



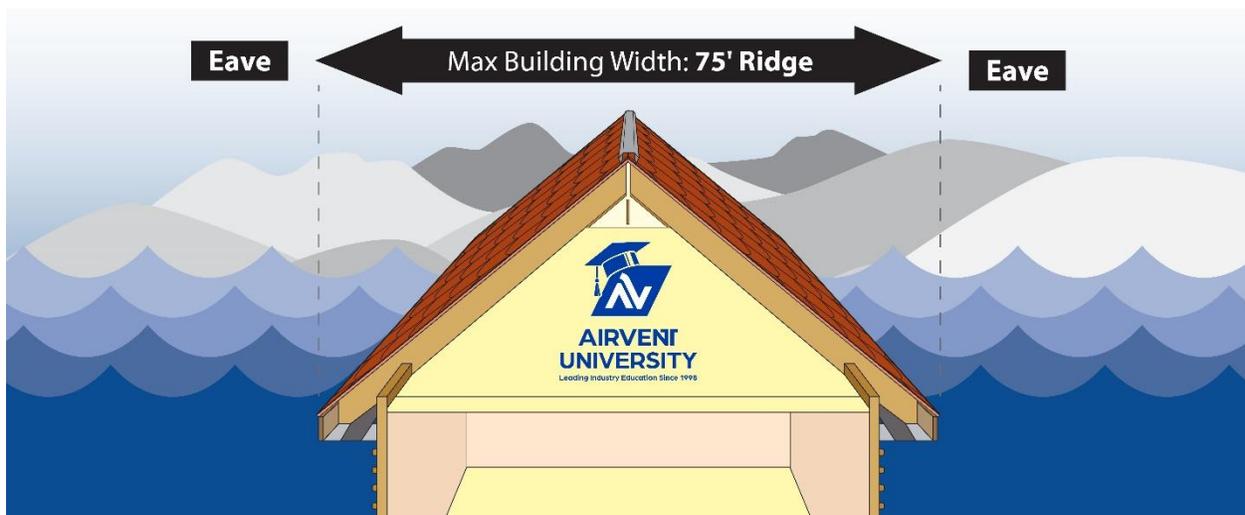
# AIRVENT UNIVERSITY LESSON PLAN

## Winter 2026 Lesson Plan

A Word About Building Widths and Rafter Runs.

A common question we're asked is, "What's the maximum roof width on which ridge vents will be effective; will stay within building code airflow requirements?"

We'll define roof width as the distance **from eave to ridge to eave** in the plan view. Roof pitch does not matter. It's just a straight line across the eave to the ridge to the opposite eave (see illustration).



A combination ridge vent (for attic exhaust airflow) and a balanced amount of intake airflow (roof-top intake or soffit/undereave vent system) will be effective (and stay within building code airflow requirements) on a roof that is **75 feet wide or less**. This assumes the ridge vent provides 18 square inches of Net Free Area per linear foot and is balanced with sufficient intake venting.

This 75-foot maximum width is based on establishing absolute minimum International Residential Code (IRC) requirements for airflow through an attic at a rate of 1 square foot of Net Free Area for every 300 square feet of attic floor space balanced with 50% intake airflow and 50% exhaust airflow.

To stay within the 1/150 IRC requirements for Net Free Area, the total width maximum would have to be **37 ½ feet** – that's 1 square foot of Net Free Area for every 150 square feet of attic floor space balanced with 50% intake airflow; 50% exhaust airflow.

## What About Rafter Runs?

Another common question we're asked is, "What's the maximum rafter run on which you can use a ridge vent?"

If it's a traditional attic with a flat floor on which you can walk into the attic, crawl around inside the attic, or store items inside the attic, there is no limit on the rafter run (but be mindful of the roof's overall width as explained above; see illustration above).

However, if it's a vaulted/cathedral ceiling style attic or otherwise compact roof system in which the "attic" is literally the 1-5-inch airflow gap between the roof deck and the insulation that was supposed to be factored in during the original build, here is some guidance.

- The 1.5-inch airflow gap between the roof deck and the insulation is sufficient for rafter lengths **up to 35 feet**.
- Rafter runs longer than 35 feet should have **at least a 2-inch to 3-inch airflow space** between the roof deck and insulation to allow for an easier path for the air to travel along the extra distance.

To test your knowledge about what you learned in the Winter 2026 Lesson Plan please take our short 5-question Pop Quiz.

