

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 distribute 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.

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 Address		Permit No
Climate Zone: Number of Bedrooms	(A)	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	Rate
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:	at 0.2 ESP	cfm (E) Must be \geq than Box (D)
	If CEV, capac	city @0.4ESP
3. Fan Duct Size and Equivalent Length		
a) Installed Equivalent Length:		
Length of ductft. + Ext. hood 30 ft.	+ (# elbows at 10	ft. each =) = ft
b) Choose either Flex duct or Smooth (rigid) du	ct	
c) Duct size required to flow Box E cfm through		
Use Maximum Equivalent Length Table 9.32	.3.8 (3) to determi	ne duct size. $in \emptyset$
4. Required Kitchen and Bathroom Exhaust Fa part of Kitchen/Bathroom spot Exhaust requirement		if Principal Exhaust Fan meets all or

	REQUIRED	EXHAUST EQUIPMENT							
	Exhaust Rate	Spot Exha	Ex.Fan/CEV						
ROOM	Table	Fan Make & Model	CFM	*Duc	t Sizing	per Table	9.32.3.8.(3)	Principal	
KOOM	9.32.3.6		@ 0.2 ESP Manf.	Duct Dia (in Ø)		Max. Equiv. Length per	Installed Equiv.	System CFM	
			Rated	rigid	flex	table	Length		
	x								
*		eding 175cfm in Table 9.3 use good engineering pra				cturer's	TOTAL (must = Box E)		

installation instructions or use good engineering practice to size duct. See *Ventilation Guidelines* Appendix page 16-A © February 20

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a) Ventilation air duct is connected not more that	to Return Air of Forced Air Heating for distribution. In 15ft, nor less than 10ft upstream of the heating appliance, unless a flow control
device is used. b) Duct Size for Fresh Air intake to RA. Choose	
Rigid Duct: 4" Ø minimum, must be insulated Flex Duct: 5"Ø minimum, must be insulated	
6. Forced Air Heating System is ducted to	supply air to every bedroom and any level without a bedroom.
7. If Heated Crawlspace present, (Choose of Minimum of one RA grille located in the cr	
	tion Option 1, 2, or 3 per sentence 9.37.3.7 (2)
MAKE-UP AIR Requirements	
	nted Appliance) or radon present in dwelling unit? (per Sentence 9.32.4.1)
2. Exhaust Appliance present which exceeds I	Box C 0.5 ACH:
 No such appliance. Omit Step 3 Yes, Commit to Depressurization Test (See 1) 	CALIFICAL TECA Vort Morriel ac 24)
Yes, Proceed to Step 3	
3. Use Active Make-up Air for Exhaust Applian	
Make-up Air Fan required: Fan Make Model	Exhaust Appliance Actual Installed Cfm Make-up Air Fan Cfm
Duct diameterinches	
Fan Location	Fan ducted to
i) Tempering Required per 9.32.4.1.(4)(a):	
ii) Transfer Grill Required: Size 1 sq in of	gross area per 2 cfm:
	Location
	32.4.1.(4)(b) before transfer to occupied area: Show calculation and er tempered to at least $54^{\circ}F$ (12°C).
	in tempered to at least 54 F (12 C).
OR b) Active Make-up Air delivered to an how make-up air will be tempered to at lea	Occupied Area: Tempering Required. Show calculation and describe ast 54°F (12°C).
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Installer Certification:	Date
I hereby certify that the design and installation o Section 9.32 Amendment.	of the ventilation system complies with the 2012 B.C. Building Code, 2014 2012 TECA Ventilation Certification Stamp
Print Name	
Signature	
Company	
Phone	
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STONIALLY LOTO TEOR	teca Ventilation Guidelines

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		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. 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	cīm	(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 exhuast requirements list below.

	REQUIRED	l	EXHAUST EQUIPMENT						
	Exhaust Rate	Spot Exha	ust Kitcher	1 & Bath	WALL	/CEILING	FANS	HRV	
ROOM	Table	Fan Make & Model	CFM	*Duc	t Sizing		9.32.3.8.(3)	Principal	
ROOM	9.32.3.6	¢	@ 0.2 ESP Manf. Rated	Duct D rigid	ia (in Ø) flex	Max. Equiv. Length per table	Installed Equiv. Length	System CFM	
* For fan capa	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 © February 2015 TECA All Rights Reserved Checklist 2, pg1of2

 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 incluse									
Duct diameterinches Fan Location 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 & 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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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 $0.5 \div 60 =$		(C)	Exhaust appliances exceeding .5 ACH may require make-up air.		
1. Principal Ventilation System Exhaust Fan Mi	inimum Air-flo	ow R	ate		
Use the bedroom count from Box (A) and Total squa determine Minimum Required Prinicpal Exhaust S	-				
	ystem Capaci	LY	cfm (D)		
2. Principal System Fan Choice					
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 b) Choose either Flex duct or Smooth (rigid) due	,	10 ft	each =) = ft		
c) Duct size required to flow Box E cfm through		gth c	of duct =		
Use Maximum Equivalent Length Table 9.32	.3.8 (3) to deter	rmine	e duct size. $in \emptyset$		
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	EXHAUST EQUIPMENT							
	Exhaust Rate	Spot Exha	ust Kitchei	n & Bath	WALL	/CEILING	FANS		Ex.Fan/CEV
ROOM	Table	Fan Make & Model	CFM			per Table		· · ·	Principal
	9.32.3.6		@ 0.2 ESP Manf. Rated	Duct D rigid	ia (in Ø) flex	Max. Equiv. Length per table		ed Equiv. ength	System CFM
	x								
* For fan capacities exceeding 175cfm in Table 9.32.3.8(3), follow manufacturer's nstallation instructions or use good engineering practice to size duct.									

