



Blower Door Testing FAQs

Starting July 1, 2017, new home construction will be required to adhere to the recent Blower Door Testing requirements. Thankfully, SkyeTec, FHBA's Preferred Energy Service Provider, can get you ready now.

Check out their helpful FAQs below. If you have further questions on the new Blower Door Testing requirements, contact SkyeTec at 866.759.3832.

1. When will Blower Door Testing be required on residential homes?

Homes permitted on or after July 1, 2017

2. Where are the Blower Door Testing requirements found?

Section 402.4.1.2 of the Florida Building Code, 5th Edition 2014 Energy Conservation

http://www.ecodes.biz/ecodes_support/free_resources/2010Florida/Energy/PDFs/Chapter%204%20-%20Residential%20Energy%20Efficiency.pdf

3. What is the requirement?

Each home must be 7 air changes per hour (7 ACH50) or less to pass.

Technical discussion: The blower door test simulates that following..... If a home had wind blowing against it at 20 miles per hour for an entire house the total volume of air in the house would exchange with outside air 7 times. The 20 mph wind, is equivalent to 50 Pascals (Pa) pressure difference that we are simulating using a Blower door Fan. All homes are tested at this 50 Pa pressure difference so comparisons can be made between homes/structure, no matter the size or plan type.

4. Does testing requirement apply to Multi-Family?

Yes, if the building is 3 stories or less since the building will be under the residential energy code.

5. Is the Blower Door Test difficult to pass?

If the home meets all sealing requirements found in table R402.4.1.1, passing the Blower Door test will be easy. Please see the attached table.

6. How much will a Blower Door Test cost?

The state average cost is around \$150.00 per Blower Door Test.

7. How long does the blower door take?

It will take 30 minutes to complete after set-up.

8. When should it be performed?

Once the house is complete, all weather-stripping is installed, home has power, water and no holes in the walls.

Please see the attached code readiness sheet.

9. How do I receive the results / what do I do with the results / what paperwork do I provide to the official?

The results are usually left onsite for the builder but can be provided electronically by some providers.

10. What does the blower door tell me?

The blower door tells you how leaky or drafty a home will be, this can contribute to homeowner discomfort. The tighter a house is the better control we can have over pollutants that come in the house, we want to control where the air comes from and filter it before it gets to the occupants.

11. Is mechanical ventilation (fresh air) required?

Only if a home is tested and if found to have less than 3 ACH50 or 3 air changes per hour.

The builders have the following options:

Type	How to	Positive	Negative
Exhaust only	Use of an upgraded exhaust fan in a second bath that runs continuously to meet the requirement	Cheapest option, easiest to control, least costly to operate for the homeowner	Unknow location of fresh air, air is not conditioned before entering the home
Supply Only	A automated fresh air damper is installed and ducted from the outside to the return side of the duct system	Middle of the road cost wise, air is filtered and conditioned as it comes in	House has a slight positive pressure, can be a more costly for home to operate as the air handler is used as the motor to pull air in.
Balanced	Install a ERV, or a combination of the automatic damper and exhaust fan	Air is filtered and conditioned, the conditioned air cools the air that comes into the home, more efficient than Supply only as it is a smaller motor	Most costly, requires another mechanical system to be installed and maintained

12. Why is the 3ACH important in determining the need for mechanical ventilation?

If a home is less than 3 ACH50, there will be little air exchange in the home when it is under natural conditions. With this being the case it has been found that the homes can increase in humidity and the air can become stagnant. The 3 ACH50 is the industry standard for the need of mechanical ventilation.

13. Where are the Mechanical Ventilation requirements found?

In cases below 3 ACH50 refer to M1507.3 for whole-house mechanical ventilation requirements.

