## Ventilation Checklist 1—Forced Air Systems Sentence 9.32.3.4(2)

Civic Addres		vnere torced air neating	System	ducts	maxc				iation an.
Civic Addres					 1		i Cilliit i	ω	
Climate Zon	e:	Number of Bedrooms	3		(A)	window (minimum dimension		sions apply), a	
	Total Floor area of living space			ft²	(B)	closet and a closing interior door.			door.
	Total Into	erior Volume of Dwelling	5	ft³					heated interior ce if heated).
.5 ACH (air	changes/h	$r) = Volume \times 0.5 \div 60 =$	=	cfm	(C)	Exhaust ap			
1. Princinal V	Ventilation	n System Exhaust Fan N	 Iinimuu	n Air-1	low R	ate			
_		from Box (A) and Total sq					and Tabl	e 9.	32.3.5. to
determine		, ,	L	0					
Minir	num Requ	iired Prinicpal Exhaust	System	Capac	city		cfm	(I	O)
2. Principal S	System Fa	n Choice							
a) Exhaust I	an contin	uous running Make		N	Iodel_		S	one	Rating
				Capaci	•				
Location: _				t 0.2 E				Must	t be $\geq$ than Box (D)
2 E D4 (	N: 1 E	Variation A. T. and A. A.	I	f CEV,	capacit	ty @0.4ES	Р		
a) Installed		Equivalent Length							
		ft + Ext. hood <b>30 ft</b> +	( #,	alhowe	at 10	ft each –	) -	_	ft (F)
b) Choose			(π			or Rig			
,	• 1	flow Box E cfm through	Box F e						
	_	(3) to determine duct siz		1		0			in Ø
4. Required 1	Kitchen aı	nd Bathroom Exhaust F	ans: Re	-list be	low if	Principal	Exhaust	Fai	n meets all or
-		m spot Exhaust requirem		1100 00	10 // 11				
	Required	1 1	XHAUST	EOUIF	MENT	1			
	EXHAUST	Spot Exhaus					FANS		Ex.Fan/CEV
	RATE Table	Fan Make & Model	CFM			g per Table 9		)	Principal
ROOM 9.32.3.6  Path Wake & Would @ 0.2 ESP Manf. Rated rigid			Max. Equiv. Length per table	Installed Eq Length	_	System CFM			

(must = Box E)

TOTAL

<sup>\*</sup> 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

5. Fresh Air must be ducted from outside to Return a) Ventilation air duct is connected not more than 15ft, no		
device is used. b) Duct Size for Fresh Air intake to RA. Choose one. Rigid Duct: 4" Ø minimum, must be insulated & vapo		8
Flex Duct: 5"Ø minimum, must be insulated & vapour	_	any lavel without a hadroom
6. Forced Air Heating System is ducted to supply 7. If Heated Crawlspace present, (Choose one)	air to every bedroom and	any level without a bedroom.
Minimum of one RA grille located in the crawlspace  No RA grille in crawlspace, choose ventilation Opt		0.37.3.7 (2)
MAKE-UP AIR Requirements  1. NAFFVA (Naturally Aspirated Fuel Fired Vented Apploon No, Omit Steps 2 & 3  Yes, Proceed to Step 2	pliance) or radon present i	n dwelling unit? (per Sentence 9.32.4.1)
2. Exhaust Appliance present which exceeds Box C 0  No such appliance. Omit Step 3  Yes, Commit to Depressurization Test (See CAUTI  Yes, Proceed to Step 3		(24)
3. Use Active Make-up Air for Exhaust Appliance. (Cho	oose a or b)	
Make-up Air Fan required: Fan Make Model	Exhaust Appliance 	Actual Installed Cfm Nake-up Air Fan Cfm
Duct diameterinches		
	Fan ducted to	
a) Active Make-up Air delivered to an Unoccupied A i) Tempering Required per 9.32.4.1.(4)(a): Show calculation how make-up air will be temper		
Make-up Fan cfm X 1.08 X ( <b>34° F</b> –	°F Winter Design Temp	your location) = (kw)
ii) Transfer Grill Required: Size 1 sq in of gross area iii) Additional Tempering Required per 9.32.4.1.(4)(b how make-up air will be further tempered to at Make-up Fancfm x 1.08 x (54)	per 2 cfm: Transfer grill size by before transfer to occupie least 54°F (12°C).	tesq. in. Location
3412 BTUH/kw		required to raise temp by 20°F
Tempered by:		4
OR b) Active Make-up Air delivered to an Occupied be tempered to at least 54°F (12°C).	Area: Tempering Require	ed. Show calculation how make-up air will
Make-up Fan cfm x 1.08 x ( <b>54° F</b> –	°F Winter Design Temp	your location) = (kw)
3412 E	BTUH/kw	Duct Heater
		© March 2015 TECA All Rights Reserved
Installer Certification:		2012 TECA Ventilation
I hereby certify that the design and installation of the ve complies with the 2012 B.C. Building Code, 2014 Section 2014 Section 2015 B.C. Building Code, 2015 B.C. Building C		Certification Stamp
Date		
Print Name		
Signature		
Company		
Phone Checklist 1, page2of2		

