Specialty Structural Engineering

CBUCK, Inc. Certificate of Authorization #8064

### **Evaluation Report**

**Die Formed Low Profile Floating Ridge Ventilator** 

#### Manufacturer

#### **Metallic Products Corporation**

7777 Hollister Road Houston, TX 77040 (713) 856-9696

For

Florida Product Approval

# FL 12805.10 R5

Florida Building Code 7th Edition (2020)

Method: 2 - B

Category: Roofing

Sub - Category: Roofing Accessories that are an Integral

**Part of the Roofing System** 

**Product Name:** Die Formed Low Profile Floating Ridge Ventilator

**Support Material:** 16 ga. Steel Purlins

Prepared by:

James L. Buckner, P.E., SECB Florida Professional Engineer # 31242 Florida Evaluation ANE ID: 1916

Report No. 20-267.10\_R Vent-DFLPto16gaPurl-ER

Date: 12 / 31 / 2020

Contents:

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This item has been electronically signed and sealed by James L. Buckner, P.E., on this date using a Digital Signature. Printed copies of this document are not considered signed and sealed, and the signature must be verified on any electronic copies.



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Manufacturer: Metallic Products Corporation

7777 Hollister Road Houston, TX 77040 (713) 856-9696

http://www.mpvent.com/

Product Name: Die Formed Low Profile Floating Ridge Ventilator

**Product Category:** Roofing

**Product Sub-Category** Roofing Accessories that are an Integral part of the Roofing System

**Compliance Method:** State Product Approval Rule 61G20-3.005 (2) (b)

**Product Description:** Die Formed Low Profile Floating Ventilators Feature Cor-A-Vent® ventilation core and are

designed specifically for screw-down type roof panels. These ventilators are primarily

designed specifically for screw-down type roof panels.

**Product Assembly as** 

**Evaluated:** 

Refer to Page 4 of this report for product assembly components/materials & standards:

1. Ridge Ventilator

Fasteners

Ventilator Base Support: Type:

Steel Purlins

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

**Description:** 

• Material: Steel

Thickness: 16 Gauge minimumYield Strength: 50 ksi minimum

**Roof Slope:** Minimum slope shall be in compliance with FBC Chapter 15 based on the type of roof

covering, applicable code sections and in accordance with manufacturer's

recommendations.

Performance: Wind Uplift Resistance

\* Design Uplift Pressure: - 103 PSF

\* Allowable design pressure for allowable stress design (ASD) with a margin of safety

of 2 to 1.

**Tested Impact Resistance** 

• Standard: ASTM E1886 (Large Missile Impact)

Results: PassMissile Impact Level: D

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#### **Performance Standards:**

The following test protocols were performed to demonstrate compliance with the intent of the code as this product does not specifically addressed the performance standard in the code.

- ASTM E330-97 Standard Test Method for Structural Performance of Exterior Windows, Curtain Walls, and Doors and by Uniform Static Air Pressure Difference
- **ASTM E1886-02** Standard Test Method for Performance of Building Envelope Impacted by Missile(s) and Exposed to Cyclic Pressure Differentials

**Standards Equivalency:** 

The ASTM E330-97 standard version used to test the evaluated product assembly is equivalent to ASTM E330-14 standard version adopted by the FBC Code 7th Edition (2020).

**Code Compliance:** 

The product(s) described herein have demonstrated compliance with the intent of Florida Building Code in compliance with FBC Section 1708.2.

**Evaluation Report Scope:** 

This product evaluation demonstrates compliance of this product with the structural wind load requirements of the Florida Building Code, as related to Florida Product Approval Rule 61G20-3.001.

Product Limitations and Conditions of Use:

- Refer to applicable building code section for ventilation requirements.
- Structural loads shall comply with the design provisions of the FBC 7th Edition (2020), Chapter 16, Section 1609.
- This product has not been evaluated for wind driven rain resistance.
- Impact rating is for the evaluated assembly as described in this report with no variance or modification.

# General Limitations and Conditions of Use:

- <u>Scope of "Limitations and Conditions of Use" for this evaluation:</u>
  - This evaluation report for "Optional Statewide 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 "Optional Statewide Approval".
- 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.
- 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.
- All metal components and fasteners shall be corrosion resistant in accordance with applicable sections of FBC, including but limited to Sections 1504.3.2, 1506.6 and 1507.4.4.
- Design of support system is outside the scope of this report.
- Fire Classification is outside the scope of Rule 61G20-3, and is therefore not included in this evaluation.
- This evaluation report does not evaluate the use of this product for use in the High Velocity Hurricane Zone code section. (Dade & Broward Counties)

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**Quality Assurance:** 

The manufacturer has demonstrated compliance of roof panel 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 **Architectural Testing, Inc. – QA** (FBC Organization #: QUA 1844)

Component(s)
Material Standards:

#### **Die Formed Low Profile Floating Ridge Ventilator**

Floating Ridge Cap

Material Steel
Thickness: 24 gauge

Yield Strength: 50 ksi Minimum

Corrosion Resistance: In compliance with FBC Section 1507.4.3
Dimension: Refer to Section Drawing of this report

Ventilator Core

Manufacturer: Cor-A-Vent, Inc.

