

RESNET Formal Interpretation 2007-001

Approved by the RESNET Board of Directors, April 20, 2007

Proponent:

RESNET Standing Technical Committee

Applies to:

2006 Mortgage Industry National Home Energy Rating Systems Standards
Table 303.4.1.(1), under “Mechanical Ventilation” and “Air exchange rate”, and footnote (f).

Interpretation: RESNET Ventilation System Definition and Application

Background

The *2006 Mortgage Industry National Home Energy Rating System Standards* (RESNET standards) contains a definition of “mechanical ventilation system,” as follows (p 3-4):

“Mechanical ventilation system – A fan designed to exchange the air in the house with outside air, sized to provide whole-house service per ASHRAE 62.2, and controlled automatically (i.e. not requiring human intervention to turn on and off). The presence of a remote-mounted on-off switch or dedicated circuit breaker labeled “whole house ventilation” (or equivalent) shall not disqualify a system from meeting the requirement of automatic control.”

The precise interpretation of this definition is significant, because credit for energy savings due to reduced envelope air leakage (less than 0.35 ACH) can only be achieved when documented by a blower door test, and then *only* if a mechanical ventilation system is present (Table 303.4.1(1) and footnotes (e) and (f)).

Compliance with new home tax credits, voluntary programs such as ENERGY STAR, and energy codes may all depend on raters’ interpretation of this definition.

Interpretation

The RESNET Technical Committee provides the following statements of clarification to the RESNET definition of “Mechanical Ventilation System”:

1. The RESNET Standards do not include by reference the entire content of ASHRAE Standard 62.2.
2. “Sized to provide whole-house service” means ventilation fan(s) shall be sized to at least meet the air flow requirements for whole building ventilation per ASHRAE Standard 62.2-2004 Section 4 Whole Building Ventilation to qualify as a mechanical ventilation system. Ventilation fan flow requirements shall be determined from Standard 62.2, Table 4.1, or the equation:

$$CFM=0.01 \times CFA + 7.5 \times (Nbr + 1)$$

Where: CFM= minimum air flow requirement
CFA = Conditioned space floor area
Nbr = Number of bedrooms

3. “Controlled automatically” means the ventilation fan system shall be capable of operating automatically on a continuous or intermittent basis, without occupant intervention, to meet the delivered mechanical ventilation rate requirements of ASHRAE Standard 62.2 2004 Section 4.
 - a. A thermostat “fan-on” switch by itself (for air-handler integrated supply-air systems) or a locally-mounted on-off switch (for devices serving as local exhaust appliances as well as whole-house ventilation systems) do not meet this requirement.
 - b. Hard-wired (continuous) devices meet the requirement.
4. Although not presently required, it is recommended that fan installations comply with Section 7 of ASHRAE 62.2-2004, with regard to sound level ratings and air flow. 62.2 requires field confirmation of air flow(s) with a flow hood, flow grid, or other flow rate measuring device, OR the use of prescriptive criteria for design and installation of air-moving equipment and ducts to ensure that design air flows are actually achieved.