**TABLE R402.4.1.1
AIR BARRIER AND INSULATION INSTALLATION**

COMPONENT	CRITERIA ^a
Air barrier and thermal barrier	A continuous air barrier shall be installed in the building envelope. Exterior thermal envelope contains a continuous air barrier. Breaks or joints in the air barrier shall be sealed. Air-permeable insulation shall not be used as a sealing material.
Ceiling/attic	The air barrier in any dropped ceiling/soffit shall be aligned with the insulation and any gaps in the air barrier sealed. Access openings, drop down stair or knee wall doors to unconditioned attic spaces shall be sealed.
Walls	Corners and headers shall be insulated and the junction of the foundation and sill plate shall be sealed. The junction of the top plate and top of exterior walls shall be sealed. Exterior thermal envelope insulation for framed walls shall be installed in substantial contact and continuous alignment with the air barrier. Knee walls shall be sealed.
Windows, skylights and doors	The space between window/door jambs and framing and skylights and framing shall be sealed.
Rim joists	Rim joists shall be insulated and include the air barrier.
Floors (including above-garage and cantilevered floors)	Insulation shall be installed to maintain permanent contact with underside of subfloor decking. The air barrier shall be installed at any exposed edge of insulation.
Crawl space walls	Where provided in lieu of floor insulation, insulation shall be permanently attached to the crawlspace walls. Exposed earth in unvented crawl spaces shall be covered with a Class I vapor retarder with overlapping joints taped.
Shafts, penetrations	Duct shafts, utility penetrations, and flue shafts opening to exterior or unconditioned space shall be sealed.
Narrow cavities	Batts in narrow cavities shall be cut to fit, or narrow cavities shall be filled by insulation that on installation readily conforms to the available cavity space.
Garage separation	Air sealing shall be provided between the garage and conditioned spaces.
Recessed lighting	Recessed light fixtures installed in the building thermal envelope shall be air tight, IC rated, and sealed to the drywall.
Plumbing and wiring	Batt insulation shall be cut neatly to fit around wiring and plumbing in exterior walls, or insulation that on installation readily conforms to available space shall extend behind piping and wiring.
Shower/tub on exterior wall	Exterior walls adjacent to showers and tubs shall be insulated and the air barrier installed separating them from the showers and tubs.
Electrical/phone box on exterior walls	The air barrier shall be installed behind electrical or communication boxes or air sealed boxes shall be installed.
HVAC register boots	HVAC register boots that penetrate building thermal envelope shall be sealed to the sub-floor or drywall.
Fireplace	An air barrier shall be installed on fireplace walls. Fireplaces shall have gasketed doors.

a. In addition, inspection of log walls shall be in accordance with the provisions of ICC-400.

schedule to maintain different temperature set points at different times of the day. This thermostat shall include the capability to set back or temporarily operate the system to maintain *zone* temperatures down to 55°F (13°C) or up to 85°F (29°C). The thermostat shall initially be programmed with a heating temperature set point no higher than 70°F (21°C) and a cooling temperature set point no lower than 78°F (26°C).

R403.1.3 Heat pump supplementary heat (Mandatory). Heat pumps having supplementary electric-resistance heat shall have controls that, except during defrost, prevent supplemental heat operation when the heat pump compressor can meet the heating load.

R403.2 Ducts. Ducts and air handlers shall be in accordance with Sections R403.2.1 through R403.2.4.

SkyeTec Home Readiness List

Code Inspection Testing Prerequisites:

- No subcontractors shall be in the home during the Final Inspection *
- All windows and doors are installed
- Weather-stripping is installed for exterior doors
- No cracked or broken windows (both panes)
- No holes in walls or ceilings
- Electricity and Water in on
- HVAC system has been started up *
- Interior attic access has been properly insulated & gasketed
- All supply and return duct boots must be sealed to the drywall
- All registers are installed
- All recessed lights are sealed to the ceiling drywall
- *Weather Conditions must be considered when scheduling/performing the final inspection. If it is too windy or raining, the performance testing will not be accurate.*



*Not required but highly recommended

If you have any questions regarding this list, please contact Tommy Spain at 904-866-3704 or tspain@skyetec.com.