

# **Roof Mount Tile Roof Installation Instructions**



IMPORTANT: Please take the time to read through the ENTIRE instructions prior to starting any work. These instructions include the installation of a Tile Flashing Skirt and Turret Extension which are both sold separately.

## **PRECAUTIONS:**

- 1. The solar attic fan is fully functional out of the box. THE FAN WILL OPERATE AS SOON AS THE SOLAR PANEL IS EXPOSED TO THE SUN. PLEASE USE CAUTION AND AVOID THE FAN BLADES DURING INSTALLATION.
- 2. Ensure normal safety precautions are taken when using tools, ladder and walking on roofs.
- **3.** Do not cut any structural members in the house.
- 4. Install only in dry weather.

#### **TOOLS/MATERIALS NEEDED**

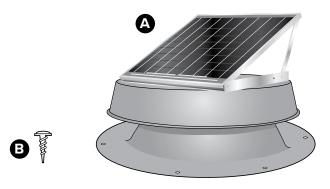
- Caulk
- Caulking Gun
- Ladder
- Marking Pencil
- Measuring Tape
- Philips Screwdriver
- Reciprocating Saw
- Safety Goggles
- Soft Cloth/Towel
- Stud Finder
- String
- Utility Knife

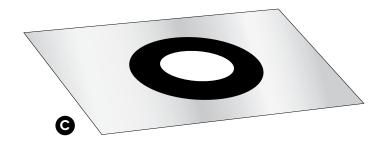
# **SOLAR ATTIC FAN KIT PARTS:**

- A. Solar Attic Fan Unit
- B. (6) Phillips Head Stainless Steel 11/2" Screws

# Additional Parts (sold separately):

- C. Tile Flashing Skirt with Rubber Membrane
- D. Turret Extension (Optional)









# **IMPORTANT Choose Where to Install Unit:**

When determining location of the unit, try to place the solar attic fan on the south side of the roof, also consider potential problems such as objects shading the unit during certain times of the day. If the roof has no ridge vent, the center of the unit should be about 2 feet down from the roof ridge. If there is a ridge vent, the center of the unit should be about 5 feet down from the roof ridge.

#### STEP 1

Choose location for the solar attic fan, south exposure is best. If a southern exposure is not feasible for your installation, the fan can be installed on any other exposure and the solar panel adjusted to capture maximum sunlight. Once the location is determined, carefully remove the surrounding tiles. Remove enough tiles to accommodate the flashing skirt (C).



#### STEP 2

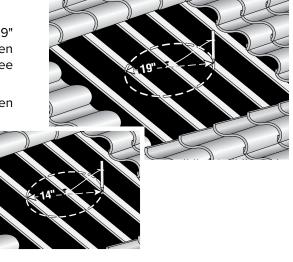
#### **DETERMINE SIZE OF HOLE NEEDED FOR YOUR INSTALLATION:**

On 24" on center construction, center the fan between the rafters and cut a 19" hole. On 16" on center construction, the installer can either cut a 14" hole between the rafters or cut a 19" hole with the roof rafter running through the hole (see "Option" illustration in Step 3).

Hammer a nail at the center of the location chosen for the solar attic fan between rafters. The center of the unit should be about 2 feet down from the ridge.

**19" HOLE**: Attach a string to the nail. Measure 9.5" of string and attach a marking pen to the string, see diagram. Scribe a 19" circle onto the roof shingles.

**14" HOLE:** Attach a string to the nail. Measure 7" of string and attach a marking pen to the string, see inset. Scribe a 14" circle onto the roof shingles.

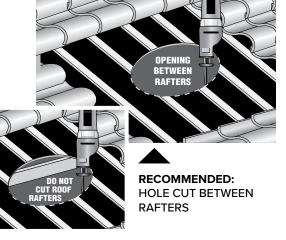


# STEP 3

With a reciprocating saw, cut the diameter of the hole. **NEVER CUT THROUGH ANY ROOF RAFTERS. LEAVE ALL FRAMING MEMBERS IN PLACE.** 

**IMPORTANT:** The solar attic fan must be installed between the roof rafters OR over a roof rafter. **DO NOT CUT THROUGH ANY FRAMING MEMBER**. Only remove roof sheathing.



