


# Attic Breeze

## Curb-Mounted Attic Fan Installation Guide

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

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#### Models 203A/204A/253A/254A

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

#### Models 203D/204D/253D/254D

- 1 Attic Vent Housing with Attached Thermal Switch.
- 1 20-watt or 25-watt Solar Panel with 16 feet of Shielded Wiring.
- 1 Mounting Bracket Kit

### Tools Required


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- Extension Ladder
- Reciprocating Saw
- Power Drill with Nut/Screw Driver and ½ inch Bit
- Electrical Tape
- Self-Tapping Roofing Screws
- Caulking Gun with Water Proof Roofing Sealant
- Measuring Tape or Ruler
- String and Permanent Marker
- Flashing for Curb Box
- 8 foot weather treated 2x4 Stud

### Installation Instructions

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**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 1600 square inches of air intake area per an installed unit, or about 12-13 standard size 16" x 8" screened soffits. 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 VENTILATION AREA TO ACHIEVE PROPER ATTIC VENTILATION.** If your attic does not have adequate ventilation, you should add enough soffits or gable vents to meet the minimum recommended intake ventilation 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-203D/204D/253D/254D) should be positioned facing either south or southwest. 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 maximum distance between the actual attic vent and the air intake vents (soffits or gable vents).



**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 installed in its place. If you choose to replace a turbine vent with an *Attic Breeze* solar attic vent, make sure to widen the attic hole after removing the turbine vent to the recommended hole size described below in this guide.



**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. Be sure to remove all packaging material and tape before proceeding.

**Step 5 - Building the Curb Box:** Build a 23 ½" x 23 ½" curb box using a weather treated 2x4 stud (see Fig. 1). The curb box should easily fit inside the curb-mount flashing of the attic vent base.

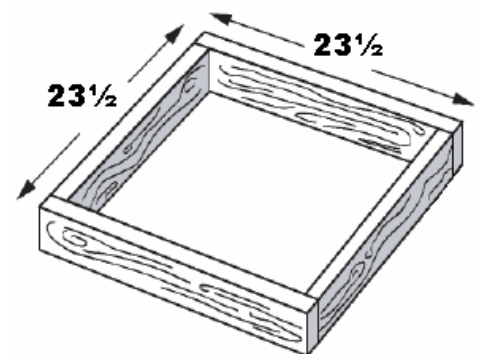


Fig. 1 - Building the Curb Box

## Installation Instructions (continued)

**Step 6 - Marking the Attic Hole:** Depending on roofing type (i.e. tile, metal roofing etc.), remove roofing material around the desired installation area to expose the roof decking. Insert a screw part-way into the roof decking 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 screw. The knot tied to the screw should allow the string to move freely in a circle. Adjust the length of the string so that when the marker is pulled tight, it measures 10 inches from the screw. Keeping tension on the string, trace out a circle onto the roof decking. The resulting circle will have a diameter of 20 inches.

**Step 7 - 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 during Step 6. 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, clear away any remaining pieces of wood from the sides of the hole and rafters.



**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 any rafters or framing members which may be located near the attic hole. This may require drilling additional pilot holes.

**Step 8 - Mounting the Curb Box:** Position the curb box over the attic hole. The box should be squared with the ridge line of the roof. Using the power drill, screw/nut driver bit, and self-tapping screws, secure the curb box to the roof decking. Tow in the self-tapping screws at a 45° angle, starting from the inside wall of the curb box and drilling through to the roof decking. It is recommended to use 4 inch self-tapping screws for this procedure.

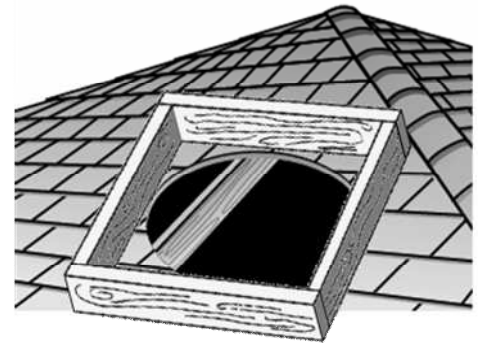


Fig. 2 - Mounting the Curb Box



**MAKE SURE THAT THE CURB BOX IS SECURELY FASTENED TO THE ROOF DECKING.** The curb box will be the primary anchor holding the attic vent to the roof.

**Step 9 - Flashing the Curb Box:** Flash the curb box using the most appropriate flashing material for your specific roof type (see Fig. 3 for common curb flashing materials). Replace tiles or metal roofing, leaving enough working space between the edge of the tiles and the curb box so that the flashing can be slipped into place.

Install the sill flashing first. Screw or nail the flashing into the curb box. **DO NOT NAIL THE FLASHING TO THE ROOF DECKING.** Next, install the side flashing and fasten it in place. If using step shingles, slip them under each row of roofing tiles, working your way up from the bottom. Slip the base of the head flashing under the roofing tiles and set it in place over the top of the side flashing. Screw the head flashing into the curb box.

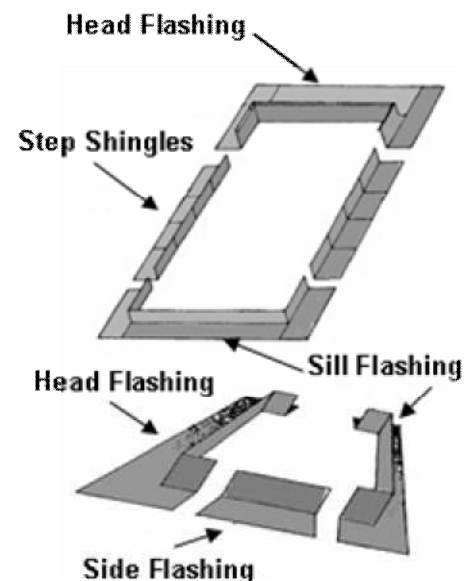


Fig. 3 - Flashing the Curb Box

## Installation Instructions (continued)

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**Step 10 - Mounting the Solar Panel:** If installing *Attic Breeze* models AB-203A/204A/253A-254A, skip ahead to Step 12. 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. Continue installation of the solar panel as directed by the instructions included with your specific mounting bracket kit.



**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.** The solar panel wire should have enough slack so that there is no tension on the connection to the attic vent unit.

**Step 11 - Securing the Solar Panel Wire:** Find the solar panel wire that was fed into the attic in Step 10 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 close to the curb box, near the secured solar panel wire. Plug the attic vent wire connections into the solar panel wire and secure the connection with electrical tape. Allow the connected wires to hang freely into the attic.

**Step 12 - Installing the Attic Vent:** Run a bead of caulking all around the top of the curb box. Position the attic vent unit over the curb box so that the thermal switch wire (or solar panel wire) is hanging from the bottom side of the vent housing. Slide the attic vent over the curb box, making sure that the vent housing is completely seated on the curb box and caulking sealant.

**Step 13 - Securing the Attic Vent:** Using self-tapping roofing screws, secure the attic vent unit to the curb box. *Attic Breeze* recommends using at least two screws on each side of the curb box to properly secure the unit. Replace any remaining tiles, shingles, or metal roofing around the attic vent needed to complete the installation.

**Step 14 - Weatherproofing:** Using the caulking gun, caulk over all exposed screw heads on the curb box. If installing *Attic Breeze* models AB-203D/204D/253D/254D, caulk over the solar panel mounting bracket screws as required.