

# CLEARING THE AIR

*Residential Ventilation Issues by Dara Bowser & Bob Allison*

## "Bath Fan Flow Measurement"

Very often, whether or not a ventilation fan is moving the correct amount of air often becomes an issue. If the ductwork has not been designed and is not according to the code-tables, how can be sure it is adequate? If the ventilation system is to be accepted according to CSA F326, all devices which provide the Total Ventilation Capacity (TVC) must be measured at start-up. For HRV's the installer is expected to be able to measure the airflows and provide a report, but for bath fans, how do you measure the flow?.

### Professional Flow-hood

Professional air-balancing contractors have flow-hood type equipment that is normally used in commercial buildings. This equipment is pricey (at least \$3,000 to buy) and usually cannot measure airflows less than 50 cfm, which means that many bathroom fans will not be able to be measured. Residential ventilation contractors and builders do not usually have this equipment and would have to hire in a specialised contractor.

### Minneapolis Bath Fan Flow-Metre

The Energy Conservatory Ltd. in Minneapolis recently introduced a simple, rugged and accurate bath fan flow metre. The Minnesota Energy Code has recently begun to require that the flow-rate of all ventilation fans be verified by measurement.

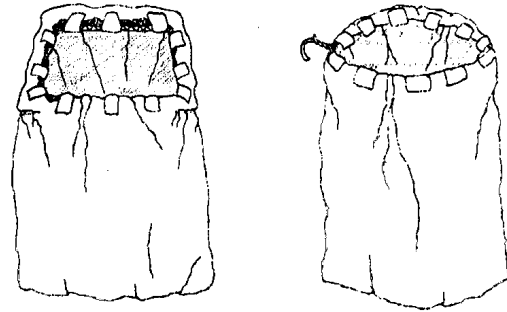
The flow-metre consists of a plastic "tub" with a gasket around the open top and a



variable opening in the bottom. The operator holds the tub over the bath fan using the handy extension pole and measures the pressure in the box with the same type of gauge that is used to measure airflow on HRV's. At \$170 U.S. (without gauge) the cost is within the range of a residential ventilation specialist. Check out [www.energyconservatory.com](http://www.energyconservatory.com).

### CMHC Garbage Bag

For the truly cheap, there is always the CMHC garbage bag method. All you need is a standard garbage bag, some duct tape and a coat hanger. (A watch for counting the number of seconds for deflation is optional.) The method is not very precise, but it is certainly much better than no measurement at all. Although at first glance



it does not appear credible, the method is easy to use and whether or not the fan is moving air is immediately visible. It is simple enough to be used by a site super if necessary .

Instructions and the chart of deflation times is available from CMHC. Look for "About Your House" publication # CE33 on the CMHC website at [www.cmhc-schl.gc.ca](http://www.cmhc-schl.gc.ca).

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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.