR MILLENNIUM METALS, INC

Report No.: H7685.03-450-18 R1

Date: 12/18/17

REPORT ISSUED TO

MILLENNIUM METALS, INC

10200 Eastport Rd

Jacksonville, FL 32218

SECTION 1

SCOPE

Intertek Building & Construction (B&C) was contracted by Millennium Metals to perform testing in accordance with TAS 100(A)-95, *Test Procedure for Wind and Wind Driven Rain Resistance of Discontinuous Roof Systems*, on one off ridge vent with detachable baffle. Results obtained are tested values and were secured by using the designated test method. Testing was conducted at Intertek facility in West Palm Beach, Florida. This report does not constitute the certification of this product nor an opinion or endorsement by this laboratory.

SECTION 2

SUMMARY OF TEST RESULTS

Off Ridge Vent

Manufacturer: Millennium Metals, Inc.

Series/Model: MMI 26 Ga Off Ridge Vent with Detachable Baffle

Test Results: PASS

For INTERTEK B&C:

COMPLETED BY:	Alan Rule
TITLE:	Field and Quality Supervisor
SIGNATURE:	 Digitally Signed by: Alan Rule
DATE:	03/14/18

AWR:ab

REVIEWED BY:	Gary Hartman, P.E.
TITLE:	Laboratory Support Engineer
SIGNATURE:	 Digitally Signed by: Gary Hartman
DATE:	03/14/18

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SECTION 3

TEST METHOD

The specimens were evaluated in accordance with the following:

TAS 100(A)-95, *Test Procedure for Wind and Wind Driven Rain Resistance of Discontinuous Roof Systems*, Florida Building Code - Test Protocols for High Velocity Hurricane Zone, 6th Edition (2017).

SECTION 4

CALIBRATION

Windstream, water supply, and water distribution calibration was performed prior to testing.

SECTION 5

MATERIAL SOURCE/INSTALLATION

The specimen was provided by Millennium Metals. Representative samples of the test specimen(s) will be retained by Intertek B&C for a minimum of ten years from the test completion date.

Installation of the tested product was performed by representatives of Intertek B&C.

SECTION 6

EQUIPMENT

Wind Generator: Engine driven propeller

SECTION 7

LIST OF OFFICIAL OBSERVERS

NAME	COMPANY
Felipe Morales	Intertek B&C
Alan Rule	Intertek B&C
Gary Hartman, P.E.	Intertek B&C

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SECTION 8

TEST PROCEDURE

This test evaluates whether a soffit ventilation and a continuous or intermittent ridge area ventilation system installed within a discontinuous roof system, provides sufficient wind driven rain resistance to allow minimal water infiltration through the soffit and ridge area vent during a predetermined test period. One assembly was tested per TAS-100(A) at the wind speed intervals indicated below. (Reference Chart No. 1 for wind speed and duration.)

Interval No.	Wind Speed (mph)	Time (min)	Water Spray
1	35	15	On
2	0	5	Off
3	70	15	On
4	0	5	Off
5	90	15	On
6	0	5	Off
7	110	5	On
8	0	5	Off

Chart No. 1
TAS-100(A) Wind Speed Intervals

SECTION 9

TEST SPECIMEN DESCRIPTION

Off Ridge Vent

Manufacturer: Millennium Metals, Inc.

Series/Model: MMI 26 Ga Off Ridge Vent with Detachable Baffle

Vent Size: 4' (nominal)

Overall Size: 8' 0" wide by 8' 0" long (with ridge condition)

Roof Slope: 2:12

General Description: The 2:12 slope roof system test assembly incorporated a ridge condition. The plywood test deck consisted of four-ply 15/32" thick plywood sheathing installed over 2x10 perimeter supports and 2x10 intermediate supports, spaced 24" on center. The plywood was cut out to provide a 8" x 46" opening below the off ridge vent. Soffit ventilation was constructed into the test deck and located below the deck's front edge.

