

Evaluation Report

Air Vent, Inc.'s Static & Motorized Roof Vents

Manufacturer

Air Vent, Inc.

4117 Pinnacle Point Drive, Suite 400
Dallas, TX 75211
214-630-7377

For

Florida Product Approval

FL 27903.1 R3

In compliance with

Florida Building Code 8th Edition (2023)

Method: 2 - B

Category: Roofing

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

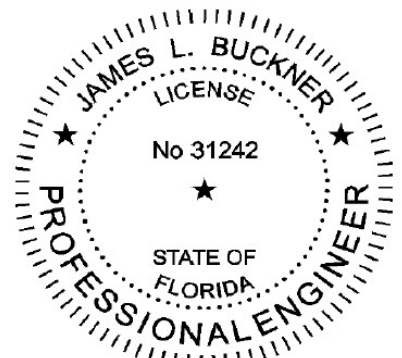
Product Name: See Model List

Product Description: Static & Motorized Roof Vents

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

Prepared by:

James L. Buckner, P.E., SECB
Florida Professional Engineer # 31242
Florida Evaluation ANE ID: 1916
Project Manager: Diana Galloway
Report No. 23-571-RoofVents-ER
(Revises 21-439- RoofVents-ER, FL27903.1 R2)
Date: 12/20/2023



James L. Buckner, P.E.
FL31242

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Evaluation Report

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Manufacturer:	Air Vent, Inc. 4117 Pinnacle Point Drive Suite 400, Dallas, TX 75211 Phone: 214-630-7377 http://www.airvent.com/		
Product Name:	Static & Motorized Roof Vents		
Product Category:	Roofing		
Product Sub-Category	Roofing Accessories that are an Integral part of the Roofing System		
Product Description:	Static and Powered roof vents. The vents are available in steel, aluminum and plastic and available in several colors. This evaluation report includes the roof vents listed in Table A.		
Product Assembly as Evaluated:	Roof Vent, Fasteners Refer to Page 4 of this report for product assembly components/materials & standards:		
Support:	Types: OSB Deck or Plywood Deck (Design of support system is outside the scope of this evaluation.) Description: (Refer to Table A) 1. OSB Deck, Min. Thickness: 3/8" 2. Plywood Deck, Min. Thickness: 3/8" 3. Plywood Deck, Min. Thickness: 15/32"		
Roof Slope:	3:12 minimum 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: See Table A		
Performance Standards:	The following test protocol was performed to demonstrate compliance with the intent of the code: ASTM E330 – <i>Standard Test Method for Structural by Uniform Static Air Pressure Difference</i>		
Code Compliance:	The product(s) described herein have demonstrated compliance with the performance standards listed above as referenced in: Florida Building Code 8 th Edition, Section 1708.2 International Building Code (IBC) 2021, Section 1708.2.2		
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.		

Specialty Structural Engineering

CBUCK, Inc. Certificate of Authorization #8064

Product Limitations and Conditions of Use:

- The ridge vents shall be installed in accordance with applicable Building Codes and in compliance with manufacturer's installation instructions.
- Refer to applicable building code section for ventilation requirements.
- This product shall not be installed on roof slopes less than 3 : 12.
- Structural loads shall comply with the design provisions of the FBC 8th Edition (2023), Chapter 16, Section 1609.

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)

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 UL, LLC (FBC Organization #: CER 9626).

Component(s)
Material Standards/
Performance:

Ridge Vent Material For: **B-144, ASR-HP, HE-15, PC-12, RV-26, RV-28, Roof Mount w/Solar Panel, Solar Cool, RVG55, RVG40, RVG51, RVG53**

Material Type: **Steel**
Thickness: 22 Ga. Minimum
Yield Strength: 40 ksi minimum
Material Standards: In compliance with the FBC Section 1507.4.3

Ridge Vent Material For: **RVA51**

Material Type: **Aluminum**
Thickness: 0.025" min.
Material Standards: In compliance with the FBC Section 1507.4.3

Ridge Vent Material For: **RVP61, SLP61, EVI**

Material Type: **Plastic**
Description: High Density Polypropylene
Material Standards: ASTM G155/D638, ASTM D1929, ASTM E635

Fastener Type for Use with: B-144, ASR-HP, HE-15, PC-12, RV-26, RV-28, Roof Mount w/Solar Panel, Solar Cool, RVG55, RVP61, SLP61, RVG40, RVA51, RVG51, RVG53:

Use: Attaches Ridge Vent Base to Plywood Deck
Type: Smooth Roofing Nail
Size: 1-1/4" x 0.115" Shaft Diameter x 0.361" Head Diameter
Standard: Per ANSIASME B18.6.1
Corrosion Resistance: Per FBC Section 1506.6

Fastener Type For Use with: EVI:

Use: Attaches Ridge Vent Base to Plywood Deck
Type: Ring Shank Roofing Nail
Size: 1-1/4" x 0.120" Shaft Diameter x 0.375" Head Diameter
Standard: Per ANSIASME B18.6.1
Corrosion Resistance: Per FBC Section 1506.6

Component(s)
**Material Standards/
Performance:**

TABLE A ALLOWABLE LOADS								
MODEL	VENT TYPE	MAT'L	BASE DIMENSIONS	HEIGHT	DOMEDIAM.	OPENING DIAM.	DECK TYPE	DESIGN PRESSURE
B-144	Static, Round Roof Fan	Steel, 22 ga.	24" x 24"	8.4"	24.3"	14.0"	OSB, 3/8" min.	-167 PSF
ASR-HP	Powered, Round Roof Fan	Steel, 22 ga.	24" x 24"	8.4"	24.3"	14.0"	OSB, 3/8" min.	-167 PSF
HE-15	Powered, Round Roof Fan	Steel, 22 ga.	24" x 24"	8.4"	24.3"	14.0"	OSB, 3/8" min.	-167 PSF
PC-12	Powered, Round Roof Fan	Steel, 22 ga.	24" x 24"	8.4"	24.3"	14.0"	OSB, 3/8" min.	-167 PSF
RV-26	Powered, Round Roof Fan	Steel, 22 ga.	24" x 24"	8.4"	24.3"	14.0"	OSB, 3/8" min.	-167 PSF
RV-28	Powered, Round Roof Fan	Steel, 22 ga.	24" x 24"	8.4"	24.3"	14.0"	OSB, 3/8" min.	-167 PSF
Roof Mount w/Solar Panel	Powered, Round Roof Fan	Steel, 22 ga.	24" x 24"	8.4"	24.3"	14.0"	OSB, 3/8" min.	-167 PSF
Solar Cool	Powered, Round Roof Fan	Steel, 22 ga.	24" x 24"	8.4"	24.3"	14.0"	OSB, 3/8" min.	-167 PSF
RVG40	Static, Slant Back Roof Vent	Steel, 22 ga.	14" x 16.75"	4.2"	N/A	7.5"	OSB, 3/8" min.	-200 PSF
RVG40	Static, Slant Back Roof Vent	Steel, 22 ga.	14" x 16.75"	4.2"	N/A	7.5"	Plywood, 1/2" min.	-53.3 PSF
RVA51	Static, Square Roof Vent	Alum.	15" x 16.8	3.8"	N/A	8"	Plywood, 1/2" min.	-60 PSF
RVG51	Static, Square Roof Vent	Steel, 22 ga.	15" x 16.8"	3.8"	N/A	8"	Plywood, 1/2" min.	-60 PSF
RVG53	Static, Square High Collar Roof Vent	Steel, 22 ga.	11.8" x 15"	3.8"	N/A	8"	Plywood, 1/2" min.	-60 PSF
RVG55	Static, Square Slant Roof Vent	Steel, 22 ga.	15.9" x 20.4"	5.0"	N/A	8"	OSB, 3/8" min.	-167 PSF
RVG55	Static, Square Slant Roof Vent	Steel, 22 ga.	15.9" x 20.4"	5.0"	N/A	8"	Plywood, 3/8" min.	-86.6 PSF
RVP61	Static, Square Roof Vent	Plastic	17.00" x 17.90"	4.8"	N/A	9"	Plywood, 3/8" min.	-130 PSF
SLP61	Static, Slant Back Roof Vent	Plastic	16.50" x 19.50"	4.75"	N/A	9"	Plywood, 3/8" min.	-133 PSF
EVI	Static, Edge Roof Vent	Plastic	11.5" x 4', 6' or 8'	0.8"	N/A	¾" wide	OSB, 3/8" min.	-203 PSF
Note: Allowable uplift design pressure(s) for allowable stress design (ASD) with a margin of safety of 1.5 to 1.								

