

Attic ventilation is needed to reduce the superheating of the attic space as well as to reduce moisture levels in cooler weather. Ventilation is needed at the high points of the roof as well as the low points. With both high and low ventilation, convection currents within the attic serve to draw cool air in at the low vent openings and expel hot air from the high vent. There are many types of attic ventilation devices. One vent company web site is www.airvent.com which has a good overview of the basic vent types and benefits. Look for the booklet "Principles of Attic Ventilation" online.

Attic ventilation calculator

To use this calculator, first find the total square footage of the attic floor area. Round your calculations up to the next highest number (see Appendix A).

Then look across to the number under the Minimum Length of Ridge column. That tells you the total linear feet of ridge vent required using the 1/300 minimum code requirements. *Note: Because today's tighter homes require more airflow, the 1/150 ratio is also included in Appendix A.*

To balance your ridge vent system, find the length of the ridge and follow the column to the right for required soffit or undereave vents (see Appendix B).

Appendix A

Ventilation Requirements

Attic Square Minimum Length of Ridge

Footage at 1/300 ratio at 1/150 ratio

1200	16	32
1500	20	40
1800	24	48
2100	28	56
2400	32	64
2600	36	72
3000	40	80
3300	44	88

Note: Calculations are based on ShingleVent II and Multi-Pitch FilterVent which provide 18" of net free area per linear foot.

Appendix B

Balancing Your Ridge Vent System

Length of Linear Feet of Number of Undereave Vents

Ridge Continuous Soffit Vent 16"x8" 16"x6" 16"x4"

15'	30	5	6	10
20'	40	6	9	13
30'	60	10	13	19
40'	80	13	17	26
50'	100	16	21	32
60'	120	19	26	39
70'	140	23	30	45
80'	160	26	34	51
90'	180	29	39	58

Note: FHA requirements and most building codes state the minimum required net free area. This minimum ventilation area may not be enough to effectively ventilate the attic to prevent moisture damage and cool the attic enough in the winter to prevent ice dams.