

**THERMAL PERFORMANCE
COMPUTER SIMULATION REPORT**

Rendered to:

ACCESS MAGNETICS LLC

**Freedom Pet Pass Energy Efficient Dog Door
TYPE: Pet Door (Door Mounted)**

**Report No.: D3599.01-116-45
Report Date: 04/03/14**

**THERMAL PERFORMANCE
COMPUTER SIMULATION REPORT**

Rendered to:

ACCESS MAGNETICS LLC
3104 Old Kawkawlin Road
Bay City, Michigan 48706

Report No.: D3599.01-116-45
Simulation Date: 04/03/14
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Project Summary: Architectural Testing, Inc. was contracted to conduct a computer model thermal analysis. Architectural Testing, Inc. utilized the THERM 6.3 and WINDOW 6.3 computer software developed by Lawrence Berkeley Laboratory. Simulations were conducted to determine the effect of the pet door on the U-Factor of the overall entry door in which it is installed. The products were evaluated in general accordance with NFRC requirements to the standard listed below.

**NFRC does not define ratings for pet doors nor provide explicit direction for their modeling. The results of this analysis do not constitute an official NFRC rating.*

Standards:

NFRC 100-2010: Procedure for Determining Fenestration Product U-Factors

Simulation Specimen Description:

Product: Freedom Pet Pass Energy Efficient Dog Door
Type: Pet Door (Door Mounted)

Modeling Assumptions:

1. Models were constructed at ideal conditions. Hardware, fasteners, and weep holes were not modeled.
2. All simulations were completed using supplied AutoCAD drawings.
3. The modeling procedure is two-dimensional. It does not take into account three-dimensional heat flow, as might occur at the corners of an assembly.

Modeling Conditions:

All conditions specified in NFRC 100 were utilized and are noted below.

Exterior Air Temperature: -0.4°F
 Exterior Wind Velocity: 12.3 mph (Perpendicular Flow)
 Interior Air Temperature: 69.8°F

References:

THERM 6.3 Program: This software was developed by the Lawrence Berkeley Laboratory. The program calculates heat loss through frame and edge-of-glass components using finite difference analysis. The program solves for temperature and heat flow distribution throughout the cross section. The temperature distribution can then be used to determine overall heat loss, total and component U-factors, and local temperatures at points of interest.

WINDOW 6.3 Program: This software was developed by the Lawrence Berkeley Laboratory. The program calculates U-factor and temperatures for the center-of-glazing using a two-dimensional heat flow analysis.

Procedure:

A standard fiberglass entry door with a polyurethane foam core was modeled to determine a baseline performance. This door was then modeled with three sizes of the pet door to determine the change in overall door performance when the pet door is installed.

Results:

Product Description		Total U-Factor	Adder
Baseline	Fiberglass Entry Door	0.158	
Freedom Pet Pass Dog Door installed in Fiberglass Entry Door			
	Small - 6" x 10" Opening	0.184	0.026
	Medium - 9" x 13" Opening	0.199	0.041
	Large - 11" x 17" Opening	0.220	0.062

The Adder noted above can be used in conjunction with any labeled NFRC U-Factor to determine the final performance of the Entry Door with the pet door installed.

Architectural Testing will service this report for the entire test record retention period. Test records that are retained such as detailed drawings, datasheets, representative samples of test specimens, or other pertinent project documentation will be retained by Architectural Testing, Inc. for the entire test record retention period. The test record retention end date for this report is April 3, 2018.

Results obtained are tested values and were secured by using the designated test methods. This report does not constitute certification of this product nor an opinion or endorsement by this laboratory. It is the exclusive property of the client so named herein and relates only to the specimen(s) tested. This report may not be reproduced, except in full, without the written approval of Architectural Testing, Inc.

For ARCHITECTURAL TESTING, INC.:

SIMULATED BY:

REVIEWED BY:

Dale C. White
NFRC Certified Simulator

Michael J. Thoman
Director - Simulations & Thermal Testing

DCW:ksl
D3599.01-116-45

Attachments (pages): This report is complete only when all attachments listed are included.

