1

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

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

			J					
Civic Addres	S				Per	rmit No		
Climate Zone	Number of Bedrooms	(A) A bedroom is a rewindow (minimum			mum dimer	nsions apply), a		
Total Floor area of living sp.				ft ² (B)	closet and a clo	closet and a closing interior door.		
	Total Into	erior Volume of Dwelling		ft ³	Total volume spaces (includi		heated interior ce if heated).	
.5 ACH (air	changes/h	r) = Volume x $0.5 \div 60 =$		cfm (C)	Exhaust applia .5 ACH may re			
1. Principal V	/entilation	System Exhaust Fan M	linimum .	Air-flow I	Rate			
determine		from Box (A) and Total squ			x (B) above an			
Minim	num Kequ	iired Prinicpal Exhaust S	System C	apacity		cfm (D)	
2. Principal S	•							
a) Exhaust F	an contin	uous running Make		Model_		Sone	e Rating	
				pacity [_			
Location: _).2 ESP	cfm	(E) Mus	$t be \ge than Box (D)$	
3. Fan Duct S	Size and E	Equivalent Length	If C	EEV, capacı	ty @0.4ESP			
a) Installed		_						
		ft + Ext. hood 30 ft + (ft (F)	
b) Choose t	• I				or Rigid	(smooth)	duct	
		flow Box E cfm through I		ivalent ler	ngth of duct	= [
Use Tabl	e 9.32.3.8	(3) to determine duct size	e.				in Ø	
_		nd Bathroom Exhaust Fa		st below it	f Principal Ex	xhaust Fa	n meets all or	
part of Kitche		m spot Exhaust requireme						
	REQUIRED	EX	CHAUST E	QUIPMEN	Γ			
	EXHAUST RATE	Spot Exhaus			L/CEILING FA		Ex.Fan/CEV	
DOOM	Table	Fan Make & Model	CFM	*Duct Sizin	g per Table 9.32	2.3.8.(3)	Principal	

-			1 1							
		REQUIRED	F	EXHAUST	XHAUST EQUIPMENT					
		EXHAUST RATE	Spot Exhau	Spot Exhaust Kitchen & Bath WALL/CEILING FANS						
	ROOM	Table	Fan Make & Model	CFM				9.32.3.8.(3)	Principal	
	KOOM	9.32.3.6		@ 0.2 ESP Manf. Rated	Duct Dirigid	flex	Max. Equiv. Length per table	Installed Equiv. Length	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, *Duct Sizing for Larger Fans*. © March 2015 TECA All Rigid

TOTAL (must = Box E)

 $@ \textbf{March 2015 TECA All Rights Reserved} \ \ Checklist \ 1, pg1 of2 \\$

Removed reference to RADON in Make-up Air Requirements

5. Fresh Air must be ducted from outside to Return a) Ventilation air duct is connected not more than 15ft, i		
device is used. b) Duct Size for Fresh Air intake to RA. Choose one. Rigid Duct: 4" Ø minimum, must be insulated & vapor Flex Duct: 5"Ø minimum, must be insulated & vapor		
c) Furnace fan continuous operation. 6. Forced Air Heating System is ducted to supply	air to every bedroom and a	ny level without a bedroom.
7. If Heated Crawlspace present, (Choose one)		
Minimum of one RA grille located in the crawlspa No RA grille in crawlspace, choose ventilation Op		32.3.7 (2)
MAKE-UP AIR Requirements		
1. NAFFVA (Naturally Aspirated Fuel Fired Vented Ap No, Omit Steps 2 & 3 Yes, Proceed to Step 2	opliance) 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 CAUT	ION TECA Vent Manual no	24)
Yes, Proceed to Step 3	1011, TECA Vent Manual pg 2	24)
3. Use Active Make-up Air for Exhaust Appliance. (Ch	*	
Make-up Air Fan required: Fan Make Model		Actual Installed Cfm
Duct diameter inches F		
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 (34° F –	°F Winter Design Temp v	our location) =(kw)
34	112 BTUH/kw	Duct Heater
ii) Transfer Grill Required: Size 1 sq in of gross area		
iii) Additional Tempering Required per 9.32.4.1.(4)(how make-up air will be further tempered to a		area: Show calculation and describe
Make-up Fancfm x 1.08 x (5		(kw) Heat from unoccupied area
3412 BTUH/ky		required to raise temp by 20°F
	•	required to raise temp by 20 T
Tempered by: OR b) Active Make-up Air delivered to an Occupied		I. Show calculation how make-up air will
be tempered to at least 54°F (12°C).	1 0 1	•
Make-up Fan cfm x 1.08 x (54° F	°F Winter Design Temp y	our location) = (kw)
3412	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 v		Certification Stamp
complies with the 2012 B.C. Building Code, 2014 Sect	ion 9.32 Amendment.	
Date		
Print Name		
Signature		
Company		
Phone Checklist 1, page2of2		
Unecklist 1. page20t2	l l	