Installation:

Installation Method:

RVA51, RVG40, RVG51, RVG53, RVG55, RVP61, SLP61:

The base of the vent shall be attached to the deck with roofing nails per this report. One fastener shall be attached to each of the four sides, located 1" from each corner and one at the mid span of each side. The fasteners must be long enough to penetrate into and through the roof deck.

B-144, ASR-HP, HE-15, PC-12, RV-26. RV-28, Roof Mount w/Solar Panel and Solar Cool:

The base of the vent shall be attached to the deck with roofing nails per this report. One fastener shall be attached to each of the four sides, located 3" from each corner and one at the mid span of each side. The fasteners must be long enough to penetrate into and through the roof deck.

EVI:

The base of the vent shall be attached to the deck with roofing nails per this report. 10 fasteners shall be attached through the pre-formed nail holes.. The fasteners must be long enough to penetrate into and through the roof deck.

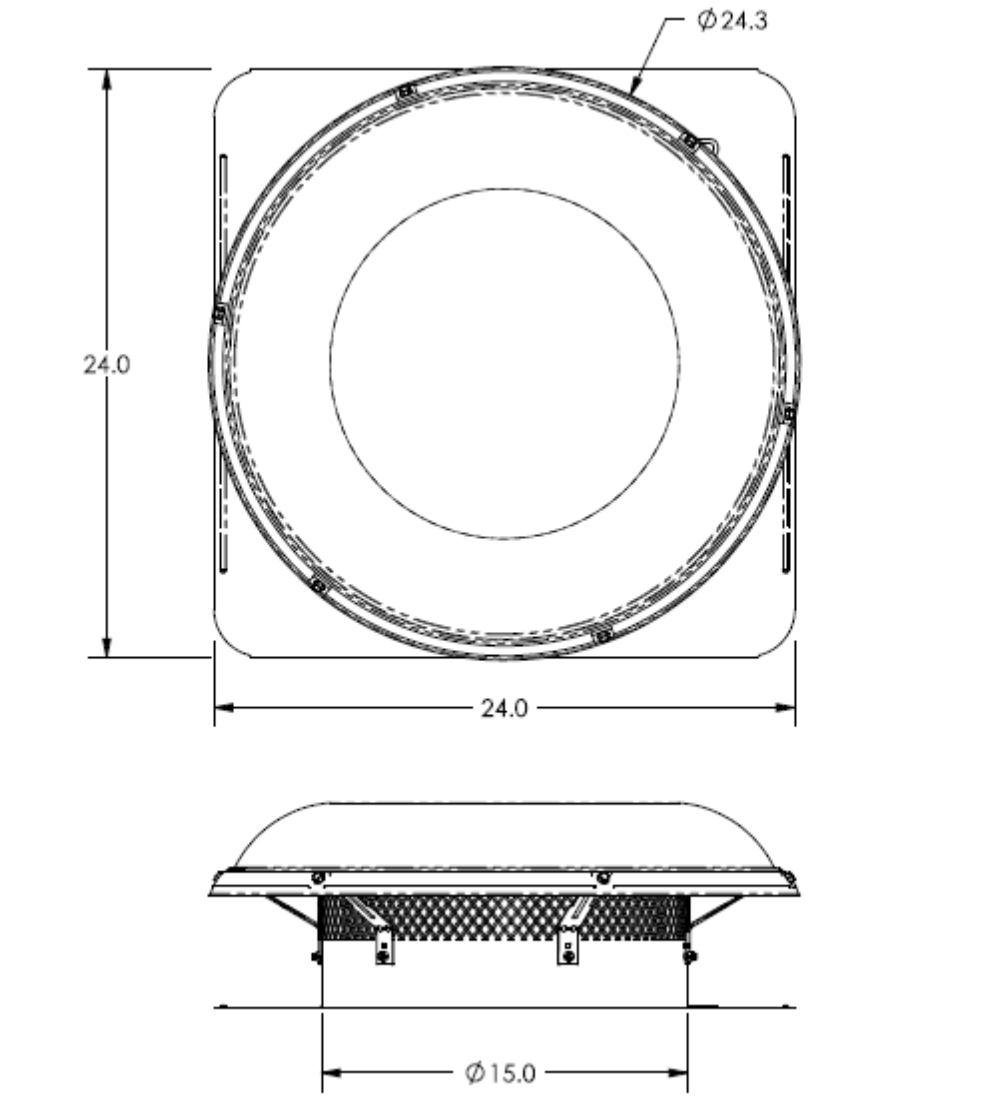
"The Static & Motorized Ridge Vents" shall be installed in compliance with the installation method listed in this report. The installation method described herein is in accordance with the scope of this evaluation report. Refer to manufacturer's installation instructions as a supplemental guide for attachment.

Evaluated

Referenced Data:

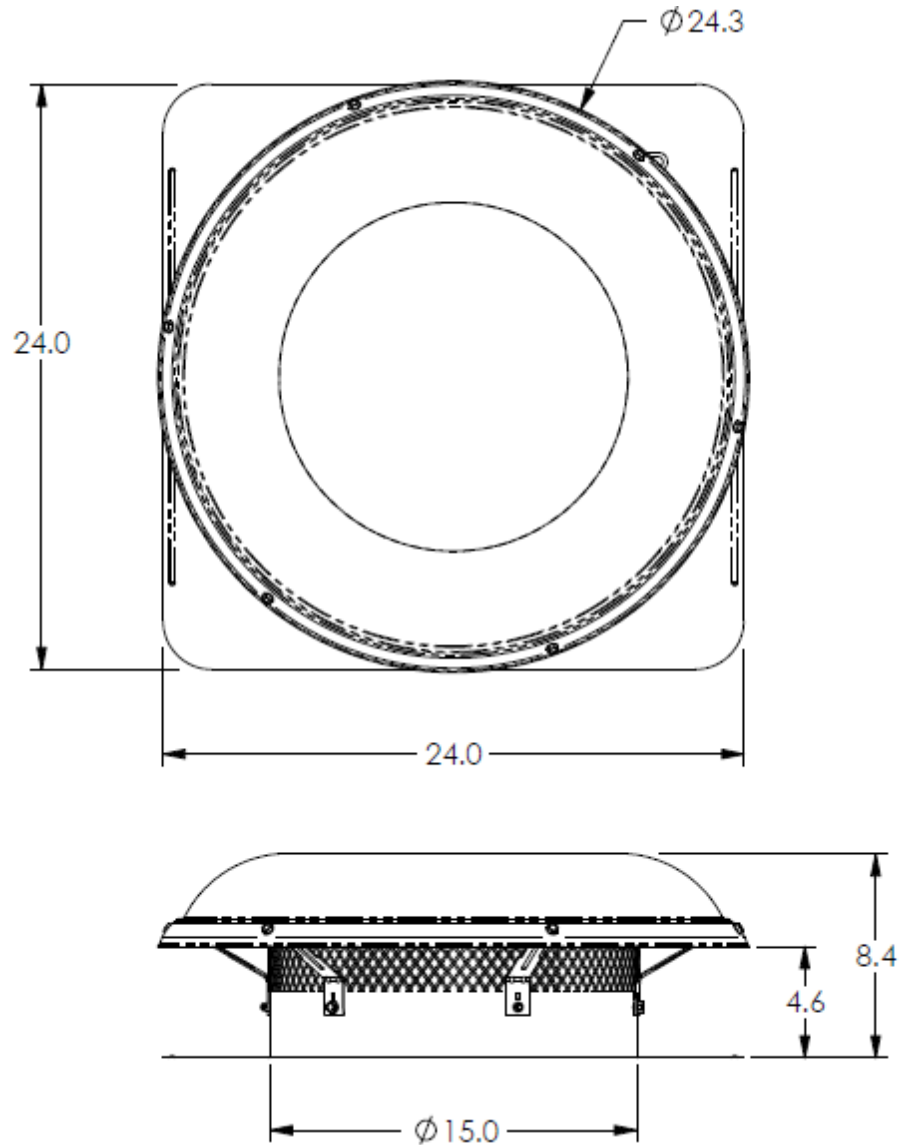
1. ASTM E330 Uniform Static Air Pressure Difference Test
By Intertek – Plano, TX (FBC Organization ID# TST 2609)
Project #: H9860.01-801-44-r1, Dated: 05/03/18
2. ASTM E330 Uniform Static Air Pressure Difference Test
By Intertek – Plano, TX (FBC Organization ID# TST 2609)
Project #: i1489.01-801-44, Dated: 06/08/18
3. ASTM E330 Uniform Static Air Pressure Difference Test
By Intertek – Plano, TX (FBC Organization ID# TST 2609)
Project #: C2730.01-801-44-r1, Dated: 01/22/13
4. ASTM E330 Uniform Static Air Pressure Difference Test
By Intertek – Plano, TX (FBC Organization ID# TST 2609)
Project #: e0944.01-801-44-r0, Dated: 12/16/14
5. Engineering Analysis
By James L. Buckner, P.E. @ CBUCK Engineering
6. Quality Assurance
By UL, LLC (FBC Organization #: CER 9626)
Air Vent, Inc. UL File E61959
7. Certification of Independence
By James L. Buckner, P.E. @ CBUCK Engineering (FBC Organization # ANE 1916)
8. Equivalency Evaluation
By Joseph Reed, P.E., Intertek/Architectural Testing – York, PA
Report #i2399.01-122-34-r1, Dated: 03/28/18

