

Regional District of Okanagan-Similkameen 101 Martin Street, Penticton, BC V2A 5J9 Telephone: (250) 490-4205 Fax: (250) 492-0063 Toll Free (BC/Alberta): 1-877-610-3737 E-mail: <u>buildinginfo@rdos.bc.ca</u> Website: <u>www.rdos.bc.ca</u>

Please complete the appropriate attached Mechanical Ventilation Checklist.

This checklist must be returned <u>BEFORE</u> calling for the Framing Inspection.

Framing Inspections will not be completed until the form is completed AND signed by a certified installer and returned to RDOS Building Inspection Services.

Mechanical Ventilation Checklists

(Please complete the appropriate attached checklist)

Checklist 1	Forced Air Systems Forced air heating system ducts intake and distribution ventilation air.
Checklist 2	HRV Systems Centrally ducted HRV (heat recovery ventilator) is used alone or in combination with a Forced 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 Use this checklist for small (less than 1800 sq.ft.), single level, non-forced air heated dwellings located in climate areas where winter design temperature is warmer than -20°C (-4°F).

Ventilation Checklist 1—Forced Air Systems SENTENCE 9.32.3.4(6)

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

Civic Addre	SS				~1]	Permit No	D	
Climate Zor	ne:	Number of Bedroom	S	window (minimum dimensions appl					
	Total	Floor area of living spac	e	ft²](B)		closet and a closing interior door		
	Total Inte	erior Volume of Dwellin	g	ft ³				all heated interior space if heated).	
.5 ACH (air	changes/h	$\mathbf{r}) = \text{Volume x } 0.5 \div 60 =$	=] (C)	eeding ke-up air.			
Use the bed determine	room count	System Exhaust Fan I from Box (A) and Total s	quare foo	tage fro	m Bc	Rate ox (B) above			
	-	nired Prinicpal Exhaust	i System	Capac	ny		cfm	(D)	
2. Principal	•			٦,	أملما	l	Sc	one Rating	
a) Exnaust	r an conun	uous running Make		Capaci		L	3(me manne	
Location					· I	cf	m (E) M	vfust be≥than Box (D)	
Dooddon, -					L 1	city @0.4ES	` `		
3. Fan Duct	Size and E	Equivalent Length			-	-			
	d Equivaler							E E	
		ft. + Ext. hood 30 f		bows a	t 10	ft. each =) =	ft	
		duct or Smooth (rigid)				6.1			
c) Duct siz	ze required	to flow Box E cfm throu	igh equiv	valent le	ength	of duct	=	in Ø	
	-	uivalent Length Table 9.						in Ø	
		nd Bathroom Exhaust		e-list be	low	if Principal	Exhaust	Fan meets all o	
part of Kitch		m spot Exhaust requiren							
	Required Exhaust		EXHAUST	-			2000, 100 000 000 000 000		
	RATE	i ers er bit står de suit i britikere≞venur unde be		 Nordex (1966) Fragments 		L/CEILING		Ex.Fan/CEV	
ROOM	Table 9.32.3.6	Fan Make & Model	CFM @ 0.2 ESP Manf. Rated	*Duc Duct Di rigid		I onoth nor	9.32.3.8.(3) Installed Equ Length		
			-						

