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How to Calculate Attic Ventilation

Use this formula when one half of the ventilation is in the soffit and one half of the ventilation is in the roof or if a vapor retardent having a transmission rating not exceeding 1 perm is installed on the warm side of the insulation.

Net Free Area: Use the steps below to calculate the total Net Free Area (NFA) required. NFA is the actual amount of opening a roof or soffit vent provides after allowing for the screen and framework of the louver. To achieve the NFA it is necessary to cut the **proper size opening** in the roof deck or soffit.

Step 1
Calculate the square footage of the attic

Attic Floor Space = _____
Square Feet

Step 3
Multiply **Step 2** by 144.* This converts Sq. Ft. to Square Inches.

Step # 2 X 144 = _____
= NFA Square Inches

Step 2
Divide **Step 1** (square feet of floor space) by 300. This will give you the 1/300 ratio required by most codes.

Attic Floor Space = _____
Divided by 300 Square Feet

Step 4
Divide **Step 3** (NFA) by 2. 1/2 of the ventilation in the eaves in 1/2 in the roof.

Total NFA/2 = _____
Square Inches

You now know that you need to provide _____ Square Inches of NFA in the roof and _____ Square Inches of NFA in the soffit. Step 4 Step 4

Look at the manufacturer's literature and find out the NFA for the ventilator you plan to use.

RIDGE VENTS

- All Airvent ridge vents are 18 sq in/lf
- All Airvent CRV ridge vents are 18 sq in/lf
- GAF Full Flow is 18 sq in/lf
- GAF Cobra ridge vent is 16.9 sq in/lf
- GAF Cobra Snow Country is 18 sq in/lf
- GAF Ridge Runner is 12.5 sq in/lf
- Mid America Hip & Ridge is 12.2 sq in/lf
- OC Ventsure ridge vent (20' roll) is 12.5 sq in/lf
- OC Ventsure ridge vent (4' piece) is 17 sq in/lf

ROOF VENTS

- Airvent alum. roof vents are 50 sq in/pc (w/ 9" hole)
- Certainteed B144 dome vent is 144 sq in/pc (w/ 15" hole)
- GAF SSB960 alum. roof Vent is 60 sq in/pc (w/ 10" hole)
- GAF IR65 plastic roof vent is 65 sq in/pc (w/ 11.12"x10" hole)
- Lomanco 750 roof vent is 50 sq in/pc (w/ 8" hole)

MISC VENTS

- Airvent Peak & Flash Vent (8' piece) is 9 sq in/lf
- Airvent Drip Drip Edge Vent (10' piece) is 9 sq in/lf
- Air Vent Edge Vent (4' piece) is 9 sq in/lf
- Smart Vent by DCI (4' piece) is 9 sq in/lf

INTAKE VENTS

- Airvent 4 X 16 Soffit Louver is 28 sq in/pc (w/ 3"x15" hole)
- Airvent 6 X 16 Soffit Louver is 42 sq in/pc (w/ 5"x15" hole)
- Airvent 8 X 16 Soffit Louver is 56 sq in/pc (w/ 7"x15" hole)
- Airvent Continous Soffit Vent (8' piece) is 9 sq in/lf
- Certainteed Ironmax D5 vented soffit is 6.4 sq in/sq ft
- Certainteed Invisivent is 10 sq in/sq ft
- Napco T-4 fully vented soffit is 5.9 sq in/sq foot
- Napco T-4 center vent vented soffit is 1.0 sq in/sq foot

Step 5
Divide **Step 4** (NFA) by the amount of NFA provided by the roof vent you have selected.

NFA required / NFA of vent = _____
Vents Needed

Step 6
Divide **Step 4**(NFA) by the amount of NFA provided by the soffit vent you have selected.

NFA required / NFA of Soffit Vent = _____
Vents Needed

To properly ventilate this attic you need

_____ roof vents and _____ soffit vents.
Step 5 Step 6