



Air Vent Case Study: Balanced Attic Ventilation vs. Unbalanced Attic Ventilation

Before; Unbalanced After; Balanced

Before & After Thermo-graphic Photos Show Reductions in Temperature Readings and Kilowatt Hours

Air Vent, a leading manufacturer of residential attic ventilation products, has conducted a "before" and "after" case study using thermo-graphic photography comparing an unbalanced and balanced attic ventilation system's impact on roof deck, attic and interior surface temperatures as well as energy usage.

Air Vent partnered with Risk Management and Engineering to study a house in Mansfield, TX (a suburb of the Dallas-Fort Worth Metroplex) analyzing temperature readings in 30 different attic and living space locations. On both the "before" (unbalanced attic ventilation) and the "after" (balanced attic ventilation) test days thermographic photo readings were taken during 12-hour periods on days with similar maximum outdoor temperatures and solar insolation (the radiant heat energy from the sun that heats the roof deck).

The unbalanced attic consisted of a mix of ridge vents and electric power fans without intake ventilation. The balanced attic consisted of electric power fans repositioned for maximum efficiency and Air Vent's new Edge $Vent^{TM}$ – a shingle-over intake vent. Power fans were used because Air Vent determined the house was not a suitable candidate for ridge vents.

The results are impressive. After the installation of Air Vent's balanced attic ventilation system:

- Maximum roof deck temperatures dropped from 146.5°F to 124°F (-22.5°F).
- Maximum attic temperatures dropped from 123.2°F to 113.9°F (-9.3°F).
- Maximum interior surface temperatures dropped from 83.1°F to 76.7°F (-6.4°F).
- Kilowatt Hours dropped from 130 to 104 (-20%).

"The results of our testing clearly showed that not only was the temperature of the air inside the attic reduced, the temperature of the roof deck materials was reduced, the temperature of the building materials inside the house was also reduced," says David Weeks, P.E., CIH, senior engineer at Risk Management & Engineering, Garland, TX. "The results of our testing clearly showed that the Air Vent balanced attic ventilation system resulted in demonstrated energy savings."

Visit <u>www.airvent.com</u> for the third-party Executive Summary of the *Air Vent Balanced Attic Ventilation vs.* Unbalanced Attic Ventilation Case Study or email <u>ventilation@gibraltar1.com</u>; 1-800-AIR-VENT.