

Florida's Blower Door Test: 3 Things Multifamily & Production Home Builders Need to Know

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Starting on July 1, 2017, blower door tests became a requirement in Florida's building code for all new residential homes and multifamily buildings three stories or less. This means that blower door tests are now more important than ever for [multifamily](#) and [production home builders](#). To help you navigate through this new development, below are the three key things to know about blower door tests in Florida.

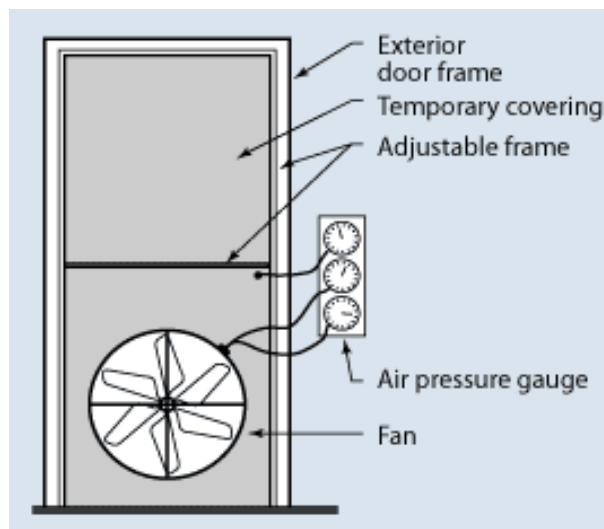
First, though, a quick [blower door test overview](#):

What's a Blower Door Test?

A blower door test determines: 1) The overall airtightness of a home by revealing the air infiltration rate and 2) Where any air leaks might be hiding.¹ Proper home airtightness is important because it reduces energy consumption, avoids moisture condensation problems, prevents air leaks and helps identify how much ventilation is needed to provide acceptable indoor air quality (IAQ).

How Does the Test Work?

Blower door test equipment includes a frame and flexible panel that fit inside an exterior doorway, as well as a variable-speed fan and tools for measuring airflow and air pressure. During a blower door test, the fan is used to pull air out of the house, thus lowering inside air pressure and causing higher-pressure outside air to flow in. This enables technicians to measure air leakage and identify sealing vulnerabilities.



Key components of a blower door test
(Credit: Department of Energy)

¹ "What is a Blower Door Test?," April 10, 2012, RESNET, <http://www.resnet.us/library/blower-door-test/>.

Now, onto the three things multifamily and production home builders need to know about Florida's blower door test:

3 Things to Know about Florida's Blower Door Test

1) Comply with Code

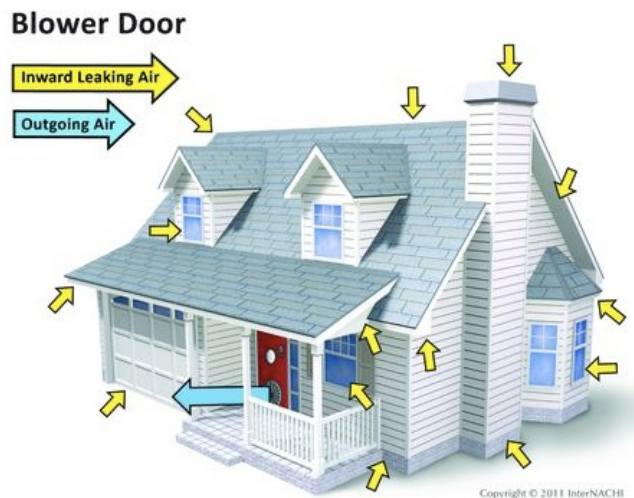
A supplement to the fifth edition of the 2014 Florida Building Code made several updates to Energy Conservation Code [Section R402.4.1.2](#) regarding blower door tests. These include:

- July 1, 2017 was selected as the start date for mandatory building air leakage testing, thus making blower door tests a code requirement for all new residential homes and multifamily buildings three stories or less.²
- A home must have seven air changes per hour (7 ACH50) or less in climate zones one and two (all of Florida) in order to pass the blower door test.³ This means that if a home has wind blowing against it at 20 miles per hour (the equivalent of 50 Pascals pressure), the total volume of air within the house would exchange with outside air up to seven times. All homes are tested at 50 Pascals pressure difference to maintain consistency.

