



# SOLAR BLASTER

*Our solar-powered attic ventilation fans are the ONLY fans that work alongside a home's passive venting system to boost its effectiveness in keeping attics cool and dry.*

## Interesting Tidbits About Attic Ventilation

### No duh, hot air rises

That's right. A home's passive ventilation system is designed around the simple fact that hot air rises. That's why passive vents are installed as high on one's roof as possible. Ridge venting makes the most sense as it lets air escape at the highest point on your roof.

### An attic is like an oven

On a nice, sunny 90 degree day, your roof deck is 170 degrees and your attic heats to 140-150 degrees.



### Worse enemies of a healthy attic

Heat and moisture are the biggest culprits to an unhealthy attic. Heat leads to roof deterioration and higher cooling costs. Moisture leads to mold, mildew, wood rot and deterioration of insulation r-value.



### Air tight homes

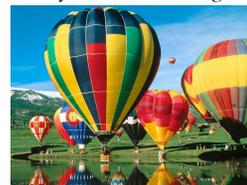
All of a home's heat, moisture and condensation that used to escape through walls and windows are now building up under the roof!

### Most neglected space

The attic is one of the most neglected spaces in a home. It's dark, difficult to access and can easily be ignored as it is out-of-sight. A professional roofer owes it to their customers to provide a full-service roof and attic inspection.

### Cool air in, hot air out

That is the entire key to proper attic ventilation. The goal is to maintain uniform air movement across the entire length of attic from eave to ridge.



## PROPER ATTIC VENTILATION

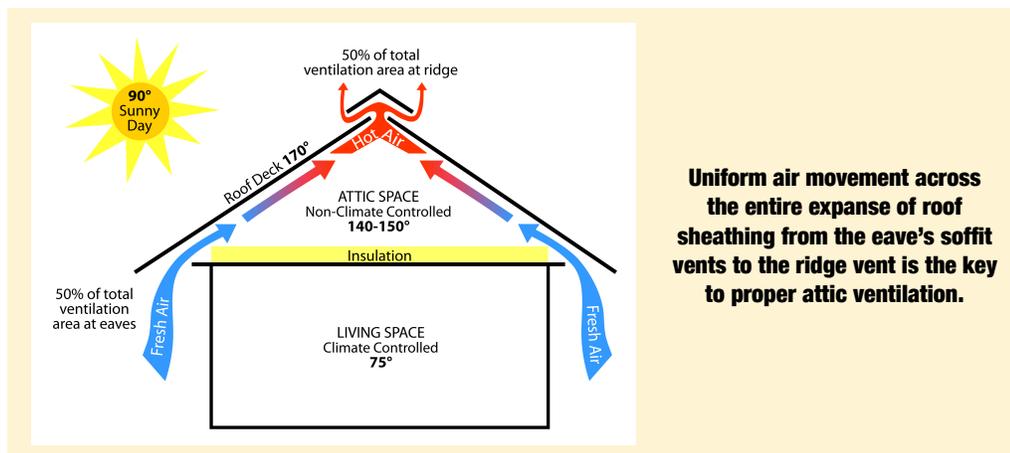
Passive venting is the industry-wide standard for proper attic ventilation. Shingle manufacturers' warranties and building codes require homes to be properly ventilated.

Attic ventilation is perhaps the most misunderstood area of roofing, and if neglected, leads to some very hideous and dangerous consequences. Ventilation is not an option; it is a necessity especially with today's air-tight homes.

A good roof design will include a balanced passive attic ventilation system. What that means is for every inch of air exhausted, there is a balanced amount of air coming in through the eave's intake vents. It also means that there is uniform eave-to-ridge air movement across the entire length of the attic. Air movement is crucial to maintaining a healthy attic.

### Boosting the Passive Vent System

Once a balanced passive vent system is achieved, boosting the effectiveness of that venting system is the advantage that Solar Blaster brings to the table.



