

# HRV/ERV Balancing Report

1. BUILDING	6. START-UP INSPECTION																																											
<b>Municipality:</b> _____ <b>Address:</b> _____	Fans are operating and clean Flows are correct Ducts are sealed Ducts are insulated with vapour barrier, where needed Hoods/grilles are installed Hoods are installed Dampers are accessible Filters are clean Condensate drain is properly installed Grease filter is installed for kitchen exhaust Kitchen exhaust has 40" clearance from the range Controls are functioning Exhaust outlet is installed 4" above grade Fresh air inlet is installed 18" above grade Fresh air inlet is labelled Inlet is located to avoid contamination from exhausts Inlet is 3' away from oil fill pipes, gas regulators, etc. Air distribution to all habitable rooms (non-forced air) Interlocked to a forced air system (if required)																																											
2. TECHNICIAN																																												
<b>Name:</b> _____ <b>Company:</b> _____ <b>Address:</b> _____ <b>Phone:</b> _____ <b>E-mail:</b> _____																																												
3. TEST EQUIPMENT																																												
<b>Flow Station:</b> _____ <b>Manometer:</b> _____																																												
4. SITE INSPECTION																																												
Power Available House Substantially Complete Air/vapour Barrier Other HVAC Equipment Operational Doors, Windows, Attic Hatches Closed Fireplace Doors and Dampers Closed All Other Exhaust Equipment Off																																												
5. HRV/ERV DESIGN	7. HRV/ERV FLOW MEASUREMENTS																																											
<b>Design Available:</b> <b>Yes</b> If yes, attach a copy <b>No</b> If no, complete the information below and then use the tables on the reverse page to determine the PVC and/or TVC based on the appropriate code or standard. <table style="width: 100%; border: none;"> <tr> <td style="text-align: center;"><b>NBC</b></td> <td style="text-align: center;"><b>OBC</b></td> <td style="text-align: center;"><b>BCBC</b></td> <td style="text-align: center;"><b>CSA F326</b></td> </tr> <tr> <td style="vertical-align: top;"> <b># of Bedrooms:</b> _____                             </td> <td colspan="2" style="vertical-align: top;"> <b># of Habitable Rooms:</b> _____                             </td> <td></td> </tr> <tr> <td style="vertical-align: top;"> <b>Capacity:</b> _____                             </td> <td style="vertical-align: top;">                     PVC or 40-60% TVC                             </td> <td style="vertical-align: top;"> <b>H</b>    <b>L</b> </td> <td></td> </tr> <tr> <td style="vertical-align: top;"> <b>Capacity:</b> _____                             </td> <td style="vertical-align: top;">                     2.5 x PVC or TVC                             </td> <td style="vertical-align: top;"> <b>H</b>    <b>L</b> </td> <td></td> </tr> </table>	<b>NBC</b>	<b>OBC</b>	<b>BCBC</b>	<b>CSA F326</b>	<b># of Bedrooms:</b> _____	<b># of Habitable Rooms:</b> _____			<b>Capacity:</b> _____	PVC or 40-60% TVC	<b>H</b> <b>L</b>		<b>Capacity:</b> _____	2.5 x PVC or TVC	<b>H</b> <b>L</b>		<b>Equipment same as design</b> Or record <b>Make:</b> _____ <b>Model:</b> _____ <table style="width: 100%; border: none;"> <thead> <tr> <th style="text-align: left;">Actual Measured Airflow</th> <th style="text-align: center;">High Speed</th> <th style="text-align: center;">Low Speed</th> </tr> </thead> <tbody> <tr> <td colspan="3"><b>Exhaust</b></td> </tr> <tr> <td>Manometer Reading</td> <td style="text-align: center;">_____</td> <td style="text-align: center;">_____</td> </tr> <tr> <td>Airflow</td> <td style="text-align: center;">_____</td> <td style="text-align: center;">_____</td> </tr> <tr> <td>Speed Setting</td> <td style="text-align: center;">_____</td> <td style="text-align: center;">_____</td> </tr> <tr> <td colspan="3"><b>Supply</b></td> </tr> <tr> <td>Manometer Reading</td> <td style="text-align: center;">_____</td> <td style="text-align: center;">_____</td> </tr> <tr> <td>Airflow</td> <td style="text-align: center;">_____</td> <td style="text-align: center;">_____</td> </tr> <tr> <td>Speed Setting</td> <td style="text-align: center;">_____</td> <td style="text-align: center;">_____</td> </tr> </tbody> </table>	Actual Measured Airflow	High Speed	Low Speed	<b>Exhaust</b>			Manometer Reading	_____	_____	Airflow	_____	_____	Speed Setting	_____	_____	<b>Supply</b>			Manometer Reading	_____	_____	Airflow	_____	_____	Speed Setting	_____	_____
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8. CERTIFICATION																																												
I, _____ certify that the HRV/ERV at this location has been balanced to meet the requirements of the building code referenced in Section 5.  <b>Signature:</b> _____ <b>Date:</b> _____ <b>HRAI #:</b> _____																																												



## National Building Code

### Capacity

Use Table 9.32.3.3 for PVC. Balance on high speed.

