

# TEXAS DEPARTMENT OF INSURANCE

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## PRODUCT EVALUATION RV-59

Effective August 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 December 2013.*

*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 Attic Fans, Models AB-201A, AB-202A, AB-251A, AB-252A, manufactured by**

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Gatesville, Texas 76528  
Telephone: (254) 865-9999  
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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

**Model AB-201A and Model AB-251A:** These model series are self flashing roof mount solar attic fans designed for composition (asphalt) shingle roofs or similar low-profile roofing materials. This series comes standard in a natural metal finish and features the solar panel directly attached to the top of the fan housing. The AB-201A includes a 20W solar panel. The AB-251A includes a 25W solar panel. A plan view, front section view, and a side section view with dimensions are included in this evaluation report.

**Model AB-202A and Model AB-252A:** These model series are self flashing roof mount solar attic fans designed for composition (asphalt) shingle roofs or similar low-profile roofing materials. This series comes standard in a powder coated finish and features the solar panel directly attached to the top of the fan housing. The AB-202A includes a 20W solar panel. The AB-252A includes a 25W solar panel. A plan view, front section view, and a side section view with dimensions are included in this evaluation report.

**Ventilator Construction:** The vent is constructed of 24 gauge Zinalume with a 20" inside conical base diameter and a 28" x 28" square flange. The head of the vent is created utilizing two sides along with a top cover. The head portion is fastened together with twenty  $\frac{3}{16}$ " spot welds per side. The head portion is secured to the throat of the base with four (4) 1" wide 16 gauge steel support flanges, each attached to the throat with five (5)  $\frac{1}{4}$ " spot welds. The head portion and the support flanges are attached with one (1)  $\frac{1}{4}$  x 0.750" Phillips PHSS bolt with a  $\frac{1}{4}$ " SS neoprene rubber bonded washer,  $\frac{1}{4}$ " SS lock washer, and a  $\frac{1}{4}$ " SS wing nut. A  $\frac{1}{4}$ " SS mesh screen is secured to the steel flanges with one (1)  $\frac{3}{16}$ " aluminum pop rivet, and two (2) pop rivets at the overlap. Additionally, three (3) SS "L" motor mount brackets are

secured on the interior top of the head portion, each with two (2)  $\frac{1}{4}$  x 0.750" Phillips PHSS bolts, a  $\frac{1}{4}$ " SS neoprene rubber bonded washer,  $\frac{1}{4}$ " SS lock washer, and a  $\frac{1}{4}$ " SS hex nut. The square flange is formed (beaded) into the collar.

**Solar Panel:** The solar panel measures 16  $\frac{1}{4}$ " wide x 19  $\frac{3}{4}$ " high x 1  $\frac{1}{8}$ " thick and is mounted on the top of the vent head. The solar panel is secured to the vent utilizing four (4)  $\frac{1}{4}$  x 0.750" HH SS bolts with a  $\frac{1}{4}$ " SS neoprene rubber bonded washer,  $\frac{1}{4}$ " SS lock washer, and a  $\frac{1}{4}$ " SS wing nut located one (1) at each corner.

### LIMITATIONS

**Design Wind Pressure:** +115 psf / -115 psf

**Roof Deck:** The roof deck shall be minimum nominal  $\frac{1}{2}$ " plywood ( $\frac{15}{32}$ " plywood is acceptable).

**Roof Slope:** The roof vent may be installed on roofs with a minimum slope of 3:12 and any slope up to a maximum slope of 16:12.

