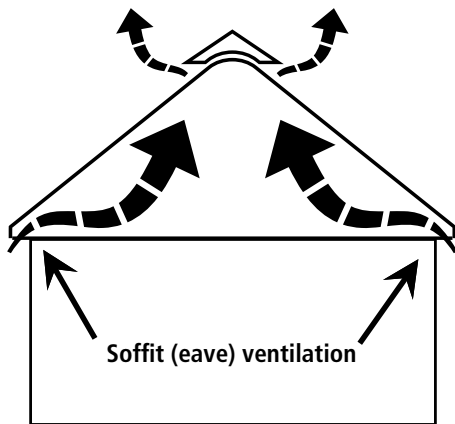
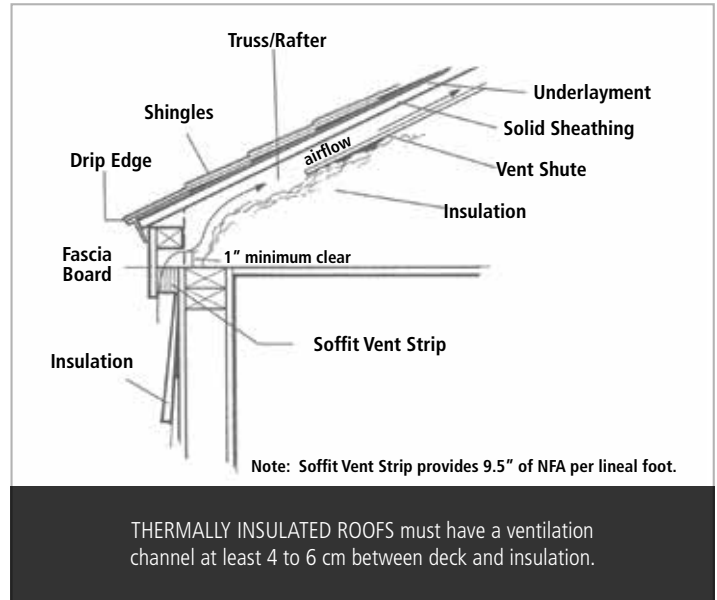


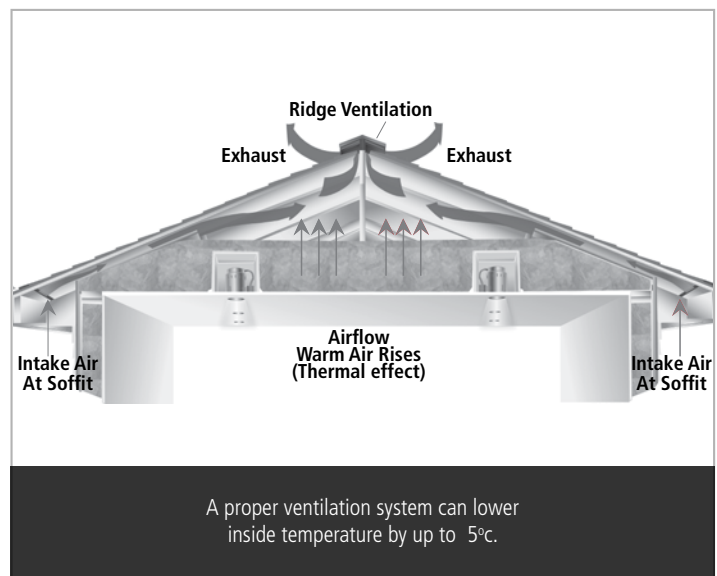
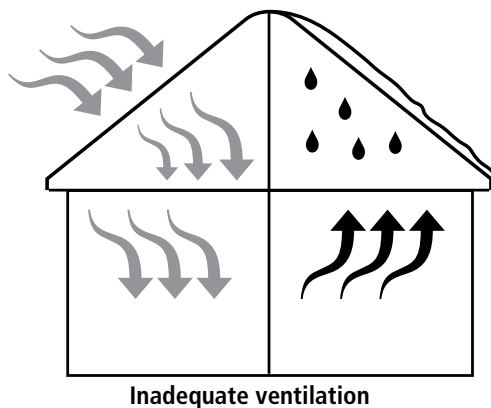
## VENTILATION FOR SHINGLE ROOFS WITH WOOD DECKS OR CEMENT BOARD DECKS

It is necessary to have adequate ventilation under the roof deck that will allow air to circulate in order to remove hot air and moisture. The air in your home is laden with moisture from cooking, laundry, bathing, the respiration of plants, animals and the evaporation from plumbing fixtures. Most of this water vapor migrates up into the attic. At night when the temperature drops, the moisture held in hot, humid air will condense and will be absorbed by the deck which will lead to damage of cement boards and rotten wood. Ventilation is important in order to get the maximum service life for both the deck and the shingles.

ROOFS WITHOUT VENTILATION LIMIT THE WARRANTY COVERAGE TO 10 YEARS REGARDLESS OF THE SHINGLE MODEL INSTALLED.



Ventilation should be balanced with 50% at the intake on the eaves or soffits and 50% on the ridge



A proper ventilation system can lower inside temperature by up to 5°C.