 5. Fresh Air must be ducted from outside to Return Air of Forced Air Heatin a) Ventilation air duct is connected not more than 15ft, nor less than 10ft upstream of th 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. 6. Forced Air Heating System is ducted to supply air to every bedroom and 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 MAKE-UP AIR Requirements NAFFVA (Naturally Aspirated Fuel Fired Vented Appliance) or radon present in No, Omit Steps 2 & 3 Yes, Proceed to Step 2 2. Exhaust Appliance present which exceeds Box C 0.5 ACH:	e heating appliance, unless a flow control any level without a bedroom. .37.3.7 (2)
No such appliance. Omit Step 3	
 Yes, Commit to Depressurization Test (See CAUTION, TECA Vent Manual pg Yes, Proceed to Step 3 	24)
3. Use Active Make-up Air for Exhaust Appliance. (Choose a or b)	
Make-up Air Fan required: Exhaust Appliance Fan Make Model	Actual Installed Cfm
Duct diameter inches	
Fan Location Fan ducted to	
 a) Active Make-up Air delivered to an Unoccupied Area first (not directly to not i) Tempering Required per 9.32.4.1.(4)(a): Show calculation & describe how make-up air will be tempered to at least 34^c 	oom containing the appliance).
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 occu describe how make-up air will be further tempered to at least 54°F (12°C).	pied area: Show calculation and
OR b) Active Make-up Air delivered to an Occupied Area: Tempering Requination how make-up air will be tempered to at least 54°F (12°C).	ired. Show calculation and describe
۰. 	© February 2015 TECA All Rights Reserved
Installer Certification: Da I hereby certify that the design and installation of the ventilation system complies w	te ith the 2012 B.C. Building Code, 2014 Ventilation Certification Stamp
Print Name	
Signature	
Company	
Phone	
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	Checklist 1, page2of2

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2014 Amendment to Section 9.32 Ventilation

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
Total Floor area of living space	ft ² ((B)	closet and a closing interior door.
Total Interior Volume of Dwelling	ft³		Total volume includes all heated interior spaces (including crawlspace if heated).
.5 ACH (air changes/hr) = Volume x $0.5 \div 60 =$	cfm ((C)	Exhaust appliances exceeding .5 ACH may require make-up air.
1. Use the bedroom count (Box A above) and tot		age ((Box B above) to determine the

minimum principal Air Flow rate required by Table 9.32. Minimum Requ	C C	(D)
2. HRV Make Model		
3. HRV Capacity: CFM @ 0.4 ESP. Box E must meet Box D rec	quirement. 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 exhuast requirements list below.

	REQUIRED							
	Exhaust	Spot Exha	HRV					
DOOL	RATE Table	Fan Make & Model	CFM	*Duc	t Sizing	per Table	9.32.3.8.(3)	Principal
ROOM	9.32.3.6		Duct D rigid	ia (in Ø) flex	Max. Equiv. Length per table	Installed Equiv. Length	System CFM	
		· · · · · · · · · · · · · · · · · · ·						
				-				
		eding 175cfm in Table 9.3 r use good engineering pr				cturer's	TOTAL (must = Box E)	

See Ventilation Guidelines Appendix page 16-A

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 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 9.37.3.7 (2)
 MAKE-UP AIR Requirements 1. NAFFVA (Naturally Aspirated Fuel Fired Vented Appliance) or radon 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
Duct diameter inches
Fan Location Fan ducted to a) Active Make-up Air delivered to an Unoccupied Area first (not directly to room containing the appliance).
 a) Active Make-up Air derivered to an Onoccupied Area inst (not directly to room containing the apphance). i) Tempering Required per 9.32.4.1.(4)(a): Show calculation & describe how make-up air will be tempered to at least 34°F (1°C) before entering unoccupied area.
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).
OR b) Active Make-up Air delivered to an Occupied Area: Tempering Required. Show calculation and describe how make-up air will be tempered to at least 54°F (12°C).
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Installer Certification: Date
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
Print Name
Signature
Company

Phone _____

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Ventilation Checklist 3—Distributed CRV Systems SENTENCE 9.32.3.4(5)

Use this Checklist when a ducted Central Recirculating Ventilator (CRV) is used to meet the fresh air intake and distribution requirements and a Principal Exhaust fan meets the exhaust requirements.