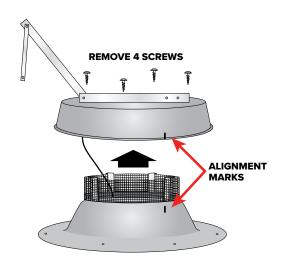


# STEP 4

Carefully turn the unit back upright. Remove the (2) screws on each side of the adjustable bracket arm holding the solar panel in place. Pull up the solar panel to allow access to the four screws that secure the housing to the flashing "L" brackets.

It's important that the position of the housing and flashing are the same when the housing is reattached. Make two marks on the unit: one on the housing and another that lines up with it on the flashing. Remove all (4) screws on top of the housing. Pull up on the housing to remove it from the flashing. Temporarily place the housing and removed screws to the side.

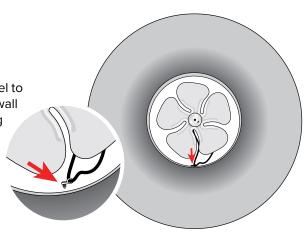
**NOTE:** The fan will continue to run once the housing is removed from the flashing. To prevent the fan from running, cover the solar panel with a piece of cardboard or soft cloth taking care not to damage the solar panel.



#### STEP 5

Turn the solar attic fan unit (A) upside down and place it on a soft cloth or towel to prevent damaging the solar panel. Locate the plastic wire clip on the inside wall of the flashing. Remove the screw on the clip to remove it from the flashing (the wire will stay connected to the clip - see closeup).

**NOTE:** Take care not to damage the solar panel or the fan blades.



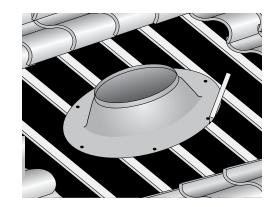
# STEP 6

Remove all (4) housing "L" brackets by unscrewing the (2) self-tapping screws holding each bracket in place. Set aside the brackets and (8) screws.



#### STEP 7

Center the solar attic fan flashing over hole cut in Step 3 and mark around the flashing footprint onto the furring strips. Remove the portion of the furring strips where the flashing will be installed (allowing the flashing to sit directly on the roof sheathing). Leave all other furring strips in place.



#### STEP 8

Place the flashing skirt **(C)** over the flashing. Press down the rubber ring all around the flashing.



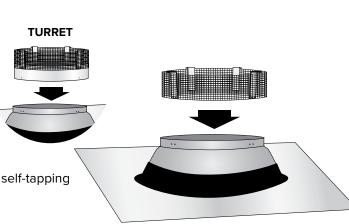
#### STEP 9

# WITHOUT TURRET EXTENSION

Replace the "L" Bracket Screen Assembly removed in Step 5 using the (8) screws (two screws per bracket).

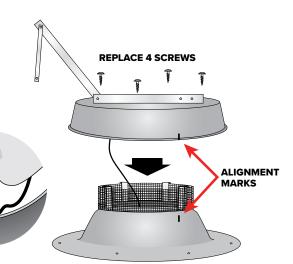
#### WITH OPTIONAL TURRET EXTENSION

Slip turret extension over the flashing lip. Secure with the provided (4) self-tapping screws using the pre-drilled holes on the flashing collar (see inset).



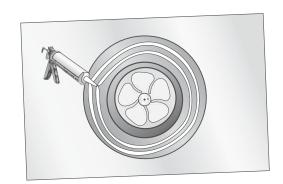
#### **STEP 10**

Carefully turn over the unit and place it on a soft cloth to prevent damaging the solar panel. Locate the plastic wire clip and reattach it to the flashing wall by replacing the clip screw (see closeup). Place the housing on top of the flashing and line-up the marks on the housing and flashing. Replace the (4) screws that were removed in Step 5.



#### **STEP 11**

Caulk the **underside** of the flashing. Two concentric rings of caulking material is sufficient.