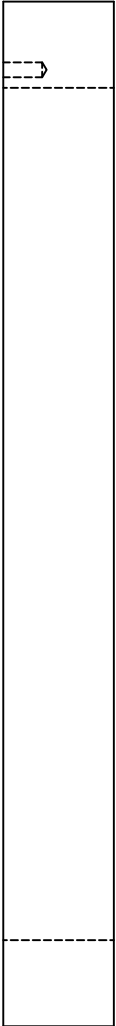
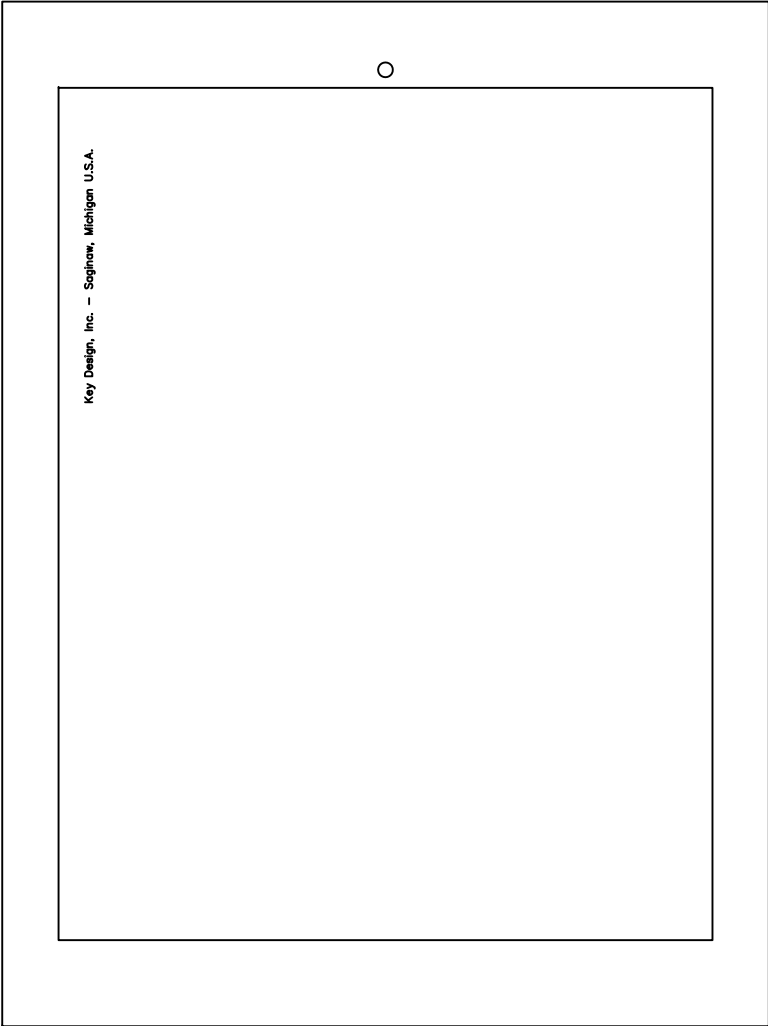
Appendix A: Project and Cross-Sectional Drawings (13)

Revision Log

Rev. #	Date	Page(s)	Revision(s)
.01 R0	4/3/2014	All	Original Report Issue to Access Magnetics LLC

Project and Cross-sectional Drawings

REVISIONS					MF
REV	DET	CHANGE	BY	CK	DATE





 Architectural Testing	Report #:	D3599.01-116-45
	Date:	4-3-2014
	Verified by:	<i>Michael J. Thoman</i>