Civic Address			Permit No
Climate Zone: Number of Bedrooms		(A)	A bedroom is a room with an openable window (minimum dimensions apply), a
Total Floor area of living space	ft ²	(B)	closet and a closing interior door.
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 $0.5 \div 60 =$	cfm ((C)	Exhaust appliances exceeding .5 ACH may require make-up air.
1. Principal Ventilation System Exhaust Fan Mi	inimum Air-flo	w R	ate
Use the bedroom count from Box (A) and Total squ determine			(B) above and Table 9.32.3.5. to
Minimum Required Prinicpal Exhaust S	system Capacit	ty	cfm (D)
2. Principal System Fan Choice			L
a) Exhaust Fan continuous running Make	Mo	del_	Sone Rating
Location:	Capacity at 0.2 ES		cfm (E) Must be \geq than Box (D)
	If CEV, ca	pacit	y @0.4ESP
3. Fan Duct Size and Equivalent Length			[]
a) Installed Equivalent Length:			
Length of ductft. + Ext. hood 30 ft.		10 ft.	each =) =ft
b) Choose either Flex duct or Smooth (rigid) du			
c) Duct size required to flow Box E cfm through Use Maximum Equivalent Length Table 9.32	-	-	
4. Required Kitchen and Bathroom Exhaust Fa	ns: Re-list belo	w if	Principal Exhaust Fan meets all or

part of Kitchen/Bathroom spot Exhaust requirements.

	REQUIRED	E	EXHAUST EQUIPMENT					
	Exhaust Rate	Spot Exhai	ist Kitcher	n & Bath	WALL	/CEILING	FANS	Ex.Fan/CEV
ROOM	Table	Fan Make & Model	CFM	*Duc	t Sizing		9.32.3.8.(3)	Principal
ROOM	9.32.3.6		@ 0.2 ESP Manf.	Duct D	· · · · · · · · · · · · · · · · · · ·	Max. Equiv. Length per	Installed Equiv.	System CFM
			Rated	rigid	flex	table	Length	
		· ·						
* For fan capacities exceeding 175cfm in Table 9.32.3.8(3), follow manufacturer's								
installation inst	nstallation instructions or use good engineering practice to size duct. (must = Box E)							
See Ventilation	Guideline	s Appendix page 16-A	© Fe	bruary 20	015 TEC.	A All Rights	Reserved Ch	ecklist 3, pg1of2

5. CRV Fresh Air Intake & Mixing Fan (Choose a or b)	Capacity @	
Make Model		cfm (F)
 a) Box F CFM is minimum 2 times Box D cfm for +5°F and v b) Box F CFM is minimum 3 times Box D for less than +5°F c) Duct Size for Fresh Air intake into return air of CRV: Min 4"Ø rigid duct, must be insulated & vapour barriered for ful Min 5"Ø, flex duct, must be insulated & vapour barriered for ful 	winter design temperat	-
6. CRV Fresh Air Circulation (Choose a or b)		
 a) Draw air from bedrooms and Supply air to common area. b) Draw air from common area and Supply air to bedrooms. 		
7. If Heated Crawlspace present		
Choose ventilation option 1, 2, or 3 per sentence 9.37.3.7 (2).		
MAKE-UP AIR Requirements 1. NAFFVA (Naturally Aspirated Fuel Fired Vented Appliance) or No, Omit Steps 2 & 3 Yes, Proceed to Step 2	radon present in dwell	l ing unit? (per Sentence 9.32.4.1)
 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 Yes, Proceed to Step 3 2. Use Active Males on Air for Exhaust Appliance (Chapter a sub- 		
3. Use Active Make-up Air for Exhaust Appliance. (Choose a or b Make-up Air Fan required: Ext		Installed Cfm
Make-up Air Fan required: Ext Fan Make Model	Make-uj	p Air Fan Cfm
Duct diameterinches		
Fan Location Fan ducted a) Active Make-up Air delivered to an Unoccupied Area first i) Tempering Required per 9.32.4.1.(4)(a): Show calculation & describe how make-up air will be tempe		
ii) Transfer Grill Required: Size 1 sq in of gross area per 2 c Transfer grill size sq. in. Location		
iii) Additional Tempering Required per 9.32.4.1.(4)(b) befor describe how make-up air will be further tempered to at le	e transfer to occupied ar	
OR b) Active Make-up Air delivered to an Occupied Area: The how make-up air will be tempered to at least 54°F (12°C).		
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Installer Certification: I hereby certify that the design and installation of the ventilation sy Section 9.32 Amendment.	ystem complies with the	2012 B.C. Building Code, 2014 lation Certification Stamp
Print Name		
Signature		
Company		
Phone		
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Ventilation Checklist 4—Exhaust Fan & Passive Inlets SENTENCE 9.32.3.4(6)

Use this checklist for small (\leq 1800 sqft), single level, non-forced air heated dwellings located in *mild* coastal & moderate interior climates where winter design temperature is warmer than -4°F.