**Air Vent, Inc.'s
Ridge Vent Profile Drawings**



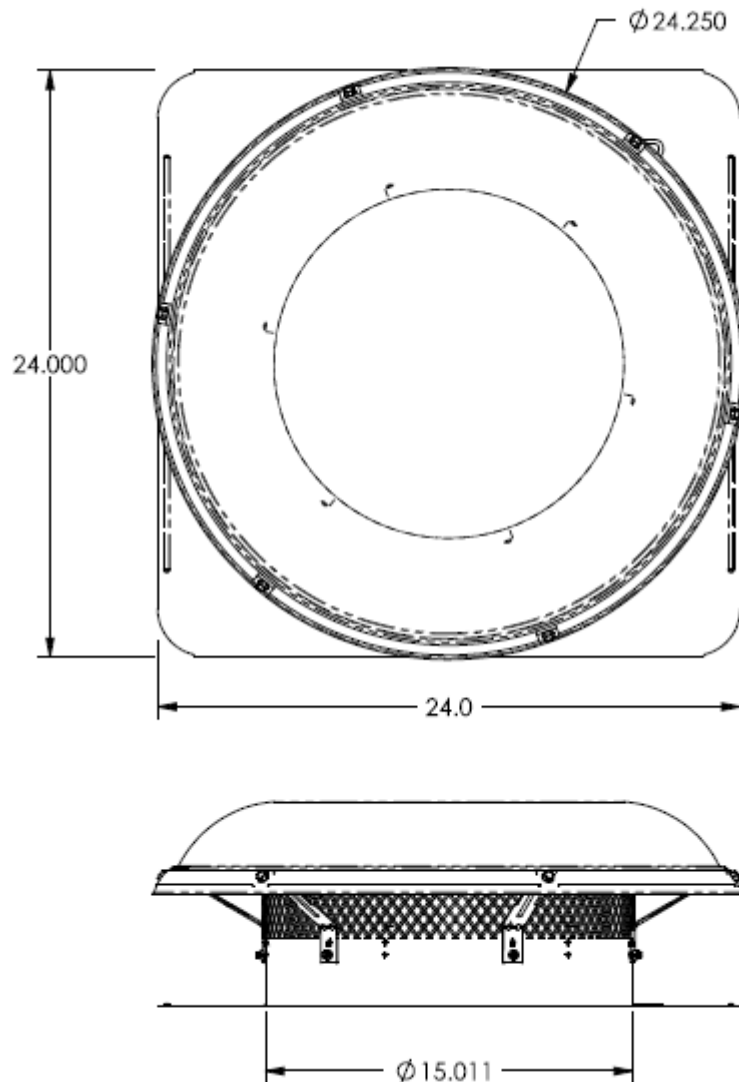
B-144
Static, Round Roof Fan

**Air Vent, Inc.'s
Ridge Vent Profile Drawings**



ASR – HP
Powered, Round Roof Fan

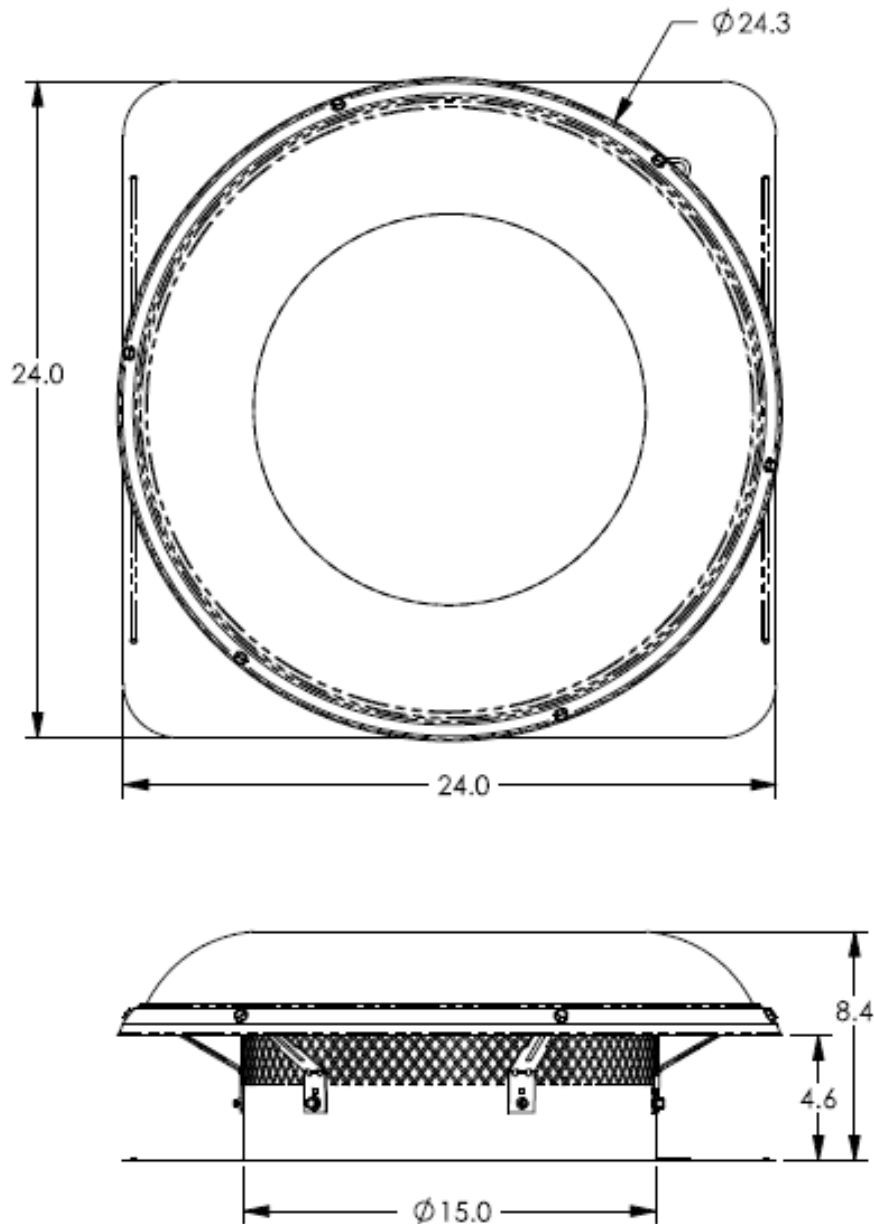
**Air Vent, Inc.'s
Ridge Vent Profile Drawings**



