

## Combustion Air Supply Exemption

Michigan Mechanical Code section 701.1 redirects to the International Fuel Gas Code (IFGC) with regards to combustion air in residential new construction. The IFGC allows the use of INTERIOR AIR for combustion supply to natural draft and power vented appliances (Section 304.5-304.5.2).

*Standard Method* allows the use of interior air for combustion supply where the volume of indoor air (in the combustion appliance zone) must be 50 cubic feet per 1000 BTUs of appliance input.

Where the infiltration rate of the home is known to be less than .4 ACH, the calculation below must be followed to determine the required volume of indoor air in the combustion appliance zone (CAZ).

For Fan Assisted Appliances (Power-Vent water heaters or furnaces with draft assist)

$$Required\ Volume_{fan} \geq \frac{15\ ft^3}{ACH} \left( \frac{I_{fan}}{1,000\ Btu/h} \right)$$

**(Equation 3-2)**

NOTE: The ACH in the formula above references NACH or ACHn which is the "natural" air infiltration, not the energy code ACH50 which is the air changes "at test pressure" of -50 Pascals. To convert ACH50 to ACH, it is approximately ACH50 divided by 17.

<b>1. ACH50 this house</b>	From blower door test results or estimated infiltration	<input style="width: 100%;" type="text"/>
<b>2. ACH nat of this House</b>	Divide ACH50 (line 1) by 17	<input style="width: 100%;" type="text"/>
<b>3. Appliance BTU Input</b>	From water heater mfg label	<input style="width: 100%;" type="text"/>
<b>4. Volume Required</b>	(15 ÷ ACHnat) x (Appliance BTU Input ÷ 1000)	<input style="width: 100%;" type="text"/>
<b>5. Volume of CAZ</b>	Volume of air space in the Combustion Appliance Zone	<input style="width: 100%;" type="text"/>

If the volume of available air in the CAZ (line 5) is greater than the volume required (line 4), additional combustion air intake is NOT needed to comply with Mechanical Code Section Section 304.5-304.5.2

Prepared By:	
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Property Address:
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