



## RESIDENTIAL MECHANICAL VENTILATION

### National Building Code Current Alberta Edition Ventilation 9.32. Requirements

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Project Information:

Name of Owner/General Contractor: \_\_\_\_\_

Municipal Address of Project: \_\_\_\_\_

Mechanical Contractor: \_\_\_\_\_ Phone No. \_\_\_\_\_

Building Permit Number: \_\_\_\_\_

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#### **NON-HEATING-SEASON VENTILATION (check one)**

1. ( ☐ ) **Natural Ventilation** - in accordance to Table 9.32.2.2. (openable windows in all habitable rooms)  
**OR**

2. ( ☐ ) **Mechanical Ventilation** 9.32.2.3.

Option 1 ( ☐ ) mechanical cooling A/C, with no natural ventilation; air change rate designed as per Table 9.32.2.3.

Option 2 ( ☐ ) comply with subsection 9.32.3 Heating-Season Mechanical Ventilation (basic forced air system)

Option 3 ( ☐ ) no mechanical cooling and no natural ventilation; mechanical system shall have the capacity to change the air at a rate of 1 air change per hour (eg. HRV or Fan Coil)

#### **HEATING-SEASON MECHANICAL VENTILATION**

##### **1. Heat Recovery Ventilators (HRV)**

Number of Furnaces \_\_\_\_\_ Number of HRVs \_\_\_\_\_

Each furnace shall be served by a dedicated HRV if used to achieve the energy efficiency requirements of Table 9.36.2.6.B. or if required by performance energy model.

CAN/CSA-F326-M form is required if ventilation design includes more than one HRV.

Principal ventilation switch must be interlocked to activate all HRVs and furnace fans. 9.32.3.3.(2)

##### **2. Principal Ventilation System 9.32.3.3.**

Option 1 ( ☐ ) introduce outside air into the ventilation system in conjunction with a forced air heating system (9.32.3.4.)

Option 2 ( ☐ ) introduce outside air into the ventilation system not in conjunction with a forced air heating system (9.32.3.5.) A detailed ventilation plan must be submitted with this system.



Principal Ventilation Fan (PVF) - # of bedrooms \_\_\_\_ CFM \_\_\_\_\_ 9.32.3.3. (see table for minimum)

Location of principal ventilation (exhaust) fan \_\_\_\_\_ Actual cfm \_\_\_\_\_.

Table 9.32.3.3 - Normal Operating Exhaust Capacity of Principal Ventilation Fan  
Forming Part of Sentence 9.32.3.3.(2)

Number of Bedrooms in Dwelling Unit	Normal Operating Exhaust Capacity of Principal Ventilation Fan, CFM	
	Minimum	Maximum
1	34	51
2	38	60
3	47	68
4	55	81
5	64	95
More than 5	System must comply with Clause 9.32.3.1(1)(a)	

Outdoor air supply/intake air flow shall be balanced to be within  $\pm 10\%$  of the principal ventilation fan at normal operating capacity. The flow regulating damper on the fresh air intake shall be permanently fixed at the balanced flow rate. **Principal ventilation fan must be interlocked with the furnace fan.**

**Air balancing report must be provided at final inspection.**

**3. Supplemental Exhaust 9.32.3.7.**

Option 1 (\_\_\_\_) Supplemental exhaust required – 100 cfm kitchen, 50 cfm bathroom (minimums)

**OR** A supplemental exhaust fan is not required in a kitchen if:

Option 2 (\_\_\_\_) The principal ventilation fan draws only from the kitchen (must be 2m above the floor)

Option 3 (\_\_\_\_) The principal ventilation fan draws from that kitchen and other rooms, provided the principal ventilation fan, on high exhaust rate, is 2.5 times the minimum operating exhaust capacity specified in Table 9.32.3.3., and the switch is labeled "KITCHEN EXHAUST"

**4. Protection Against Depressurization 9.32.3.8.**

Option 1 (\_\_\_\_) All fuel-fired appliances are direct-vented or mechanically vented (makeup air not required)

Option 2 (\_\_\_\_) Outdoor makeup air is supplied at a rate, not less than the capacity of any exhaust device, and not greater than 10% over the exhaust device capacity, and makeup air must be tempered to at least 12 degrees Celsius – details must be submitted.

**NOTE:** 9.32.3.11. All joints in supply air, exhaust air, and fresh air intakes shall be sealed with mastic, metal foil duct tape or the manufacturers' specified sealants.