2 Ventilation Checklist 2—HRV Systems SENTENCE 9.32.3.4 (3) & (4)

Use this checklist when a centrally ducted HRV (heat recovery ventilator) is used alone or in combination with a Forced Air Heating System to meet principal ventilation system requirements.

Civic Address_____ Permit No._____

Climate Zone: ____ Number of Bedrooms _____ (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 _____ ft^2 (B)

Total Interior Volume of Dwelling _____ ft^3 Total volume includes all heated interior spaces (including crawlspace if heated).

.5 ACH (air changes/hr) = Volume x 0.5 ÷ 60 = _____ cfm (C) Exhaust appliances exceeding .5 ACH may require make-up air.

1. Use the bedroom count (Box A above) and total square footage (Box B above) to determine the minimum principal Air Flow rate required by Table 9.32.3.5

Minimum Required Rate _____ cfm (D)

2. HRV Make _____ Model _____

3. HRV Capacity: CFM @ 0.4 ESP. Box E must meet Box D requirement. _____ cfm (E)

4. List Exhaust Grilles Locations: 1 minimum @ 6 ft or higher from floor of uppermost level.

_____ _____

_____ _____

_____ _____

5. Required Kitchen and Bathroom Exhaust

If HRV used to meet all or part of Kitchen/Bathroom spot exhaust requirements list below.

ROOM	REQUIRED EXHAUST RATE **Table 9.32.3.6**	EXHAUST EQUIPMENT						
		Spot Exhaust Kitchen & Bath WALL/CEILING FANS						HRV
		Fan Make & Model	CFM @ 0.2 ESP Manf. Rated	*Duct Sizing per Table 9.32.3.8.(3)				Principal System CFM
				Duct Dia (in Ø) rigid	Duct Dia (in Ø) flex	Max. Equiv. Length per table	Installed Equiv. Length	
							TOTAL (must = Box E)	

* 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*.

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Removed reference to RADON in Make-up Air Requirements

6. HRV Fresh Air Distribution (Choose a or b)

a) Supply Air from HRV direct connect to Return Air of a Forced Air Heating System:

☐ FA system fan and HRV fan continuous operation and

☐ FA system ducted to supply air to every bedroom and each floor level without a bedroom

b) Supply Air from HRV distributed independently

☐ Ducted to every bedroom and each floor level without a bedroom and

☐ HRV fan continuous operation

7. If Heated Crawlspace present, (Choose one)

☐ Minimum of one Forced Air System 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: **Exhaust Appliance Actual Installed Cfm** _____

Fan Make _____ Model _____ **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.

$$\frac{\text{Make-up Fan cfm\_\_\_\_\_ X 1.08 X (\textbf{34° F} – \_\_\_\_\_ °F Winter Design Temp your location)}}{\text{3412 BTUH/kw}} = \text{\_\_\_\_\_ (kw) Duct Heater}$$

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).

$$\frac{\text{Make-up Fan \_\_\_\_\_cfm x 1.08 x (\textbf{54° F} – 34°F)}}{\text{3412 BTUH/kw}} = \text{\_\_\_\_\_(kw) Heat from unoccupied area required to raise temp by 20°F}$$

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).

$$\frac{\text{Make-up Fan cfm\_\_\_\_\_ x 1.08 x (\textbf{54° F} – \_\_\_\_\_°F Winter Design Temp your location)}}{\text{3412 BTUH/kw}} = \text{\_\_\_\_\_ (kw) Duct Heater}$$

Installer Certification:

I hereby certify that the design and installation of the ventilation system complies with the 2012 B.C. Building Code, 2014 Section 9.32 Amendment.

2012 TECA Ventilation Certification Stamp

Date _____

Print Name_____

Signature_____

Company_____

Phone _____

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