



BLOWER DOOR TEST WHITEPAPER

The 2015 Energy Conservation Code became effective for the Texas Industrialized Housing and Buildings program on August 1, 2017. Under the new regulations, there is no option for visual inspection in lieu of the blower door test.

The 2015 IECC requires that residential occupancies, including: one- and two-family dwellings and multiple single-family dwellings as well as Group R-2, R-2 and R-4 buildings three stories or less in height, to pass a blower door test per unit

A final inspection **cannot be passed** without a blower door test report demonstrating compliance.

What is a blower test?

The blower door test is used to help determine the airtightness of a home or building. The test is performed once the building has been completed.

During testing exterior windows, doors, fireplaces, and stove doors are closed, but not sealed beyond intended weather stripping. Dampers including exhaust, intake, makeup air, backdraft, and flue dampers are also closed- but not sealed. Interior doors, if installed, remain open while exterior doors for continuous ventilation systems and heat recovery ventilators are closed & sealed. HVAC systems must be turned off while supply and return registers are to be left fully open.

Proper building tightness helps to ensure:



Reduced energy consumption due to air leakage



Reduced risk for problems caused by moisture condensation



Reduction of drafts caused by cold air leaking outdoors



Necessary mechanical ventilation to provide acceptable indoor air quality

How does it work?

The blower door test uses a powerful fan mounted into the frame of an exterior door. The fan then pulls air out of the building or residence, reducing inside air pressure. The outside air, which is at a higher pressure, then flows in through unsealed cracks and openings. The test determines the air infiltration rate of a building.

A blower door consists of a frame and flexible panel which fits in a doorway, a fan, pressure gauge, airflow manometer, and hoses for measuring airflow.

Essentially, the blower door test depressurizes the residence to identify air leaks.

Surprisingly, the **average home has enough air leakage to add up to a two-foot square hole;** the equivalent of leaving an average-sized window open all day, every day.

What are the blower door test requirements in Texas?

Regulations state that the building or dwelling should not have an air leakage rating which exceeds:

Without verification that the building does not exceed these standards, the **building cannot pass final building inspection.**

- Five air changes per hour in Climate Zones 3 and 4
(Houston, Austin and San Antonio)
- More stringent three air changes per hour in Climate Zone 2
(Dallas and Fort Worth)



Questions?

Austin Mansell

Director of Multi-Family

AMansell@garlandinsulating.com

Direct: 214-355-3741

Office: 214-341-0254

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