

Preliminary
Energy Efficiency Test Results
for
The Freedom Pet Pass™ Dog Door
And The
“World's Best Selling Pet Door”

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Conducted by:

Building Performance

by Design

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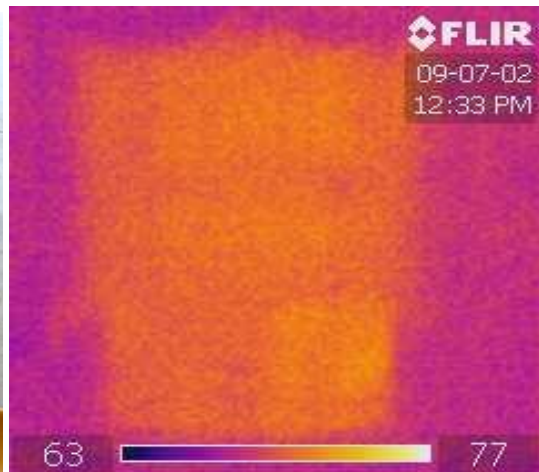
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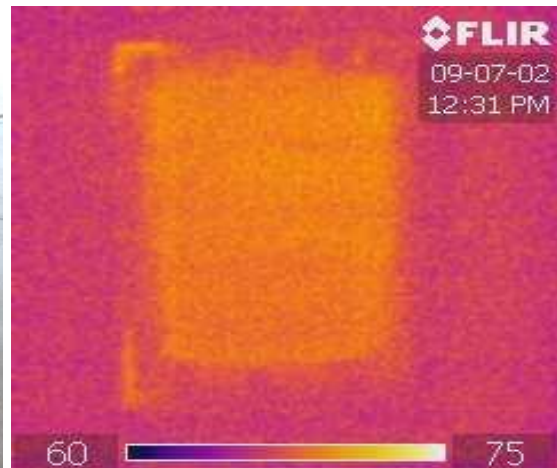
Air leakage tests and thermal imaging were conducted on the Freedom Pet Pass and the “Worlds Best Selling Pet Door”. The temperature and air leakage test conditions were identical for the dog doors tested. Ambient air was 65.7° F and test pressure was +50pa.



The Freedom Pet Pass dog door did not have any detectable air leakage while performing the air leakage test, and the multi-layer of SBR rubber and two layers of marine grade canvas with a total R-value of approximately of 0.35 did provide a decent thermal barrier.



The “Worlds Best Selling Pet Door” had significant air leakage while performing the air leakage test and the single layer of plastic with an approximate R-value of .25 did not provide a good thermal barrier.



Preliminary Test Results

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The preliminary test results indicate that the Freedom Pet Pass out preformed the competitive “Worlds Best Selling Pet Door” in air leakage test.

The main goals of air leakage control are to:

- ◆ Save energy.
- ◆ Increase comfort.
- ◆ Protect insulation’s thermal integrity.
- ◆ Reduce direct cooling or heating of people and building components by outdoor air.
- ◆ Avoid moisture migration into building cavities.
- ◆ Reduce vermin’s access to indoors.
- ◆ Reduce flow of air pollution from external sources.
- ◆ Reduce rainwater leakage.
- ◆ Enhance fire safety.

The energy savings through infiltration when comparing the Freedom Pet Pass to the “Worlds Best Selling Pet Door”; the unique magnetic seal of the Freedom Pet Pass design reduces the infiltration by 190% when compared to the “Worlds Best Selling Pet Door”. Air leakage in buildings represents from 5% to 40% of the space-conditioning costs. Controlling air leakage is one of the most important functions.

The Freedom Pet Pass pet flap multi- layer design incorporating SBR rubber and two layers of marine grade canvas with a total R-value of approximately of 0.35 did provide a decent thermal barrier. The Freedom Pet Pass design reduces the thermal losses by 25-30% when compared to the “Worlds Best Selling Pet Door”.

Some dog door manufactures make claims that a double movable flap provides additional R-value due to a dead air space between the door flaps. When you talk about “two flaps” being more effective than one flap by creating dead air space, there are many factors to consider. In the case of a pet door, heat will be lost or gained anytime the door is used. How well the door is sealed will affect how much air infiltrates around the edges while it is closed, and how well-insulated the pet flap is will affect how much heat is transferred by conduction through the door. How fast the wind is blowing, the temperature difference between warm and cool areas, and the frequency of use will impact how fast heat is transferred as well. If you have a pet that prefers to stand or lay in the doorway keeping it open, you are back to a “hole in the wall” regardless of how well it works when closed. Testing indicates that due to the air leakage around the flaps of a double flap pet door; a dead air space is not truly created and therefore additional R-value cannot be substantiated.