

Evaluation Report FLAMCO "Off-Ridge Vent" Roof Vent

Manufacturer:

Florida Metal Products, Inc.

6940 Stuart Avenue
Jacksonville, FL 32254

for

Florida Product Approval

FL 21580.1 R1

Florida Building Code 6th Edition (2017)

Method: 2 - B

Category: Roofing

**Sub - Category: Roofing Accessories that are an Integral
Part of the Roofing System**

Product Name: "Off-Ridge Vent"
Product Description: Roof Vent
Attached To: Wood Deck

Prepared by:

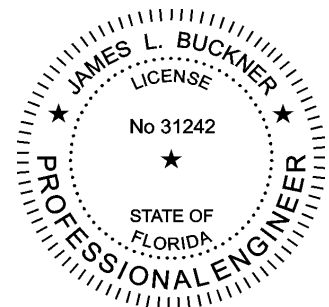
James L. Buckner, P.E., SECB
Florida Professional Engineer # 31242
Florida Evaluation ANE ID: 1916
Project Manager: Diana Galloway
Report No. Report No. 17-185- ORV-ER
(Revises 16-143-ORV-ER, FL 21580.1)
Date: 9/18/17

Contents:

Evaluation Report

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Facsimile of digital copy signed by
James L. Buckner, P.E.
Electronically signed and sealed documents shall
comply with the provisions of FAC Rule 61G15-23.



A handwritten signature in blue ink, appearing to read "James L. Buckner".

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1.0 Manufacturer: Florida Metal Products, Inc. dba FLAMCO

6940 Stuart Avenue
Jacksonville, Florida 32254
(800) 634-8400
<http://flamco.com>

2.0 Manufacturing Plant: Jacksonville, Florida

3.0 Product:

3.1 **Product Name:** "Off-Ridge Vent"

3.2 **Product Description:** Roof Vent

4.0 Evaluation Scope:

4.1 **Compliance with the following**

Florida Building Code 6th Edition (2017)

4.2 **Evaluation Method:**

Florida Product Approval Rule 61G20-3.005 (2) (b)

4.3 **Evaluation Classification:**

Category: Roofing

Sub Category: Roofing Accessories that are an Integral part of the Roofing System

4.4 **Properties Evaluated**

Structural (Wind Resistance) Properties

4.5 **Limits of Evaluation:**

This product assembly evaluation is limited to compliance with section 4.1 to section 4.4 of this report.

5.0 Evaluated Uses:

FLAMCO "Off-Ridge Vent" is used as a roof ventilator.

6.0 Product Assembly Description:

6.1 **General:**

The FLAMCO "Off-Ridge Vents" are low profile, off-ridge roof vent for pitched roofs fabricated from 26 gauge, G-90 primed, galvanized steel with a galvanized steel mesh covering mechanically attached to Plywood Deck.

7.0 General Assembly as Evaluated:

Refer to section 15.0 of this report for product assembly components/materials & standards.

8.0 Support System:

(Design of support system is outside the scope of this evaluation.)

8.1 Type: Wood Deck

8.2 Description: 15/32" (min.) or greater plywood, or

Wood plank deck (based on minimum density/specific gravity of 0.42)

9.0 Slope:

Minimum slope shall be 2:12. (and in compliance with FBC Chapter 15 based on the type of roof covering, applicable code sections and in accordance with manufacturer's recommendations.)

10.0 Performance:

10.1 Wind Resistance:

Table A Allowable Loads	
Design Uplift Pressure	-46 PSF

Notes:

1. Allowable design pressure(s) for allowable stress design (ASD) with a margin of safety of 2 to 1.

11.0 Performance Standard:

The following test protocols were performed to demonstrate compliance with the intent of the code:

11.1 **ASTM E330-02** – *Standard Test Method for Structural Performance of Exterior Windows, Curtain Walls, and Doors and by Uniform Static Air Pressure Difference*

12.0 Code Compliance:

12.1 The product assembly described herein has demonstrated compliance with the Florida Building Code 6th Edition (2017) Section 1708.2.

13.0 Limitations and Conditions of Use:

13.1 Design of support system is outside the scope of this report. Support shall be structural framing members complying with the code and shall be designed by others.

13.2 Scope of “Limitations and Conditions of Use” for this evaluation:

This evaluation report for “State Approval” contains technical documentation, specifications and installation method(s) which include “Limitations and Conditions of Use” throughout the report in accordance with Rule 61G20-3.005. Per Rule 61G20-3.004, the Florida Building Commission is the authority to approve products under “State Approval”.

