We protect what matters most™

To: GAF Residential Sales, GAF Contractors, Field Services, AIS, CARE

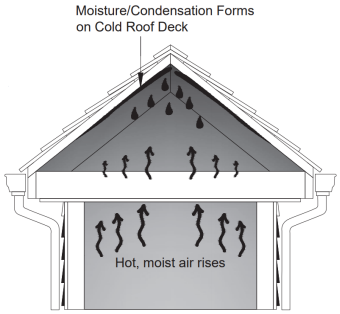
From: Technical Services

No: TAB-R-120

Proper Attic Ventilation

Why Is Proper Ventilation So Important?

With advances in construction products and procedures… heat, moisture and condensation that used to escape through walls and windows are now building up inside of homes and attic spaces. An excess of attic heat can lead to moisture build-up in the attic, increased energy costs, ice dams, and potential damage to roofing products and structural supports.



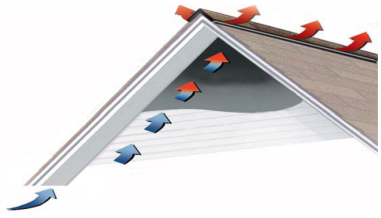
What Precautions Need To Be Taken?

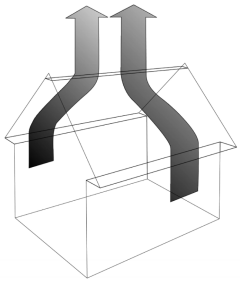
Reduce excess heat and moisture in attics with proper ventilation. The best way to ventilate an attic and ensure a balanced and functional system is to use continuous soffit or fascia vents (intake) and ridge or hip vents (exhaust). The amount of ventilation needed can be calculated by following the FHA (Federal Housing Administration/HUD) 1/300 Rule. This calls for 1 ft^2 (.09 m^2) of net free ventilation per 300 ft^2 (27.9 m^2) of attic floor area when using soffit to ridge venting.

Note: GAF does allow the use of Hip Venting to supplement ridge venting in order to meet minimum exhaust venting requirements. A ridge vent should be installed first as the primary exhaust vent. If the minimum exhaust ventilation is not achieved, then Cobra Hip Vent can be used to supplement the ridge vent.

How Do Continuous Soffit, Fascia, Ridge & Hip Venting Work?

Continuous soffit, fascia, ridge and hip venting work by convection. Using the natural force of hot air rising ensures proper airflow from the eave all the way to the ridge and/or the top half of the hip. Cool, dry air replaces hot, moist air that is "pushed" out through the ridge vent.





How To Avoid Attic Ventilation Problems...

Install a balanced ventilation system: Ventilation systems such as soffit and ridge/hip vents must be balanced to work effectively. A properly balanced system provides for 50% of the air flow through the soffit and 50% of the air flow through the ridge and/or the top half of the hip. The amount of ridge/hip (exhaust) ventilation should not exceed the amount of soffit (intake) ventilation.

If the length of available ridge is limited, supplement with venting hips: Cobra Hip Vents installed on the hips will help provide effective ventilation on roofs with little or no ridge area.

DO NOT use multiple vent systems: In general, if continuous soffit or fascia and ridge vents are used; power fans, roof louvers, static exhaust vents and any other roof vents should be removed or disconnected, and gable vents should be closed. The use of mixed ventilation systems, such as soffit and ridge vents in combination with a power fan could result in reverse airflow that could result in water leakage into the attic. Note: Where there is limited ridge length, such as with a hip roof, and where hip vents cannot be installed, the use of static exhaust vents placed within 12" (305 mm) of the ridge is acceptable.

DO NOT utilize exhaust vents as intake: Roof louvers, ridge vents or other static exhaust vents installed at or near the eave edge will not function effectively as intake ventilation. **Note:** In structures with little or no attic space, (which restricts or makes proper attic intake/exhaust venting impractical), a Ventilated Roof Insulation Panel (often called vented nail base) can be installed. This can help reduce heat drive into the living/condition spaces and exhaust excess moisture before it can condense in the roof deck or roofing system.

How Does Ventilation Affect Warranty Coverage?

GAF's Shingle & Accessory Limited Warranty that covers manufacturing defects will remain in effect regardless of the ventilation used. However, any damage to the roofing system or the structure that is caused by inadequate ventilation is not covered by the Warranty. The GAF Shingle & Accessory Limited Warranty does not warrant the workmanship of the roofer who installs the roof or the installation/performance of the roof system. GAF assumes no responsibility that the installation conforms to local code requirements.

Questions?

GAF Technical Services Can Assist You... with these and other questions you may have regarding your new roof installation. Technical Support Services can be contacted at 800-766-3411. The GAF website is a great resource for just about any question you may have or for additional information you may require. Please visit www.gaf.com to find the latest information on our products and their installation.

Important: This document supersedes any prior GAF Technical Advisory Bulletins on this topic. Please always check www.gaf.com to make sure you have the most up to date information.