ReVireo

10/14/18

Reference: Testing the air flow of a bathroom exhaust fan system. Testing was to evaluate the air flow of an exhaust fan connected to a roof vent and compare the performance of the fan when connected to the Moisture Flow Soffit Vent.

My name is Anneliese Khalil. My RESNET HERs Rater ID number is 9423647. My BPI ID number is 5030725. As of today, 10/14/2018, I am current on the following professional certifications:

-BPI Building Analyst
-BPI Healthy Homes Evaluator
-RESNET HERs Rater
-EPA ENERGY STAR v3 Verification Rater

Today, 10/14/18, I successfully installed the Moisture Flow Soffit Vent. The vent was attached to a Panasonic bath fan, model number FV-11VQ5, serial number 702. The fan and soffit vent were attached using a 4" transition duct, insulated to an R-8, and is approximately 12' in length. After installation, the fan flow was measured using an Energy Conservatory DG-700 manometer and an Energy Conservatory exhaust fan flow meter. This is industry standard equipment used to test fan flow and measure pressure. The measured CFM of the bath fan connected to the soffit vent was 111-117.

It should be noted that fan flow was measured in the same bath fan when it was attached to a roof vent termination. The same transition duct was used, the same equipment was used to test the fan flow, and all other conditions were similar (same fan, same transition duct, same attic, similar weather – testing took place approximately six hours apart), if not identical, except for the termination point. The measured CFM of the bath fan connected to the roof vent termination was 90-96 CFM.

The observed difference in fan flow is likely due to the soffit vent termination, by its very nature, being the last component of a down flow system. The transition duct running from the bath fan to the soffit vent is on a downward pitch, which helps the fan evacuate the exhausted air with more force. It should also be noted that because of the way the bath fan is positioned in relation to the soffit, the transition duct does a 180 degree turn directly out of the fan unit. This bend did not negatively impact the performance of the bath fan.

I encourage any qualified individual or organization to independently verify my findings.

Sincerely,

A Khalil

Anneliese Khalil
Building Analyst

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