13.3 Option for application outside “Limitations and Conditions of Use”

Rule 61G20-3.005(1)(e) allows engineering analysis for “project specific approval by the local authorities having jurisdiction in accordance with the alternate methods and materials authorized in the Code”. Any modification of the product as evaluated in this report and approved by the Florida Building Commission is outside the scope of this evaluation and will be the responsibility of others.

13.4 This report is a building code product evaluation per FLPE rule (FAC) 61G15-36 to comply with Florida product approval rule (FAC) 61G20-3. This evaluation report is part of the Florida Building Commission approval for the listed code related criteria. This report by James Buckner, P.E. and CBUCK Engineering is not a design certification of code compliance construction submittal documentation, per FBC section 107, for any individual structure, site specific or permit design.

13.5 Structural loads shall comply with the design provisions of the FBC 6th Edition (2017), Chapter 16, Section 1609.

13.6 All metal components and fasteners shall be corrosion resistant in accordance with FBC, including but limited to Sections 1504.3.2, 1506.6 and 1507.4.4.

13.7 Refer to applicable building code section for ventilation requirements.

13.8 Fire Classification is outside the scope of Rule 61G20-3, and is therefore not included in this evaluation.

13.9 This report does not evaluate the use of this product assembly as described in this report for use in the High Velocity Hurricane Zone code section. (Dade & Broward Counties)

14.0 Quality Assurance:

The manufacturer has demonstrated compliance of products in accordance with the Florida Building Code and Rule 61G20-3.005 (3) for manufacturing under a quality assurance program audited by an approved quality assurance entity through Keystone Certifications, Inc., (FBC Organization #QUA ID:1824).

15.0 System/Components**15.1 "Off Ridge Vent"**

- 15.1.1 Material: Steel
- 15.1.2 Thickness: 26 gauge (min.)
- 15.1.3 Yield Strength: 40 ksi min.
- 15.1.4 Corrosion Resistance: In compliance with FBC Section 1507.4.3:
ASTM A792 coated, or ASTM A653 G90 galvanized steel
- 15.1.5 Overall Product Dimensions ($\pm \frac{1}{4}$ " nominal):
 - 15.1.5.1 Length(s): 2', 4', 6' and 8' (max.)
 - 15.1.5.2 Width: 23-1/2" (max.)
 - 15.1.5.3 Height: 4-1/2" and 8-1/2" (max.)

15.2 Fastener:

- 15.2.1 Base Fastener: Attaches Roof Vent to Deck
 - 15.2.1.1 Type: Smooth or Ring Shank Roofing Nails
 - 15.2.1.2 Size: 11 gauge \times 2" (Long)
 - 15.2.1.3 Corrosion Resistance: Per FBC Section 1506.5
 - 15.2.1.4 Standard: Per ASTM F 1667

15.3 Roof Adhesive:

- 15.3.1 Type: Standard Heavy bodied Flashing Cement
- 15.3.2 Description: Asbestos-free asphalt based roof cement
- 15.3.3 Application Size: 1/4" thick (min.)
- 15.3.4 Standard: Per ASTM D 4586 Type I

16.0 Installation Method:

(Refer to installation method at the end of this evaluation report.)

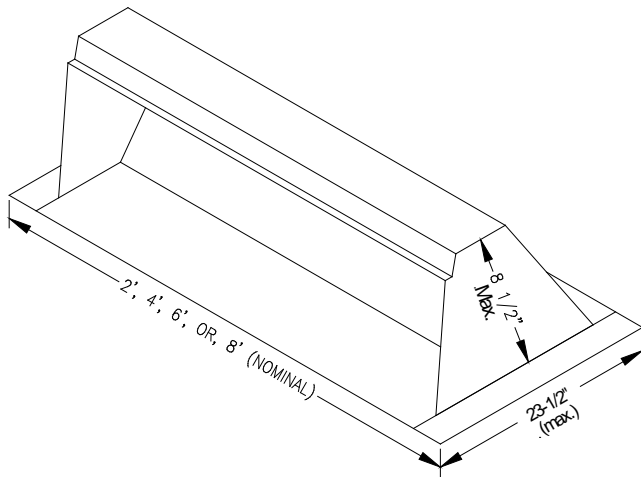
Prepare deck opening by trimming any shingles or tiles & existing nails that may interfere with ridge vent installation. Apply roof cement to the underside, back and side flanges of the ridge vent. Cement should be a 1/4" thick and extend 2" onto roof underlayment. (Install cement in compliance with manufacturer's installation guidelines.) Position vent base flange beneath loosened shingles and align with deck opening. Attach the unit side flanges to deck with fasteners per Section 15.2.1 spaced 4" o.c. and 1" from each end. Apply Roofing Cement to exposed fastener heads. Minimum fastener penetration thru bottom of support, 3/16".

