

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 | <input 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 type="text"/> ft ² | (B) |
| | Total Interior Volume of Dwelling | <input 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 type="text"/> 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 | | | | | | HRV Principal System CFM |
|-------|---|---|------------------------------|-------------------------------------|--|------------------------------|-------------------------|-----------------------------|
| | | Spot Exhaust Kitchen & Bath WALL/CEILING FANS | | | | | | |
| | | Fan Make & Model | CFM @ 0.2 ESP Manf. Rated | *Duct Sizing per Table 9.32.3.8.(3) | | Max. Equiv. Length per table | Installed Equiv. Length | |
| rigid | flex | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | 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*. © March 2015 TECA All Rights Reserved Checklist 2, pg1of2

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:

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).

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

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 2012 B.C. Building Code, 2014 Section 9.32 Amendment.

Date _____
 Print Name _____
 Signature _____
 Company _____
 Phone _____

2012 TECA Ventilation Certification Stamp