#### **STEP 12**

Carefully turn the unit back over and place on the roof centered over the hole cut in Step 3. Secure to the roof with the (6) Philips head screws (B) provided through the pre-drilled holes. Bend or roll up the flashing skirt so that it is out of the way as needed until all (6) screws are secured.

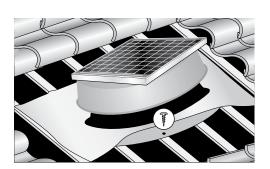
**NOTE:** Local Building Code requirements may specify anchoring that requires additional screws installed in the flashing.

#### Florida Dept. of Community Affairs:

http://www.floridabuilding.org/pr/pr\_app\_srch.aspx

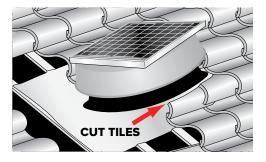
#### Texas Dept. of Insurance:

http://www.tdi.state.tx.us/wind/prod/indexrv.html



## STEP 13

At the HIGH side of the roof towards the ridge, replace the tiles over the flashing skirt. Cut tiles to fit around flashing. Some furring strips may need to be replaced on top of flashing footprint to support tiles.

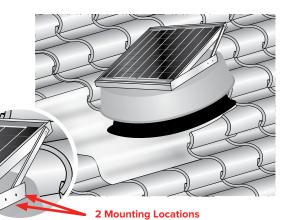


### **STEP 14**

Replace the tiles on the LOW side of the roof, but keep skirt above the tiles and reshape the skirt aluminum to form around the tiles. Apply sealant on the underside of the tile skirt to secure the skirt to the tiles.

Adjust the solar panel to the position it will collect the most sunlight throughout the day. (The panel can be left in the down position.) To adjust the solar panel, remove the (2) self-tapping screws on either side of the bracket. Lift up the solar panel and line up the pre-drilled hole on the bracket arm to one of the two pre-drilled holes on the L-bracket attached to the housing as illustrated. Re-attached the (2) self-tapping screws on both sides.

**IMPORTANT:** Prior to an anticipated hurricane or high wind event, the solar panel must be secured with screws in the flat position.





# Solar Attic Fan Limited Lifetime Warranty

Natural Light Energy System (hereinafter NLES) warrants any solar attic fan manufactured by NLES to be free from defects in materials and workmanship to the original residential purchaser (hereinafter CONSUMER) from the date of purchase. All aspects of the Warranty are subject to the following limitations, terms and conditions.

#### 1. DURATION OF WARRANTY

If a NLES solar attic fan (hereinafter "Equipment") is determined to have a defect in material or workmanship, NLES will, at its sole discretion, repair or replace the defective part at NO CHARGE to the CONSUMER, (excluding labor, and applicable shipping and handling costs) for the duration of the CONSUMER's ownership of the original equipment (hereinafter "LIFETIME").

#### 2. LIMITATIONS OF COVERAGE

This Warranty extends only to the CONSUMER for damage resulting from defects in materials and workmanship, it does not extend to damage caused by the CONSUMER'S neglect or abuse, or by accident, to damage caused by wind, hail or abnormal weather conditions, or to damage caused by acts of God, civil insurrection or extraordinary circumstances which are beyond the control of NLES.

NLES shall not be liable for any direct or indirect damage resulting from the use of the Equipment, and in no event shall the extent of the Warranty coverage exceed the purchase price of the Equipment.

NLES assumes no liability for the determination of the proper equipment necessary to meet a CONSUMER'S requirements, nor does it authorize others to assume such obligations on its behalf.

#### 3. MISCELLANEOUS

In order to be considered for validation, all claims for Warranty coverage must be accompanied by a copy of the purchase agreement indicating the date of initial installation, NLES reserves the right to inspect the solar attic fan prior to honoring any Warranty claim.

This Warranty gives you specific legal rights, and you may have other rights which may vary from state from state. Any and all inquiries or claims under this Warranty must be submitted in writing to Natural Light Energy Systems, Attn: Warranty Department, 10821 N. 23rd Avenue, Phoenix, AZ 85029 or by e-mail to info@nltubular.com.