Solar-powered attic fans that fit right inside the passive vents roofing professionals are installing on their homeowner's roofs allow these vents to remove hot and moist air even on non-windy days. We love the irony that we are utilizing the actual source of the heat problem, to also be the solution for removing that hot, moist air.

### Bigger is NOT Better

That's right. Other solar-powered attic fans on the market are not only 2-4 times more expensive, they circumvent the design and science behind the passive venting system. Remember, uniform eave-to-ridge air movement across the entire attic length

is the key to proper attic ventilation. People are installing these large solar vents in addition to their current passive vent system and that leads to problems. Large fans leave problematic hot spots in the attic. They pull air only from one spot on the roof. And if combined with other vents, they often pull air from the neighboring passive vent or gable vent rather than the soffit vents.

Multiple smaller fans spaced evenly across the entire attic length will be much more effective in boosting your passive vent system. Also smaller fans require less power to start operating so our fans will even work on slightly cloudy days.

# WHY IS MIXING OUTLET VENTS A BAD IDEA?

*More types of vents, in terms of variety, is not better. In fact, it can lead to some serious problems.*

*This article was reprinted with permission from the author, Ron Hungarter, a licensed contractor, real estate inspector, roofing tools inventor, and home inspector instructor.*

Mixing different types of outlet ventilation can interfere with the essential inlet flow of air at the soffit. Reduced inlet air flow at the soffit reduces all air flowing up and along the roof sheathing - essential for dry sheathing, a healthy home, and a healthy you!. Ever hear the expression, less is more? Not so for outlet vents. If you have more than one type of roof outlet vent, choose the most efficient type. Then eliminate all other outlet vent styles.

Mold and mildew are rapidly becoming a major health issue in homes all over the United States.

When people are advised not to mix outlet vents, they look confused and in disbelief of that advice. Until recently, our thinking has been that "more is better." But more isn't better! As most of you already know, the best way to ventilate a home is to install continuous soffit inlet vents and continuous ridge outlet vents. How many times have you heard that, right? But, what I'll bet you haven't heard is that mixing outlet vents can be a serious mistake. The dominant outlet vent has been proven to convert the weaker outlet vent into an inlet vent, eliminating the needed air draw up from the soffit area.

Upon investigating this home pictured below, we discovered a roof with two kinds of outlet vents - gable end vents, and a centrally located power attic ventilator.

Airflow will seek the path of least resistance. When the power attic ventilator was activated in this one-year-old attic, instead of air being drawn up from the soffit vent, air was sucked in through the gable end vents. Now, you may say, "So what? Air is still flowing, isn't it?" NO! Not where it is needed to be



flowing, along the entire underside of the roof's sheathing, gathering up and removing water vapor.

The results: Condensation on the lower roof section due to decreased air flow in from the soffit vents, allowing water vapor, droplets, moisture, "life-giving" liquid to form on the lower roof sheathing! Unfortunately, that life manifests itself in the form of mold and mildew, and in severe cases, wood rot. Why? Because you now have a perfect medium for mold growth - dark, moist, nutrient-rich plywood, with its glues, and wood and other organic matter



now helping to nurture and sustain their growth. NOT GOOD!

