

Blower Door Testing Required!



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Fig. 1 Minneapolis Blower Door™

What's new in the RI Energy Code for residential new construction?

Rhode Island has adopted the 2013 RI State Energy Conservation Code which requires that all residential new construction buildings or dwelling units be tested and verified for their air leakage rate. This applies to any new residential building or dwelling unit permitted after Oct. 1, 2013. The test results must be recorded as Air Changes per Hour at 50 Pascals of pressure (ACH50) and reported to the building official.

Reference - SBC-2 N1102.4.1.1 and SBC-8 R402.4.1.1

What is a blower door test?

The building or residential unit is placed in safe winter conditions and a large fan is placed in a door or window (Fig. 1). This fan depressurizes the building or dwelling unit. A pressure gauge records the pressure and cubic feet per minute (CFM) flow rate of the fan to achieve a pressure difference of 50 Pascals (0.2 inches w.g.). The CFM is then converted to ACH50 using the volume of the house with the following calculation: $ACH50 = (CFM50 \times 60) / \text{Volume (Cubic Feet)}$.

Who performs the blower door testing?

The code states "Testing shall be conducted by an approved third party where required by the building official." The Building Code Commission is currently reviewing legislation that will approve statewide credentials. Currently there is no standard in place. The certifications under consideration for performing blower door and duct leakage testing are BPI, HERS and ACCA 12. Before the test is conducted, the testing agents' qualifications should be reviewed by the building code official. Builders are not allowed to perform the test for code compliance on their own building.

Reference - SBC-2 N1102.4.1.2 and SBC-8 R402.4.1.2

What happens if it fails?

There is currently no pass or fail in the state of Rhode Island. The reason for this is to give contractors an opportunity to see what it takes to perform the test, and to see what leakage rates they are currently achieving. Other states have adopted maximum rates of 3 - 7 ACH50, so this is the time to practice. Even if RI does not adopt the 2012 IECC requirement of 3 ACH50 this year, eventually the requirement will be this tight. If all of the mandatory requirements of the code are met, the building or dwelling unit should test below 4 ACH50.

Have questions:

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