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 ft2 (.09 m2) of net free ventilation per 300 ft2 (27.9 m2) of attic floor area when using soffit to ridge venting.

Note: 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.

How To Avoid Attic Ventilation Problems… (Continued)

If the length of available ridge is limited, supplement with by 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.