

Determining Your Ventilation Needs

Many homes are improperly or inadequately ventilated even when some form of ventilation is installed.

Signs of improper ventilation include:

- Damp insulation
- Unnaturally dark or discolored decking
- Dark streaks on roof boards around nails
- Orange resin beads on rafters signaling sweating wood
- Moisture on roof boards & rafters
- Crumbling, curled roof shingles

In drastic cases of dampness, soft and crumbling boards will be evident, and structural repairs may be needed. In less drastic situations, the problems may be solved simply by installing additional ventilation. To determine your ventilation needs, find the square footage of your attic floor and use the number to calculate how much Net Free Area your ventilation must provide. Net Free Area is the approximate clear opening of the ventilator through which air may move. As a general rule, the space ventilated should have a minimum Net Free Area of 1/150*. This means that for each 150 square feet of attic floor space, 1 square foot of Net Free Area is required for ventilation. The ratio can be reduced to 1/300 if:

1. there is a vapor barrier installed in the attic over the living space, or
2. there is a difference of at least three feet in height between the intake (soffit under-eave vents) and the exhaust (Ridge).

The total Net Free Area of the intake and exhaust must be balanced. Any excess Net Free Area should be at the intake.

* *Check local codes.*