

Please complete the appropriate **Mechanical Ventilation Checklist** and return to the appropriate **CRD Building Inspection office**.

Note: Ventilation checklists must be submitted with building permit application.

Mechanical Ventilation Checklists

Checklist 1	Forced Air Systems Forced air heating system ducts intake and distribute ventilation air.
Checklist 2	HRV Systems Centrally ducted HRV (heat recovery ventilator) is used alone or in combination with Force Air Heating System to meet principal ventilation system requirements.
Checklist 3	Distributed CRV Systems Ducted CRV (central recirculating ventilator) is used to meet the fresh air intake and distribution requirements and a Principal Exhaust fan meets the exhaust requirements.
Checklist 4	Exhaust Fan & Passive Inlets Used in single level, non-forced air heated dwellings located in coastal climate areas where winter design temperature is warmer than or equal to +14 degrees Fahrenheit.

SGI, Malahat & Willis Point

625 Fisgard Street
PO Box 1000
Victoria BC V8W 2S6
250.360.3230
binspection@crd.bc.ca

Juan de Fuca

#3-7450 Butler Rd
Sooke BC
V9Z 1N1
250.642.8109
bijdf@crd.bc.ca

Salt Spring Island

#206-118 Fulford-Ganges Rd
Salt Spring Island BC
V8K 2S4
250.537.2711
bisaltspring@crd.bc.ca

Pender Island

#30-4605 Bedwell Harbour Rd
PO Box 113
Pender Island BC V0N 2M0
250.629.3424
bipender@crd.bc.ca

1 Ventilation Checklist 1—Forced Air Systems SENTENCE 9.32.3.4(2)

Use this Checklist where **forced air heating system ducts intake and distribute** ventilation air.

Civic Address _____		Permit No. _____	
Climate Zone: _____	Number of Bedrooms	<input style="width: 50px; height: 20px;" type="text"/>	(A) A bedroom is a room with an openable window (minimum dimensions apply), a closet and a closing interior door.
	Total Floor area of living space	<input style="width: 50px; height: 20px;" type="text"/> ft ²	(B)
	Total Interior Volume of Dwelling	<input style="width: 50px; height: 20px;" type="text"/> ft ³	Total volume includes all heated interior spaces (including crawlspace if heated).
.5 ACH (air changes/hr) = Volume x 0.5 ÷ 60 =		<input style="width: 50px; height: 20px;" type="text"/> cfm	(C) Exhaust appliances exceeding .5 ACH may require make-up air.

1. Principal Ventilation System Exhaust Fan Minimum Air-flow Rate

Use the bedroom count from Box (A) and Total square footage from Box (B) above and Table 9.32.3.5. to determine

Minimum Required Principal Exhaust System Capacity cfm (D)

2. Principal System Fan Choice

a) Exhaust Fan continuous running Make _____ Model _____ Sone Rating _____

Location: _____ **Capacity at 0.2 ESP** cfm (E) Must be ≥ than Box (D)
If CEV, capacity @0.4ESP

3. Fan Duct Size and Equivalent Length

a) Installed Equivalent Length:
Length of duct _____ ft + Ext. hood **30 ft +** (_____ # elbows at 10 ft each = _____) = ft (F)

b) Choose type of duct: Flex duct or Rigid (smooth) duct

c) Duct size required to flow Box E cfm through Box F equivalent length of duct = in Ø
Use Table 9.32.3.8 (3) to determine duct size.

4. Required Kitchen and Bathroom Exhaust Fans: Re-list below if Principal Exhaust Fan meets all or part of Kitchen/Bathroom spot Exhaust requirements.

ROOM	REQUIRED EXHAUST RATE Table 9.32.3.6	EXHAUST EQUIPMENT						Principal System CFM
		Spot Exhaust Kitchen & Bath WALL/CEILING FANS					Ex.Fan/CEV	
		Fan Make & Model	CFM @ 0.2 ESP Manf. Rated	*Duct Sizing per Table 9.32.3.8.(3)		Installed Equiv. Length		
rigid	flex			Max. Equiv. Length per table				

* For fan capacities **exceeding** 175cfm in Table 9.32.3.8(3), follow manufacturer's installation instructions or use good engineering practice to size duct. See *Ventilation Guidelines* Appendix page 16-A, *Duct Sizing for Larger Fans*.

