



Proper ventilation is best achieved by having both ridge ventilation (high) and eave edge (low). A balanced ventilation system uses ridge vents or provides about one-half of the total ventilation area at a roof assembly's low points, such as soffit vents, and the remaining area at or near the ridge. Balancing ventilation in this manner allows for air intake to occur at the low points and exhaust to take place at high points. Air movement from low to high points is aided by natural convection. Ventilation is typically measured by Net Free Ventilation Area (NFA).

Based on the assumption that the NFA balanced high and low ventilation is present, the following simplified method is acceptable for use in most residential re-roofing applications:

**Minimum of one (1) static roof vent (40" NFA) per each three (3) squares of roofing material installed.**

- Upper ventilators shall be located no more than three (3) feet below the ridge or highest point of the space being ventilated.

**Equivalents:**

- One (1) four foot section of ridge vent = 2 static roof vents (based on Air Vent shingle vent II specifications)
- One (1) turbine = 6 static roof vents
- One (1) power vent (minimum 1150cfm) = 18 static roof vents

**"Texas Pattern Roof Vents"** are not approved for use in the City of Amarillo unless specifically approved in writing.

"Proper attic ventilation is recognized by most roofing professionals as a necessary component of a successfully performing steep-slope roof assembly." National Roofing Contractors Association (NRCA)

NRCA recommends designers of steep-slope roof assemblies provide attic ventilation by using static, balanced ventilation systems with a minimum amount of 1 square foot (0.09 m<sup>2</sup>) of net free ventilating area for every 150 square feet (28 m<sup>2</sup>) (1-150 ventilation ratio) of attic space measured at the attic floor level.

In place of balanced ventilation systems, forced or mechanical ventilation may be appropriate. Ventilation measuring 1 cubic foot per minute per square foot (0.3 m<sup>3</sup>/minute/m<sup>2</sup>) of attic space at an attic floor effectively is equivalent to the 1-150 ventilation ratio for static ventilation.

For large-volume attics, such as attics with roof slopes greater than 8-in-12 (34 degrees), consideration should be given to increasing attic ventilation.

**EXAMPLES of TYPICAL UPPER VENT TYPES**

<p>Typical Static Vent</p>	<p>Ridge Vent</p>	<p>Turbine Vent</p>	<p>Power Vent*</p>

**EXAMPLES of TYPICAL LOWER VENTILATION OPTIONS (minimum 50%)**

<p>Individual Soffit Vent</p>	<p>Drip edge Vent</p>	<p>Continuous Soffit Vent</p>