



ROSS  
Manufacturing, LLC

Innovation in Ventilation™

## PRINCIPLES OF ATTIC VENTILATION



### WHY VENTILATE THE ATTIC?

1. REMOVES HEAT FROM THE ATTIC.
  - a. Proper ventilation uses intake and exhaust vents to help reduce energy costs by removing the hot air from the attic.
  - b. By removing the hot air from the attic, the home is able to stay cooler and the air conditioner runs less frequently.
  - c. All shingle manufacturers' warranties state that their warranties are voided if proper ventilation is not used.
2. REMOVES MOISTURE FROM THE ATTIC.
  - a. Proper ventilation removes the moisture from the attic. The attic insulation R-Value indicates the insulation's resistance to air flow – specifically heat. The greater the R-Value the better the insulation. Moisture will reduce the R-Value of insulation.
  - b. Moisture can lead to mold and mildew in the attic.
  - c. Moisture can also cause damage to the roof deck.

### HOW DO YOU CALCULATE PROPER ATTIC VENTILATION?

1. THE RECOGNIZED BUILDING STANDARD FOR BALANCED ATTIC VENTILATION IS THE 1/150 RULE.
  - a. For every 150 square feet (sq. ft.) of attic space, 1 square foot of ventilation is recommended.
  - b. Every square foot of ventilation is divided by 2 for the Intake (soffit ventilation) and the Exhaust (roof ventilation).
  - c. Convert to square inches by multiplying by 144.
2. YOU MAY USE THE 1/300 RULE IF A VAPOR RETARDANT IS UTILIZED ON THE BUILDING STRUCTURE.
3. EXAMPLE OF A BALANCED VENTILATION SYSTEM:
  - a. Attic square footage / divided by 150 = sq. ft. NFA (net free area) needed for a balanced system.
  - b. Divide NFA by 2 = NFA (net free area) Intake and NFA Exhaust.
  - c. To convert to square inches multiply by 144.

Calculation Example: 2,000 square feet of attic space

$2,000 / 150 = 13.333 \text{ sq. ft. Net Free Area (NFA TOTAL)}$

$13.333 / 2 = 6.6665 \text{ sq. ft. NFA Intake \& 6.6665 sq. ft. NFA Exhaust}$

$6.6665 \times 144 = 959.976 \text{ sq. in. NFA Intake \& 959.976 NFA Exhaust}$

Ross® 150 Roof Vent® - 150 sq. in. NFA = 7 vents

Ross® 65 Slant Back Vent® - 65 sq. in. NFA = 15 vents

Ross® 2-IN-1 Ridge Vent® - 84 sq. in. NFA = 12 vents