HE – 15

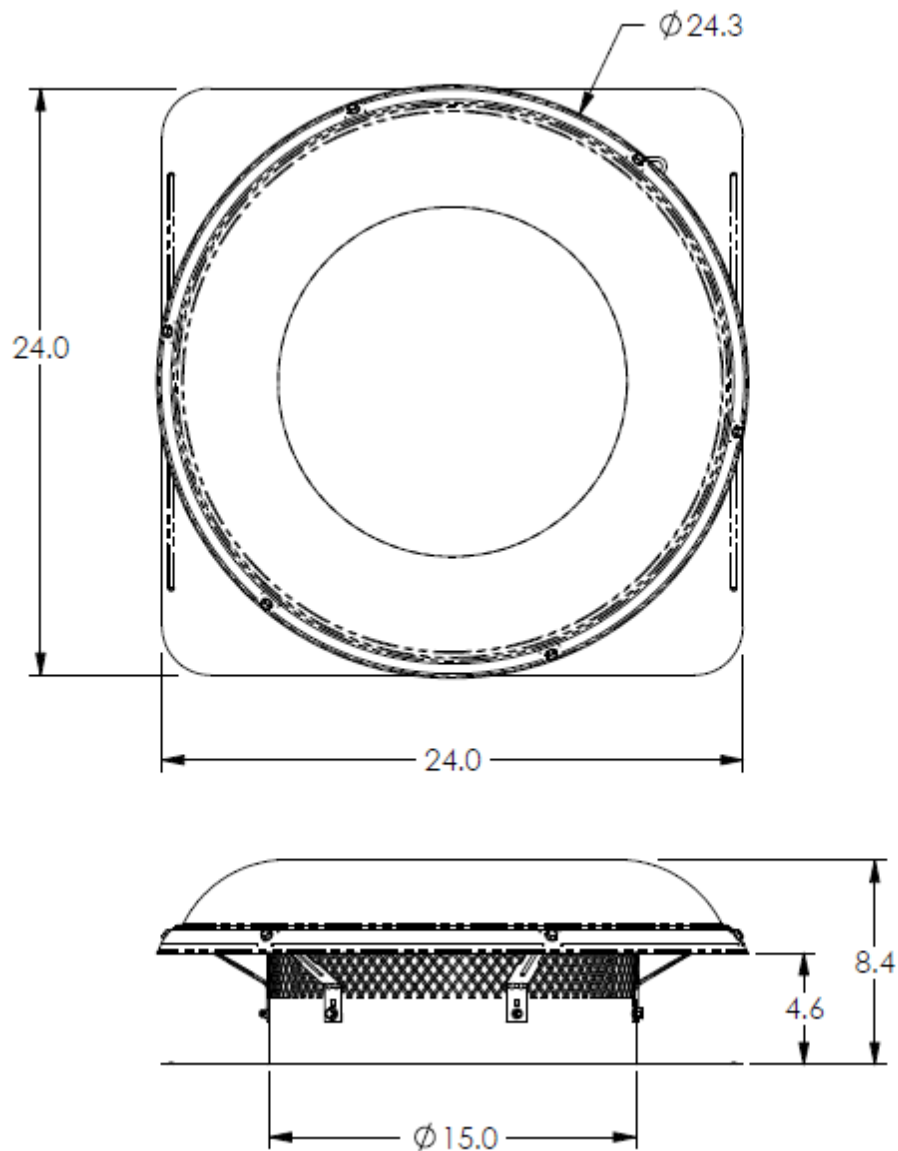
Powered, Round Roof Fan

**Air Vent, Inc.'s
Ridge Vent Profile Drawings**



PC – 12
Powered, Round Roof Fan

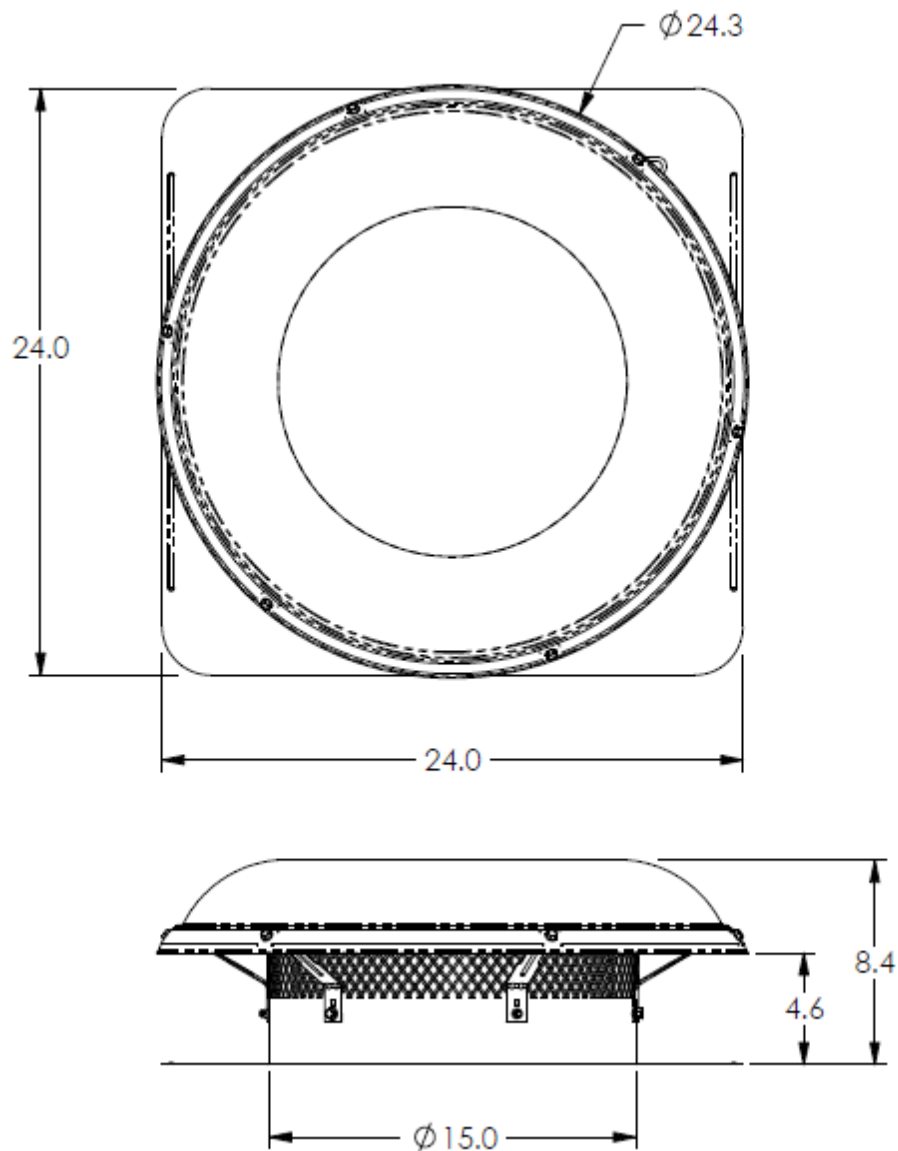
**Air Vent, Inc.'s
Ridge Vent Profile Drawings**



