

Attic Breeze

Self-Flashing Attic Fan Installation Guide

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Thank you for purchasing your new solar powered attic vent from *Attic Breeze*. Our attic vents have been carefully designed to provide easy installation with minimal tools or experience required.

 Before beginning installation of your new attic vent, please read through this guide and review the tools required for installation. If you do not have the needed tools or feel uncomfortable performing any of the tasks required for installation, contractor services are available in most areas to assist you with your installation needs.

Please note that this guide is intended for informational purposes only. *Attic Breeze* assumes no responsibility for any damages incurred during or as a result of installation of our products.

Parts List

Models 201A/202A/251A/252A

- 1 Attic Vent Housing with Attached 20-watt or 25-watt Solar Panel and Thermal Switch.

Models 201D/202D/251D/252D

- 1 Attic Vent Housing with Attached Thermal Switch.
- 1 20-watt or 25-watt Solar Panel with 15 feet of UV Resistant Wiring.
- 1 Mounting Bracket Kit

Tools Required

- Extension Ladder
- Reciprocating Saw
- Power Drill with ½ inch Bit
- Electrical Tape
- Hammer & Roofing Nails or Self-Tapping Roofing Screws
- Caulking Gun with Water Proof Roofing Sealant
- Measuring Tape or Ruler
- String (~12-13 inches)
- Permanent Marker
- Roofing Knife or Box Cutter

Installation Instructions

Step 1 - Ventilation Requirements: For proper function of your solar attic vent, your home must have the minimum required amount of outside air intake available to the attic space. This is typically accomplished through either soffits or gable vents. *Attic Breeze* recommends a minimum of 750 square inches of net free area intake ventilation per an installed unit. All attic intake vents should be clean (no debris) to allow for free movement of outside air into the attic space.

 **YOU MUST HAVE THE REQUIRED AMOUNT OF INTAKE VENT AREA TO ACHIEVE PROPER ATTIC VENTILATION.** If your attic does not have adequate ventilation as described above, you must add enough soffits or gable vents to at least meet the minimum required intake vent area. **FAILURE TO MEET THESE REQUIREMENTS MAY RESULT IN POOR PERFORMANCE OF YOUR ATTIC VENT AND/OR ATTIC DEPRESSURIZATION.**

Installation Instructions (continued)

Step 2 - Attic Requirements: To achieve the best results from our solar attic vents, *Attic Breeze* recommends inspecting the inside of your attic for uncapped shafts and chases, large unsealed ceiling seams, or other building features which may allow the air in your home to freely exchange with the air in your attic. Areas where potential air exchange is identified should be capped or sealed wherever possible.



SOLAR ATTIC VENTS ARE NOT RECOMMENDED FOR HOMES WITH DROP CEILINGS, CHASES, OR OTHER BUILDING FEATURES THAT DO NOT PROVIDE AN ADEQUATE SEAL BETWEEN THE LIVING AND ATTIC SPACES. If you are uncertain if this applies to your situation, contact us to discuss.



Tip: The better your attic space is sealed preventing air exchange with the inside of your home (even the small gaps), the more effective your attic insulation will become and the better the performance you will achieve from your solar attic vent. Since thoroughly sealing your attic could take some time, *Attic Breeze* recommends doing so only *after* your installation is complete. The temperature inside your attic will be greatly reduced after installation, making this task much more tolerable.

Step 3 - Location of Your Attic Vent: The proper placement of your solar attic vent will be based on several factors. For optimum performance, the solar attic vent (or solar panel for models AB-201D/202D/251D/252D) should be positioned facing south. Additionally, the solar attic vent (or solar panel) should be positioned on an area of your roof that is not shaded or otherwise blocked from the sun for extended periods throughout the day. Finally, your attic vent should be positioned on an area of your roof that gives the optimum distance between the solar attic fan and the air intake vents (soffits or gable vents). The key to finding the best installation location is in maximizing cross-flow ventilation by balancing the air intake sources.



IF YOUR HOME IS EQUIPPED WITH TURBINE VENTS, THESE VENTS MAY NEED TO BE SEALED-OFF OR REMOVED. Your solar attic vent will pull air backwards through the turbine vent, which may result in poor attic cooling performance if the turbine vent is located in close proximity to the solar attic vent. In many cases, a turbine vent can be removed and the solar attic fan installed in its place. If you choose to replace a turbine vent, make sure to widen the attic hole to the required size (20" diameter) after removing the turbine vent.



Tip: For best results, your attic vent should be installed about two feet below the ridge line of your roof and as close to the mid-point of your house as possible. In most cases, this will allow for optimum cooling performance to be achieved from your solar attic vent.

Step 4 - Unpack the Attic Vent: Unpack your new solar attic vent and make sure all listed parts are included. Make sure to remove all packaging material and tape before proceeding.

Step 5 - Marking the Attic Hole: Hammer a nail part-way into the roof in the approximate center of the area chosen to install the attic vent. Tie one end of string to a permanent marker, and the other end to the nail. The knot tied to the nail should allow the string to move freely in a circle around the nail (i.e. no winding of the string around the nail). Adjust the length of the string so that when the marker is pulled tight on the string, it measures 10 inches from the nail (see Fig. 1). Keeping tension on the string with the marker, trace out a circle onto the roof. The resulting circle will have a diameter of 20 inches.



