RESIDENTIAL MECHANICAL VENTILATION DESIGN SUMMARY

For systems serving one dwelling unit and conforming to the Ontario Building Code

This form is for convenience only, Tillsonburg shall not be responsible for errors or omissions alleged to be the result of the use of this form.

COMBUSTION APPLIANCES 9.32.3.1.(1)

- ☐ A) Direct vent (sealed combustion) only
- ☐ B) Positive venting induced draft to dedicated sealed vent (except fireplaces
- ☐ C) Natural draft, B-vent or induced draft gas fireplace
- ☐ D) Solid Fuel (Including fireplaces)
- ☐ E) No Combustion Appliances

HEATING SYSTEM

- ☐ Forced Air ☐ Non Forced Air
- ☐ Electric Space Heat

HOUSE TYPE 9.32.3.1.(2)

- ☐ I) Type A) or B) appliances only, no solid fuel
- ☐ II) Type I) except with solid fuel (including fireplaces)
- ☐ III) Any Type C) appliance
- ☐ IV) Type I) or II) with electric space heat
- ☐ Other: Type I) or II) or IV) no forced air

SYSTEM DESIGN OPTIONS

- ☐ 1) Exhaust only/ Forced Air System
- ☐ 2) HRV with extended Exhaust Ducts/Forced Air System
- ☐ 3) HRV Simplified Exhaust Connection to Forced Air System
- ☐ 4) HRV-Full Ducting/ Not Coupled to Forced Air System
- ☐ Part 6 Design

TOTAL VENTILATION CAPACITY 9.32.3.3 (1)

Basement & Master Bedroom	_____	@ 20 cfm	_____ cfm
Other Bedrooms	_____	@10 cfm	_____ cfm
Bathrooms & Kitchen	_____	@10 cfm	_____ cfm
Other Rooms	_____	@10 cfm	_____ cfm
Table 9.32.3.3		Total	_____ cfm

PRINCIPAL VENTILATION CAPACITY REQUIRED 9.32.3.4 (1)

One Bedroom (Master)	31 cfm	
Two Bedrooms	47 cfm	(Choose One)
Three Bedrooms	63 cfm	
Four Bedrooms	79 cfm	

Table 9.32.3.4.A

More than 4 - Part 6 PROPOSED

SUPPLEMENTAL VENTILATION CAPACITY 9.32.3.5

Total Ventilation Capacity	_____	cfm
Less Principal Ventilation Capacity	_____	cfm
Required Supplemental Ventilation Capacity	_____	cfm

PRINCIPAL EXHAUST FAN CAPACITY

Make & Model: _____

Location: _____

Sone Rating: ☐ HVI Approved

*** See over for more information**

SUPPLEMENTAL FANS (Make & Model) 9.32.3.5

LOCATION	MODEL	CFM	SONES

HEAT RECOVERY VENTILATOR 9.32.3.11

Make & Model: _____

_____ cfm high _____ cfm low

_____ % Sensible Efficiency @ -25˚

☐ HVI Approved

*** A ventilation record is required after an HRV is installed**

LOCATION OF INSTALLATION

Tillsonburg

Civic Address:

BUILDER

Name: _____

INSTALLATION CONTRACTOR/ DESIGNER CERTIFICATION

I hereby certify that this ventilation system has been designed in accordance with the Ontario Building Code. (Current Version)

Name: _____

Address: _____

City: _____

Phone: _____

Signature: _____

HRAI No. Date:

Tillsonburg
CONNECTED. ENRICHED. INSPIRED.

Table 3.32.3.4.B

Forming Part Sentence 9.32.3.4.(9)

PRINCIPAL EXHAUST DUCT SIZE				
Number of Bedrooms in *Dwelling Unit*	Minimum *Exhaust Duct* Diameter			
	Ducts Connected to Inlet and Outlet of Principal Exhaust Fan		Ducts Connected to One Side Only of Principal Exhaust Fan	
	Smooth Duct, mm (in)	Flexible Duct mm (in)	Smooth Duct, mm (in)	Flexible Duct mm (in)
1	100 (4")	125 (5")	100 (4")	125 (5")
2	125 (5")	150 (6")	125 (5")	150 (6")
3	125 (5")	150 (6")	150 (6")	175 (7")
4	150 (6")	175 (7")	150 (6")	176 (7")
More than 4	Part 6 Design	Part 6 Design	Part 6 Design	Part 6 Design

Table 9.32.3.5

Forming Part of Sentence 9.32.3.5.(4)

Kitchen, Bathroom and Water Closet Room Exhaust Duct Size		
Fan Capacity cfm	Minimum Exhaust Duct Diameter	
	Ducts Connected to Inlet & Outlet of Exhaust Fan, mm (in)	Ducts Connected to One Side Only of Exhaust Fan mm (in)
53	125 (5")	125 (5")
106	150 (6")	150 (6")

Note to Table 9.32.3(5):

1) Where flexible duct is used, the duct diameter shall be increased by 25mm (1 in.)

Exhaust jacks & grills must NOT be smaller than the required size of the ducts they are attached to as required in Sentence 9.32.3.12(14)

Table 9.32.3.9

Forming Part of Sentence 9.32.3.9 (4)

Fan Sound Rating		
Fan Application	Maximum Sound Ratings, sones	
	Rated according to CAN/CSA -C260-M	Rated according to HVI 915
Principal Exhaust	2.5	2.5
Supplemental exhaust fans installed in bathrooms and water closet rooms and their make-up air fans	2.5	3.5
Supplemental exhaust fans installed in kitchens and their make-up air fans	No rating required	no rating required

Table 9.32.3.10.B

Forming Part of Sentence 9.32.3.10.(10)

Equivalent Duct Size				
Required Round Duct Size mm (in)	Permitted Equivalent Rectangular Duct Size, mm (in)			
	Stack Duct	100 mm (4") Depth	125 mm (5") Depth	150 mm (6") Depth
75 (3")	82 x 250 (3 ¼ x 10")	57 x 100 (2 ¼ x 4")		
100 (4")	82 x 250 (3 ¼ x 10")	89 x 100 (3 ½ x 4")	75 x 125 (3" x 5")	75 x 150 (3" x 6")
125 (5")	82 x 250 (3 ¼ x 10")	125 x 100 (5" x 4")	100 x 125 (3" x 5")	85 x 150 (3 ½" x 6")
150 (6")	82 x 300 (3 ¼ x 12")	200 x 100 (8" x 4")	150 x 125 (6" x 5")	125 x 150 (5" x 6")
175 (7")	82 x 350 (3 ¼ x 14")	275 x 100 (11" x 4")	200 x 125 (8" x 5")	175 x 150 (7" x 6")
More than 175 (7")	Part 6 Design	Part 6 Design	Part 6 Design	Part 6 Design

9.32.3.8(2) Where a solid fuel-fired combustion appliance is installed, the ventilation system shall include a heat recovery ventilator that is designed to operate so that the flow of exhaust air does not exceed the flow of intake air in any operating mode, and that complies with the requirements of Article 9.32.3.11.