RV-26

Powered, Round Roof Fan

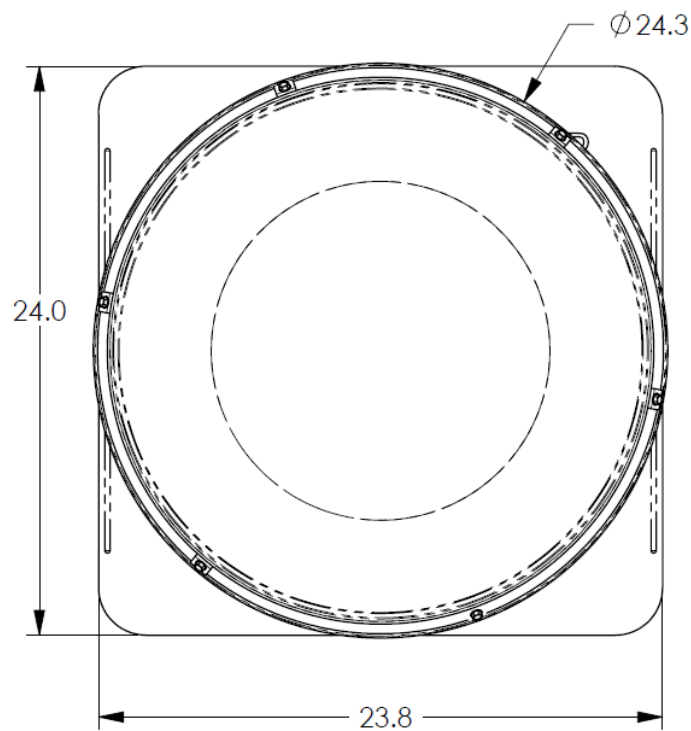
**Air Vent, Inc.'s
Ridge Vent Profile Drawings**



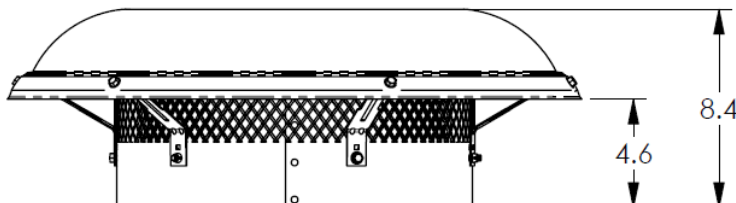
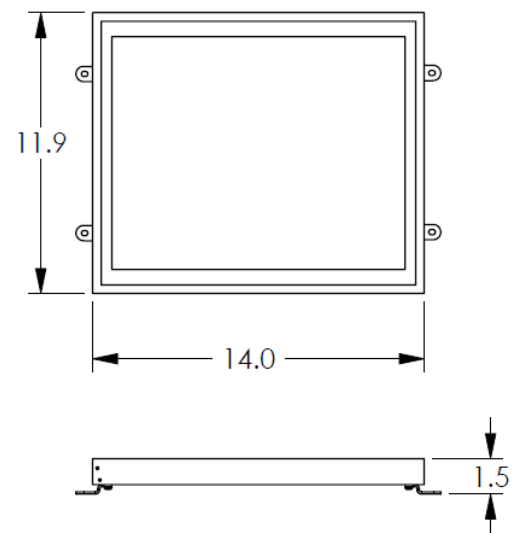
RV-28
Powered, Round Roof Fan