Skirt/Base

Material Steel
Thickness: 24 gauge
Yield Strength: 50 ksi Minimum

Corrosion Resistance: In compliance with FBC Section 1507.4.3

Dimension: Refer to Section Drawing of this report

**Fastener** 

Use: 1) To Attach Ventilator Cap to Skirt/Base

2) To Attach Ventilator Skirt/Base to support

Type: Self-Drilling Screw, w/ Weather-Seal Washers

Size:  $1/4" \times 1-1/2"$  Minimum

Corrosion Resistance: Per FBC Section 1506.6 and 1507.4.4

Standard: Per SAE J78-1979

#### Installation: Installation Method:

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

Attach Die Formed Low Profile Floating Ridge Ventilator to 16 Ga. steel supports at the skirt/base with 1/4 " self-drilling screws, with minimum penetration through support 3/4 in

- Locate Fasteners along the length of the ridge vent skirt/base
- Fastener Spacing: 12 in. o.c. & 6 in. from each end

"Low Profile Floating Ridge Ventilator" shall be installed in compliance with the installation method listed in this report. 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.

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#### **Evaluated Referenced Data:**

1. ASTM E330-97 Uniform Static Air Pressure Difference Test

By: Architectural Testing, Inc. – Test Lab (FBC Organization #TST ID: 1910)

Report Number: 61243.01-801-44, Dated: 12/14/05

2. ASTM E1886-02 Impact Test

By: Architectural Testing, Inc. – Test Lab (FBC Organization #TST ID: 1910)

Report Number: 61243.01-801-44, Dated: 12/14/05

3. Quality Assurance

By Architectural Testing, Inc. – QA, (FBC Organization #QUA ID:1844)

4. Equivalency of Test Standard Certification

By James L. Buckner, P.E. @ CBUCK Engineering

 Certification of Independence
 By James L. Buckner, P.E. @ CBUCK Engineering (FBC Organization # ANE 1916)

6. Engineering Analysis

By CBUCK Engineering

Report #C15-108, Dated: 10/26/15

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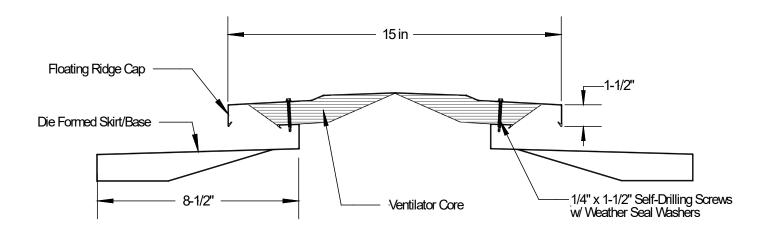
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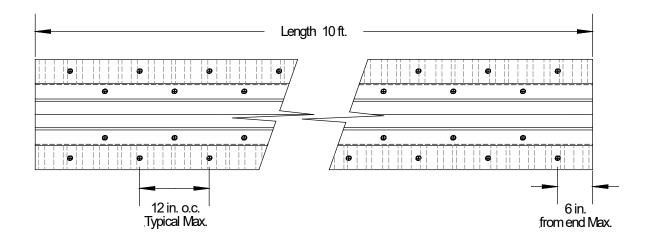
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# Installation Method Metallic Products Die Formed Low Profile Floating Ridge Ventilator Attached to 16 Ga. Steel Supports



**Side Section View** 



**Top View Screw Locations** 

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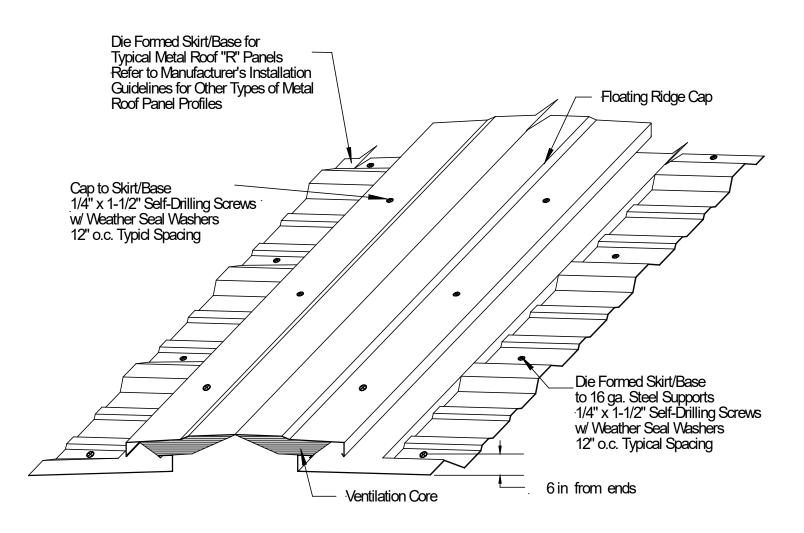
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# Installation Method Metallic Products Die Formed Low Profile Floating Ridge Ventilator Attached to 16 Ga. Steel Supports



**Isometric View**