2

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	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 tota minimum principal Air Flow rate required by Ta		(Box B above) to determine the			
	num Required Ra	te cfm (D)			
2. HRV Make N	Todel				
6. HRV Capacity: CFM @ 0.4 ESP. Box E must meet Box D requirement.					
4. List Exhaust Grilles Locations: 1 minimum @	6 ft or higher from	n floor of uppermost level.			

5. Required Kitchen and Bathroom Exhaust

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

ROOM Spot Exhaust Kitchen & Bath WALL/CEILING FANS HRV		REQUIRED	EXHAUST EQUIPMENT						
ROOM Table 9.32.3.6 Fan Make & Model CFM @ 0.2 ESP Manf. Pated Tigid flex Tigid Tigid flex Tigid T		EXHAUST RATE	Spot Exhau	ıst Kitchei	n & Bath	n WALL	/CEILING	FANS	HRV
9.32.3.6 Duct Dia (in Ø) Max. Equiv. Installed Equiv. System CFM Pated rigid flex Length Length	ROOM		Fan Make & Model					`	
	ROOM	9.32.3.6	N	Manf.			Length per		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*

TOTAL (must = Box E)

 $\textit{Guidelines} \ \textit{Appendix} \ \textit{page} \ 16-\textit{A}, \textit{Duct} \ \textit{Sizing} \ \textit{for} \ \textit{Larger} \ \textit{Fans}. \\ & @ \ \textit{March} \ \textit{2015} \ \textit{TECA} \ \textit{All} \ \textit{Rights} \ \textit{Reserved} \\ & \text{Checklist} \ \ 2, \ \textit{pg} \ \textit{1of} \ \textit{2015} \ \textit{Tech} \ \textit{All} \ \textit{Rights} \ \textit{Reserved} \\ & \text{Checklist} \ \ 2, \ \textit{pg} \ \textit{1of} \ \textit{2015} \ \textit{$

${\it Removed \ reference \ to \ RADON \ in \ Make-up \ Air \ Requirements}$

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 opera	tion and
FA system ducted to supply air to every bedro	om and each floor level without a bedroom
b) Supply Air from HRV distributed indep	
Ducted to every bedroom and each floor level	·
HRV fan continuous operation	
7. If Heated Crawlspace present, (Choose of	ne)
Minimum of one Forced Air System RA grille located	
No RA grille in crawlspace, 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 Appl	ance) 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 CAUTIO	N TECA Vent Manual ng 24)
Yes, Proceed to Step 3	v, TECA vent ivianual pg 24)
3. Use Active Make-up Air for Exhaust Appliance. (Choo	se a or h)
Fan Make Model	Exhaust Appliance Actual Installed Cfm Make-up Air Fan Cfm
Duct diameter inches Fan	
Fan interconnected with exhaust appliance fan. Fan	
a) Active Make-up Air delivered to an Unoccupied Are	a first (not directly to room containing the appliance).
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) before entering unoccupied area.
Make-up Fan cfm X 1.08 X (34° F –	°F Winter Design Temp your location) =(kw)
3412	BTUH/kw Duct Heater
ii) Transfer Grill Required: Size 1 sq in of gross area po	
	before transfer to occupied area: Show calculation and describe
how make-up air will be further tempered to at le	
Make-up Fancfm x 1.08 x (54°	$\mathbf{F} - 34^{\circ}\mathbf{F}$ =(kw) Heat from unoccupied area
3412 BTUH/kw	required to raise temp by 20°F
Tempered by:	
	rea: Tempering Required. Show calculation how make-up air wil
be tempered to at least 54°F (12°C).	
Make-up Fan cfm x 1.08 x (54° F –	F Winter Design Temp your location) = (kw)
© March 2015 TECA All Rights Reserved 3412 BT	
Installer Certification:	2012 TECA Ventilation
I hereby certify that the design and installation of the vent complies with the 2012 B.C. Building Code, 2014 Section	
compiles with the 2012 B.C. Building Code, 2014 Section	9.32 Amendment.
Date	
Print Name	
~.	
Signature	
Company	
Company	
Phone	
Checklist 2, pg2of2	

3

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.