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Roof System:

COMPONENTS	DETAILS	ATTACHMENT METHOD
30# Asphalt saturated organic felt paper	A single layer was used with a 4" overlap between adjacent sheets.	0.120" x 1-1/4" galvanized annular ring shank roofing nails with 32 Ga tin caps spaced 6" on center at the perimeter and overlaps with two intermediate rows spaced 12" on center.
Asphalt Shingles	Installed over the felt paper	The asphalt singles were secured using 11 Ga x 1-1/4" roofing nails per the installation instructions.
Off ridge vent	The vent was constructed from 26 Ga painted galvalume steel. The overall dimensions of the vent were 4-1/2" (h) x 23-3/8" (w) x 52-1/4" (l). The top flange of the vent was located 11" below the ridge.	The vent was secured through the flanges at the top, bottom and sides using 11 Ga x 1-1/4" roofing nails spaced 8" on center. Roof cement was utilized below the vent flanges and on top of the flanges at the nail heads.
Baffle	The baffle was constructed from 26 Ga painted galvalume steel and measured 3" (h) x 2-3/4" (w) x 52-1/4" (h).	The bottom leg of the baffle was placed underneath the bottom flange of the vent and secured using the vent installation nails

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SECTION 10**CONCLUSION**

The results are tabulated as follows.

WIND SPEED	OBSERVATIONS
35 mph	No water leakage
70 mph	No water leakage
90 mph	No water leakage
110 mph	No water leakage

Notes:

Reference Chart No. 1 for test wind speeds and durations.

Reference Section 11 for Photographs.

The MMI 26 Ga Off Ridge Vent with Detachable Baffle tested per TAS 100(A)-95 met the requirements for wind driven rain resistance. Per Section 11.1.2 of TAS 100(A) the vent met the requirements for installation up to and including a height of 33 feet.

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SECTION 11

PHOTOGRAPHS



Photo No. 1
Exterior of Deck at 35 mph



Photo No. 2
Exterior of Deck at 70 mph

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Photo No. 3
Exterior of Deck at 90 mph



Photo No. 4
Exterior of Deck at 110 mph



Total Quality. Assured.

2658 Electronics Way
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www.intertek.com/building

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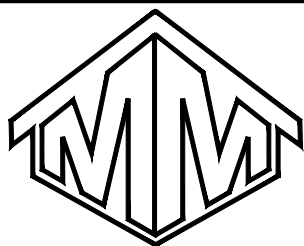
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SECTION 12

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 included in this report. Any deviations are documented herein or on the drawings.