### 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 <sup>2</sup>	(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.	
l. Use the bedroom count (Box A above) and tota ninimum principal Air Flow rate required by Ta Minin	-			
2. HRV Make M	-			
. HRV Capacity: CFM @ 0.4 ESP. Box E must meet Box D requirement.				
4. List Exhaust Grilles Locations: 1 minimum @	6 ft or highe	r fron	n floor of uppermost level.	
S Required Kitchen and Rathroom Evhaust				

If HRV used to meet all or part of Kitchen/Bathroom spot exhuast requirements list below.

ROOM    Spot Exhaust Kitchen & Bath WALL/CEILING FANS   HRV		REQUIRED	F	EXHAUST EQUIPMENT					
ROOM  Table 9.32.3.6  Fan Make & Model  CFM @ 0.2 ESP Manni Patrol Patro		EXHAUST RATE	Spot Exhau	ust Kitcher	n & Bath	n WALL	/CEILING	FANS	HRV
9.32.3.6    Max. Equiv.   Installed Equiv.   System CFM	ROOM	Table	Fan Make & Model						
	ROOM	9.32.3.6		Manf.			Length per		System CFM

<sup>\*</sup> 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

TOTAL (must = Box E)

Guidelines Appendix page 16-A, Duct Sizing for Larger Fans. © March 2015 TECA All Rights Reserved Checklist 2, pg1of2

<b>6. HRV Fresh Air Distribution</b> (Choose a or b)	
a) Supply Air from HRV direct connect to Return Air of a For	rced Air Heating System:
☐ FA system fan and HRV fan continuous operation and	
FA system ducted to supply air to every bedroom and each floor l	evel 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	9.37.3.7 (2)
MAKE-UP AIR Requirements	
1. NAFFVA (Naturally Aspirated Fuel Fired Vented Appliance) or radon present	t in dwelling unit? (per Sentence 9.32.4.1)
No, Omit Steps 2 & 3	
Yes, Proceed to Step 2	
<ul> <li>2. Exhaust Appliance present which exceeds Box C 0.5 ACH:</li> <li>No such appliance. Omit Step 3</li> <li>Yes, Commit to Depressurization Test (See CAUTION, TECA Vent Manual presents)</li> </ul>	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 Appliand Fan Make Model	ce Actual Installed Cfm
Fan Make Model	Make-up Air Fan Cfm
Duct diameterinches	
Fan Location Fan ducted to a) Active Make-up Air delivered to an Unoccupied Area first (not directly to re	
a) Active Make-up Air delivered to an Unoccupied Area first (not directly to rei) 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) by	
Make-up Fan cfm X 1.08 X (34° F – °F Winter Design Tem	p your location) =(kw)
3412 BTUH/kw	Duct Heater
ii) Transfer Grill Required: Size 1 sq in of gross area per 2 cfm: Transfer grill s	
iii) Additional Tempering Required per 9.32.4.1.(4)(b) before transfer to occup	
how make-up air will be further tempered to at least 54°F (12°C).	
Make-up Fancfm x 1.08 x ( <b>54°</b> F $- 34$ °F) = _	(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 Requi be tempered to at least 54°F (12°C).	red. Show calculation how make-up air wil
Make-up Fan cfm x 1.08 x ( <b>54° F</b> –°F Winter Design Tem	p your location) = (kw)
© March 2015 TECA All Rights Reserved 3412 BTUH/kw	Duct Heater
<b>Installer Certification:</b> 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
Date	
Print Name	
Signature	
Company	
Phone	
Checklist 2, pg2of2	

## 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

intake and	aistributi	on requirements and a Pr	ıncıpai	Exnaus	t ian n	neets the e	exnaust requ	irements.	
Civic Addres	S					I	Permit No		
Climate Zone	e:	Number of Bedrooms			(A)	window (m	ith an openable asions apply), a		
	Total	Floor area of living space		ft²	closet and a closing in (B)			erior door.	
	Total Into	erior Volume of Dwelling		Total volume includes all heated interior spaces (including crawlspace if heated).					
.5 ACH (air	changes/h	r) = Volume x $0.5 \div 60 =$		ft <sup>3</sup>	]	Exhaust appliances exceeding .5 ACH may require make-up air.			
Use the bedredetermine	oom count	n System Exhaust Fan M from Box (A) and Total sq nired Prinicpal Exhaust	uare foo	tage fro	m Box			32.3.5. to	
2. Principal S	•	•	2,200111	o apar	J		(2	-,	
-	•	uous running Make		N	[odel_		Sone	e Rating	
,		J		Capacit					
Location: _				t 0.2 E		cfm ( y @0.4ESI	E) Must be $\geq$ the	nan Box (D)	
<ul><li>a) Installed</li><li>Length o</li><li>b) Choose t</li><li>c) Duct size</li></ul>	a) Installed Equivalent Length:  Length of ductft + Ext. hood 30 ft + (# elbows at 10 ft each =) =ft (F)  b) Choose type of 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.								
-		nd Bathroom Exhaust F m spot Exhaust requirement		-list be	low if	Principal	Exhaust Fa	n meets all or	
	REQUIRED	EX	XHAUST	EQUIP	MENT	ı			
	EXHAUST RATE	Spot Exhaus						Ex.Fan/CEV	
ROOM	Table 9.32.3.6	Fan Make & Model	CFM @ 0.2 ESP					Principal System CFM	
	9.32.3.0		Manf. Rated	Duct Di rigid	flex	Length per table	Installed Equiv. Length	System Crw	
* For fan capa	cities exce	eding 175cfm in Table 9.32	.3.8(3), f	follow n	nanufa	cturer's	TOTAL		

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 3, pg1of2

(must =

Box E)

5. CRV Fresh Air Intake & M	ixing Fan (Choose a or b)		
a) Box F CFM is minimum 2			-
b) Box F CFM is minimum		_	perature.
Make			c (E)
	take into return air of CRV be insulated & vapour barrierd be insulated & vapour barrierd	ed for full length, OR	cfm (F)
6. CRV Fresh Air Circulation	•		
a) Draw air from bedrooms a b) Draw air from common a	and Supply air to common		
7. If Heated Crawlspace prese			
Choose ventilation option 1, MAKE-UP AIR Requires	2, or 3 per sentence 9.37.3	.7 (2).	
<del>-</del>		ance) <b>or radon present in</b>	a dwelling unit? (per Sentence 9.32.4.1)
2. Exhaust Appliance present  No such appliance. Omit S  Yes, Commit to Depressuri:  Yes, Proceed to Step 3	Step 3 zation Test (See CAUTION	J, TECA Vent Manual pg	24)
3. Use Active Make-up Air for I	Exhaust Appliance. (Choos	e a or b)	
Make-up Air Fan required:	M 11	Exhaust Appliance	Actual Installed Cfm [ake-up Air Fan Cfm
			lake-up Air Fan Cfm
Duct diameter			
Fan Locationa) Active Make-up Air deliver	Fan	ducted to	
		a first (not directly to room	m containing the appliance).
i) Tempering Required per 9.		40 of 100st 249E (19C) hot	``````````````````````````````````````
			ore entering unoccupied area.
Make-up Fan cfm	X 1.08 X ( <b>34° F</b> –	°F Winter Design Temp y	your location) = (kw)
	3412	BTUH/kw	Duct Heater
iii) Additional Tempering Re		efore transfer to occupied	esq. in. Location d area: Show calculation and <b>describe</b>
-	cfm x 1.08 x ( <b>54° l</b>	2 (0.75)	(kw) Heat from unoccupied area
-	3412 BTUH/kw		required to raise temp by 20°F
	S 112 BT OTEKW		required to raise temp by 20 T
be tempered to at least 5	4°F (12°C).		d. Show calculation how make-up air will
*	x 1.08 x ( <b>54° F</b> –		$(\text{cour location}) = \underline{\qquad} (\text{kw})$
© March 2015 TECA All Rights F	Reserved 3412 BTU	JH/kw	Duct Heater
Installer Certification: I hereby certify that the design a complies with the 2012 B.C. Bu			2012 TECA Ventilation Certification Stamp
Date	,		
Print Name			
Signature			
Company			
Phone			
Checklist 3, pg2of2			

