

March 10, 2015

To Whom It May Concern,

Few things are more misunderstood about the home than attic ventilation. In essence, efficient attic ventilation is all about providing conditions or components that allow for a steady, high volume of air movement. When you have such a system in place, you create surroundings that are beneficial to both the integrity of the roofing structure and for the people that live in that structure.

At this point it is important to understand what issues are associated with attics. During the warm weather months, radiant heat from the sun hits the roof. As the roof temperature increases, it conducts that heat through the roof sheathing into the attic. As the heat builds up in the attic, it radiates to the attic floor and then into the adjacent living areas. On a hot sunny day, the temperature at the roof sheathing can soar to 170 degrees F and attic temperatures can exceed 140 degrees F. As a result, the temperatures in the rooms directly beneath the attic become noticeably uncomfortable. To reduce the effects of that heat –not only the daytime heat gain but also the excess heat stored in the attic- air conditioning systems typically have to operate longer and work harder. However, a less obvious but more costly consequence can be found on the roof itself. Over time, that excess high attic heat can cause the premature breakdown and distortion of the roofing materials, resulting in such problems as early shingle replacement and/or a leaky roof. During the cooler months the problem is moisture and it can be very serious. The primary cause of attic moisture is warm humid air that is transported from the heated living areas of the home into the unheated attic space via unsealed penetrations in the ceiling structure. It is a process called “vapor diffusion”. This warm air condenses as water droplets or frost on the cooler roof trusses and rafters. Over time that moisture can result in wood rot and also become a breeding ground for harmful mold and bacteria. The escaping warm air can also raise the temperature of the attic above 32 degrees F causing any snow on the roof to melt and run down to the colder roof edge where it freezes and turns to ice. This condition called “ice damming” can lead to structural damage of the fascia boards and the gutter system.

There are several different solutions to control the heat and moisture problems in attics, but the most important solution is to provide a constant flow of air, moving in a constant direction. This air movement helps lower the heat and evaporates moisture. We can create this air movement in one of two ways –natural ventilation or power ventilation. In a natural ventilation system, intake vents, exhaust vents, ridge vents are positioned on the roof structure to take advantage of the thermal properties of air movement (hot air rises, cool air falls) and the power of wind. However, wind is an intermittent power source and thermal air movement is a slow moving force. The better solution for these attic problems is power ventilation.

By installing power ventilation or an attic fan to the roof structure, you are maximizing the air movement. An attic fan does not rely on wind or thermal forces to operate. It pulls air into the attic through the intake vents at the soffit by the force of the rotating motor blades. They can be controlled manually or automatically with a thermostat, or humidistat. They can operate all year round, summer or winter, day or night. They ensure a constant high volume of airflow on demand. When installing an attic fan it is very important to make sure you have a high quality product, you have enough soffit vents or gable vents to supply the intake air, you have the right size fan and that you use a qualified installer.

Of course insulation and roofing material are very important to solving these problems but there is no doubt that power ventilation or an attic fan can be a valuable product.

John Riley

National Sales Manager

SOLD UNDER THESE FINE NAMES:

Ventamatic®

**Cool
Attic®**

**MAXX
AIR®**

COOL DRAFT

nuVent®