 BOX FRAME
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 MATL: PVC

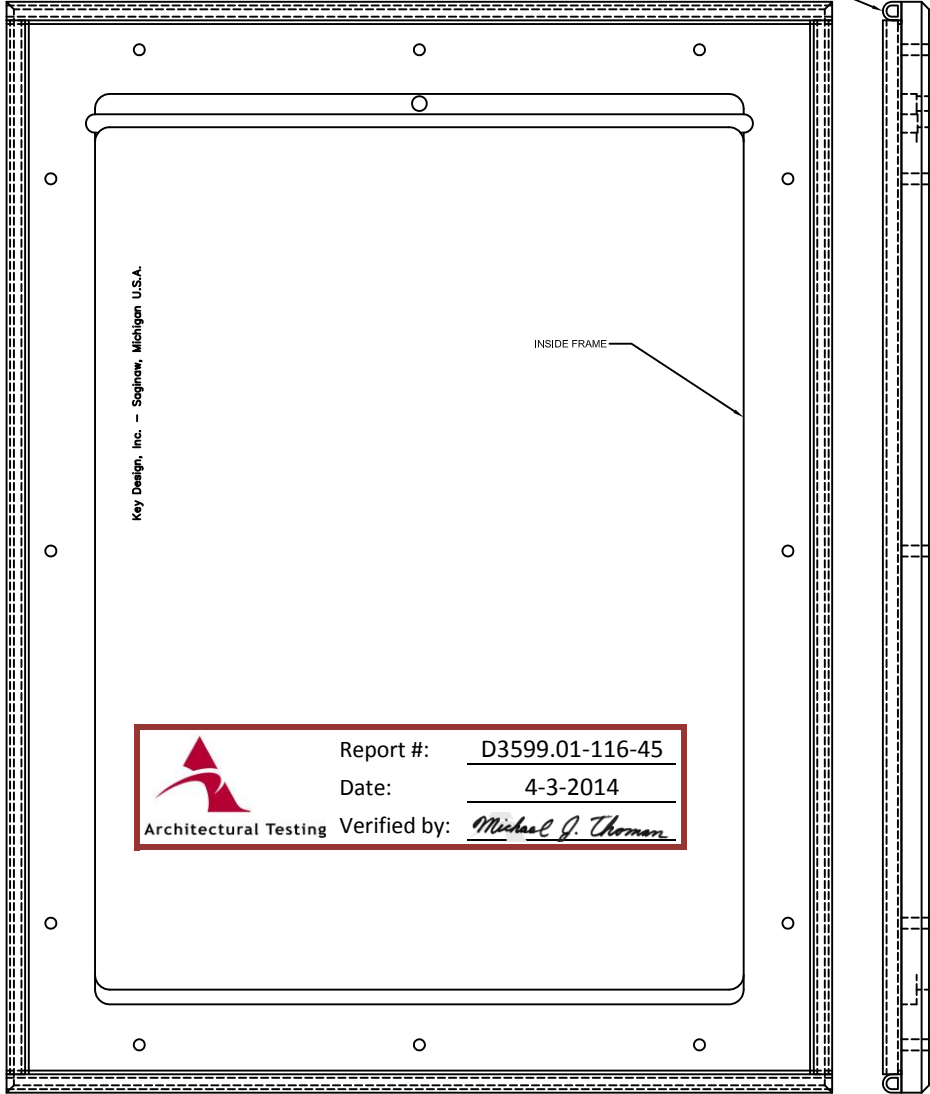
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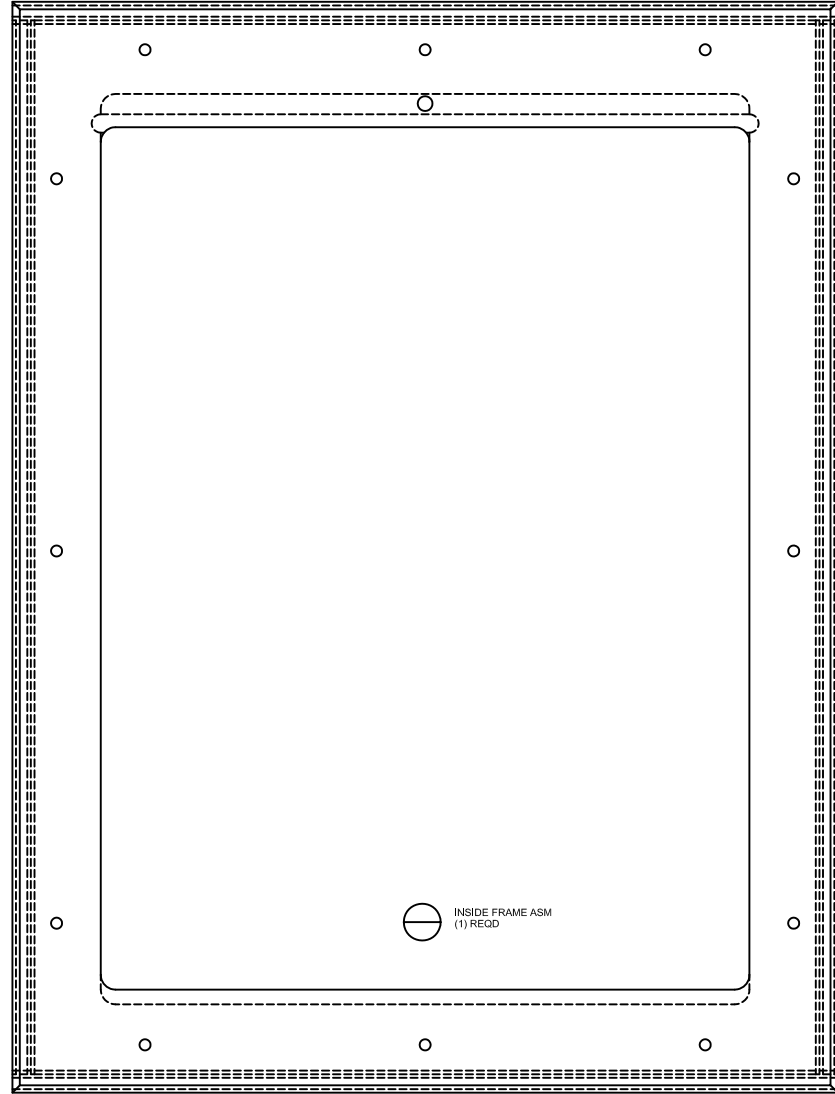
FREEDOM PET PASS

