

# What Homeowners Should Know About Attic Ventilation

MOISTURE

WEATHER FILTER

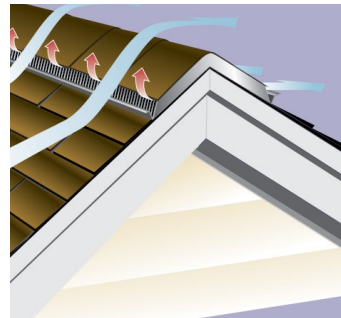
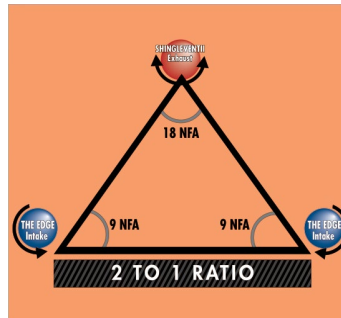
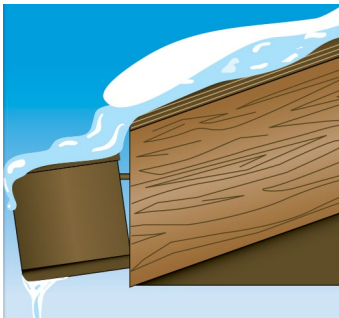
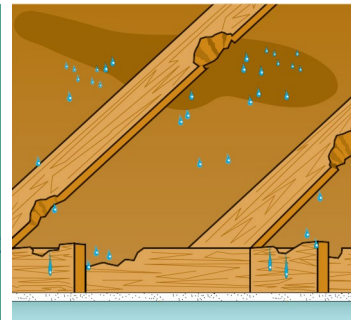
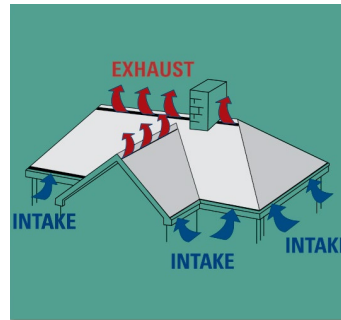
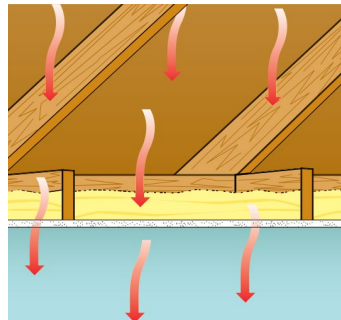
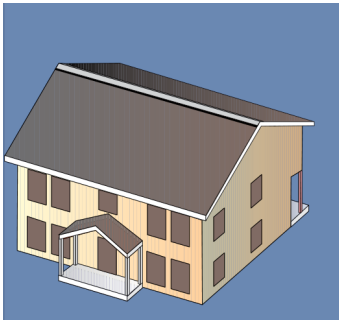
EXHAUST

WIND BAFFLE

INTAKE

HEAT/ICE

AIR QUALITY



MOISTURE

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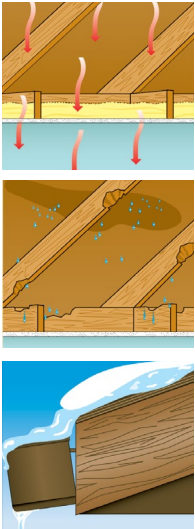
AIR QUALITY



# 1

## Attic Ventilation is Essential

Attic ventilation is an important part of your home's design and construction.



- **In the summer**, attic ventilation can **help prevent heat buildup**, which will help make your living areas cooler and more comfortable, help reduce air conditioning costs and help prevent premature roof shingle deterioration. The major shingle manufacturers require attic ventilation to validate the shingle warranty.
- **In the winter**, attic ventilation can **help prevent moisture buildup**, which will help prevent wood rot, mold, mildew and poor indoor air quality.
- And because it helps keep the roof deck uniformly cool **in the winter**, attic ventilation (along with proper attic insulation) can help prevent the uneven freeze/thaw cycle associated with snow on your roof that often leads to **ice dams**. Ice dams can back water under shingles causing roof deck and interior surface damage.

### Did you know?

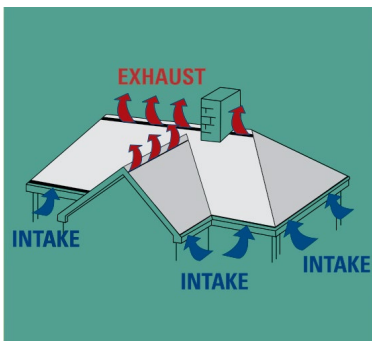
The average family of four generates 2 to 4 gallons of water vapor a day through activities such as cooking, cleaning, showering, laundry and breathing. Some of this water vapor rises into your attic. Ventilation helps remove it before it causes problems such as wood rot, wet insulation, mold and mildew.

Source: *Moisture Control in Buildings*, Heinz R. Trechsel



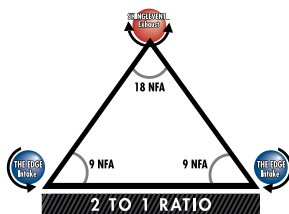
# 2

## Your Attic Needs Equal Intake and Exhaust Ventilation



Research has shown that the best way to ventilate an attic is with a **balanced system** of intake vents low at the roof's edge or in the soffit/eaves along with exhaust vents high on the roof at or near the ridge. This allows cool, dry intake air at the roof's edge to flush out any warm, moist air through the exhaust vents.