**Air Vent, Inc.'s
Ridge Vent Profile Drawings**

SOLAR FAN

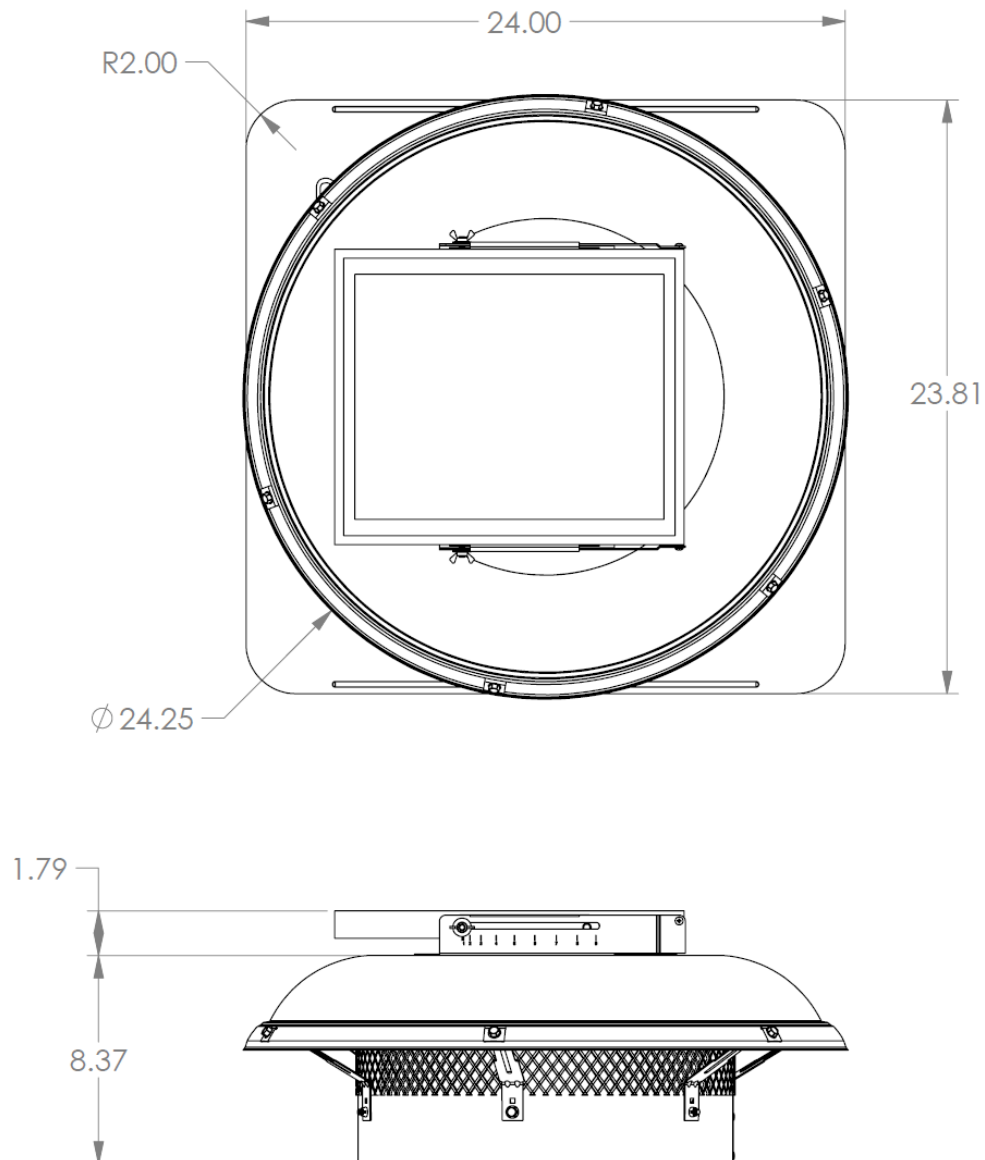


SOLAR PANEL



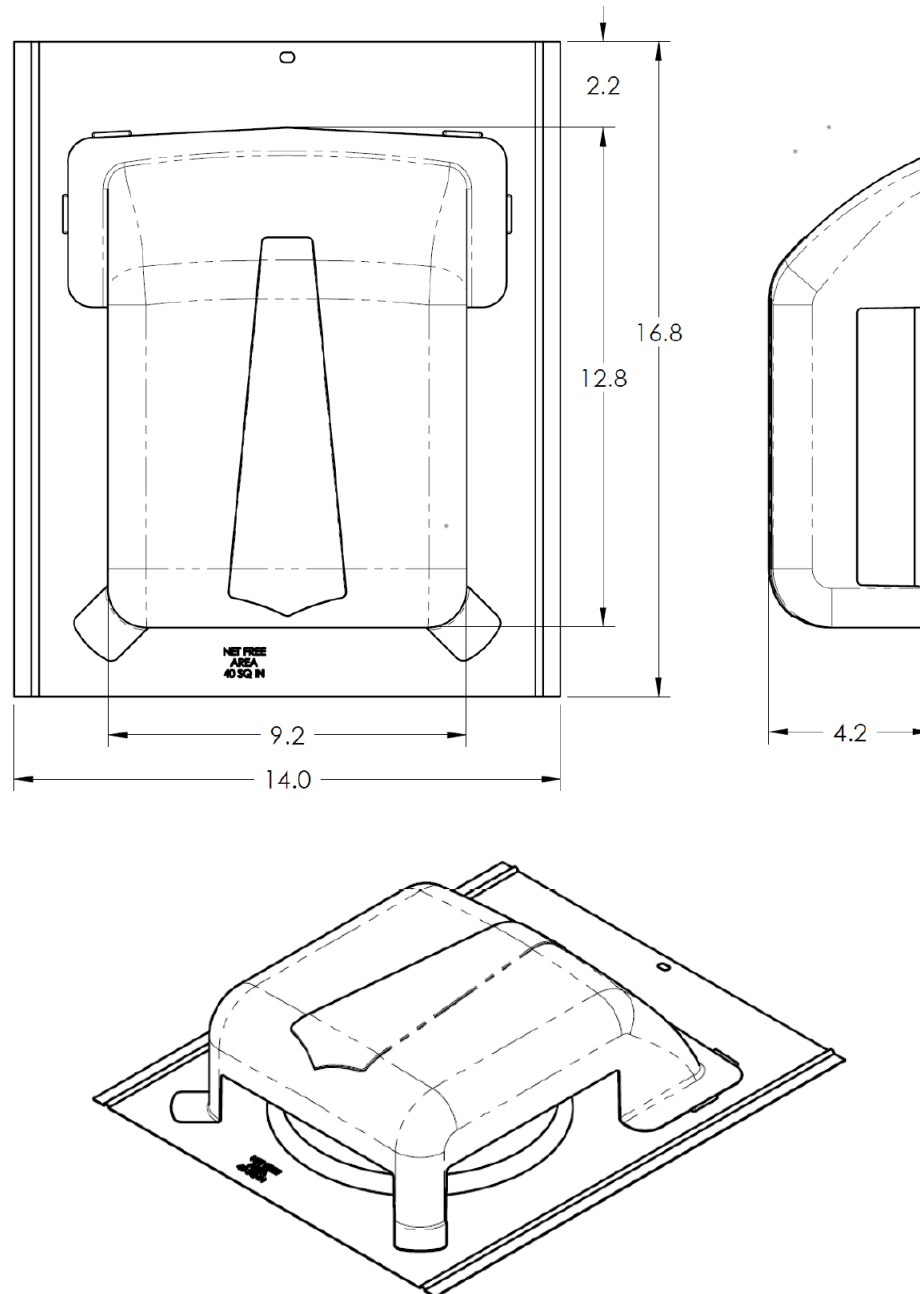
Roof Mount w/Solar Panel
Powered, Round Roof Fan