Fig. 1 - Marking the Attic Hole

Installation Instructions (continued)

Step 6 - Cutting the Attic Hole: Using a power drill equipped with a ½ inch drill bit, drill a hole anywhere along the circle that was previously traced out onto the roof during Step 5. This will be a pilot hole for the reciprocating saw. Following the circle pattern, insert the reciprocating saw into the pilot hole and cut out the hole in the roof. When the cutting is complete, use your hammer to clear away any remaining pieces of wood and shingle from the sides of the hole and from the rafters or framing members if any are present (see Fig. 2).



Fig. 2 - Cutting the Attic Hole



DO NOT CUT THROUGH ANY ROOFING RAFTER OR FRAMING MEMBER. ONLY CUT AND REMOVE THE ROOF SHEATHING. This can be accomplished by adjusting the reciprocating saw so that it does not cut deep enough to cut into the rafters or framing members. Alternatively, if your saw cannot be adequately adjusted, you must cut around the rafters or framing members if present. This may require drilling additional pilot holes.



Tip: Roofing rafters are usually spaced in intervals of either 16 inches or 24 inches on center. You can often find where the rafters are located by hammering on the roof and listening for a solid echo. Once the rafters are located, mark the location and cut around them.

Step 7 - Lifting the Shingles: The shingles located directly above and to the sides of the attic hole must be lifted from the nails or staples holding them in place. This can be accomplished by inserting the reciprocating saw sideways, in between the shingles and the roof decking, at the 9 o'clock position of the attic hole. Then, in a sweeping motion cutting from the left-hand side of the hole to the right-hand side, use the saw to cut through the roofing nails until you reach the 3 o'clock position of the hole. Alternatively, any flat bladed tool (i.e. such as a trial) can be used to pry up the roofing nails as needed (see Fig. 3).



Fig. 3 - Lifting the Shingles



Tip: The solar attic vent will only have 3 inches of flashing extending beyond the attic hole, so not many shingles will need to be lifted to accommodate the unit. Be careful not to rip the shingles when prying up the nails or staples. Any ripped shingles will need to be sealed with roofing tar or caulk during Step 11.

Step 8 - Mounting the Solar Panel: If installing *Attic Breeze* models AB-201A/202A/251A/252A, skip ahead to Step 10. Depending on the mounting bracket option you have chosen for your remotely mounted solar panel, you will need to either drill a hole in your roof or attic wall to accommodate the solar panel wire. Using a power drill equipped with a ½ inch bit, drill a hole in the roof centered over the area chosen for your solar panel or in the attic wall near your adjustable bracket. Insert the solar panel wiring through the hole and into the attic. Using the caulking gun, seal around the hole and wire (see Fig. 4). Install the solar panel as directed by the instructions included with your specific mounting bracket kit.



Fig. 4 - Mounting the Solar Panel



MAKE SURE THE SOLAR PANEL IS INSTALLED WITHIN 14 LINEAR FEET OF THE ATTIC VENT UNIT TO ALLOW FOR TENSION IN THE SOLAR PANEL WIRE.

Installation Instructions (continued)

Step 9 - Securing the Solar Panel Wire: Find the solar panel wire that was fed into the attic in Step 8 and temporarily secure it to the side of the attic hole. You may need to enter the attic to retrieve the wire. Place the attic vent unit partially over the attic hole, near the secured solar panel wire. Plug the thermal switch lead wires into the solar panel wires and secure the connection with electrical tape. Allow the connected wires to hang freely into the attic.



THE SOLAR PANEL WIRE SHOULD HAVE ENOUGH SLACK SO THAT THERE IS NO TENSION ON THE CONNECTION TO THE ATTIC VENT UNIT.

Step 10 - Installing the Attic Vent: Using the roofing knife, cut a 4 inch gap in the shingles and tar paper at the 3 o'clock and 9 o'clock positions of the attic hole to allow the attic vent flashing to slide underneath. Position the attic vent unit so that it is horizontally centered with the attic hole. Slide the square flashing of the attic vent unit, underneath the shingles and tar paper, into the gap that was cut at the 3 o'clock and 9 o'clock positions of the hole. Lift the unit up at an angle while still in position. Note that the thermal switch (if included) should be hanging freely into the attic from the fan unit. Using the caulking gun, run a bead of caulk on the bottom side of the flashing facing the roof. When finished, continue sliding the unit upward and underneath the shingles until it is positioned directly over the attic hole. The cylindrical part of the attic vent should be touching the cut out edge of the shingles when the unit is aligned directly above the hole (see Fig. 5).



Fig. 5 - Installing the Attic Vent



Tip: If you experience any difficulty sliding the flashing under the shingles, it is possible that a nail or staple was missed during Step 7. Remove any remaining nails or staples holding down the shingles and the attic vent unit should slide easily into place.

Step 11 - Securing the Attic Vent: Using either roofing nails or self-tapping roof screws, secure the attic vent unit to the roof. *Attic Breeze* recommends securing the vent to the roof with two screws (or nails) across the top of the flash, two screws (or nails) on each of the sides in the 3 o'clock and 9 o'clock positions, and finally two screws (or nails) across the bottom of the flashing. Use roofing nails as needed to secure any shingles that remain loose after securing the unit to the roof.

Step 12 - Weatherproofing: Using the caulking gun, run a caulk bead around the area where the shingles meet the attic vent unit. Additionally, caulk over all exposed screw or nail heads and seal the gaps that were cut into the shingles. If any of the shingles were ripped during installation, make sure the rips are caulked and sealed as well. If installing *Attic Breeze* models AB-201D/202D/251D/252D, caulk over the solar panel mounting bracket screws as required.

Congratulations, your installation is now complete! Make sure to save your warranty information and invoice. If you have any questions or comments about our products, please contact our support staff to discuss. From everyone at *Attic Breeze*, we thank you for your purchase!