

# CLEARING THE AIR

*Residential Ventilation Issues by Dara Bowser & Bob Allison*

## Current Issues in Residential Ventilation June 2004

Bob and I would like to thank the regular and occasional readers of this column over the past 10 or so years. We began writing this in December 1992, or at least, that is the oldest article we can find. We would also like to thank those who were able to make it to the ventilation discussion at the Annual Meeting and Training Session in Collingwood. Congratulations to Simcoe and Grey-Bruce Chapters for hosting the conference.

### 1) Proposed Changes to the OBC Section 9.32 Not Recommended.

At it's December 12<sup>th</sup>, 2003 meeting, the Ontario Building Code Part 9 Technical Committee considered the proposed changes to section 9.32 arising from the proposed changes to the National Building Code. The committee rejected the proposed changes as they have not been field tested and suggested that the Ministry set-up a task force to monitor the outcome of the new NBC rules, prior to harmonization with the OBC.

HRAI, OHBA, an Ontario Consumers Group, and the writers of this column have expressed concerns and opposition to the proposed changes.

### 2) Some HRV's Sold in Ontario Do Not Comply with 9.32.3.11.(2)

Until recently, it could be assumed that all HRV's sold in Ontario met the minimum efficiency requirements of the above noted sentence, that is to say, 55% sensible recovery efficiency when tested according to CAN/CSA 439-M at -25°C and a minimum air-flow of 30 L/s. This requirement is intended to ensure that the HRV will continue to provide the ventilation intended by the code during the coldest days of winter. The rating is published in the HVI Certified Home Ventilation Products Directory which is frequently updated and is available for download at [www.HVI.org](http://www.HVI.org).

The units (mostly ERV type) which have appeared on the Ontario market are certified to an outdoor temperature of -15°C. This is higher than the outdoor winter design temperature in all but the mildest climate regions of Ontario. Use of such a unit in a climate zone where the design temperature is less than -15°C would probably result in a situation where the HRV would no longer be capable of providing the Ventilation required by the OBC. Where the ventilation system is designed according to Part 6, the cold weather requirement continues to apply by virtue of sentence 6.2.1.7.(2)(b). Although these units are often called "ERV's", they are effectively defined as HRV's by the OBC as only HRV's are permitted to provide the required ventilation (see sentence 9.32.3.4.(5)).

### 3) B-Vented Gas Appliances in New Homes

In our travels about Ontario, Bob and I have seen some examples of B-vent installations in new homes using exhaust only systems without any provision under Part 6 design to ensure that there is no back-drafting. For most of Ontario, B-vents for gas -fuelled new homes are a thing of the past. If Section 9.32 and consequently CSA F326 (Part 6 design) are enforced, the use of a B-vent for a gas-fired appliance in a new home is not practical. Municipalities which continue to permit installation of B-vents in new homes should investigate their interpretation of the applicable codes more closely because of the danger of back-drafting that may result.

### 4) Exhaust Fans Vented into Attics/Soffits

Venting exhaust fans directly to the outside is a basic principle which has been in the code for quite a while. It is simple in concept and easily inspected but does not seem to be universally enforced. There are examples of mould growth in these cavities which can be traced to this practice. This is so important that it hardly seems worth the risk of non-enforcement.

**Summary:** It is accepted in Ontario that section 9.32 is a section worth enforcing as it contains some basic provisions with respect to health, safety and the preservation of structural integrity. OBC section 9.32 is simple, effective, relatively easy to enforce and has proven itself so over a period of 10 years. The enforcement community agrees that there are no valid reasons why it should undergo wholesale revisions. Given Section 9.32's simplicity and universality, it is also difficult to understand why some municipalities do not seem to be enforcing the section vigorously, or seem to have unique local interpretations.

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NOTE: The opinions expressed in this column are those of the writers and do not reflect the views of HRAI, OBOA or any other agency, corporation or individual.