

SOLAR POWERED ATTIC FAN



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Installation and Mounting Guide

Thank you for purchasing the Solar Powered Attic Fan from U.S. Sunlight Corp. We are committed to providing alternative energy products that can improve your everyday life and our environment. We have reduced packaging material and eliminated Styrofoam to reduce the impact on landfills. We offer an installation video that is available to view online at www.ussunlight.com.

If there is a problem with your U.S. Sunlight product call us at 1-866-446-0966

Spare parts, installation advice, or recommendations for professional installers in your area are only a phone call away. Professional installation may be much less than you expect, please call us to get average rates for your area.

Please note that this product is designed for asphalt shingles, or wood shake roofs with a minimum of 4/12 pitch. If you have spanish tile, s-tile, concrete, metal or flat roof, please call us before attempting to install the product.

Before beginning the installation of your new Solar Powered Attic Fan, please read through the entire installation instructions and call us if you have any questions.

TOOLS REQUIRED

- Ladder
- Reciprocating saw or jig saw
- Power drill with a 1/2" – 1" inch drill bit (only one needed)
- 1 – 2" deck screw and screw bit
- Hammer & roofing nails or self tapping galvanized screws
- Caulk Gun with Waterproof Roofing Sealant
- Measuring tape or ruler
- Permanent marker, sidewalk chalk or crayon
- Roofing knife or box cutter
- Flat pry bar

Installation Instructions

It is suggested that you prepare the opening prior to bringing the fan up on the roof. Always secure the fan on the roof to avoid the fan sliding off the roof and getting damaged.

Step 1 - Ventilation

To make sure you have proper intake ventilation, and to maximize the solar fan's effectiveness, You should remove or block any static vents. If there is an existing turbine type vent, simply remove the old vent and use the same hole for the new installation, or block completely. (fig. 1)



fig. 2



fig. 3

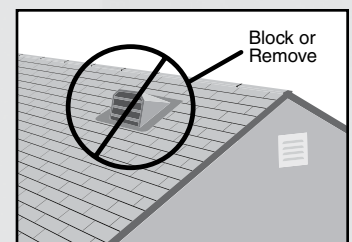


fig. 1

Important Tip:




To properly close off any static vents, use tar paper and staples as shown in (fig. 2 & 3).

Mounting the Fan

Step 2 – Sizing Requirements

See sizing chart to assure that you select the correct number of fans for your situation. Some attics have walled off or chambered areas that will require additional fans to properly vent the space.

If you have any questions or concerns please call our customer service specialists at:
1-866-446-0966

| How Many Fans Do I Need? | | | |
|---|---|---|---|
| | Low Slope Up to 4/12 | Medium Slope 5/12 - 8/12 | High Slope 9/12 - 12/12 |
| Attic Size <i>total sq. ft.</i> |  |  |  |
| 800 sq.ft. | 1 Fan | 1 Fan | 2 Fans |
| 1200 sq.ft. | 1 Fan | 2 Fans | 3 Fans |
| 1600 sq.ft. | 2 Fans | 3 Fans | 4 Fans |
| 2000 sq.ft. | 2 Fans | 4 Fans | 5 Fans |
| 2400 sq.ft. | 2 Fans | 4 Fans | 6 Fans |

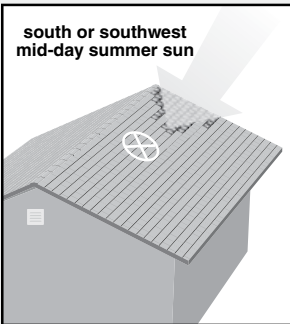


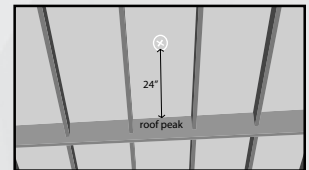
fig. 4

Step 3 – Positioning of the Solar Fan

The solar fan should be positioned to face south or southwest for optimum performance and should be positioned on an area of the roof that is not shaded or otherwise blocked from the sun for extended periods throughout the day. The solar fan should be installed 18 – 24 inches from the top of the roof peak and as close to the mid-point of your house as possible. In the case that 2 or more fans are getting installed you should separate the fans by at least 15 feet to maximize circulation. (fig. 4)

Step 4 – Marking the Hole

From inside the attic, measure down from the roof peak approximately 18 to 24 inches and center this spot between two rafters. Drill a screw through this mark into the plywood and roof shingle so it will be easily located from on top of the roof.



