

TEXAS DEPARTMENT OF INSURANCE

Engineering Services / MC 103-3A 333 Guadalupe Street P.O. Box 149104 Austin, Texas 78714-9104
Phone No. (512) 322-2212 Fax No. (512) 463-6693

PRODUCT EVALUATION RV-57

Effective March 1, 2010

The following product has been evaluated for compliance with the wind loads specified in International Residential Code (IRC) and the International Building Code (IBC). This product shall be subject to reevaluation February 2014.

This product evaluation is not an endorsement of this product or a recommendation that this product be used. The Texas Department of Insurance has not authorized the use of any information contained in the product evaluation for advertising, or other commercial or promotional purpose.

This product evaluation is intended for use by those individuals who are following the design wind load criteria in Chapter 3 of the IRC and Section 1609 of the IBC. The design loads determined for the building or structure shall not exceed the design load rating specified for the products shown in the limitations section of this product evaluation. This product evaluation does not relieve a Texas licensed engineer of his responsibilities as outlined in the Texas Insurance Code, the Texas Administrative Code, and the Texas Engineering Practice Act.

Solar Star Roof Mount Solar Powered Attic Fan, manufactured by

Solatube International, Inc.
2210 Oak Ridge Way
Vista, California 92081-8341
Telephone: (760) 597-4400
www.solatube.com

will be acceptable for use in designated catastrophe zones along the Texas Gulf Coast when installed in accordance to manufacturer's installation instructions and this product evaluation.

PRODUCT DESCRIPTION

The Solar Star roof mount attic fan is a solar powered attic fan used to provide attic ventilation. The 14 inch attic fan is available in a low profile model (overall height of 6.4") suitable for most roof covering applications and a high profile model (overall height of 9.9 inches) suitable for tile roof coverings. Refer to Figure 1 for an illustration of each profile. The attic fan is powered by Solar Star's proprietary 10-watt solar panel, located on the top panel of the attic fan.

Flashing Construction: The steel non-pitch flashing is formed to create a curb with conical sides. For the low profile model, the conical sides are 2 ½" high. For the high profile model, the conical sides are 6" high. The eight (8) sided flashing base has inscribed dimensions of 25.3" x 25.3". The diameter of the hole at the top of the flashing is 14".

Fan/Solar Panel Construction: The solar panel is attached to the top of steel top panel with adhesive foam pads. The fan motor with a press-fit fan blade is mounted to the interior face of the top panel with four (4) machine screws with sealing washers. The plastic fan grill with integral mounting ring is attached to the top panel with four (4) steel stand-offs fastened at each end with steel rivets. The plastic fan grill has a diameter of 23.6" and a height of 2.80". The top panel has a diameter of 23.37" and a height of 2.68".

Assembly: The plastic fan grill is with the attached fan and solar panel assembly is attached to the top of the flashing with four (4) sheet metal screws.

LIMITATIONS

Design Wind Pressure: +33 psf / -110 psf

Roof Deck: The roof sheathing shall be minimum nominal $\frac{1}{2}$ " plywood. Solid board decking (minimum nominal 1 inch thick Douglas Fir-Larch lumber) is also acceptable.

Roof Slope: There is no minimum or maximum roof slope.

Impact Resistance: N/A.

INSTALLATION INSTRUCTIONS

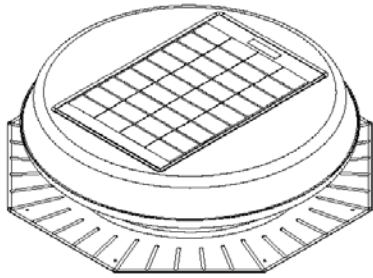
General Installation Requirements:

The attic fan shall be installed in accordance with the manufacturer's installation instructions and this evaluation report.

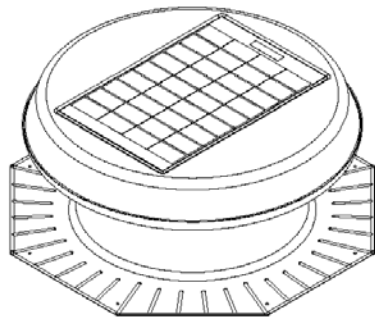
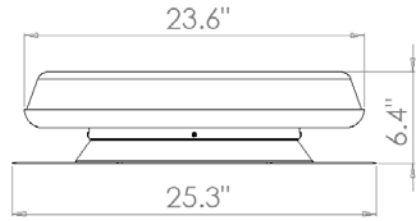
Installation:

The roof deck material shall be as described in this evaluation report. Cut an 18 inch diameter hole in the roof covering material and the roof deck. Avoid cutting roof framing members. Remove or loosen enough roof covering material along the perimeter of the roof hole to allow for the installation of the attic fan flashing. Apply a continuous $\frac{1}{2}$ " bead of roofing sealant to the underside perimeter of the attic fan flashing. Turn the flashing upright and center over the roof hole with the panel label located on the high side of the assembly. Secure the flashing to the roof deck with minimum No. 10 x 2" truss head sheet metal screws installed through each of the equally spaced pre-drilled holes in the flashing. Replace the existing roof covering and re-secure to the roof deck. The fasteners shall be long enough to penetrate into and through the roof deck material.

Note: The manufacturer's installation instructions shall be on the job site during the installation. All fasteners shall be corrosion resistant as specified in the International Residential Code (IRC); the International Building Code (IBC); and the Texas Revisions.



SOLAR STAR WITH 2.5"
HIGH NO PITCH FLASHING



SOLAR STAR WITH 6"
HIGH NO PITCH FLASHING

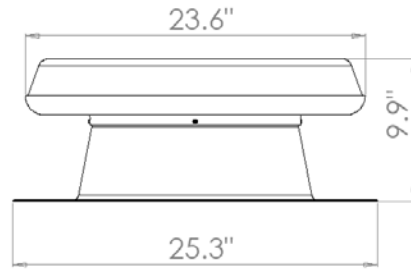


Figure 1. Solar Star Attic Fan Profiles