Date: September 16, 1996
Time: 1:00 pm to 5:00 pm
Location:
Georgia Power Skills Development Center Plant Branch
Milledgeville, Georgia

Attendees:
Ben Fortson, Georgia Power Company
Jim Earley, Georgia Power Company
Mike Walker, Southern Company Services
Les Orenstein, AURA Ventilation
Car Brorup, Horton Homes

Equipment:
1-4'X3'X2' sealed box. Constructed out of 3/4" Wafer Board with a 14" hole in the top of the box and a 4" hole in the bottom.
1-144 sq. in. Round Browning Static Cap

1-14" AURA Roof Vent
1-8" AURA Roof Vent
1-Roll Aluminum Tape
1-Air Handler Unit with damping system (Unit used to create wind for test)
1-Smoke Pencil

Monitoring Equipment:
1-ALNOR Digital Volometer
1-Microdate Logger and Pito Tube

Test Procedure:

Using the sealed box to represent attic space, the air handler was adjusted by the damping system to produce various wind speeds to blow across the top of the different vents. Using the ALNOR Digital Volometer, several measurements were taken at the top of the roof vent to measure air speed, and at the 4" hole, to measure air exhausted or blown into the roof vent, for each vent installation.
A Pito Tube was inserted in the wind stream to measure the pressure while the Microdate Logger recorded the information. This pressure was converted into wind speed to verify that the wind produced by the air handler remained constant.
All doors were shut and air conditioning units turned off while these tests were being conducted to reduce air circulation in the laboratory.

Test Results

Test 1: 144 Square Inch Round Browning Static Cap

The 144 Square Inch Round Browing Static Cap was the first vent used in the test. With the air handler unit blowing 7 MPH wind across the roof vent, there was little or no air exhausted or blowing into the Static Cap.

The maximum amount of air exhausted by the Browning Static Cap was 8.4 CFM. To verify our readings, a smoke pencil was used to indicate the direction of air flow. The smoke would circulate around the 4" opening, sometimes moving away from the hole and then in some cases being drawn in.
When the wind was increased to 10 MPH, the air circulated around the 4" hole as described above.

The wind was adjusted to blow down on the vent at a 45º angle. With the wind at 45 MPH, the air movement measured at the 4" hole was 240 CFM. For these conditions, 240 CFM of air is blowing in the 144 Square Inch Round Browning Static Cap.

Test 2: 14" AURA Roof Vent
The 14" AURA Roof Vent was used in the second test. Thw wind was adjusted from 7, 10, 13 and 15 MPH and exhausted air movement readings were taken at each wind speed. The following graph and table (at the end of this document) show the exhausted air to the wind velocity.

Wind MPH	CFM Exhausted
2.7	30.6
5	55.7
7.1	115.2
16.46	288.8

The graph and table show that as the wind speed increases, the amount of exhausted air by the roof vent increases.
The wind was adjusted to blow down on the roof vent at a 45º angle. With the wind at 15 MPH, the air movement measured at the 4" hole was 119 CFM. For these conditions, 119 CFM of air was exhausted by the 14" AURA Roof Vent.

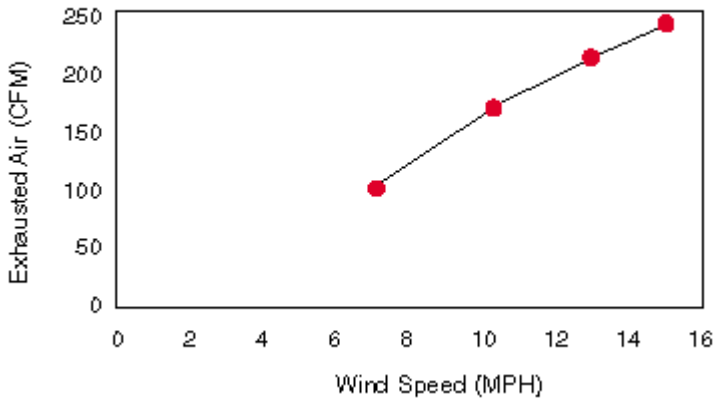
Test 3: 8" AURA Roof Vent
The 8" AURA Roof Vent was used in the third test. The wind was adjusted from 2.7, 4.98, 7.1, 12.5 and 16.5 MPH and exhausted air readins were taken at each wind speed. The following graph and table (at the end of this document) show the exhausted air to the wind velocity.

Wind MPH	CFM Exhausted
7.2	98.6
10.4	154.5
13.5	206
14.65	237.5

The graph and table show that as the wind speed increases, the amount of air exhausted by the roof vent increases.

Conclusion
As seen in the information above, for this particular test setting and environment, the AURA 8" and 14" Roof Vent exhausted more air than the 144 Square Inch Round Static Cap.

14 Inch AURA Roof Vent



8 Inch AURA Roof Vent