Civic Address		Permit No
Climate Zone: Number of Bedrooms	(A)	A bedroom is a room with an openable window (minimum dimensions apply), a
Total Floor area of living space	ft ² (B)	closet and a closing interior door.
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 $0.5 \div 60 =$	cfm (C)	Exhaust appliances exceeding .5 ACH may require make-up air.
1. Principal Ventilation System Exhaust Fan Mi	nimum Air-flow R	late
Use the bedroom count from Box (A) and Total squa		
determine	-	
Minimum Required Prinicpal Exhaust S	ystem Capacity	cfm (D)
2. Principal System Fan Choice		
a) Exhaust Fan continuous running Make	Model	Sone Rating
	Capacity	
Location:		cfm (E) Must be \geq than Box (D)
	If CEV, capaci	ty @0.4ESP
3. Fan Duct Size and Equivalent Length	-	-
a) Installed Equivalent Length:		
Length of ductft + Ext. hood $30 \text{ ft} + ($	# 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 =
Use Table 9.32.3.8 (3) to determine duct size.		in Ø
4. Required Kitchen and Bathroom Exhaust Fa	ns: Re-list below if	Principal Exhaust Fan meets all or
part of Kitchen/Bathroom spot Exhaust requirement		
	LAUST EOUIPMEN	[

1	REQUIRED	EXHAUST EQUIPMENT								
	Exhaust Rate	Spot Exha	Spot Exhaust Kitchen & Bath WALL/CEILING FANS							
2001	Table	Fan Make & Model	CFM				9.32.3.8.(3)	Principal		
ROOM	9.32.3.6		@ 0.2 ESP Manf.	Duct Dia (in Ø)		Max. Equiv.	Installed Equiv.	System CFM		
			Rated	rigid	flex	Length per table	Length			
	1			-						
	* 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 <i>Ventilation</i>									

Removed reference to RADON in Make-up Air Requirements	
5. Required Inlets for passive Ventilation Air Supply	
a) High wall installation (minimum 6 ft above floor)	
b) Located in each bedroom and at least one common area	
c) Inlet Free Area greater than or equal to 4 Sq In	
6. If Heated Crawlspace present	
\Box 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 dwelli	ng 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 p	og 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 Applianc Fan Make Model	e 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 real)	
a) Active Make-up Air delivered to an Unoccupied Area first (not directly to re i) Tempering Required per 9.32.4.1.(4)(a):	oom containing the appliance).
Show calculation how make-up air will be tempered to at least 34°F (1°C) b	efore entering unoccupied area.
Make-up Fan cfm X 1.08 X (34° F – °F Winter Design Temp 3412 BTUH/kw	$= \underline{\qquad} (kw)$
ii) Transfer Grill Required: Size 1 sq in of gross area per 2 cfm: Transfer grill si	
iii) Additional Tempering Required per 9.32.4.1.(4)(b) before transfer to occupi	ed area: Show calculation and describe
how make-up air will be further tempered to at least 54°F (12°C).	
	(kw) Heat from unoccupied area
3412 BTUH/kw	required to raise temp by 20°F
Tempered by:	
OR b) Active Make-up Air delivered to an Occupied Area: Tempering Requir be tempered to at least 54°F (12°C).	ed. Show calculation how make-up air w
Make-up Fan cfm x 1.08 x (54° F –°F Winter Design Temp	your location)
3412 BTUH/kw	$= \underline{\qquad} (kw)$
J412 D101/KW	Duct Heater
Installer Certification:	© March 2015 TECA All Rights Reserve
I hereby certify that the design and installation of the ventilation system	2012 TECA Ventilation Certification Stamp
complies with the 2012 B.C. Building Code, 2014 Section 9.32 Amendment.	
Date	
Print Name	
Signature	
Company	
Phone Checklist 4, pg2 of 2	

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