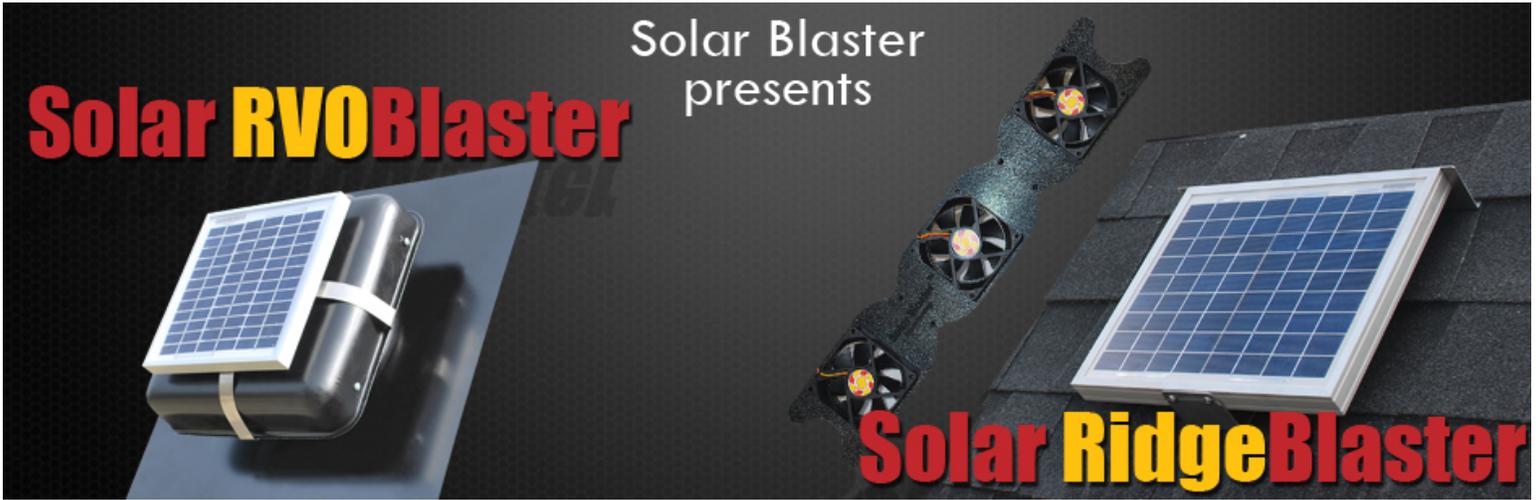
Notice in the photographs, the mold growth decreases towards the top of the roof. Why? Because the upper roof area has the most air flow, in from the gable end vents and out through the top, center power attic ventilator.

As homeowners become more and more conscious of rising energy costs and the need to conserve, we as a Nation are building tighter and tighter homes. Unfortunately, tight is not necessarily healthy. And, unfortunately, many contractors and homeowners are not aware of the extreme importance of proper attic ventilation. This need for ventilation is compounded by these tightly built homes, which do not have the old fashioned air leaks, allowing homes to breathe.

If you learn one thing from reading this article, let it be that there must be air flow in the attic, starting at the soffit inlet vents and extending along the roof sheathing to then be exhausted out through the outlet vents. Mixing different types of outlet vents interferes with that flow of air. Therefore, reduce multiple outlet vent types to only one.

Please check your attic for mold, check your roof for outlet vent styles, and take the appropriate action to eliminate "more" styles of vent before winter, because "less is more!"

([http://www.ronhungarter.com/black\\_mold.html](http://www.ronhungarter.com/black_mold.html))



**Solar RIDGEblaster**



The world's first solar-powered ridge ventilation system that truly vents from the highest point on the roof. The three-fan unit is installed inches below the ridge opening, helping to boost the effectiveness of the passive ridge vent system. The 10W solar panel operates the individual fans according to the amount of sunlight available. So even on partially cloudy days, at least one fan will still work.



The Solar RIDGEblaster is a 20-minute install from the rooftop and features a hidden flashing system for a really nice look. This unit retails for \$250 and can be purchased from your local Allied Building Products or directly from Solar Blaster's website.

**Solar RVOblaster**

The Solar RVOblaster is our can vent solution to attic ventilation. It comes in two configurations:

- RetroFit Kit
- Pre-installed on a metal vent



It is an ideal solution for homes needing additional ventilation when a ridge vent isn't an option. The RetroFit Kit can even adapt for high hood venting for flat roof applications and is only a 5-minute install using tools already in a roofer's bag.

If you order the Pre-installed version, it will come installed on a metal RVO-38 vent.

The RVOblaster RetroFit Kit retails for \$125 and the Pre-installed Vent version is \$150.

**30% Tax Credit**

Our solar-powered attic ventilation solutions qualify for a federal 30% tax credit and additionally may even qualify for city and state credits. This credit includes the product and labor. Visit [www.dsireusa.org](http://www.dsireusa.org) for a comprehensive list of all solar-related incentives.

