

The Heating, Refrigerating and Air Conditioning Institute of Canada (HRAI) is a not-for-profit national trade association serving the HVACR industry and the public interest. HRAI provides a wide range of informational and educational opportunities for building officials. Just as contractors, building owners, and building managers need to keep up to date in our ever-changing HVACR industry, building officials also need to know the "facts" and need to keep current. HRAI continues to work closely with OBOA and salutes the various municipalities across Canada who have joined the association as associate members. HRAI, through its national network of chapters, provides a means for building officials, contractors, wholesalers, manufacturers and consultants to work together.

OBOA members should note that HRAI offers a wide range of HVACR technical manuals, design manuals, and software for applications such as heat loss/gain, duct design and air handling, commercial and residential courses, brochures (CFC's/HCFC's, ventilation, and tips for choosing a contractor), as well as posters and videos.

HRAI's training program includes courses in Residential Mechanical Ventilation, Installation and Design. Together, the material which forms the basis of these courses is referred to as the "HRAI Ventilation Manual". This material covers the National Building Code Ventilation requirements as they apply to single-family housing as well as ventilation design according to the CAN/CSA F326 Standard and the R-2000 Ventilation Guidelines. Ventilation courses are run throughout the year in Ontario and across Canada on a scheduled as well as a "demand" basis for all interested industry personnel, including building officials. HRAI will also conduct special courses arranged and designed just for building officials. For more information on materials and courses call HRAI at 905-602-4700 (fax 602-1197).

HRAI is pleased to provide the support for the timely and ongoing information in this column for OBOA members.

Residential Ventilation Issues by Dara Bowser maato

Can Range Hoods be Used for Ventilation Under Section 9.32 Rules?

The answer to this question is not straightforward. At first glance, it would appear that range hoods are not allowed as ventilation devices in section 9.32. (The prescriptive Requirements for Ventilation in Dwelling Units). This flies in the face of current practice however, where range hoods are the equipment of choice when providing local smoke, odour and humidity exhaust from kitchen and cooking areas.

First let's look at the clauses that speak to the issue.

9.32.3(8) requires that if the exhaust intake for a principal fan is located in a kitchen, it must be within 300 mm of the ceiling. This effectively rules out range hoods for the purpose of providing the *Principle Exhaust Fan Capacity* requirement. This is not unreasonable, however, as range hoods are not intended for prolonged use to provide background ventilation. They are intended to provide intermittent ventilation to remove cooking odours, smoke and humidity from kitchen areas.

9.32.3.2. requires that each kitchen, bathroom and water-closet room be equipped with an exhaust air intake. This might take the form of an intake connected to a central exhaust fan or it could be a fan located in the room itself. The fan could be the *Principal Exhaust Fan*, or it could be a *Supplemental Exhaust Fan*. Additionally, 9.32.3.5.(5) requires that there be a switch located in the kitchen, bath or water-closet room which controls the fan which serves it, whether the fan be central or local.

A range hood is a good choice to meet this requirement for kitchens, particularly as it comes equipped with the requisite control switch mounted on the face. Of course "recirculating" range hoods do not qualify, as they are not considered to be exhaust fans.

There is a snag in all of these seemingly logical clauses, and that is the sentences which permit the use of auxiliary or *supplemental fans* to provide part of the required *Total Ventilation Capacity* 9.32.3.5.(7). Another sentence, (9.32.3.9.(3) requires that all fans which are required to provide the Total Ventilation Capacity are not permitted to exceed the maximum sone ratings found in Table 9.32.3.G, or 2.5 sones for most fans and 3.5 sones for fans located in kitchens. A quick review of the *HVI Certified Ventilation Products Catalogue*, shows that there are no range hoods listed that have sone ratings of 3.5 sones or less. Does this mean a range hood is not permitted for use? No. Actually, it just means that a range hood is not permitted to be counted for that part of the ventilation which is called the *Total Ventilation Capacity (TVC)*. Range hoods continue to be permitted (and are the equipment that most builders will choose) to provide the "required exhaust from kitchens" requirement. In most homes, if the *Principal Ventilation Capacity* is provided by one device, the difference between

it and the required *Total Ventilation Capacity* can be easily provided by a washroom type fan, many of which are rated at 2.5 sones or less. any ventilation provided by the range hood is then additional to the TVC requirement and the range hood does not have to meet the sound maximums. This approach is quite consistent with practice and the approach of the code; that is: fans which are provided to supply background ventilation, on a continuous basis if the homeowner so desires, should be reasonably quiet. Range hoods are intended for intermittent, higher-rate exhaust to remove smoke, cooking odour and humidity from kitchens and so the maximum noise requirements are inappropriate.

This and other topics are covered in detail in a 2-day OBOA workshop: "**Residential Ventilation Systems for Building Officials**". The *HVI Certified Ventilation Products Catalogue* is included as part of the course material and is also available from HRAI.

*Dara Bowser is an HRAI & OBOA Ventilation Instructor, an associate member of the CSA Technical Committee on Residential Mechanical Ventilation. Dara has been involved in residential ventilation as a consultant, manufacturer, and trainer for the past 12 years.

Public Relations

O.P.I.A. President Wayne Hamel extended a warm invitation to O.B.O.A. President Davis to attend their board meeting on March 5th, 1994.

President Davis took the opportunity to present "The Training Agreement Contract: previously negotiated, to the O.P.I.A. Board where it was enthusiastically received.

Mutual areas of training, technical and future direction interests were discussed openly and respectfully.

Mr. Davis appraised the O.P.I.A. Board of the proposed restructuring of the Canadian Council of Building Inspectors and invited the O.P.I.A. to participate and to provide comments accordingly to Mr. Yaman Uzumeri was appointed by the O.B.O.A.

President Davis expressed his appreciation to the O.P.I.A. Technical Review Committee for their expert comments which are needed by both organizations and members alike. The O.B.O.A. looks to O.P.I.A. for their plumbing expertise and appreciates their efforts to this end.

*Submitted by Charles Clark, CBCO,
Public Relations Chairman*