

# *ATTIC COOL 1600*

## *Self-Flashing Attic Fan* **Installation Guide**

Congratulations! You have made a great first step towards making our world a better place to live. The AC1600 is an excellent example of how the sun's power can work for us, helping each of us save our precious natural resources while saving money. We are confident you will enjoy the impact the AC1600 Solar Powered Attic Fan has on making your indoor living environment more comfortable and affordable to maintain.

### **Getting Started**



Before you begin, it is important you review these installation instructions thoroughly. It is imperative that your solar powered attic fan is properly installed to ensure you realize the benefits proper attic ventilation can provide and to minimize any potential negative effects that could occur should the product be installed incorrectly or in an attic environment that is not properly conditioned for proper attic ventilation.

**NOTE: The information contained in this Installation Guide is intended for informational purpose only. Lumina-Global, Inc. assumes no responsibility for any damages incurred during or as a result of the installation of any of our products.**

### **Precautions**

- Ensure to practice good construction practices when installing this product. Normal safety precautions should be taken when using tools, working in the attic or on the roof.
- The AC1600 is designed to mount effectively to the roof decking. It is not necessary to secure the product to structural crossbeams. Caution should be taken not to cut any structural members in the house.
- While replacement of roof decking can be done, it is costly and unnecessary if time is taken to ensure proper measurements and cutting are done. Remember to measure twice and cut once!
- Check the fan out upon removing it from the box to make sure that it is fully working before installing it on the roof.

## Tools Required

- ◆ Reciprocating or circular saw
- ◆ Marking Pen or Chalk
- ◆ String
- ◆ Measuring Tape
- ◆ Self-tapping stainless steel screws
- ◆ Caulking Gun w/ Water Proof Roofing Sealant
- ◆ Screw Gun
- ◆ Ladder(s)
- ◆ Razor Knife or Box Cutter
- ◆ Cordless Power Drill

## Installing Your AC1600

### Step 1: Ventilation Requirements

In order for your solar powered attic fan to perform correctly, it is imperative that your home has the required amount of passive ventilation in place. Typical examples of passive ventilation include: Soffit Vents, Pipe Vents, Ridge Vents or Gable Vents. According to the HVI (Home Ventilating Institute), you should have a minimum of one (1) square foot of air inlet area (passive ventilation) for every 300 CFM of powered exhaust. This helps ensure you can achieve 10 air changes per hour, using fresh outside air and not air from your conditioned, living environment. Lumina-Global Inc., recommends that you have one (1) square foot of air inlet area for every 150 CFM. All attic intake vents should be clean and free from debris and insulation to allow for the outside air to move freely into the attic space.



**IT IS VERY IMPORTANT TO ENSURE THAT YOU HAVE THE REQUIRED AMOUNT OF PASSIVE VENTILATION IN ORDER TO ACHIEVE PROPER ATTIC VENTILATION USING THE AC1600.** If your attic is not properly ventilated as outlined above, it is possible to create a “negative pressure” situation in your attic. This may result in pulling cool, conditioned air from your living space into the attic, thereby defeating the intended purpose of the Solar Powered Attic Fan. **IF YOU DO NOT HAVE THE MINIMUM PASSIVE VENTILATION AS DESCRIBED ABOVE, ADDITIONAL AIR INTAKE VENTS SHOULD BE ADDED PRIOR TO INSTALLING THE AC1600.** A professional roofer or contractor can assist you with this process.

### Step 2: Attic Requirements

Installation of a solar powered attic fan is an excellent time to inspect your attic space for any leaks in uncapped shafts, chases, recessed cans, ceiling joints, etc. that may allow air from your living space to seep into the attic. It is also a good time to check water heaters and other gas powered devices for any gas leaks that may have occurred. Fix any leaks or cracks that are discovered whenever possible.

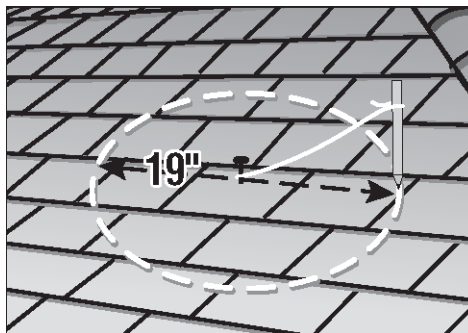
**NOTE: Solar Powered Attic Fans are NOT recommended for homes with drop ceilings, chases or other building features that would not provide an adequate seal between the living environment and attic space.**

### **Step 3: Choosing a location for your AC1600**

It is important to choose a location that will optimize the exposure of your AC1600 to the sun to maximize the amount of time your unit will run throughout the day. Southern exposure is typically best. Given the tremendous flexibility that is provided with the AC1600 (Adjustable Pitch and Remote Mounting Capabilities) it should be possible to find a southern exposure position for the entire unit or solar panel. It is important that the fan be placed near the apex of the attic roof (approximately 2 to 3 feet below the ridge line) and as far away from the majority of the air intake vents as possible. Again, given the flexibility of our product, these placement considerations should be easy to achieve. Finally, whenever possible, it is best to place the unit between the attic rafters. This minimizes the chances of inadvertently cutting through one of these structural beams and will minimize any interference with air flow.