**Certified Installer Program**



Be sure to contact Dan Rheume, the owner and inventor, if you are interested in becoming a certified installer of Solar Blaster products. We'd love to have you join us as we revolutionize the passive vent industry.

**Contact Info:**

Dan Rheume  
[sales@solarblasterfans.com](mailto:sales@solarblasterfans.com)  
 1-855-SUN FANS (786-3267)

**Let's activate passive vents so the sun can start removing its own hot air!**

**[solarblasterfans.com](http://solarblasterfans.com)**

# FULL-SERVICE ROOF AND ATTIC INSPECTION FORM

Style of Roof		Exterior Inspection	
<input type="checkbox"/>	Basic Gable Roof	Total Length of Horizontal Ridge _____	
<input type="checkbox"/>	Basic Hip Roof	Total Length of Diagonal Ridge _____	
<input type="checkbox"/>	Multiple Gabled Roof	<b>Signs of Damage Due to Inadequate Ventilation</b>	
<input type="checkbox"/>	Multiple Hip Roof	• Curling or cracking shingles due to heat/moisture damage	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/>	Cut-up Roof	• Soffits: peeling paint, signs of leaking from roof	<input type="checkbox"/> Yes <input type="checkbox"/> No
No. of Existing Exhaust Vents		• Problems with ice dams during the winter	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/>	Ridge Vents	• Icicles at edge of roof in the winter	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/>	Hip Vents	• Uneven snow melt on roof	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/>	Roof Can Vents	• Gutter damage from ice dams	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/>	Power Fans	Interior Inspection	
<input type="checkbox"/>	Gable Vents	Square footage of attic _____	
<input type="checkbox"/>	Other:	Soffit/Intake Vents are blocked by insulation	<input type="checkbox"/> Yes <input type="checkbox"/> No
No. of Existing Intake Vents		Signs of Roof Leaks on Attic Ceiling	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/>	Continuous Soffit Vents	<b>Signs of Damage Due to Inadequate Ventilation</b>	
<input type="checkbox"/>	8" x 16" Under-eave Vents	• Moisture damage	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/>	6" x 16" Under-eave Vents	• Rust or dirt on exposed nails	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/>	4" x 16" Under-eave Vents	• Compacted, moist or moldy attic insulation	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/>	Vented Drip Edge	• Mold, mildew in the attic	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/>	Other:	• Frost on the underside of roof deck during the winter	<input type="checkbox"/> Yes <input type="checkbox"/> No
Type of Insulation		• Blackened plywood	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/>	Rolled Insulation	• Signs of wood rot	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/>	Blown-in Insulation	• Insulation degradation and loss of loft	<input type="checkbox"/> Yes <input type="checkbox"/> No

## Benefits of Passive Venting



- ✓ Expels heat.
- ✓ Expels moisture.
- ✓ Reduces cooling costs.
- ✓ Increases roof life expectancy.
- ✓ Reduces wood rot.
- ✓ Reduces heating costs.
- ✓ Keeps insulation fresh.

- ✓ Reduces attic air temp difference from outside air.
- ✓ Reduces risk of mold and mildew growth.
- ✓ Stops heat transfer into living space.
- ✓ Healthier attic makes for a healthier home.
- ✓ Improves interior air quality.

## Benefits of Solar Blaster Ventilation



- ✓ Activates passive vents to make them more efficient.
- ✓ Promotes uniform air movement across entire attic.
- ✓ Works even on non-windy days.
- ✓ Multiple fans don't leave hot spots.
- ✓ Do not require thermostat control.
- ✓ Easy to install.

- ✓ Uses the source of heat to be the solution at no additional cost.
- ✓ Less expensive than large fans.
- ✓ Can be installed from the roof top.
- ✓ Even works on slightly cloudy days.
- ✓ Work all year around.
- ✓ Work when there is enough sun to power at least one fan.