Included in the box is a template for cutting out the hole. It is printed on the cardboard protecting the base of the fan. Punch out the template and use scissors or a utility knife to smooth out any rough edges. From on top of the roof, locate the screw and place the cardboard template over the top of the screw aligning it in the center hole of the template. Using a pen or marker, trace a circle around the outer edge of the template, resulting in a circle with a 14" diameter. (fig. 5)

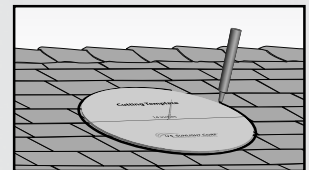


fig. 5

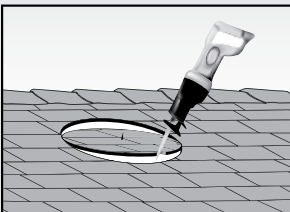


fig. 6

Step 5 – Cutting the Hole

Using a power drill equipped with a 1/2 - 1" drill bit, drill a pilot hole anywhere along the inside of the circle. Insert the saw blade into the pilot hole and follow the circle pattern to cut the hole into the roof. (fig. 6)



Do not cut through any roofing rafters or framing members! Only cut and remove the roof sheathing and shingles. Prior to cutting the hole, make sure you do not have any wires or waterlines in the area that you are cutting. Before completely cutting out the circle, try to secure the removed material so it does not fall into the attic space.

Step 6 – Lifting the Shingles

The nails located 5" above and to the side of the hole will need to be removed for the solar fan flashing to slip between the felt paper and the shingles – (fig. 7) You should use a pry bar or reciprocating saw to loosen or cut any nails and/or staples.

Do not attempt to force the unit into place. If it does not slide easily into place, a nail is most likely obstructing the flashing. In some cases the builder may have used large washers to install the felt paper. In this case lift up on the flashing as you are sliding it under the shingles.

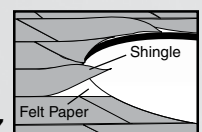
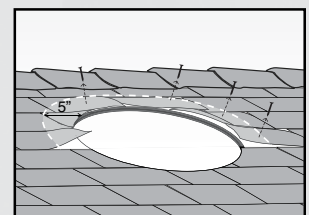
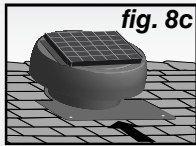
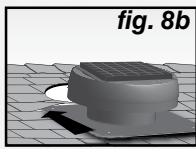
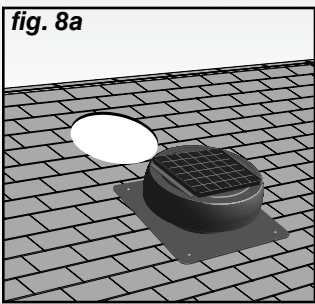


fig. 7



Step 7 – Installing the Solar Fan

Position the Solar Fan so that it is directly below the hole (**fig. 8a**) and **orienting the flashing so that the pre-drilled holes are at the top and bottom respectively**. Begin sliding the flashing of the Solar Fan underneath the shingles and on top of the felt paper at the mid-point of the hole (**fig. 8b**). Continue sliding the solar fan upward (making sure that the top of flashing is facing toward the top of the roof) until it is positioned directly over the attic hole (**fig. 8c**).

Step 8 – Securing the Solar Fan

Using roofing nails or the provided self-tapping galvanized screws, secure the solar fan to the roof. The solar fan should be secured across the bottom of the flashing by driving nails/screws through the two pre-drilled holes at the bottom edge of the flashing (the top of the flashing will be secured by the existing roofing nails and shingles). Apply waterproof roofing sealant to the nail/screw heads (**fig. 9**). Use roofing nails as needed to secure any shingles that remain loose. Apply waterproof roofing sealant to the backside of any loose shingles or nail heads that have been added.

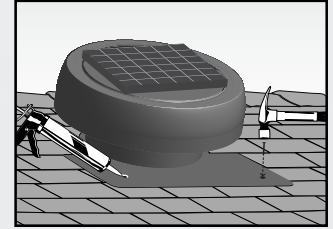


fig. 9

Adjusting the Fan

Step 9 – Adjustments

The fan's solar panel should be adjusted to maximize exposure to the sun's path during the day. The optimal adjustment is to have the panel 90 degrees to the midday path of the sun. You can re-adjust the panel during winter or summer seasons if desired. (**fig. 10**)