**Air Vent, Inc.'s
Ridge Vent Profile Drawings**



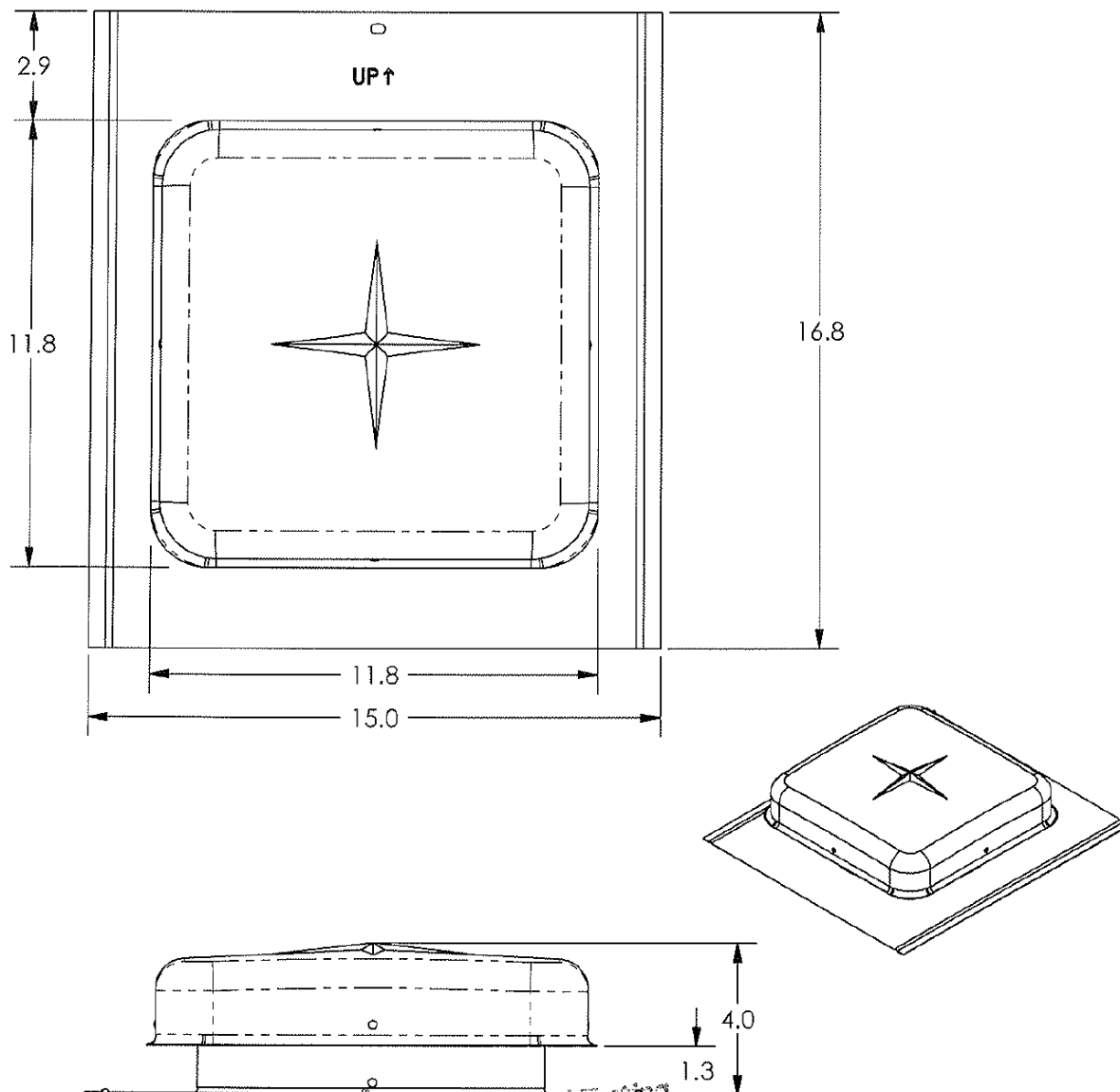
Solar Cool
Powered, Round Roof Fan

**Air Vent, Inc.'s
Ridge Vent Profile Drawings**



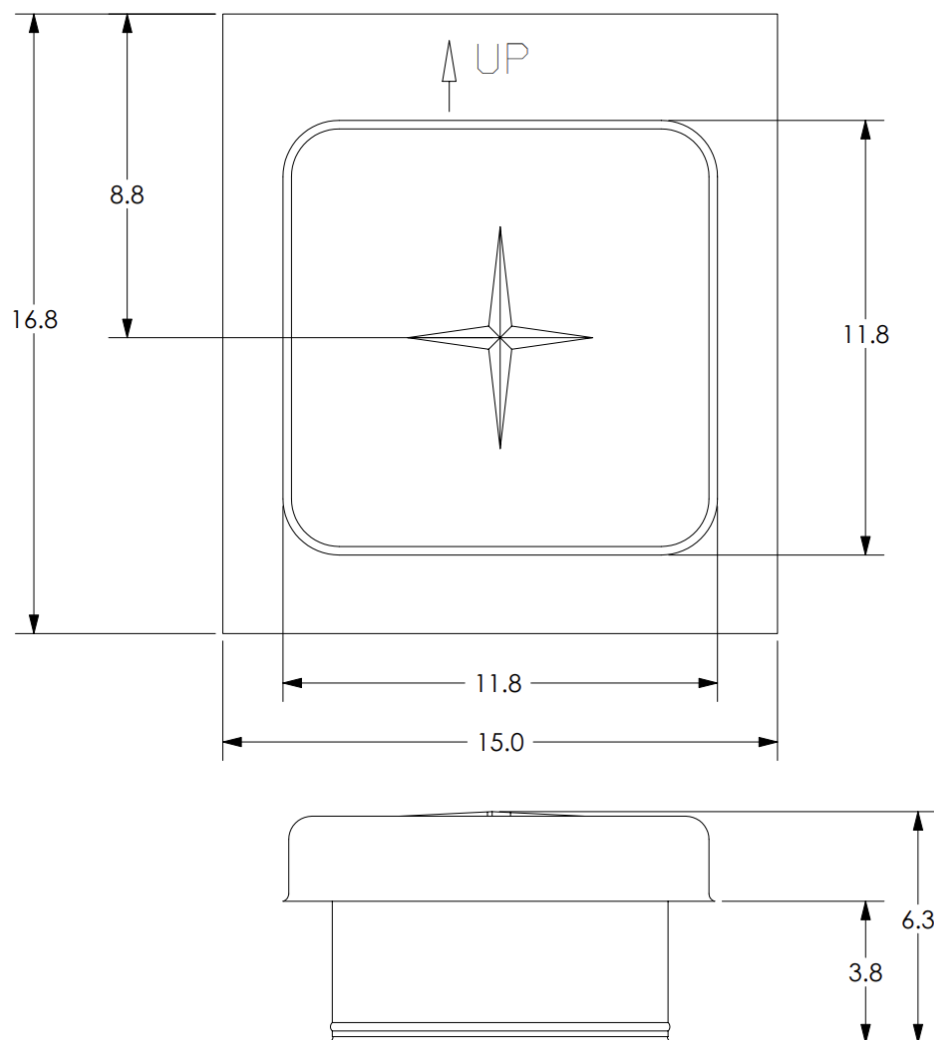
RVG40
Static, Slant Back Roof Vent

**Air Vent, Inc.'s
Ridge Vent Profile Drawings**



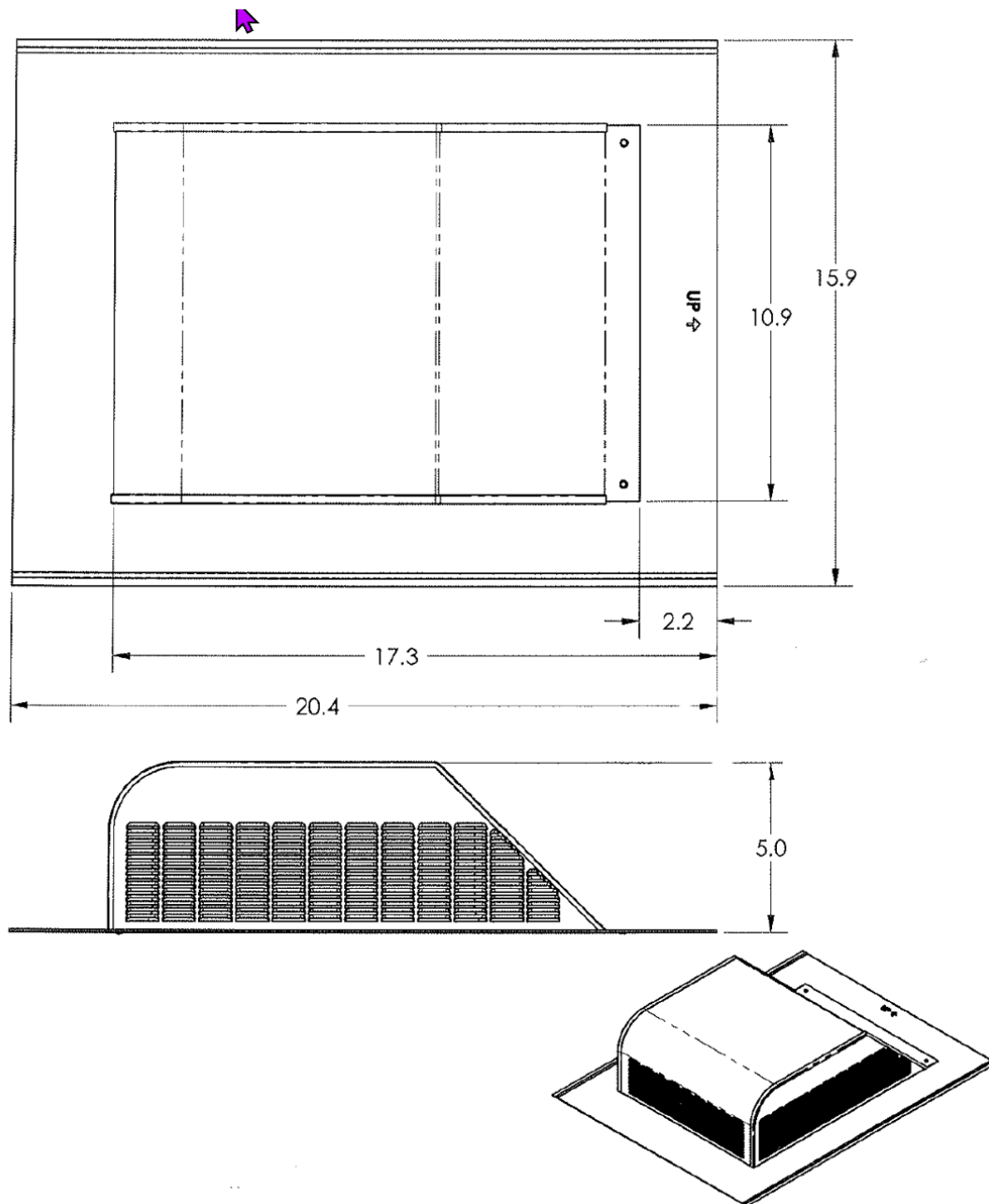
RVA-51 and RVG-51
Static, Square Roof Vent

