



Virginia Blower Door Testing, LLC

Technical Bulletin



Subject: Air leakage testing requirements under the 2024 IECC and 2024 IRC

Effective Date: Upon adoption.

No.: 24-11

Blower Door Testing

Summary: The 2024 model IECC and IRC require air-leakage testing for residential buildings, dwelling units, and sleeping units. The allowable leakage rate is stated separately and varies by compliance path and climate zone. These provisions apply only after adoption by the governing jurisdiction.

Background: Section N1102.5.1.2 (R402.5.1.2), Air leakage testing, states: “The building or each dwelling unit or sleeping unit in the building shall be tested for air leakage.” Section N1102.5.1.3 (R402.5.1.3), Maximum air leakage rate, establishes the permitted leakage rates. Under the prescriptive compliance path, the maximum is 3.0 air changes per hour at 50 Pa (ACH50) in Climate Zones 3 through 5.

Requirements: Testing is conducted in accordance with ANSI/RESNET/ICC 380, ASTM E779, ASTM E1827, or ASTM E3158 and reported at a pressure differential of 0.2 inch water gauge (50 Pa). A written report of the results must be signed by the party conducting the test and provided to the code official.

References: N1102.5.1.2 (R402.5.1.2), Air leakage testing - N1102.5.1.3 (R402.5.1.3), Maximum air leakage rate - ANSI/RESNET/ICC 380 - ASTM E779 - ASTM E1827 - ASTM E3158

Notes: For compliance under N1101.13.1 (R401.2.1), the 2024 model code limits leakage to 4.0 ACH50 in Climate Zones 0 through 2, 3.0 ACH50 in Climate Zones 3 through 5, and 2.5 ACH50 in Climate Zones 6 through 8. Under N1101.13.2 or N1101.13.3 (R401.2.2 or R401.2.3), the limit is 4.0 ACH50 or 0.22 cfm/ft² of the applicable enclosure area, subject to the stated exceptions. Verify the locally adopted code, amendments, compliance path, and testing-unit conditions with the authority having jurisdiction. As of this bulletin revision, Virginia’s statewide enforceable construction codes are based on the 2021 code cycle; the 2024 model provisions are not statewide requirements unless adopted or otherwise required by the jurisdiction.

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