		1	1		1		
Civic Address			<u> </u>		Permit No.		
Climate Zone	:	Number of Bedrooms		(A)	A bedroom is a room with an opena window (minimum dimensions apply)		
	Total	Floor area of living space	ft ²	(B)	closet and a closing interior	or door.	
	Total Into	erior Volume of Dwelling	ft ³		Total volume includes al spaces (including crawlspa		
.5 ACH (air c	hanges/h	r) = Volume x $0.5 \div 60 =$	cfm	(C)	Exhaust appliances exceed .5 ACH may require make		
1. Principal Vo	entilation	System Exhaust Fan M	inimum Air-f	low R	Rate		
-		from Box (A) and Total squ				.32.3.5. to	
Minim	um Requ	ired Prinicpal Exhaust	System Capac	eity	cfm ((D)	
2. Principal Sy	ystem Fa	n Choice					
	,	uous running Make	N	[odel_	Son	e Rating	
			Capacit	ty [
Location:			at 0.2 E	SP	cfm (E) Must be ≥ 1	than Box (D)	
			If CEV,	capaci	ty @0.4ESP		
3. Fan Duct Si	ize and E	Equivalent Length			•		
a) Installed I	Equivaler	nt Length:					
Length of	duct	ft + Ext. hood 30 ft + (# elbows	at 10	ft each =) =	ft (F)	
b) Choose ty					or Rigid (smooth)	duct	
c) Duct size	required	to flow Box E cfm throug	h Box F equiv	alent	length of duct $= [$		
Use Table	9.32.3.8	(3) to determine duct size	. .			in Ø	
_		nd Bathroom Exhaust Fa m spot Exhaust requireme		low if	f Principal Exhaust Fa	an meets all or	
	Required	EX	HAUST EQUIP	MENT	Γ		
	EXHAUST				CEILING FANS	Ex.Fan/CEV	
D0016	Rate Table	Fan Make & Model			g per Table 9.32.3.8.(3)	Principal	
ROOM	9.32.3.6				Max. Equiv. Installed Equiv.	System CFM	

	REQUIRED	EXHAUST EQUIPMENT						
	EXHAUST RATE	Spot Exhau	ıst Kitcher	& Bath	WALL	/CEILING	FANS	Ex.Fan/CEV
ROOM	Table	Fan Make & Model	CFM @ 0.2 ESP				9.32.3.8.(3)	Principal
	9.32.3.6		Manf. Rated	Duct Di rigid	flex	Max. Equiv. Length per table	Installed Equiv. Length	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*

TOTAL (must = Box E)

Guidelines Appendix page 16-A, Duct Sizing for Larger Fans. © March 2015 TECA All Rights Reserved Checklist 3, pg1of2

Removed reference to RADON in Make-up Air Requirements

5. CRV Fresh Air Intake & Mixing Fan a) Box G CFM is minimum 2 times Bo		annan wintan da	aian tanananatuna	
b) Box G CFM is minimum 2 times Bo				
Make Me		_	iperature.	
c) Duct Size for Fresh Air intake into r		0.4 ESP	cfm	(G)
Min 4"Ø rigid duct, must be insulated Min 5"Ø, flex duct, must be insulated	_	-		
6. CRV Fresh Air Circulation (Choose a	or b)			
a) Draw air from bedrooms and Supply b) Draw air from common area and Su				
7. If Heated Crawlspace present				
Choose ventilation option 1, 2, or 3 pe MAKE-UP AIR Requirements	r sentence 9.32.3.7 (2).			
1. NAFFVA (Naturally Aspirated Fuel Fir No, Omit Steps 2 & 3	red Vented Appliance) pro	esent in dwelling	gunit? (per Sentence	9.32.4.1)
Yes, Proceed to Step 2				
2. Exhaust Appliance present which exc No such appliance. Omit Step 3				
Yes, Commit to Depressurization Test Yes, Proceed to Step 3	t (See CAUTION, TECA	Vent Manual pg	24)	
3. Use Active Make-up Air for Exhaust A				
Make-up Air Fan required:	Exh Madal	aust Appliance A	Actual Installed Cf	
Fan Makeinches	For Location		ake-up Air Fan Cf	
Fan interconnected with exhaust app				
a) Active Make-up Air delivered to an U i) Tempering Required per 9.32.4.1.(4)(Show calculation how make-up air v	J noccupied Area first (n (a):	ot directly to room	m containing the app	pliance).
Make-up Fan cfm X 1.08 X	(34° F – °F Winte	er Design Temp y	our location)	= (kw)
	3412 BTUH/k	W		Duct Heater
ii) Transfer Grill Required: Size 1 sq in iii) Additional Tempering Required per	9.32.4.1.(4)(b) before tra	nsfer to occupied		
how make-up air will be further to	m x 1.08 x (54° F – 34°F	1	(1) II4 f	
	12 BTUH/kw	=		m unoccupied area
			required to r	raise temp by 20°F
Tempered by: OR b) Active Make-up Air delivered to	an Occupied Area: Tem		d. Show calculation	how make-up air will
be tempered to at least 54°F (12°C Make-up Fan cfm x 1.08 x 0		er Design Temp v	your location)	
© March 2015 TECA All Rights Reserved		d Besign Temp y		(kw)
Installer Certification:	3412 BTUH/KW			uct Heater
I hereby certify that the design and installa	ation of the ventilation sy	stem	2012 TECA V Certification	
complies with the 2012 B.C. Building Coo			Certification	n Stamp
Date				
Print Name				
Signature				
Company				
Phone Checklist 3, pg2of2				
Checklist 3, pg2of2				I