# 4

## 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°F.

coast	al climate a	reas where winter design	n tempe	rature is	s warn	ner than o	or equal to +	·14°F.
Civic Addre	ss				_		Permit No	
Climate Zon	ne:	Number of Bedrooms	S		(A)	window (minimum dimens		nsions apply), a
	Total Floor area of living spa			ft²	(B)	closet and a closing interior door.		
	Total Inte	rior Volume of Dwelling	Ţ,	ft³			me includes al luding crawlspa	I heated interior ace if heated).
.5 ACH (air	changes/hr	$) = \text{Volume x } 0.5 \div 60 =$		cfm	(C)		pliances exceed y require make	
Use the bed determine	room count f	System Exhaust Fan M from Box (A) and Total sq ired Prinicpal Exhaust	uare foo	tage fro	m Box			.32.3.5. to D)
2. Principal	•							
a) Exhaust l	Fan continu	uous running Make		N Capacit			Son	e Rating
Location: _			8	t 0.2 E	SP	cf y @0.4ES	``´	ust be $\geq$ than Box (D)
Length of b) Choose c) Duct siz Use Tab	type of ductor required to ble 9.32.3.8 <b>Kitchen an</b>	ft + Ext. hood <b>30 ft</b> +	gh Box l e. 'ans: Re	Flex Fequiv	duct [ alent l	or Rig	id (smooth) duct = [	in Ø
	REQUIRED	E	XHAUST	EQUIP	MENT	1		
	EXHAUST RATE	Spot Exhaus						Ex.Fan/CEV
ROOM	Table 9.32.3.6	Fan Make & Model	@ 0.2 ESP Manf. Rated	rigid flex Length		Max. Equiv. Length per table	Installed Equiv. Length	Principal System CFM
		ding 175cfm in Table 9.32 use good engineering prac					TOTAL (must = Box E)	

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<ul> <li>5. Required Inlets for passive Ventilation Air Supply</li> <li>a) High wall installation (minimum 6 ft above floor)</li> <li>b) Located in each bedroom and at least one common area</li> <li>c) Inlet Free Area greater than or equal to 4 Sq In</li> </ul>	
<b>6. If Heated Crawlspace present</b> ☐ 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 No, Omit Steps 2 & 3  Yes, Proceed to Step 2	n dwelling unit? (per Sentence 9.32.4.1)
<ul> <li>2. Exhaust Appliance present which exceeds Box C 0.5 ACH:</li> <li>No such appliance. Omit Step 3</li> <li>Yes, Commit to Depressurization Test (See CAUTION, TECA Vent Manual pg</li> <li>Yes, Proceed to Step 3</li> </ul>	24)
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 N	Iake-up Air Fan Cfm
Duct diameterinches	
Fan Location Fan ducted to Fan ducted to a) Active Make-up Air delivered to an Unoccupied Area first (not directly to room 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) because the second of	
Make-up Fan cfm X 1.08 X (34° F – °F Winter Design Temp	your location) =(kw)
3412 BTUH/kw ii) Transfer Grill Required: Size 1 sq in of gross area per 2 cfm: Transfer grill siz iii) Additional Tempering Required per 9.32.4.1.(4)(b) before transfer to occupie how make-up air will be further tempered to at least 54°F (12°C).	Duct Heater esq. in. Location
3412 BTUH/kw	required to raise temp by 20°F
Tempered by:  OR b) Active Make-up Air delivered to an Occupied Area: Tempering Require be tempered to at least 54°F (12°C).  Make-up Fan cfm x 1.08 x (54° F °F Winter Design Temp (3412 BTUH/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.	2012 TECA Ventilation Certification Stamp
Date	
Print Name	
Signature	
Company	
Phone Checklist 4, pg2 of 2	