TOTAL (must = Box E)	
----------------------------	--

Removed reference to RADON in Make-up Air Requirements

5. Fresh Air must be ducted from outside to Return Air of Forced Air Heating for distribution.

- a) Ventilation air duct is connected not more than 15ft, nor less than 10ft upstream of the heating appliance, unless a flow control device is used.
- b) Duct Size for Fresh Air intake to RA. Choose one.
 - Rigid Duct: 4" Ø minimum, must be insulated & vapour barriered for full length, OR
 - Flex Duct: 5"Ø minimum, must be insulated & vapour barriered for full length.
- c) **Furnace fan continuous operation.**

6. Forced Air Heating System is ducted to supply air to every bedroom and any level without a bedroom.

7. If Heated Crawlspace present, (Choose one)

- Minimum of one RA grille located in the crawlspace, OR
- No RA grille in crawlspace, choose ventilation Option 1, 2, or 3 per sentence 9.32.3.7 (2)

MAKE-UP AIR Requirements

1. NAFFVA (Naturally Aspirated Fuel Fired Vented Appliance) present in dwelling unit? (per Sentence 9.32.4.1)

- No, Omit Steps 2 & 3
- Yes, Proceed to Step 2

2. Exhaust Appliance present which exceeds Box C 0.5 ACH:

- No such appliance. Omit Step 3
- Yes, Commit to Depressurization Test (See CAUTION, TECA Vent Manual pg 24)
- Yes, Proceed to Step 3

3. Use Active Make-up Air for Exhaust Appliance. (Choose a or b)

Make-up Air Fan required:

Fan Make _____ Model _____ Exhaust Appliance Actual Installed Cfm _____
 Make-up Air Fan Cfm _____
 Duct diameter _____ inches Fan Location _____

- Fan interconnected with exhaust appliance fan.** Fan ducted to _____

a) Active Make-up Air delivered to an Unoccupied Area first (not directly to room containing the appliance).

- i) Tempering Required per 9.32.4.1.(4)(a):
 Show calculation how make-up air will be tempered to at least 34°F (1°C) before entering unoccupied area.

$$\frac{\text{Make-up Fan cfm} \times 1.08 \times (34^\circ \text{F} - \text{Winter Design Temp your location})}{3412 \text{ BTUH/kw}} = \text{Duct Heater (kw)}$$

- ii) Transfer Grill Required: Size 1 sq in of gross area per 2 cfm: Transfer grill size _____ sq. in. Location _____

- iii) Additional Tempering Required per 9.32.4.1.(4)(b) before transfer to occupied area: Show calculation and **describe how make-up air will be further tempered** to at least 54°F (12°C).

$$\frac{\text{Make-up Fan cfm} \times 1.08 \times (54^\circ \text{F} - 34^\circ \text{F})}{3412 \text{ BTUH/kw}} = \text{Heat from unoccupied area required to raise temp by } 20^\circ \text{F}$$

Tempered by: _____

OR b) Active Make-up Air delivered to an Occupied Area: Tempering Required. Show calculation how make-up air will be tempered to at least 54°F (12°C).

$$\frac{\text{Make-up Fan cfm} \times 1.08 \times (54^\circ \text{F} - \text{Winter Design Temp your location})}{3412 \text{ BTUH/kw}} = \text{Duct Heater (kw)}$$

© March 2015 TECA All Rights Reserved

Installer Certification:

I hereby certify that the design and installation of the ventilation system complies with the 2018 B.C. Building Code, 2014 Section 9.32 Amendment.

Date _____
 Print Name _____
 Signature _____
 Company _____

Phone _____
 Checklist 1, page2of2

2012 TECA Ventilation Certification Stamp