**Be sure your attic has enough intake vents.** They are crucial to the attic ventilation system and are often overlooked. Your roofing contractor can help you select intake vents to balance the system including Air Vent's Edge™ Vent (an edge-of-roof installed, shingle-over intake vent), continuous soffit vents, rectangular under-eave vents or vented drip edge products. When using vented soffit panels made by siding manufacturers confirm the amount of airflow they allow and be sure the installer has actually cut the holes in the soffit.



### Did you know?

An easy way to ensure that your attic ventilation system is balanced is by using Air Vent's Edge™ Vent for intake and Shingle Vent® II ridge vent for exhaust. Together they are part of The Balanced System® for Optimum Attic Ventilation.



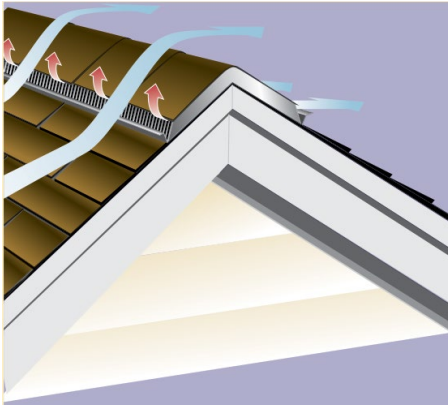
### Did you know?

When using an electric-powered attic fan, be sure the fan has a *thermostat* to fight heat in the summer and a *humidistat* to fight moisture in the winter. Without a humidistat, the power fan will only ventilate your attic as the heat builds up. It won't fight moisture buildup.



## 3

### Ridge Vents are the Most Efficient Exhaust Vents for Your Attic



A ridge vent, which is installed at the peak of your roof, is the best way to provide exhaust ventilation for your attic provided there is sufficient horizontal ridge length. It doesn't have any moving parts to break. It doesn't use any electricity to operate. And because it's installed along the entire peak of your roof, it ventilates the **entire underside of the roof deck** – as long as there is sufficient intake ventilation low at the roof's edge or in the soffit/eaves. No other exhaust vent can ventilate the entire roof deck.

Select a ridge vent that has an **external wind baffle** and an **internal weather filter**. The external wind baffle uses the wind to enhance the vent's airflow performance by literally pulling air out of the attic similar to the way a wing on an airplane helps lift the plane off the ground. The external baffle also deflects weather elements away from the attic. The internal weather filter provides an extra layer of weather

protection against wind-driven rain, snow, debris and insects. Unlike a furnace filter it is not treated with oil so it does not collect dust and will not clog under normal conditions. Air Vent makes several styles of ridge vents that feature the external wind baffle and internal weather filter.

### Did you know?

Homes with very little or no horizontal ridge length are still candidates for ridge vents. Air Vent's Hip Ridge® Vent is designed for use on the diagonal hips – offering another option besides power fans for hip roofs.



## 4

### Mixing Two Different Exhaust Vents on Your House is a Mistake



One of the most potentially troublesome attic ventilation mistakes is having two different types of exhaust vents on your house – for example, mixing a ridge vent with a powered fan, a roof louver, a gable louver or a wind turbine. Technically, this mistake is called short-circuiting the attic ventilation system. (See illustration on the left.)

Here's what can go wrong during short-circuiting: Because air always follows the path of least resistance and is always looking for the nearest opening, the ridge vent at the peak of your roof could pull its source of intake air from the powered fan, or roof louver, or gable louver or wind turbine (each of which happens to be the closest opening) instead of from the intake vents low at the roof's edge or in the soffit/eaves. Unless specially designed, exhaust vents are not designed to be intake vents. If air enters an exhaust vent, along with it could be rain, snow, dirt and debris right into

your attic! Furthermore, the lower portion of the attic is inadequately ventilated.

Therefore, **don't mix any two types of exhaust vents on your house** if it's one common attic. Always stick with one system.



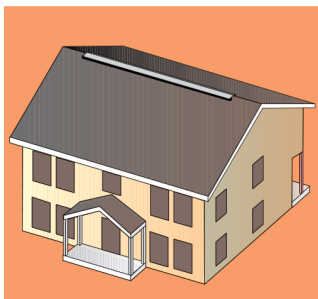
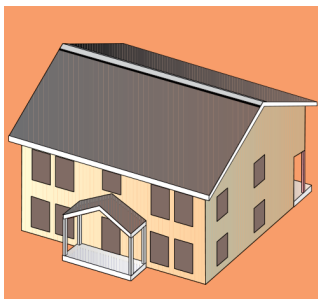
**Did you know?**

Solar-powered fans are an environmentally friendly alternative to traditional power fans. A solar panel collects energy from the sun and drives the motor in the power fan without any ongoing electrical costs to you. There's no need to hire an electrician or crawl into the attic to install the unit.



**5**

**Your Roofline Will Look Best if Ridge Vents Are Installed End-to-End**



Shingle-over ridge vents can blend in very nicely with your roofline, especially when matching ridge cap shingles are installed on top of the vent. However, a ridge vent that stops short of the end of the roof creates a less attractive, uneven roofline and reduces curbside appeal in your neighborhood. Maintain the distinctive beauty of your roof by running the ridge vents to the very end of the roof. *(See illustrations on the left.)*

**Did you know?**

Indications that your attic might have a ventilation problem include wet or compressed insulation, rusty nails or rust spots that dripped onto your insulation, blackened plywood, mold or mildew inside your attic, curling or cracking shingles, uneven snow melt and icicles at the roof edge.



**Did you know?**

A whole-house fan installed in a central hallway inside your house can help improve your indoor air quality and can be used as an energy-saving alternative to air conditioning or to augment the use of the air conditioner.



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