## HOW MUCH VENTILATION DO YOU NEED?

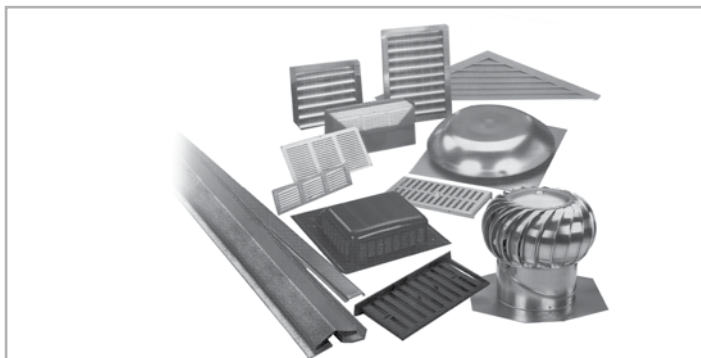
You should have 1 square meter of net free ventilation for every 300 square meters of horizontal attic floor area. Take floor attic area and divide by 300 and you will get the NFA (Net Free Area) or total ventilation needed for the whole roof.

A balanced system should have an air intake at or as close as possible to the eaves, and the exhaust at or as close as possible to the ridge. This will allow for continuous air flow that will remove hot air, water vapor and moisture from the attic or upper roof. Each vent manufacturer will have a different net free ventilation in their product. Be sure to check what the net free area is for the type of vent you are considering.

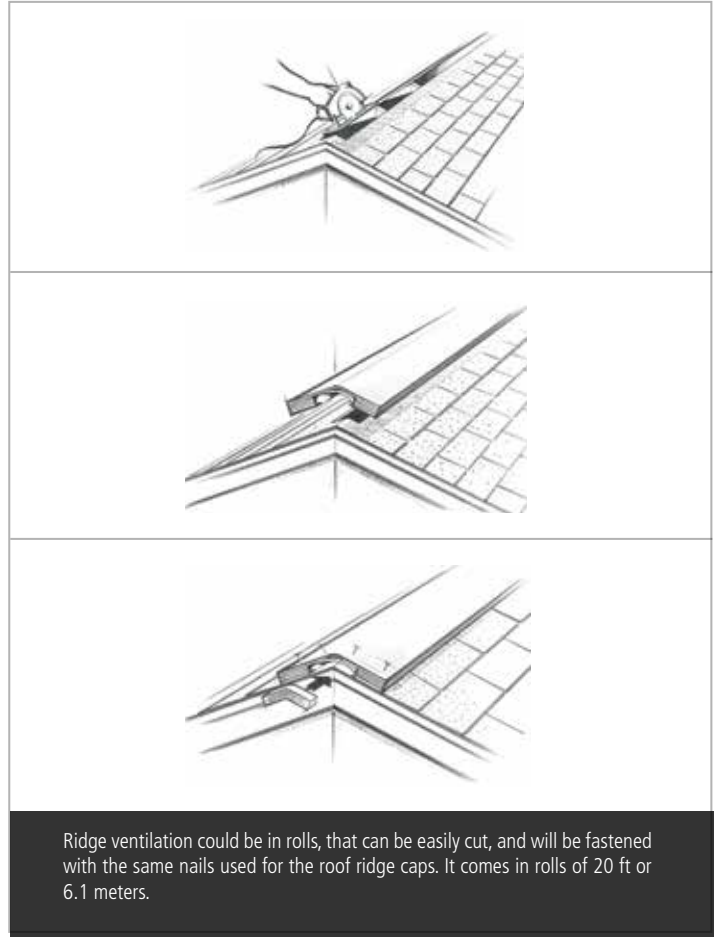
### Example

- 1 foot square = 0.093 m<sup>2</sup> = 144 square inches
- One Gable roof has an attic floor of 6 m. x 10 m. = 60 m<sup>2</sup> = 645 ft<sup>2</sup>
- Required ventilation 60 m<sup>2</sup> /300 = 0.20 m<sup>2</sup> = 310 square inches
- 50% = 0.10 m<sup>2</sup> = 155 square inches should be installed on the ridge
- 50% or 155 square inches should be installed on the eaves (soffits)

Eaves ventilation could be done with continues metal or plastic soffits.



There are many types of ventilation systems with several shapes and sizes. Be sure to check with the vent manufacturer for details for proper amount and application.



Ridge ventilation could be in rolls, that can be easily cut, and will be fastened with the same nails used for the roof ridge caps. It comes in rolls of 20 ft or 6.1 meters.

Reviewing this example, this roof of 60 m<sup>2</sup> of attic floor, will need 310 square inches of NFA of ventilation.

At or near the eaves there should be 155 square inches of airflow. If you use a square plastic recessed gable vent of 12 inches by 12 inches size, each will have a NFA of 75 square inches per unit. The number of gable vents that you need would be 155 sq. in. /75 sq. in. per unit or 2 units, one on each side of the roof.

At or near the ridge you also need 155 sq inches of airflow. A rigid roll vent could have NFA of 12.7 sq inches per each lineal foot installed. 155 sq in/12.7 sq. in. per ln ft = 12.20 ft = 3.73 lineal meters. You need to install 3.73 meters of the continuous rigid roll vent along the 10 meters of the ridge to meet the ventilation system requirement.

MANUFACTURERS WILL USUALLY LABEL EACH VENT UNIT WITH THE NFA, OR WILL STATE THE NFA PER LINEAL FOOT FOR ROLL VENT PRODUCTS.

NOTE IN HOT WEATHER OR CATHEDRAL ROOF OR INSULATED ROOF YOU SHOULD DUPLICATE THE VENTILATION AND AIRFLOW BY USING 150 AS DIVISOR FACTOR INSTEAD OF 300.

For additional information on IKO's full line of superior Roofing products, please call:  
 Armorooof: armorooofexport@iko.com or visit our website: www.armorooof.com

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