

MECHANICAL CODE DISCUSSION

Fireplaces and Energy Efficient Construction



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The 2012 International Energy Conservation Code requires fireplaces to have gasketed doors. The purpose of this requirement is to limit air leakage through the building thermal envelope. While it's important to limit air leakage while a fireplace is not in use, there is a critical need to insure an operating fireplace does not place a home in a critical negative pressure condition.

a small 2 bedroom rambler with a masonry fireplace in the living room. This home would not be considered tight in construction, especially compared to a home built

today. All of the homes in this housing tract, of similar style, experienced an identical negative problem when we built a roaring fire in the fireplace. of course, the problem was a B-vent reversal, where the home ran so negative, the B-vent became a source

for fireplace combustion air. The solution was to crack open the living room window providing a combustion air source near the fireplace.

Consider the fireplace in the above photo. This is a high end Isokern fireplace with a 14" chimney and a 6" combustion duct. Common sense tells us the 28 sq. in. area of the combustion air duct is far smaller than the 154 sq. in. area of the chimney, and will not satisfy the outside air requirement for either a gas or wood fire. Compounding the issue is Isokern does not recommend

doors on their fireplaces. The conclusion is not popular but accurate; open hearth fireplaces do not belong in tightly sealed homes built today. This statement is accurate, an open hearth fireplace is simply a wood or gas powered exhaust fan. ■

Your comments, suggestions and questions are always welcome—Brent