The FLAMCO "Off-Ridge Vent" shall be installed in compliance with the installation method listed in this report and applicable code sections of FBC 6th Edition (2017). The installation method described herein is in accordance with the scope of this evaluation report. Refer to manufacturer's installation instructions as a supplemental guide for attachment.

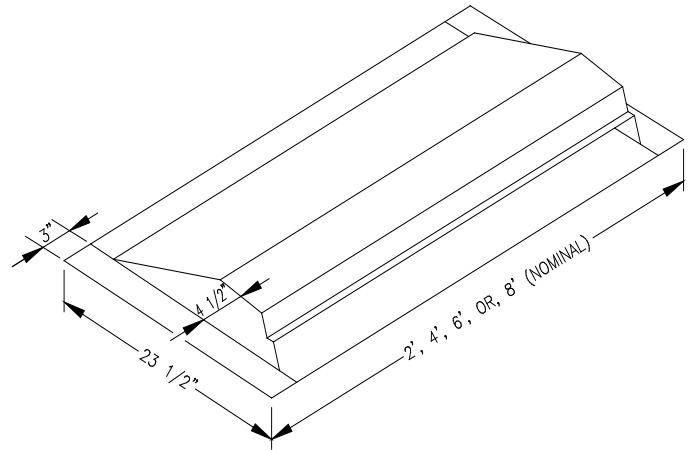
17.0 Evaluation Reference Data:

- 17.1 ASTM E330-02 Uniform Static Air Pressure Difference Test
 - By Fenestration Testing Laboratory, Inc. (FTL) (FBC Organization #TST ID: 1657)
 - Project #16-6647, Lab #9124, Dated: 11/09/16
- 17.2 Quality Assurance
 - By Keystone Certifications, Inc. (FBC Organization #: QUA 1824)
 - Licensee #440
- 17.3 Engineering Analysis
 - By James L. Buckner, P.E. @ CBUGK Engineering
 - (FBC Organization # ANE 1916)
- 17.4 Certification of Independence
 - By James L. Buckner, P.E. @ CBUGK Engineering
 - (FBC Organization # ANE 1916)

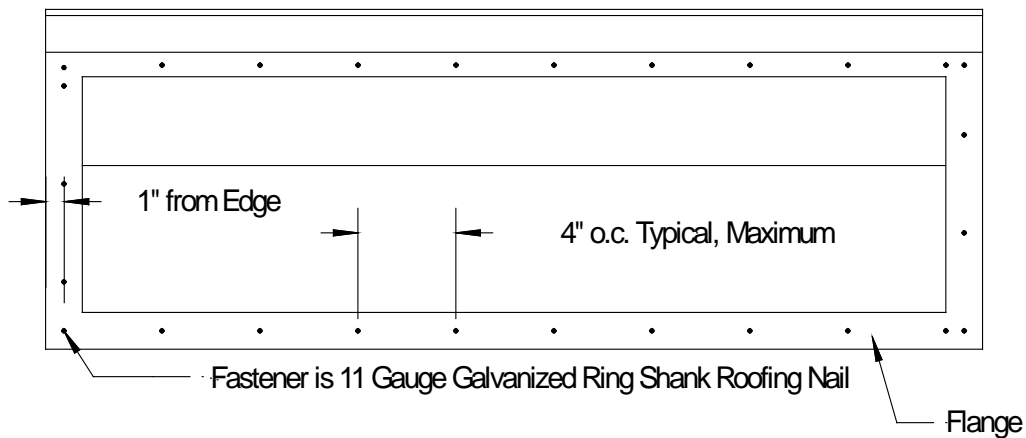
Installation Method FLAMCO "Off-Ridge Vent" Roof Vent



"Off-Ridge Vent"
(for Tile Roofs)
Isometric View



"Off-Ridge Vent"
(for Shingle Roofs)
Isometric View



Top Plan View
(Typical Fastening Pattern)
(Not to Scale)