# CBUCK Engineering

Specialty Structural Engineering

CBUCK, Inc. Certificate of Authorization #8064

# **Evaluation Report**

"MPO-G"

# **Center-Pivot Adjustable Blades Wall Louver**

#### Manufacturer

## **Metallic Products Corporation**

7777 Hollister Road Houston, TX 77040

For

Florida Product Approval

# FL 12256.2 R4

Florida Building Code 7th Edition (2020)

Method: 1 - D

**Category: Panel Wall** 

Sub - Category: Wall Louver

**Product Name:** MPO-G Wall Louver

Material: Steel

### Prepared by:

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

Report No. 20-297.02-Louver-MPOG-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: Center-Pivot Adjustable Blades Wall Louver

MPO-G

Product Category: Panel Walls

Product Sub-Category Wall Louver

Compliance Method: State Product Approval Rule 61G20-3.005 (1) (d)

Product Description: Center-Pivot Adjustable Blades Wall Louvers are specifically designed to for pre-

engineered metal wall panels. These systems are self-flashing and self-framing. Center-Pivot Adjustable Blades Wall Louvers feature roll-formed blades with plated twin link pivot brackets and connected to plated rod. They are assembled with brass pivot and

set screws for smooth, noncorrosive operation.

**Product Assembly as** 

**Evaluated:** 

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

1. Wall Louver

2. Fasteners

Support: Type:

Steel Sub-Framing

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

**Description:** 

• Material: Steel

Thickness: 14 Gauge minimum
 Yield Strength: 50 ksi minimum

Performance: Wind Resistance

\* Allowable Design Pressure: +/- 170 PSF

\* Allowable design pressure for allowable stress design (ASD)

**Tested Impact Resistance** 

Standard: ASTM E1886 (Large Missile Impact)
 Assembly: As described in this evaluation report

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 & ASTM E1886-02 standard version used to test the evaluated product assembly is equivalent to ASTM E330-14 & ASTM E1886-12 standard version adopted by the Florida Building Code 6th Edition (2017).

**Code Compliance:** 

The product(s) described herein have demonstrated compliance with the performance standards listed above as referenced in the current Florida Building Code.

**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:

• Scope of "Limitations and Conditions of Use" for this evaluation:

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)

Components/Materials (by Manufacturer):

#### **Center-Pivot Adjustable Blades Wall Louver**

Model Name: MPO-G

Overall Dimension: 48 " × 48" Maximum

Frame Component:

Material: Steel
Thickness: 18 gauge

Yield Strength: 50 ksi Minimum Corrosion Resistance: G-90 Galvanized

Blade Component:

Material: Steel
Thickness: 20 gauge

Yield Strength: 50 ksi Minimum Corrosion Resistance: G-90 Galvanized

**Fastener** 

Type: Self-Drilling Screw w/ Weather-Seal Washer

Size: 1/4'' - 14 x minimum penetration through support 3/4''

Head: Hex-Head

Material Corrosion Resistance Steel

Standard: Per SAE J78-1979

#### Installation:

#### **Installation Method:**

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

Attach Center-Pivot Adjustable Blades Wall Louvers model MPO-G to minimum 14 Ga. steel supports with 1/4" - 14 x minimum penetration through support 3/4 in.

- Locate Fasteners along the entire perimeter of the louver
- Fastener Spacing: 12 in. o.c. Maximum & 2 in. from each corner

The "Center-Pivot Adjustable Blades Wall Louvers" 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.

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

1. ASTM E330-97e1 Uniform Static Air Pressure Difference Test

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

Report Number: 61244.01-801-44, Dated: 12/14/05

2. ASTM E1886-02 Impact Test

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

Report Number: 61244.01-801-44, Dated: 12/14/05

3. Quality Assurance

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

Certification of Independence

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

(FBC Organization # ANE 1916)



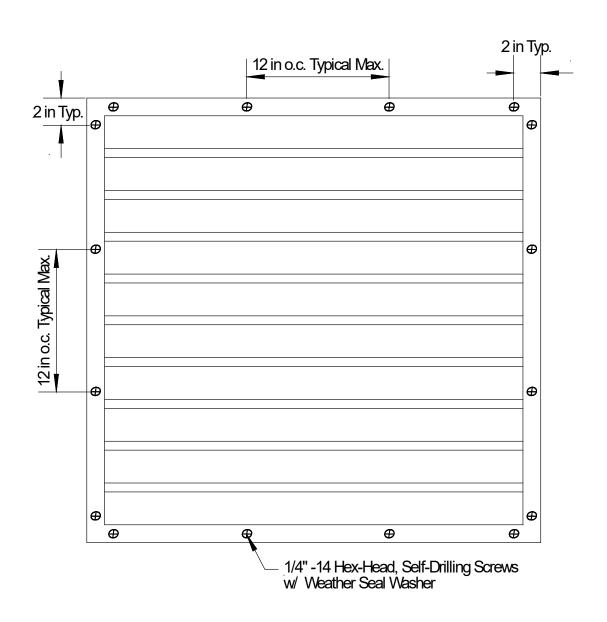
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# Installation Method Metallic Products Corporation Center-Pivot Adjustable Blades (MPO-G) Wall Louver Attached to 14 Ga. Steel Supports



**Front Elevation View** 



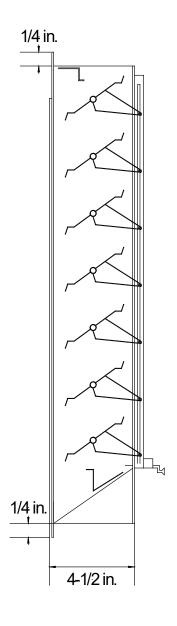
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# Installation Method Metallic Products Corporation Center-Pivot Adjustable Blades (MPO-G) Wall Louver Attached to 14 Ga. Steel Supports



**Side Section View**