See Ventilation Guidelines Appendix page 16-A

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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 v c) Duct Size for Fresh Air intake into return air of CRV: Min 4"Ø rigid duct, must be insulated & vapour barriered for full Min 5"Ø, flex duct, must be insulated & vapour barriered for full 	winter design temp		
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			
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 d	welling unit? (per S	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)	
3. Use Active Make-up Air for Exhaust Appliance. (Choose a or b)			
Make-up Air Fan required: Exh Fan Make Model	aust Appliance Ac Mak	tual Installed Cfm xe-up Air Fan Cfm	
Duct diameterinches			
Fan Location Fan ducted to an Unoccupied Area first i) Tempering Required per 9.32.4.1.(4)(a): Show calculation & describe how make-up air will be temper	(not directly to roo	m containing the app	
ii) Transfer Grill Required: Size 1 sq in of gross area per 2 cf	m:		
Transfer grill size sq. in. Location			
iii) Additional Tempering Required per 9.32.4.1.(4)(b) before describe how make-up air will be further tempered to at le		d area: Show calcula	ation and
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).		d. Show calculation	and describe
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Installer Certification: I hereby certify that the design and installation of the ventilation sy Section 9.32 Amendment.	Date stem complies with 2012 TECA V	the 2012 B.C. Build entilation Certifica	ling Code, 2014 tion Stamp
Print Name			
Signature			
Company			
Phone			
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4 Ventilation

2014 Amendment to Section 9.32 Ventilation

Ventilation Checklist 4—Exhaust Fan & Passive Inlets SENTENCE 9.32.3.4(6)

Use this checklist for small (≤ 1800 sqft), single level, **non-forced air** heated dwellings located in coastal climate areas where winter design temperature is warmer than or equal to +14%. -2 ° ℃

Civic Address	S		Permit No						
Climate Zone	ו	Number of Bedrooms	5		(A)	window (m	n with an openable mensions apply), a		
	Total	Floor area of living space		ft²](B)	closet and a	erior door.		
	Total Int	erior Volume of Dwelling	5	ft³		Total volume includes all heated int spaces (including crawlspace if heated			
.5 ACH (air o	changes/h	$r) = Volume \ge 0.5 \div 60 =$	=	cfm](C)	Exhaust appliances exceeding .5 ACH may require make-up air.			
1. Principal Ventilation System Exhaust Fan Minimum Air-flow Rate Use the bedroom count from Box (A) and Total square footage from Box (B) above and Table 9.32.3.5. to determine Minimum Required Prinicpal Exhaust System Capacity cfm (D)									
2. Principal S	-	-				· · ·			
a) Exhaust F	an contin	uous running Make			lodel_		Se	one Rating	
				Capaci	•	of			
Location:	· · ·			nt 0.2 E		cf	` í	Must be \geq than Box (D)	
If CEV, capacity @0.4ESP 3. Fan Duct Size and Equivalent Length a) Installed Equivalent Length:							in Ø		
-		nd Bathroom Exhaust F		e-list be	low if	Principal	Exhaust	Fan meets all or	
part of Kitcher	REQUIRED	m spot Exhaust requirem	XHAUST	FOLIE	MENT				
	Exhaust	Spot Exhaus					FANS	Ex.Fan/CEV	
DOOM	Rate Table	Fan Make & Model	CFM	*Duc	t Sizing	per Table 9	.32.3.8.(3)) Principal	
ROOM	9.32.3.6		@ 0.2 ESP Manf. Rated	Duct Di rigid	Duct Dia (in Ø)		Installed Equ Length	niv. System CFM	

* 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 © February 2015 TECA All Rights Reserved Checklist 4, pg1 of 2

 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 c) Inlet Free Area greater than or equal to 4 Sq In)
6. If Heated Crawlspace present Choose ventilation option 1, 2, or 3 per sentence 9.3	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 dwelling 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 3. Use Active Make-up Air for Exhaust Appliance. (Choose a or b) 	
Make-up Air Fan required: Ext Fan Make Model Duct diameter inches	Make-up Air Fan Cfm
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 temper	
ii) Transfer Grill Required: Size 1 sq in of gross area per 2 cf	
Transfer grill size sq. in. Location	
iii) Additional Tempering Required per 9.32.4.1.(4)(b) before describe how make-up air will be further tempered to at least	e transfer to occupied area: Show calculation and
OR b) Active Make-up Air delivered to an Occupied Area: T how make-up air will be tempered to at least 54°F (12°C).	empering Required. Show calculation and describe
1	© February 2015 TECA All Rights Reserved
Installer Certification: I hereby certify that the design and installation of the ventilation sy Section 9.32 Amendment.	Date
Print Name	
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