



Gerkin™

WINDOWS & DOORS

Window Performance Starts with Air!



Air Infiltration Matters

- Recently all of the talk has been about u-values and solar heat gain. If we are comparing fixed windows for energy loss that may be all that needs to be looked at, but when comparing operating windows, that's a whole new story. Very few people understand what air infiltration is or why it is important. Air infiltration can greatly affect energy loss and utility costs. Just because two windows have the same u-value does not mean they will perform the same in your building. Let's look at some facts.

Why is window air infiltration important?

- Imagine a 12' x 12' room with a 6' x 5' window in it. Air infiltration will cause the room to exchange the inside air with the outside air. The more air exchanges you have, the more times your heating and cooling system have to recondition the air in the room
- Formula – Divide the room mass by the amount of air loss of the window. This will tell us how long it will take to exchange the air in the room based on the variable air infiltration rates.
- Example Specs – 12'x12'x8' room = 1152 cu ft , Window area = 30 sq ft , air infiltration rate = .04 cfm.
- Example Calculation - Air loss: $30 \times .04 = 1.2$ cfm (1152 divided by 1.2 = 960 minutes or 16 hours to exchange the air in the room.
- Let's see how different air infiltration rates can dramatically affect the amount of air exchanges and thus your cost of heating and cooling.

The affects of air infiltration

● Air Infiltration Rate

- .01
- .04
- .07
- .10
- .13
- .17
- .22
- .25
- .30 (Typical architect Spec)

● Air Exchange Rate

- 64 Hours
- 16 Hours
- 9.1 Hours
- 6.4 Hours
- 4.9 Hours
- 3.8 Hours
- 2.9 Hours
- 2.5 Hours
- 2.1 Hours

The Gerkin Difference

- All Gerkin products are designed with overall performance in mind. Our air infiltration rates are among the lowest in the country. Add to this our incredible u-values, solar heat gain and design pressures, Gerkin out performs the competition. As a result, buying Gerkin products saves on energy loss which makes Gerkin an overall better value.