### **Step 4: Making the Attic Fan Hole**

Hammer a nail (part way into the roof) at a position that is the center of the proposed hole. Tie a string to the submerged nail (Not too tight, as the string needs to rotate freely around the nail without winding or binding to the nail). Measure the diameter of the desired hole, and use a string length equal to half of the hole diameter (Typically 8 – 10" of string). Tie the other end of the string to a permanent marker and rotate the marker around the nail (keeping the string tight) to outline the hole. (See diagram) The resulting circle should have a diameter of 16 to 20"!



### **Step 5: Cutting the Attic Hole**

Using the cordless power drill equipped with a ½" drill bit, drill a hole anywhere along the circle that was drawn. This will provide the pilot hole for the reciprocating saw. If a circular saw is used, special care must be taken to ensure the depth of the cut does not penetrate deep enough to cut into any of the structural beams. We recommend the use of a reciprocating saw whenever possible, again making sure that the blade depth is set so as NOT to penetrate much beyond the roof decking depth. Proceed with cutting out the hole following the line previously drawn. Use your hammer to remove any remaining debris and shingles away from the edges of the hole to ensure a clean entry point into the attic.



### **Step 6: Lifting the shingles**

With the razor or utility knife, cut a four inch slit through the shingles and tar paper at the 3 o'clock and 9 o'clock position of the fan flashing. This will allow the fan flashing foot print to be easily inserted under the shingles. Using a flat bladed tool or the reciprocating saw held flat against the roof, slide the blade sideways under the shingles to clear any nails that would impede the placement of the fan flashing under the shingles. (See the diagram below for more information on proper orientation and lifting procedures. It is important to carefully lift the shingles in an effort to avoid compromising the shingle integrity and simplify the installation process)



### **Step 7: Mounting the Solar Powered Attic Fan**

It is imperative that the fan be mounted in such a manner that completely eliminates the risk of any moisture from entering into the attic space. In an effort to achieve this goal, we recommend using high quality, weather resistant, roofing sealant. Place two continuous rings of caulk to the underside of the fan flashing. Taking care not to smear the caulk on the exposed shingles, slide the fan flashing under the TAR PAPER and SHINGLES and gently force the fan flashing up until the shingles come in contact with the pitched portion of the attic fan. NOTE: The bottom portion of the fan flashing will reside on top of the shingles below the fan. Secure the attic fan to the roof using four (4) self tapping stainless steel screws, utilizing the 4 pre-drilled holes that are in the 12, 3, 6 and 9 o'clock position. The 3 o'clock and 9 o'clock screws should go under the shingles, while the 12 and 6 o'clock screws will go on top of the shingles. After securing the attic fan, use roofing nails and roofing sealant to re-secure any shingles that may have become displaced or raised during the installation process.

### **Step 8: Finishing the Installation**

Seal the screw holes at the 6 and 12 o'clock positions using the roof sealant. Next, seal the slits that were made in the shingles at the 3 o'clock and 9 o'clock position during the installation. Finally, place another thick layer of sealant along the exposed side of the fan flashing as an added barrier to moisture. Make sure all caulk is smoothed out and clean looking. Make sure to remove any debris that may have accumulated during the installation process. The job site should be left looking very clean!

### **Step 9: Panel Adjustment**

If necessary, loosen the two (2) set screws on the side of the panel mount to adjust the pitch of the solar panel in an effort to optimize sun exposure. Most roof pitches provide an optimal pitch, however, if an adjustment needs to be made it is important to replace the set screws after adjusting the pitch and locking them in place using "lock tite" or some similar adhesive.

**Step 10: Confirm operation**

You will undoubtedly feel the attic fan displacing attic air while working with the unit on the roof; however, we recommend making a trip into the attic after installation to ensure no debris was inadvertently left in the attic hole and that the attic fan is operating efficiently.

**SPECIAL CONSIDERATIONS**

If it is determined that a remote mount would result in the best ventilation and fan operation, follow the same sequence of installation instructions through step 8 for proper installation of the attic fan unit. However, PRIOR TO placement of the attic fan onto the roof, you must first remove the solar panel and adjustable pitch mounting bracket. You should also locate the solar panel roof mount kit (included in your packaging) as it will be required to mount the panel correctly.

WARRANTY



attic  
COOL  
Solar Powered Attic Fan

ATTIC COOL SOLAR POWERED ATTIC FAN  
25-YEAR WARRANTY ON SOLAR PANEL, &  
FAN COMPONENTS

*The manufacturer warrants this product to be free from defects in material and manufacturer's workmanship for a period of 25 years on the solar panel, brushless motor, and the housing, from the date of installation. This warranty is subject to proper installation of the unit in accordance with the manufacturer's written installation instructions. The manufacturer will not be liable for any special, incidental or consequential damages in any way related to, or arising out of, defects in, or damage to, the solar attic fan.*

*Please check with state regulations as limitations of these rights may vary from state to state*

*IMPORTANT: Please complete the following registration form.  
Product must be registered in order to receive manufacturer's warranty*

Please mail registration to: Lumina Global, Inc. 17927 Oak Park Bend Ln. Cypress, TX 77433

REGISTRATION

Date of Purchase: \_\_\_\_\_

Customer Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Customer Feedback:

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