 THIRD ANGLE PROJECTION	SHEET NO.	TOTAL SHEETS	DESIGN APPROVED CHECKED DATE	DRAWN SCALE 1:1 DATE
	DRAWING NUMBER	DATE	DATE	DATE

FOAM SEAL .375 X .25




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
INSIDE FRAME ASM
(1) RECD

REVISIONS				
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 2. PLACE DECIMALS 0.005
 3. PLACE DECIMALS 0.0005
 4. PLACE DECIMALS 0.00005

KEY DESIGN INC.
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DESIGN APPROVED	DRAWN
CHECKED	SCALE 1:1
DATE	DATE
DRAWING NUMBER	

THIRD ANGLE PROJECTION


SHEET NO. **0**
 TOTAL SHEETS

Freedom Pet Pass

Energy Efficient Pet Doors

Door Mount Installation Instructions

 Architectural Testing	Report #:	D3599.01-116-45
	Date:	4-3-2014
	Verified by:	<i>Michael J. Thomas</i>

WARNING: TODDLERS AND CHILDREN CAN FIT THROUGH PET DOORS AND MAY ESCAPE OUTSIDE UNATTENDED.

*Now you have purchased your pet door and you'll have to decide whether you're going to install it yourself or have someone do it for you. Proper installation is a prerequisite for the weather tight seal. If you're very handy, self-installation is the cheapest way to go. But if you're not, the extra cost of having your pet door professionally installed may be well worth the convenience, as well as peace of mind in knowing it's done properly and securely.

Freedom Pet Pass Door Mount Installation Tips: (install video online) www.energyefficientdogdoors.com

Note: Do not mount pet door too low on your door. This may damage the structural integrity of your door.

Decide the proper height to install your pet door (see Freedom Pet Pass sizing tips). Use the outside of the frame inserts (see arrows on frame and trace around) to create the dimensions for the rough-cut opening.

Note: Before making the rough-cut opening verify your trace lines are level to ensure a watertight seal with our flap system when the pet door is mounted.

Once the hole for the pet door is cut check for fit.

1. Imbed the pet door into the exterior pet doorframe (side without screw holes) with a high-grade acrylic silicone caulk. This provides for easy cleanup and a surface that accepts paint.

Note: Before you caulk, verify the security door or interior side of your pet door will face the interior of your home when installed.

2. With your home door mounted in place, caulk the outside flange of the exterior pet door frame and apply the pet door into your home door from the outside.

3. With help from an assistant apply the interior pet door frame (side with screw holes) with the screws provided to the inside of your door to secure your pet door to your door. Do not over tighten screws. Wipe away excess caulk.

