

# ASHRAE 62.2-2013 Whole Building Ventilation Calculations

## New and Existing Homes

Clear Entries

### Basic Building Data

Select State or Province	
Select City	
Enter Square footage	
Enter # of Bedrooms	
Select # of Floors	

Infiltration Credit	Start	Finish
Enter Blower Door CFM <sub>50</sub>		

Appendix A Existing Building Calculations		
	Start	Finish
<b>Kitchen</b>		
Window?		
Enter Fan CFM		
<b>Bath 1</b>		
Window?		
Enter Fan CFM		
<b>Bath 2</b>		
Is there a 2nd Bath?		
Window		
Enter Fan CFM		
<b>Bath 3</b>		
Is there a 3rd Bath?		
Window		
Enter Fan CFM		
Ventilation "Deficit" CFM		

	Start	Finish
Exist. Adjusted Whole Bldg CFM	#N/A	#N/A
New Bldg Whole Bldg CFM	#N/A	#N/A

*(Note for new homes Local Exhaust ventilation must be added)*

ACH <sub>50</sub>	No CFM50	No CFM50
ACH <sub>Natural</sub>	No CFM50	No CFM50

Target CFM <sub>50</sub> (0.35 ACH)	#N/A
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### **About this sheet**

This sheet is designed to determine the volume of airflow required to meet the ASHRAE 62.2-2013 whole building ventilation requirement.

There is a tab at the bottom of the page that links to a Report Sheet that can be completed and signed to document the system.

The "Exist. Adjusted Whole Bldg CFM" cells display the ventilation requirements for existing buildings adjusted for existing fans, windows and infiltration credit.

The "Whole Bldg CFM (New Bldg)" displays the CFM required for new buildings, adjusted with the infiltration credit. Note that for new buildings, local exhaust ventilation must also be installed.

It displays required ventilation when the building is tightened, calculates the  $ACH_{50}$ ,  $ACH_{natural}$ , and the Target CFM50 for .35  $ACH_{natural}$ .

Ceiling height assumed to be 8 feet.

Note that the calculations are based on ASHRAE's TMY 3 weather data, and the number of stories of the building.

If Macros are active, select "Clear Entries" to clear all the entry fields.

### **Using the Sheet**

Select the closest State or Province.

Select the closest Weather Station.

Enter the square footage of the house.

Enter the number of bedrooms.

Select the number of floors.

Enter the Blower Door  $CFM_{50}$  (if it is known) in the "Start" cell.

### **Existing Building Adjustment**

NOTE: Calculations assume that if there is no entry for a window or fan in the kitchen, the Existing building calculations are not being used.

The "Finish" column allows you to adjust the fan sizes to achieve a '0' cfm deficit.

Select "Yes" or "No" for a window in the kitchen.

Enter the measured fan CFM in the kitchen.

Select "Yes" or "No" for a window in the bathroom.

Enter the measured fan CFM in the bathroom.

Select "Yes" or "No" for second bathroom, etc.

Note that for intermittent control, click the Intermittent Control tab.

Click on the Report Control tab for a printable report version of the data.

**Whole Building Ventilation Intermittent Control**

All information with PINK fill is generated automatically.

Enter the total cycle time (total On plus Off time).

Enter the cfm fan to be used, sheet will calculate required ON time

or

Enter the desired fractional on time (half time would be .5)

and the sheet will calculate the cfm of the fan required.



House is in:	,	0
Square feet:	0	
# of Bedrooms:	0	
# of Stories:	0	

**Continuous Whole Building Ventilation Required**

	Start	Finish
Existing Bldg	#N/A	#N/A
New Building	#N/A	#N/A

**For Intermittent Operation**

Enter Total cycle Time Time On + Time Off:  Hour(s)

Existing House		Start	Finish
Enter installed fan CFM:			
Minutes on:	#N/A	#N/A	
Minutes off:	#N/A	#N/A	
OR		Start	Finish
Enter desired fractional on-time:			
Fan cfm Required:	#N/A	#N/A	
Minutes on:	0	0	
Minutes off:	120	120	

New House		Start	Finish
Enter installed fan CFM:	80		
Minutes on:	#N/A	#N/A	
Minutes off:	#N/A	#N/A	
OR		Start	Finish
Enter desired fractional on-time:			
Fan cfm Required:	#N/A	#N/A	
Minutes on:	0	0	
Minutes off:	120	120	

#N/A

Project Name:

Project Address:

Project City:

Project State:

Project Zip:

Floor area:  Square feet

# of Bedrooms:

Combustion CFM Threshold:  cfm

If the sum of highest flow rate of the two largest fans exceeds this number, make-up air must be supplied to any atmospherically vented appliance.

Whole Building Ventilation Type:

Continuous      Intermittent

Control (check):

Closest Weather Station:

Target CFM<sub>50</sub> (0.35 ACH)

Blower Door (CFM<sub>50</sub>): Start      Finish

    

ACH<sub>50</sub>      

ACH<sub>n</sub>      

Whole Building CFM Required

New      

Existing      

Measured Flow (enter):

These calculations were made to determine the correct ventilation flow rate based on the ASHRAE 62.2-2013 Standard. I attest that the results are correct and accurate to the best of my knowledge and ability.

Signed:

For:

Date: