

Evaluation Report

Solar Royal SR1800 Solar Ventilation Fan

Manufacturer

Solar Royal, LLC.

3530 Bee Caves Road, Ste 104
Austin, Texas 78746
(512) 547-3269

for

Florida Product Approval

FL 41921

Florida Building Code 7th Edition (2020)

Per Rule 61G20-3

Method: 2 - B

Category: Roofing

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

Product Name: *Solar Royal SR1800*
Product Description: *Solar Ventilation Fan*
Attached to OSB or Plywood Deck

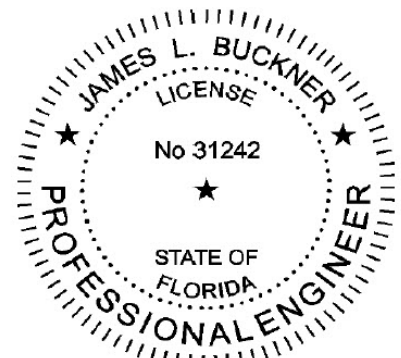
Prepared by:

James L. Buckner, P.E., SECB
Florida Professional Engineer # 31242
Florida Evaluation ANE ID: 1916
Report No. 23-533.01.2_SR1800-ER7
Date: 02/08/2023

Contents:

Evaluation Report Pages 1 – 6

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.



James L. Buckner, P.E.
FL31242

2023.02.09 22:47:10 -05'00'

Manufacturer:	Solar Royal, LLC.
Product Name:	Solar Royal SR1800
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:	Solar Royal SR1800 is a solar ventilation fan. The ventilation fan has a two-piece design where the flashing is installed first and then the hood is secured without the use of tools. The ventilation fan includes a built-in monocrystalline adjustable solar panel allowing for versatility in mounting positions. The solar panel is 30 or 35 Watt and is expandable via an external power connector to 40/50-/60-70-Watts.
Product Assembly as Evaluated:	A Solar Royal SR1800 ventilation fan with solar panel mechanically attach to wood deck with screws.
Model Numbers:	<u>Designation</u> SR 1800
Fan Unit Base Support:	Type: Wood Deck (Design of support system is outside the scope of this evaluation) Description Options: <ul style="list-style-type: none">• OSB (Oriented Strand Board) 7/16" or greater• Plywood 15/32" or greater• Wood plank deck (based on minimum density/specific gravity of 0.42) 15/32 " or greater
Roof Slope:	Slope shall be in compliance with FBC, Chapter 15 based on the type of roof covering.
Performance:	Allowable Wind Uplift Resistance: * Negative Design Pressure: - 340 PSF * Allowable design pressures for allowable stress design (ASD).

- Performance Standards:** The following test protocol was performed to demonstrate compliance with the intent of the code as this product is not specifically addressed in the performance standards listed in the code.
- **ASTM E330-14** – *Standard Test Method for Structural Performance of Exterior Windows, Curtain Walls, and Doors and by Uniform Static Air Pressure Difference*
- Code Compliance:** The product described herein has demonstrated compliance with:
Florida Building Code 7th Edition (2020), Section 1708.2.
International Building Code 2018, 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 7th Edition (2020) , as related to Florida Product Approval Rule 61G20-3.001.
- Limits of Use:**
- The Solar Royal SR1800 Fan including solar panel and electrical wiring shall be installed in compliance with Solar Royal’s installation instructions and in accordance with applicable Building Codes
 - 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.
 - Refer to applicable building code section for ventilation requirements.
 - 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 vent 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., an Intertek Company** (FBC Organization #: QUA 1844)

Component(s)

Material Standards:

Solar Ventilation Fan

- **Nominal Dimensions**

Fan Base:	26" × 26"
Hood:	24" × 24"
Solar Panel:	18" × 18" Nominal
Overall Height:	7.64 " Nominal

- **Fan Base:**

Material:	Powder coated Aluminum (6061)
Thickness:	0.075"

- **Dome**

- Material	ABS Thermoplastic – High Impact Automotive Grade with UV stabilizer and Fire Retardant
- Thickness:	0.112"

Fastener

Type:	Wood Screws with Neoprene washers
Size:	#10 × 1-1/2 in. Minimum
Standard:	Per ANSI/ASME B18.6.1
Corrosion Resistance:	Per FBC Section1506.6

Installation:

Installation Method:

(Refer to Pages 5 and 6 of this evaluation report)

Solar Royal SR1800 units shall be installed in compliance with the installation method listed in this report. Two screws located on each side, located approximately 6 " from each end and 2" in from the edge of the flange. Refer to installation drawing 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.