**Air Vent, Inc.'s
Ridge Vent Profile Drawings**



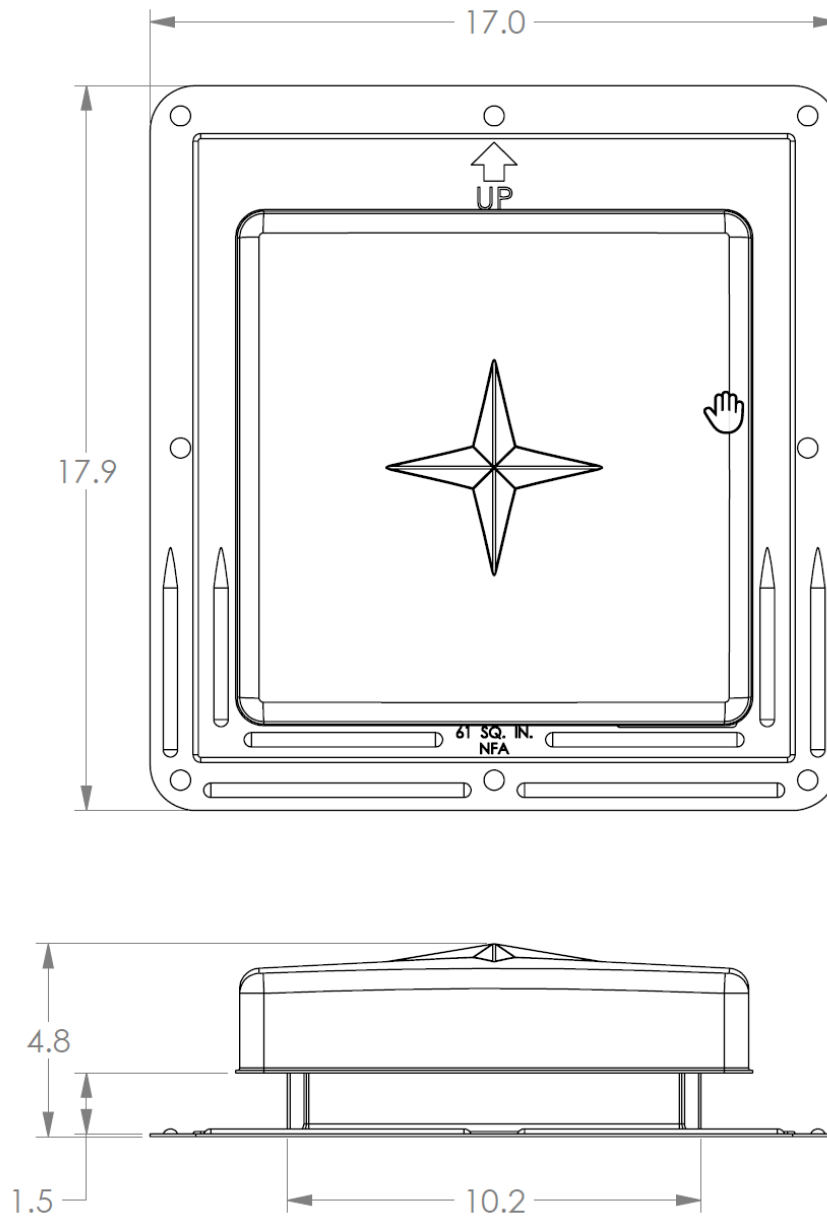
RVG-53
Static, Square Roof Vent

**Air Vent, Inc.'s
Ridge Vent Profile Drawings**



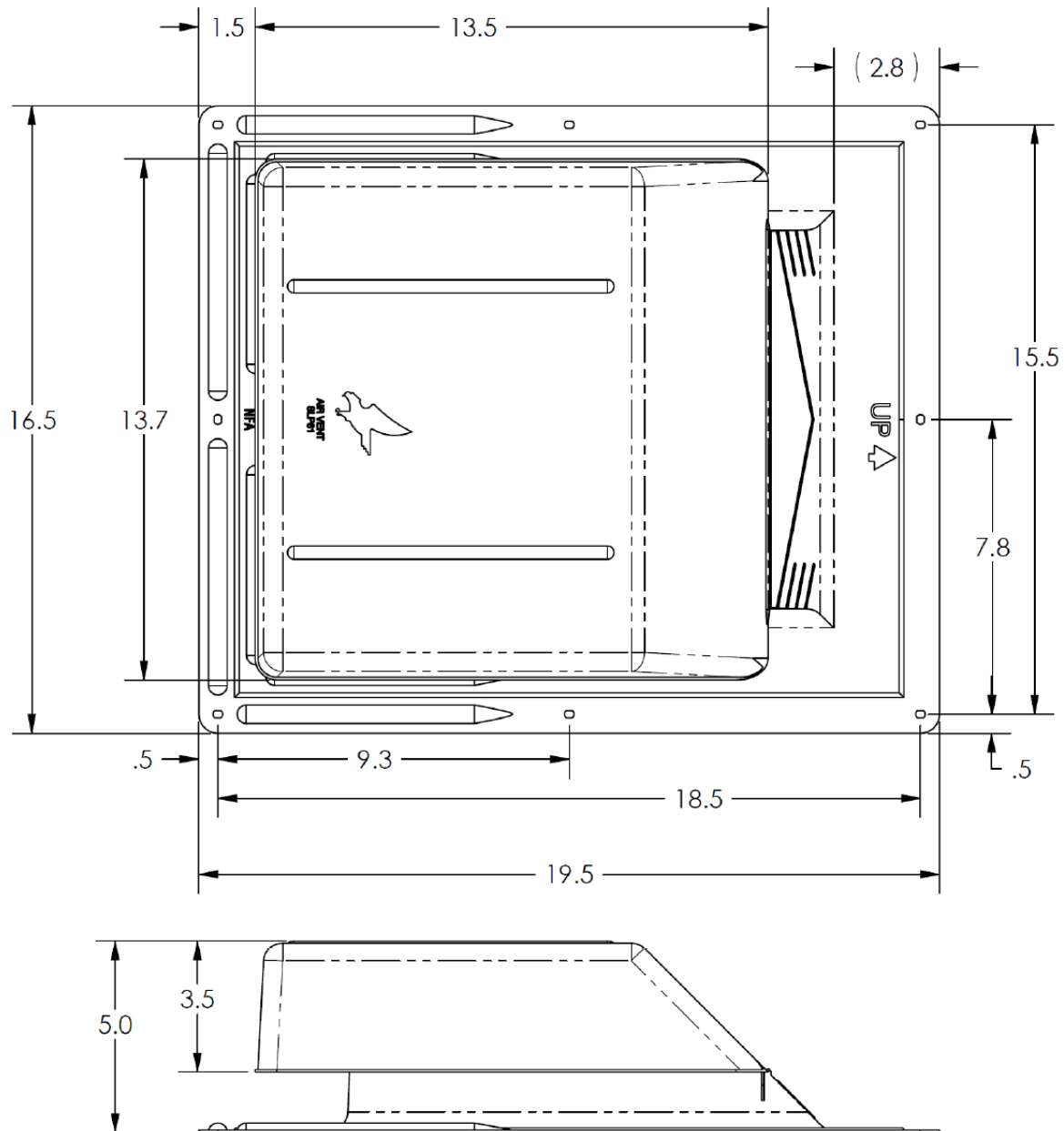
RVG55
Static, Square Roof Vent

**Air Vent, Inc.'s
Ridge Vent Profile Drawings**



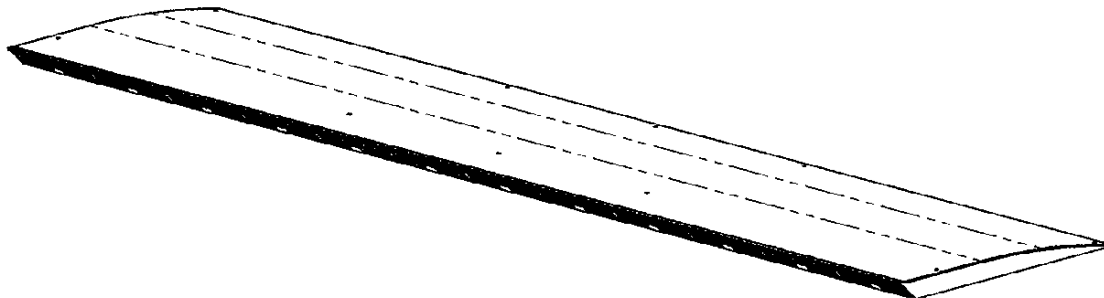
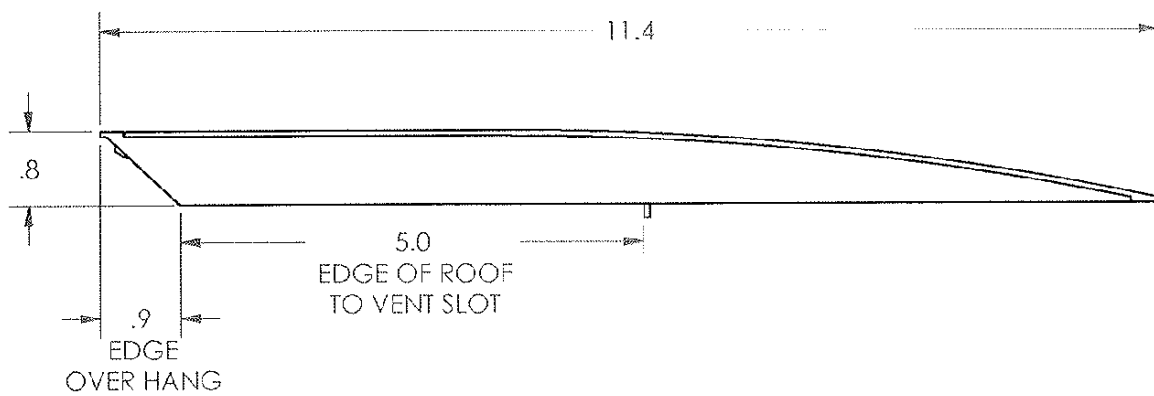
RVP61
Static, Square Roof Vent

**Air Vent, Inc.'s
Ridge Vent Profile Drawings**



SLP61
Static, Slant Back Roof Vent

**Air Vent, Inc.'s
Ridge Vent Profile Drawings**



EVI

Static, Edge Roof Vent
With Removable Baffle