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 *mild* coastal & moderate interior climates where winter design temperature is warmer than -4°F.

coastal &	moderat	te interior climates where	winter	design	temp	erature is	warmer the	an –4°F.
Civic Address_							Permit No	
Climate Zone:		Number of Bedrooms		(11) w		A bedroom is a room with an openable window (minimum dimensions apply), closet and a closing interior door.		
	Total Floor area of living spa			ft²	(B)			
7	Total Inte	erior Volume of Dwelling		ft³			me includes all luding crawlspa	heated interior are if heated).
.5 ACH (air ch	.5 ACH (air changes/hr) = Volume x 0.5 \div 60			cfm	(C)		pliances exceed y require make-	
1. Principal Ve	ntilation	System Exhaust Fan M	Iinimuı	m Air-f	low R	ate		
		from Box (A) and Total squ					and Table 9	.32.3.5. to
	m Requ	iired Prinicpal Exhaust	System	Capac	city		cfm (D)
2. Principal Sys	stem Fa	n Choice						
a) Exhaust Far	n contin	uous running Make		N	Iodel_		Sone	e Rating
Location:				Capacit at 0.2 E	•	cf	Em (E) Mu	ust be \geq than Box (D
b) Choose typec) Duct size rUse Table	duct be of duce equired 9.32.3.8	ft + Ext. hood 30 ft + (et: to flow Box E cfm throug (3) to determine duct size	th Box l	Flex Fequiv	duct [alent l	or Rig	id (smooth) duct = [in Ø
-		nd Bathroom Exhaust Fa m spot Exhaust requireme		-11St be	10W 1I	Principal	Exnaust Fa	in meets all of
	REQUIRED	ЕХ	KHAUST	EQUIP	MENT			
	Exhaust ⁻ Rate	Spot Exhaus	t Kitcher	& Bath	WALL	/CEILING	FANS	Ex.Fan/CEV
ROOM	Table	Fan Make & Model	CFM	*Duc	t Sizing	per Table 9	Principal	
ROOM	9.32.3.6		@ 0.2 ESP Manf. Rated	Duct Di rigid	a (in Ø) flex	Max. Equiv. Length per table	Installed Equiv. Length	System CFM

* For fan capacities exceeding 175cfm in Table 9.32.3.8(3), follow manufacturer's

TOTAL

installation instructions or use good engineering practice to size duct. See Ventilation

(must = Box E)

Cividelines Appendix page 16. A. Duct Siring for Larger Eggs. (March 2015 TECA All Bights Received. Checklist 4, pg

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 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 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) -up Air Fan required: Exhaust Appliance Actual Installed Cfm ______ Fan Make _____ Model ____ Make-up Air Fan Cfm ______ Make-up Air Fan required: 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 room containing the appliance). 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) before entering unoccupied area. 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 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). Make-up Fan ____cfm x 1.08 x ($\mathbf{54}^{\circ}$ 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 Required. Show calculation how make-up air will be tempered to at least 54°F (12°C). Make-up Fan cfm____ x 1.08 x (**54° F** – _____°F Winter Design Temp your location) = _____ (kw) 3412 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 ventilation system **Certification Stamp** complies with the 2012 B.C. Building Code, 2014 Section 9.32 Amendment. Phone Checklist 4, pg2 of 2