Installation Method Solar Royal SR1800 Solar Ventilation Fan Attachment Assembly



APPENDIX - A Model# SR1800

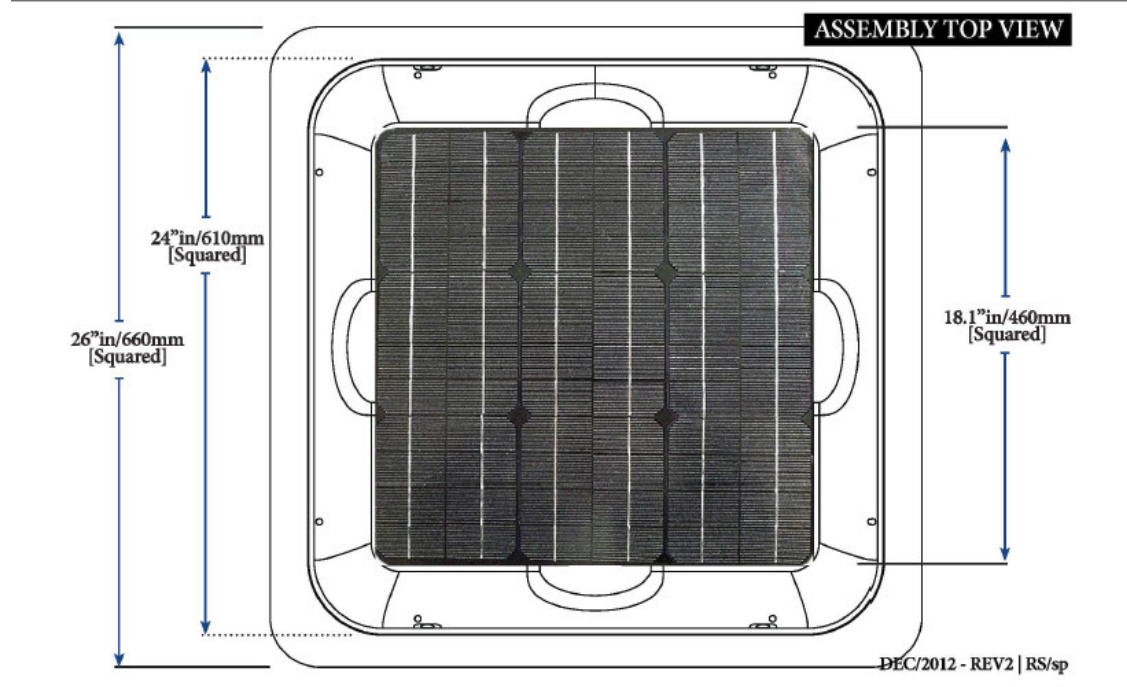
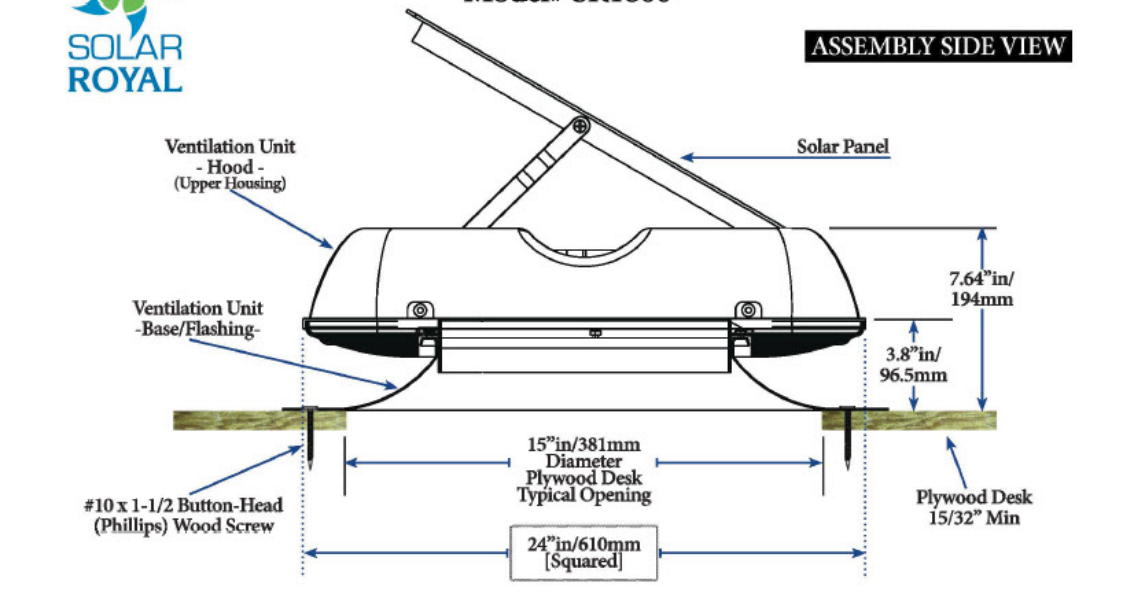


Figure 1. Assembly Top and Side View

Installation Method
Solar Royal SR1800
Solar Ventilation Fan Attachment Assembly