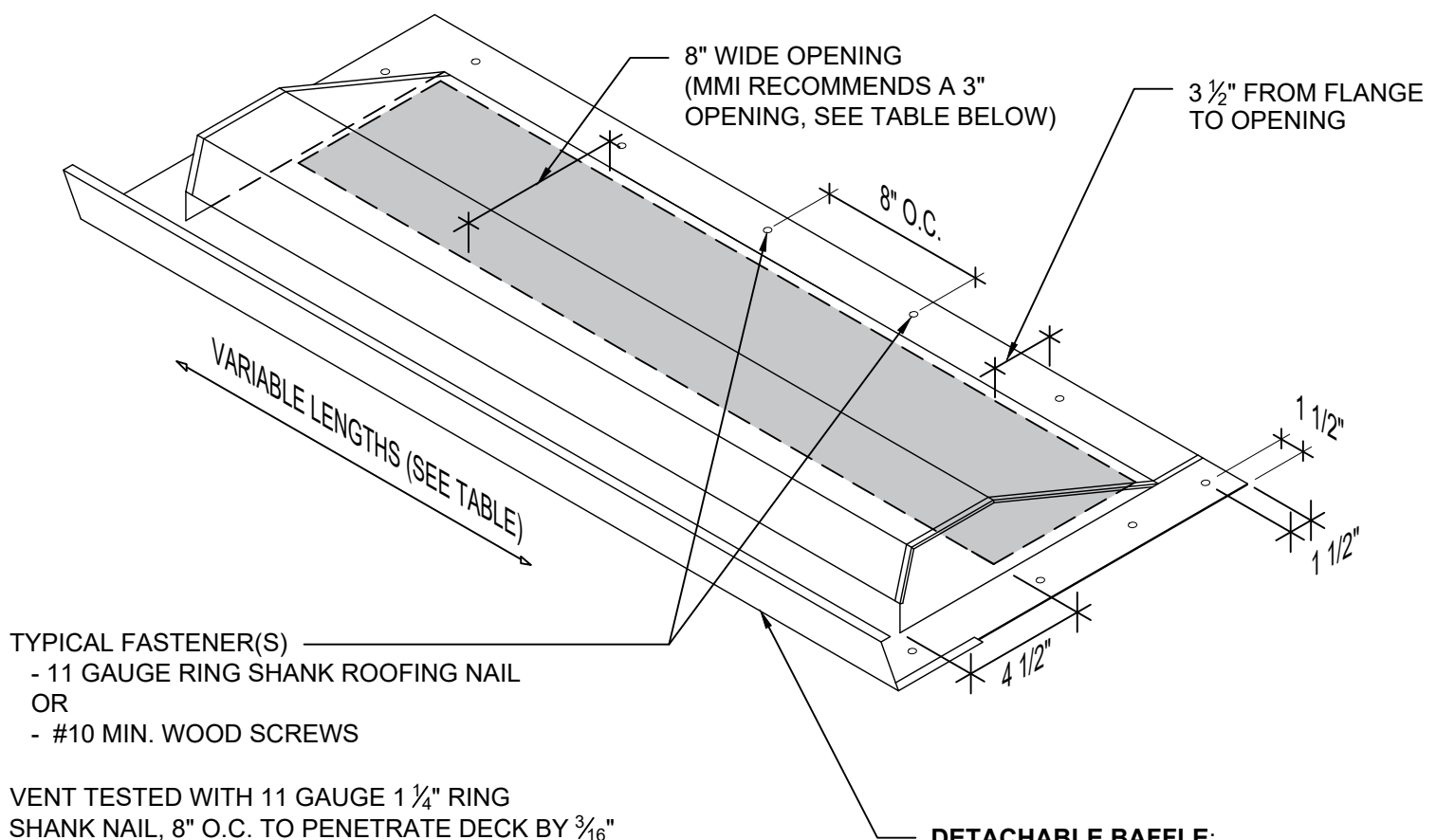
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904-358-8366 WATTS 1-877-358-7663 (ROOF)
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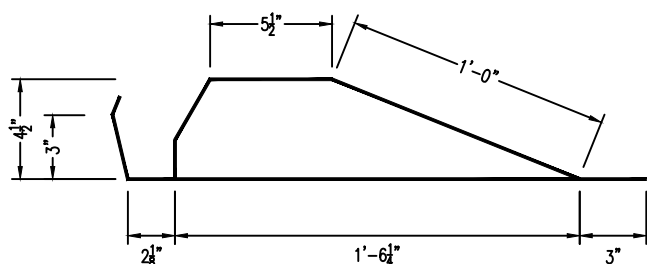
TAS 100(A) -95 INSTALLATION METHOD

Millennium Metals, Inc.

MMI Off Ridge Vent with Detachable Baffle - Attached to Wood Deck



DETACHABLE BAFFLE:
TWO PIECE SYSTEM THAT SLIDES INTO LOWER FLANGE OF VENT AND SECURED WITH APPROVED FASTENERS 8" O.C.



SIDE VIEW

MMI OFF RIDGE VENT RECOMMENDATIONS		
LENGTH	CUT OUT	NET FREE AREA
4 Ft.	3" x 46"	138 Sq. In.
6 Ft.	3" x 70"	210 Sq. In.
8 Ft.	3" x 94"	282 Sq. In.
10 Ft.	3" x 118"	354 Sq. In.

OFF RIDGE VENT

	Report #:	H7685.03-450-18
	Date:	12/20/17
	Verified by:	<i>[Signature]</i>

MILLENNIUM METALS INC.

TOLL FREE: 1-877-358-7663

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SECTION 13

REVISION LOG

REVISION #	DATE	PAGES	REVISION
0	12/18/17	N/A	Original Report Issue
1	12/20/17	5	Added 1-1/4" length for 11 Ga nail
		10	Updated drawings
2	03/14/18	5	Changed shingles to asphalt shingles