Note: For a cleaner installation use a wood shim to remove excess caulk after it has cured. A wood shim is less likely to cause scratches on the surface you are cleaning.

The PVC frame accepts plastic spray paints to color coordinate the color of the PVC frame to your door. For best results properly prepare the PVC frame to accept a plastics spray paint to prevent blemishes. Consult a paint expert if you are unsure as to priming PVC.

If you do not feel comfortable installing a self-framing door mount pet door we suggest asking a handy friend or hiring licensed contractor to install this custom application for you.



Freedom Pet Pass Do's and Do not's

Do not allow leashed pets to pass through the pet door.

Do not force your pet through the pet flap when training it to use the pet door.

Do lift the black magnetically lined jam and allow your pet to pass through the pet flap on its own to encourage your pet to use the pet door, reward with treats and praise.

Do not rely solely on the chew guard to prevent a mischievous pet from chewing the magnetically lined jam. The chew guard simply reduces the damage a pet may cause.

Do use a powerful anti-chewing product to completely prevent a mischievous pet from chewing. Consult your vet to identify the most effective product.

Do remove debris from magnets with a dry rag once a month for optimal sealing.

Do use a non-detergent cleanser (Woolite) and a soft scrub brush to remove dirt from the canvas coated pet flap.

Do not allow children to use the pet door.

Do expect an energy-efficient seal and a happy pet if you follow these simple instructions.

Pet Door Training Tips

Finally, you have your new pet door installed! However, your dog will not instantly know what it is, or how to use it. You're going to have to teach him how (as with all training) and be prepared for it to take some time. Many dogs learn to use pet doors within a very short time. But others, especially timid or anxious dogs, might take weeks of patient coaching before they will be confident enough to use their doors. Be patient, don't rush it, and above all don't force your dog because, if you do, you may make him so afraid of the door that he will never use it.

There are basically two approaches to teaching your dog to use his new door.

Dog isn't afraid of the door method:

The traditional method of training a dog to use a pet door is really just a matter of showing the dog the door, then putting yourself on one side of the door, your dog on the other, and enticing him to go through it by calling him or holding a treat. Of course, when he does come through, reward him with the treat, and spend a few minutes petting and playing with him before repeating the exercise. Many dogs will catch on in just a few minutes. Others will take a day or two. For the slower learners, try coaxing him from both inside and outside. If he seems very confused, try propping the door open at first, then lower it when he seems to understand what it's for. Keep the whole exercise positive, be sure not to push your dog through the door or otherwise turn it into an unpleasant experience, and eventually he'll get the idea.

Dog is afraid of the door method:

The above method may not work for some dogs, who are just too timid or anxious about the whole idea. If your dog is one of these, it may seem at first as though he will never catch on. Training the timid or anxious dog does take a lot more time and a lot more patience, but if you stick to it, don't rush him, and above all don't frighten or scold him, even this dog can eventually learn to use his door.

- Begin by removing the door's cover or flap altogether, or use heavy tape to keep the door completely open. Entice your dog through the door by using treats, affection, whatever works. When he does, reward him and play with him for several minutes before trying again or he might think it was a bad thing to come in.

- After your dog will come in and out easily as above (and that may take several days), try covering the top part of the opening with a plastic bag or old towel. Entice him through as before. Gradually lower the covering until your dog becomes accustomed to the feeling of it dragging across his back and will go in and out easily

- Replace the towel with a piece of plastic or cardboard, and repeat step 2.

- Reattach or un-tape the original flap and coax the dog through as in the beginning. If necessary, tape a corner of the flap up, or only lower the flap part of the way so the dog can see the opening. Take your time with these steps and, if necessary backtrack to a previous step. With time and patience on your part, eventually even the shyest dog should be able to use the door with ease.



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One Door Mount / Wall mount Frame with Flap system Parts List.

- One outside frame with flap system attached with screws and snap caps.
- One inside frame for plastic security panel.
- One plastic security panel with Black plastic knob and screw attached.
- Eight screws and snap caps to attach inside frame to outside frame.
- One length (to be spit in two) white compression spacer.
- One ring with locking pin.

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