



Interpretation: Continuously Operating Whole House Mechanical Ventilation

Designation No: 380-2016-03

Approved: April 14, 2019 by RESNET SDC 300

Effective Date: May 14, 2019

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Reference: This request for interpretation refers to the requirements presented in Standard: 380-2016

Page Number(s): _____

Section(s): 3.2.11.4 and 4.2.7.2

Table(s): _____

Relating to: _____

Background (provided by Requester):

RESNET QA oversight activities have discovered inconsistency among raters when determining whether to tape/seal non-dampered openings as it pertains to the procedure to prepare the building for infiltration and duct system testing. The issue stems from an interpretation of the meaning of “continuously operating” in sections 3.2.11.4 and 4.2.7.2 within RESNET/ICC 380-2016. Within other code standards such as the IRC, “continuously operating” can refer to appliances like refrigerators which do not run 24/7, but turn on and off automatically without any interaction from the occupants. Many testers have taken a plain English interpretation that “continuously operating” (as it is used in the above referenced sections of 380-2016) means the fan is designed to be in operation 100% of the time. This interpretation difference can lead to very different test results and creates inconsistency in the marketplace.

This interpretation request is necessary in the name of consistency and

creating a level playing field. Without a clear definition of “continuously operating” some testers are making an interpretation to seal these non-dampered openings during duct leakage to outside or infiltration testing.

The proposed interpretation is in line with the original intent of the standard. Non-dampered openings create “holes” through which natural infiltration occurs whenever a mechanical ventilation system fan is not activated. When connected to heating/cooling air distribution systems, these “holes” also create openings through which duct leakage occurs during times when the heating/cooling system operates and the ventilation system fan is not activated. As such, these “holes” cause additional air exchange with the outside beyond the design for ventilation air and should be accounted for during testing.

**Requester’s
Interpretation:**

The term “continuously operating” as it is used in RESNET/ICC 380-2016 shall be defined as a ventilation fan designed to operate 100% of the time or 24/7. Ventilation systems that automatically turn the fan on or off (for example: timer, moisture/temperature sensor) shall NOT be considered continuously operating and their non-dampered openings shall not be sealed during testing.

Question: Is this Interpretation correct?

**SDC300
Answer:** Yes

**SDC300
Comments:**

Sections 3.2.11.2 and 4.2.7.1 clearly state that non-dampered ventilation openings of “intermittently operating” systems shall not be sealed. Timer and sensor controlled systems are intermittent and not continuous.

3.2.11. Non-dampered openings for ventilation, combustion air and make-up air

3.2.11.2 Non-dampered ventilation openings of intermittently operating whole-house ventilation systems, including HVAC fan-integrated outdoor air inlets, that connect the Conditioned Space Volume to the exterior or to Unconditioned Space Volume shall not be sealed.

3.2.11.4. Non-dampered ventilation openings of continuously operating whole-house ventilation systems that connect the Conditioned Space Volume to the exterior or to Unconditioned Space Volume shall be sealed at the exterior of the enclosure where conditions allow.

4.2.7. Non-dampered ventilation openings within the duct system shall be treated as follows:

4.2.7.1. Non-dampered ventilation openings of intermittently operating whole-house ventilation systems, including HVAC fan-integrated outdoor air inlets, that connect the Conditioned Space Volume (including space conditioning duct systems) to the exterior or to Unconditioned Space Volume shall not be

sealed.

- 4.2.7.2.** Non-dampered ventilation openings of continuously operating whole-house ventilation systems that connect the Conditioned Space Volume (including space conditioning duct systems) to the exterior or to Unconditioned Space Volume shall be sealed, preferably at the exterior of the enclosure.