



# Builder Tip

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## PRINCIPAL EXHAUST FAN CONTROLS

### ONTARIO BUILDING CODE

#### 9.32.3.4. Principal Exhaust

- (2) Except as permitted in Sentence (3), the principal exhaust fan shall be controlled by a manual switch.
- (3) A principal exhaust fan required under this Article may be controlled by a dehumidistat or other automatic control device where the manual switch required in Sentence (2) is capable of activating the fan regardless of the setting of the automatic control.
- (4) The switches required in Sentence (2) and (3) shall be centrally located in the dwelling unit and shall be identified with the words "VENTILATION FAN".
- (5) The principal exhaust required may be provided by means of heat recovery ventilator installed in accordance with Article 9.32.3.11

Note: when an HRV is installed as a simplified connection (directly to furnace) then this schematic does not apply.

### OBJECTIVE

Mechanical ventilation is an effective means of reducing the potential for unhealthy levels of indoor air contaminants due to the use of building materials and occupant lifestyles.

To avoid costly service calls and complaints, it is important that a homeowner understands how to operate and maintain the ventilation system.

The homeowners ability to control the rate of ventilation may be achieved by single, multiple or automatic controls.

It is common practice in the residential building industry to install a principal exhaust fan in a bathroom on the second floor. Two switches are installed; one at the bathroom fan location, the other usually in the dining room (a central location). When this practice is employed, the multiple controls must be wired in parallel so that any control can turn **on** the fan, regardless of the setting of the other control. To turn **off** the fan from the bathroom, the switch in the dining room must be in the **off** position. The same would apply to an HRV installation using a bathroom fan as the principal exhaust.

The chart below illustrates the proper switch positions and the resulting fan operation:

CENTRAL SWITCH	BATHROOM SWITCH	FAN	HRV
ON	ON	ON	ON
OFF	OFF	OFF	OFF
OFF	ON	ON	ON
ON	OFF	ON	ON