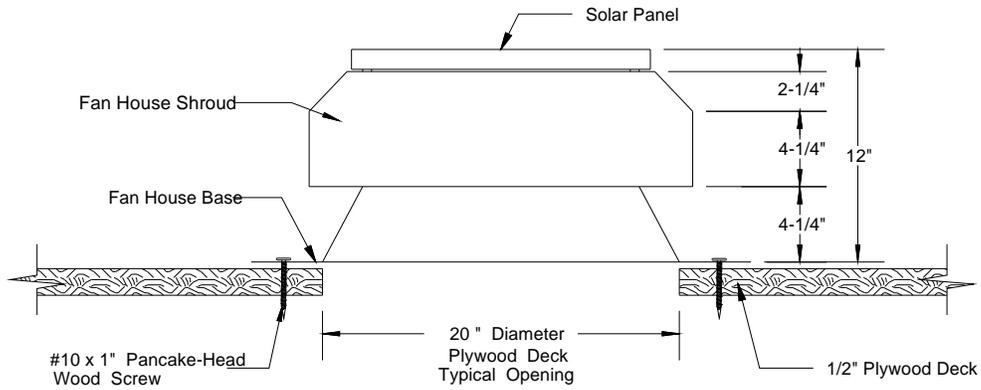
### INSTALLATION INSTRUCTIONS

#### General Installation Requirements:

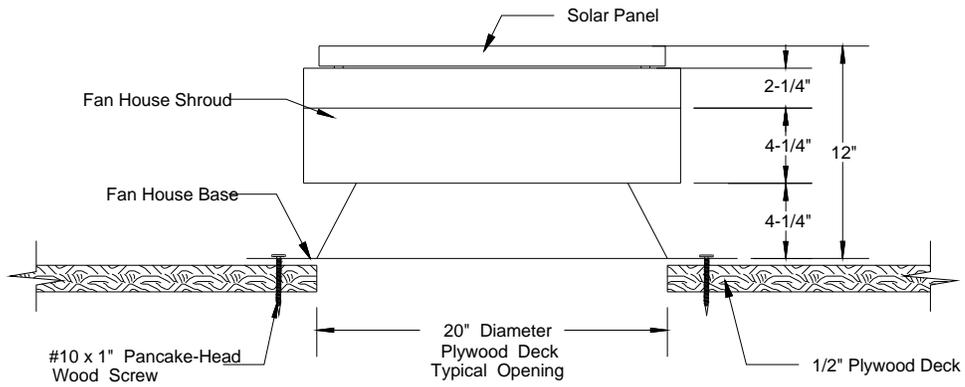
All requirements specified in the International Residential Code (IRC) and the International Building Code (IBC) shall be satisfied. The manufacturer's installation instructions shall be followed unless otherwise specified by this product evaluation.

**Roof Deck:** The roof deck shall consist of plywood wood structural panels with a minimum nominal thickness of  $\frac{1}{2}$ " plywood ( $\frac{15}{32}$ " plywood is acceptable).

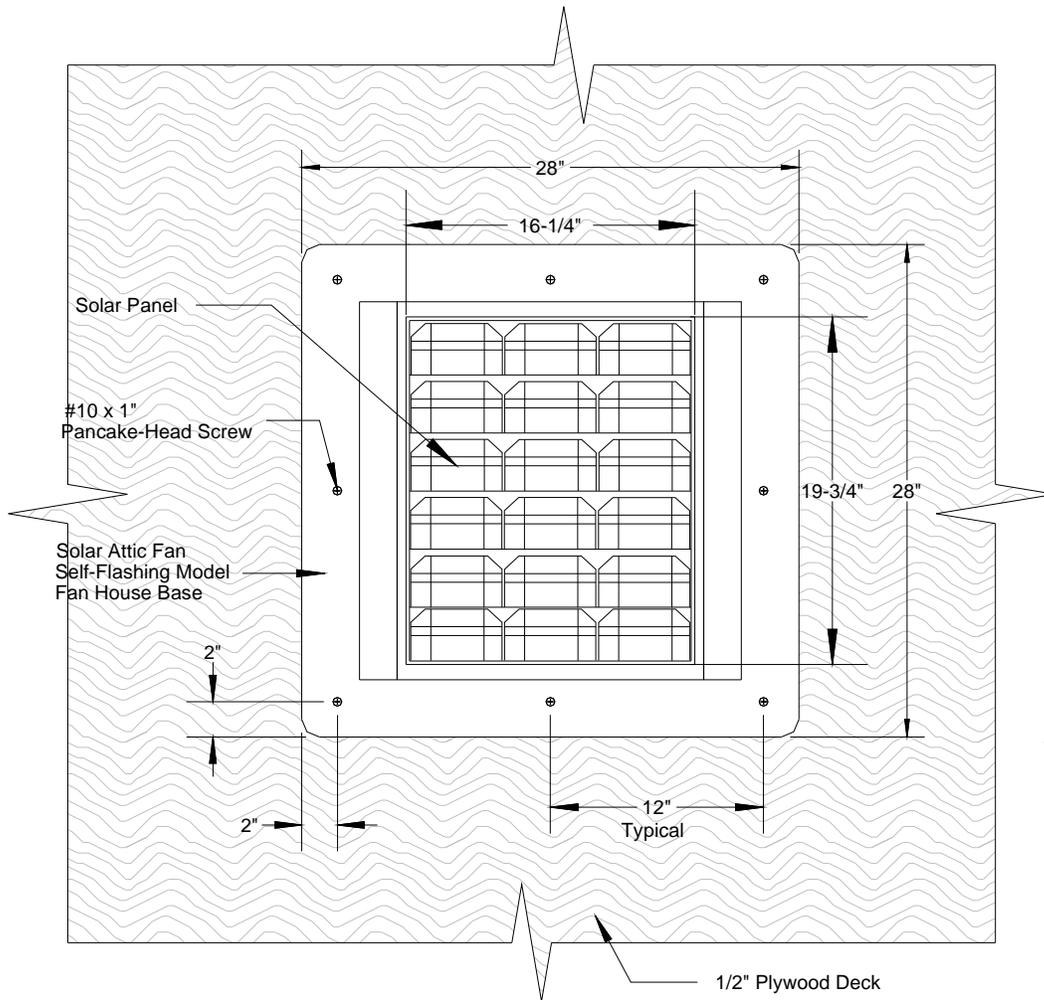
**Installation:** Locate the attic vent on the roof as specified by the product manufacturer. Mark a 20" diameter circle on the roof as specified by the product manufacturer. Using the mark as a guide, cut a 20" diameter hole in the roof. Do not cut through any roof framing members (rafters or trusses). Lift the shingles located directly around the cut hole. Slide the attic vent flange underneath the shingles and underlayment and position the attic vent so that it is centered with the attic hole. Follow the manufacturer's instructions for proper vent placement. The flange of the vent is secured to the wood structural panel roof deck with a total of eight (8) minimum No. 10 x 1" Phillips Pancake Head wood screws. One (1) fastener is required at each corner. One (1) fastener is required at the mid-point of each side. The fasteners shall be long enough to penetrate the roof vent flange and completely through the roof deck. Apply weatherproofing as specified by the product manufacturer.



**FRONT SECTION VIEW**



**SIDE SECTION VIEW**



### TOP PLAN VIEW

**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.