Note, that the best time to do a blower door test is when the home is move-in ready: air-handling systems are installed, electricity is turned on, doors and windows are appropriately sealed and flooring is complete.

2) Build Tight, Ventilate Right

In addition to being required by Florida building code, the blower door test ensures that contractors seal the home properly so you can build tight and ventilate right. For example, you can answer these key questions: Did your window



***The blower door test identifies where air leaks may be hiding
(Credit: InterNACHI)***

² "Blower Door Air Leakage Testing Guide for Florida Code Compliance," Florida Solar Energy Center (FSEC), July 18, 2017, http://www.floridabuilding.org/fbc/commission/fbc_0817/Energy_TAC/Blower_Door_Testing_Guide_for_BASF_for_TAC.pdf.

³ "Blower Door Air Leakage Testing Guide for Florida Code Compliance," Florida Solar Energy Center (FSEC), July 18, 2017, http://www.floridabuilding.org/fbc/commission/fbc_0817/Energy_TAC/Blower_Door_Testing_Guide_for_BASF_for_TAC.pdf.

installer do a good job? Was weather stripping done as expected? Were gaps or cracks left that can lead to problems with mold, IAQ and energy efficiency?

Blower door test results also allow you to document the airtightness levels needed to qualify for [green building and energy efficiency programs](#) for homes and multifamily construction, such as Leadership in Energy and Environmental Design (LEED), National Green Building Standard™ (NGBS) Multifamily, Green Globes, ENERGY STAR and Florida Green Building Coalition (FGBC). Securing these certifications enables you to promote a home's superior airtightness and energy efficiency, thus making properties more desirable and increasing sales and profits.

For a full list of the latest air barrier and insulation inspection component criteria, [click here](#).

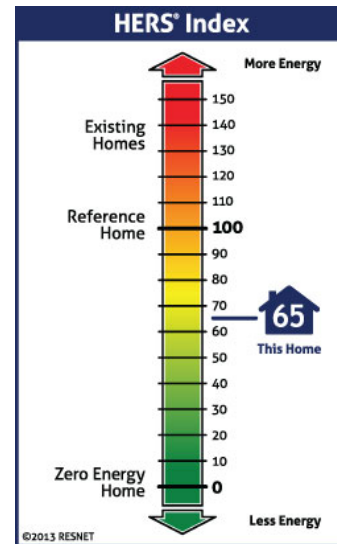
3) One Step Closer to a HERS Rating

The [Home Energy Rating System \(HERS\) Index](#) is the industry standard for measuring a home's energy efficiency, as well as a nationally recognized system for inspecting, testing and calculating a home's energy performance. A HERS rating consists of a [blower door test](#), a [duct leakage test](#), [building energy modeling](#) and a [thermal bypass inspection](#) (pre-drywall), and the lower the score the greater the energy efficiency.

There are many benefits to receiving a positive HERS rating. For example, HERS ratings are required for many green building programs, as well as to be eligible for incentives, such as the [45L tax credit](#), which is worth up to \$2,000 per home. In addition, a HERS rating allows builders to market their homes as more energy efficient and as higher quality than the competition.

4) BONUS: The Test is Easy to Do

A certified professional must conduct Florida's blower door tests, which are easy to do. As a certified rater, RunBrook's [energy rating team](#) has done thousands of tests, and we're especially equipped for multifamily and production home



*The HERS Index measures a home's energy efficiency
(Credit: RESNET)*



Blower door test being conducted by RunBrook, a certified rater

projects with hundreds of residences. We make sure that blower door tests are performed with skill, in a timely manner and in close coordination with the construction manager.

In Sum

Now that blower door tests are a requirement in Florida building code, multifamily and production home builders must familiarize themselves with everything that's involved. Fortunately, if you work with an [experienced and knowledgeable](#) testing professional, the process is quick, efficient and cost-effective. This will save you time and money, help you increase sales, get you one step closer to a home energy rating and green building certification and ultimately boost your bottom line.

For more information on blower door tests, and to see one being conducted by RunBrook, please view a short video by [clicking here](#).

To learn about how RunBrook can maximize the value of blower door testing, [contact us](#) today.

Matt Zirkelbach is Co-Founder and President of [RunBrook](#), an expert in building sustainably and boosting value. RunBrook's consultants, energy modeling professionals, certified energy raters and field inspectors add more value per square foot by optimizing the sustainable design and construction process. For more information, visit: www.runbrook.com.