



UBC 1994

Section 1505 Ventilation

1505.3 Ventilation. Where determined necessary by the building official due to atmospheric or climatic conditions, enclosed attics and enclosed rafter spaces formed where ceilings are applied directly to the underside of roof rafters shall have cross ventilation for each separate space by ventilating openings protected against the entrance of rain and snow. The net free ventilating area shall not be less than 1/150 of the area of the space ventilated.

Venting by Square Footage of the Building

Exceptions:

1. The area may be 1/300 of the area of the space ventilated provided 50 percent of the required ventilating area is provided by ventilators located in the upper portion of the space to be ventilated at least three feet above eave or cornice vents with the balance of the required ventilation provided by eave or cornice vents.
2. The area may be 1/300 of the area of the space ventilated provided a vapor retarder having a transmission rate not exceeding 1 perm is installed on the warm side of the attic insulation.

Interpretation:

The ventilation requirement is 1/150. Meaning 1 square foot of ventilation for every 150 square feet of attic floor. The distribution is 1/2 a square foot of intake and 1/2 a square foot of exhaust. Another calculation that would be easier to work with is 1 sq ft of intake and 1 sq ft of exhaust for every 300 sq feet of attic floor.

There is an exception to the above rule. A 100% increase in attic floor allowance is given (from 150 sq ft to 300 sq ft) provided that two provisions are provided:

1. The distance between the ventilators in relation to their height is 3 feet. This does not mean 3 feet of distance between them. The distance could be for example 150 feet apart but the difference in elevation is 3 feet. The placement is 50% of the intake vents must be in the lower portion and 50% in the upper portion (not in the middle).
2. A vapor barrier must be provided. If both of the above provisions are met, then calculations are based upon the 1/300 rule. Meaning that for every 300 square feet of attic floor 1/2 a square foot of intake and 1/2 a square foot of exhaust is required. Or to base it upon 600 square feet of attic floor, 1 sq ft of intake and 1 sq ft of exhaust is needed.