fig. 10

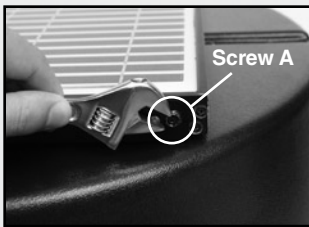


fig. 11

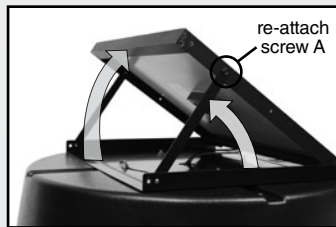


fig. 12

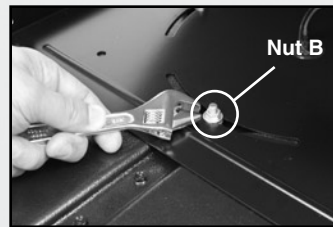


fig. 13

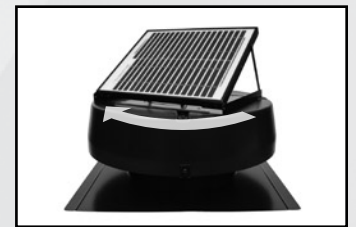


fig. 14

To adjust the tilt of the panel

Remove screw "A" on both sides of the panel assembly and set aside. (**fig. 11**) Lift the panel and swing panel braces up to desired position and re-attach screw "A" in the appropriate holes. There are 3 positions to choose from. (**fig. 12**)

To adjust the rotation of the panel

Loosen nut "B" (there are four) (**fig. 12**), then rotate the panel base to the desired position (**fig. 13**) and re-tighten the nuts. The panel base can be rotated up to 360 degrees by completely removing nuts "B", lifting the assembly off the bolts and re-positioning accordingly. Re-attach the nuts and tighten when completed.

Thermal Switch

The thermal switch allows the fan to run when the temperature reaches 80 degrees and shuts the fan off when the temperature dips below 65 degrees.

You can bypass the switch if you'd prefer the motor to run continuously during the day. To do this, simply disconnect the black leads from the switch and black terminal (**fig. 15a and 15b**) and re-connect the lead from the switch directly to the motor as shown (**fig. 15c and 15d**).



fig. 15a



fig. 15b



fig. 15c

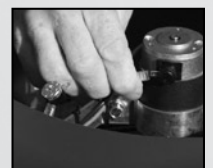


fig. 15d



THIS SOLAR FAN WILL AUTOMATICALLY START WHENEVER THE SUN SHINES ON THE SOLAR PANEL. ALWAYS EXERCISE CAUTION WHEN IN THE VICINITY OF THE FAN.



Maintenance Tip: The solar panel is most effective when clean and free of dust, leaves, and debris. Normally, rainwater will cleanse the solar panel and keep it operating at peak efficiency. If necessary, simply hose off the solar panel between rain showers.



WARRANTY

Manufacturer's Limited Warranty

U. S. Sunlight Corp. ("Manufacturer") warrants that certain of its product components are free from defects of workmanship and/or materials for a period of time commencing on the date of original purchase and continuing as noted hereafter: (a) attic fan motors for a period of five (5) years (b) solar panels for a period of twenty (20) years (c) attic fan housings for a period of twenty (20) years.

Disclaimer


Except as expressly set forth herein, all Manufacturer's products, including components thereof, are sold "AS IS" without warranty of merchantability, fitness for intended purpose, or other warranty, express or implied. In no event shall Manufacturer be liable for the loss of profits, indirect, special, incidental, consequential or other similar damages, including but not limited to any claim or demand arising out of the installation, furnishing, or functioning of a product or use by purchaser or any third party. The warranty terms and conditions detailed above do not extend to misuse, neglect, abuse, alteration, exposure to extreme weather conditions, lightning strikes, physical damage to any product, or damages caused by transportation or installation of any product. Manufacturer explicitly does not warrant any labor, shipping, or service fees incurred by purchaser for the replacement, repair, or exchange of any product or product components claimed under the above warranty terms and conditions.

Warranty Claims

Warranty claims shall be submitted in writing to Manufacturer at its principal place of business. Claims shall include a copy of the original purchase invoice, purchaser's name, address, telephone number, and e-mail address, and such other particulars as are necessary to describe the claimed defect. If requested by Manufacturer, purchaser shall ship the claimed defective component(s) to Manufacturer's principal place of business, FOB destination, freight prepaid, for evaluation. As to any product component determined by Manufacturer to contain a defect covered by its warranty, Manufacturer reserves the right, at its discretion, to repair or replace the defective component, or rebate a portion of the purchase price prorated based on the balance of the warranty term.

General

This limited warranty contains all of the terms and conditions of Manufacturer's warranty of the purchased product and its components. No representation, arrangement, or agreement not appearing herein shall be binding on Manufacturer. This limited warranty is issued in and shall be governed by the laws of the State of California.

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REGISTRATION

WE WOULD LOVE TO HEAR FROM YOU!

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U.S. Sunlight, Inc. | 5625-B Brisa Street, Livermore, CA 94550

Name _____ Address _____

City _____ State _____ Zip _____ Date of Purchase _____

Purchased From _____ Name of Installer _____ (self ___)

Phone # of Installer _____

Comments _____
