

Did You Know...?

Section 75(1) of the Occupational Health and Safety Act and Regulations 213/91 states that: - no work shall be performed in a building or structure that will be at least two storeys high when it is finished unless stairs are installed in accordance with this section.

HRAI Technical Commentary

Residential Ventilation Issues Fan Requirements

Safety: (a) each exhaust fan conforms to CSA 22.2 No. 113, "Fans and Ventilators", (Clause 9.32.3.3.(2)(a))
CSA 22.2 #113 is the CSA Safety Certification Standard for Fans and Ventilators. The standard covers a broad range of equipment from pedestal and desk-top fans through bath fans, range-hoods, heat recovery ventilators and ceiling pendent fans, up to and including agricultural exhaust fans. The standard includes requirements for electrical safety (shock hazard), fire (material combustibility if a source of ignition exists), and personal injury (guarding of bare-live and moving parts).

Labelling is required for certain products e.g: "Suitable for use in a household cooking area" (for range hoods) and "Do not install in a cooking area" (for all other fans).

Range-hoods and cooking area fans are also required to have labels which call attention to the need for frequent cleaning of the fan, grease-laden surfaces and the filter. Other relevant markings include: "Do not use in a window" and "Install behind shutters for protection from rain" for fans which do not conform to the rain-guarding requirements. Wall insert fans not intended for exterior use are required to be marked "Install in interior wall". Fans which are suitable for use in a bathtub or shower-stall area (passes water-spray and thermal-shock tests) are required to be marked "Suitable for installation over tub or shower". Fans which do not meet the the general guarding requirements are required to be labelled "Caution: Mount with the lowest moving parts at least 2.5 meters above floor or grade level". Some pendent ceiling fans are allowed to be installed at 2.1 meters above floor level, but they must meet tip-speed and blade-thickness requirements. Heavy pendent ceiling fans which require special mounting boxes are required to be marked "Warning: Mount only to an outlet box marked acceptable for fan support".

Fans and fan/light combinations are tested for heat build-up in an assembly which provides R-40 insulation.

CSA 22.2 #113 does not include a test for airflow or a test for noise, nor is there a test for longevity.

Fans which conform to CSA

22.2 #113 are entitled to bear the CSA mark, and the manufacturer is subject to periodic factory inspection of his production facility and product to ensure that the product continues to conform to the originally certified product. Often, fans which are certified to CSA 22.2 #113 carry only the CSA mark. This sometimes leads to confusion because it is difficult for an inspector to verify that the product is certified to 22.2 #113 rather than another CSA standard. Recently, however, major fan manufacturers have begun to mark their fans "Certified to CSA #113" in order to avoid confusion.

Airflow: (3) The mechanical ventilation capacity of the system described in sentence (2) shall be assumed to be the sum of the capacities of the individual fans, as rated at a different static pressure of at least 25 pa. (Clause 9.32.3.3.(3))

As discussed previously, CSA 22.2 #113, does not provide airflow ratings. So how does one verify the rated capacity? Is it necessary to obtain manufacturer's literatures to verify the capacity? Thankfully, the HRAI Residential Ventilation Council has resolved to move towards widespread use of the Home Ventilating Institute (HVI) labelling program for household fans.

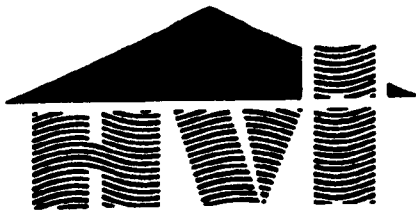
The Home Ventilating Institute is a US-based agency which carries out independent laboratory testing of household fans for airflow and noise. The HVI label is a blue foil rating label

Cont'd on page 30

carrying the HVI logo and which contains a single-point rating for airflow at 25 pa. (0.1" w.g.) as well as noise expressed in "sones". In order to label a product, the manufacturer must have it tested at the HVI lab. The HVI test procedure has recently been harmonized with the CSA C260 procedure so that these results now meet all Canadian requirements. The test results for all currently-certified fans are available in a catalogue from HVI (30 West University Dr., Arlington Heights, IL, 60004, Tel. (708) 394-0150). Once labelled, a fan must undergo periodic re-testing and the rating of a fan may be challenged by another manufacturer.

Hopefully, the industry-wide use of these labels will result in considerably less confusion and guesswork for builders and building officials.

TESTED / CERTIFIED



**HOME VENTILATING
INSTITUTE
DIVISION OF AMCA**

** Dara Bowser is an HRAI Ventilation Instructor, an associate member of the CSA Technical Committee on Residential Mechanical Ventilation, a member of the CSA Subcommittee on 22.2 #113; Fans and Ventilators. Dara has been involved in residential ventilation as a consultant, manufacturer and trainer for the past 12 years.*

Editor's Commentary

The December issue #6 brings to close a very successful year. The information contained in all the Journals to-date has been exceptional. I would like to extend to all those individuals and organizations who contributed on behalf of the O.B.O.A. a big **THANK YOU!**

Notably:

- | | |
|----------------|---|
| Branch Facts | Ministry of Housing |
| Warranty Watch | Ontario New Home Warranty Program |
| Legal Corner | Leo Longo (Aird & Berlis)
Christopher Williams (Aird & Berlis) |
| Zone Quest | Glenn Tunnock (McNeely-Tunnock Ltd.) |

Also input from fellow Professional Organizations:

- | | |
|-------------------------------|--|
| H.R.A.I. Technical Commentary | Dara Bowser (Heating, Refrigerating, and Air Conditioning Institute of Canada) |
| A.P.E.O. Up-dates | Eric Smythe (Association of Professional Engineers of Ontario) |
| O.A.A. Up-dates | Ontario Association of Architects |
| O.P.I.A. | Pete Bilyea (Ontario Plumbing Inspectors Associations) |
| M.L.E.O. | Danny DiPasquale (Municipal Law Enforcement Officers Association) |

Also to all O.B.O.A. members and O.B.O.A. Board Members.

PLAN TO ATTEND

O.B.O.A.'s ANNUAL MEETING & TRAINING SESSIONS

August 29th to September 1st, 1993 - Sault Ste. Marie

Be Informed

- Training Courses
- Code Change Updates
- Highlights on Technological Changes
- Association Business
- Special Interest & Technical Sessions

Consider a Family Vacation

Explore the Region



**MOBO
NIGHT**
Monday
Aug 30th, 1993