If the range hood is NOT vented outside record 2.5 x PVC as well.

### Balancing Speed

If the range hood is NOT vented outside balance the PVC on low speed and also verify that high speed meets 2.5 x PVC.

Otherwise balance the PVC on high speed.

**Normal Operating Exhaust Capacity of Principal Ventilation Fan Table 9.32.3.3**

Number of Bedrooms	Capacity cfm (L/s)	
	Minimum	Maximum
1	32 (16)	48 (24)
2	36 (18)	56 (28)
3	44 (22)	64 (32)
4	52 (26)	76 (38)
5	60 (30)	90 (45)
More than 5 bedrooms and the system must comply to CSA-F326		

## Ontario Building Code

### Capacity

Use Table 9.32.3.4.A for the PVC.

Use CSA F326 Table 1 for the TVC

### Balancing Speed

If the HRV services at least one bathroom or kitchen then balance the PVC on low speed and the TVC on high speed.

Otherwise balance the PVC on high speed.

**Principal Exhaust Fan Capacity Table 9.32.3.4.A**

Number of Bedrooms	Capacity	
	cfm	L/s
1	30	15
2	45	22.5
3	60	30
4	75	37.5
5	90	45
More than 5	Part 6 Design	

## British Columbia Building Code

### Capacity

Use Table 9.32.3.5 for the PVC.

### Balancing Speed

Balance the PVC on high speed.

Floor Area,	Table 9.32.3.5. Principal Ventilation System Exhaust Fan Minimum Air-Flow Rate				
	Minimum Air-flow Rate				
	Number of Bedrooms				
	0-1	2-3	4-5	6-7	>7
< 1507 ft <sup>2</sup> (< 140 m <sup>2</sup> )	30 CFM (14 L/s)	44 CFM (21 L/s)	59 CFM (28 L/s)	74 CFM (35 L/s)	89 CFM (42 L/s)
1507 ft <sup>2</sup> - 3024 ft <sup>2</sup> (140 m <sup>2</sup> - 280 m <sup>2</sup> )	44 CFM (21 L/s)	59 CFM (28 L/s)	74 CFM (35 L/s)	89 CFM (42 L/s)	104 CFM (49 L/s)
3025 ft <sup>2</sup> - 4531 ft <sup>2</sup> (281 m <sup>2</sup> - 420 m <sup>2</sup> )	59 CFM (28 L/s)	74 CFM (35 L/s)	89 CFM (42 L/s)	104 CFM (49 L/s)	119 CFM (56 L/s)
4532 ft <sup>2</sup> - 6038 ft <sup>2</sup> (421 m <sup>2</sup> - 560 m <sup>2</sup> )	74 CFM (35 L/s)	89 CFM (42 L/s)	104 CFM (49 L/s)	119 CFM (56 L/s)	136 CFM (64 L/s)
6039 ft <sup>2</sup> - 7545 ft <sup>2</sup> (561 m <sup>2</sup> - 700 m <sup>2</sup> )	89 CFM (42 L/s)	104 CFM (49 L/s)	119 CFM (56 L/s)	136 CFM (64 L/s)	150 CFM (71 L/s)
> 7545 ft <sup>2</sup> (> 700 m <sup>2</sup> )	104 CFM (49 L/s)	119 CFM (56 L/s)	136 CFM (64 L/s)	150 CFM (71 L/s)	165 CFM (78 L/s)

## CSA F326

### Capacity

Use Table 1 for the TVC.

Record 40-60% of TVC as well (e.g. half capacity).

### Balancing Speed

Balance the TVC on high speed and the half capacity on low speed.

TABLE 1 - VENTILATION CAPACITY REQUIREMENTS (CSA F326)		
Room Type/Classification	Column 1	
	Total Ventilation Capacity	
Category A Rooms	cfm	L/s
Master Bedroom	20	10
Basement	20	10
Single Bedrooms	10	5
Living Room	10	5
Dining Room	10	5
Family room	10	5
Recreation Room	10	5
Other Habitable Rooms	10	5
Category B Rooms		
Kitchen	10	5
Bathroom	10	5
Laundry	10	5
Utility Room	10	5