



Virginia Blower Door Testing, LLC

Technical Bulletin



Subject: Duct Leakage Testing
AKA Duct Blaster Test - Duct Pressure Test

Effective Date: Upon adoption.
No.: 24-08

Duct Leakage Testing

Summary: The 2024 model IECC and IRC require each applicable duct system to be tested for air leakage. Testing requirements are in N1103.3.7 (R403.3.7), Duct system testing; maximum permitted leakage is addressed separately in N1103.3.8 (R403.3.8), Duct system leakage, and Table N1103.3.8 (R403.3.8).

Background: Each duct system is tested in accordance with ANSI/RESNET/ICC 380 or ASTM E1554. Total leakage is measured across the duct system at a pressure differential of 0.1 inch water gauge (25 Pa) and includes leakage from both supply and return ductwork.

Requirements: Testing is permitted at rough-in or postconstruction, with or without registers or grilles installed. Installed registers and grilles, or uninstalled register boots, are sealed during the test. A written report must be signed by the testing party and provided to the code official.

References: N1103.3.7 (R403.3.7), Duct system testing - N1103.3.8 (R403.3.8), Duct system leakage - Table N1103.3.8 (R403.3.8) - N1103.3.9 (R403.3.9), Unit sampling - ANSI/RESNET/ICC 380 - ASTM E1554

UPDATE: 2024 IECC/IRC Code Changes - Duct System Testing.

Testing exceptions: Testing is not required for ventilation-only duct systems that are not integrated with heating or cooling ducts. Testing is also not required where no more than 10 feet of ductwork is external to the space-conditioning equipment, the duct system is entirely within conditioned space, and no plenums are formed from building cavities or gypsum board.

2024 leakage limits: Table N1103.3.8 (R403.3.8) replaces the former single-value summary. For systems serving more than 1,000 ft², the maximum total leakage depends on equipment status, duct location, and the number of ducted returns: 3 or 4 CFM25/100 ft² when equipment is not installed; 4 or 6 when all components are installed; 6 or 8 when equipment is not installed and ducts are entirely in conditioned space; and 8 or 12 when all components are installed and entirely in conditioned space. The lower value applies to fewer than three ducted returns. For systems serving 1,000 ft² or less, the corresponding limits are 30, 40, 60, and 80 CFM25.

Applicability: Where equipment is not installed, testing is permitted when the return ductwork is installed and supply-and-return leakage is included; the maximum is 3 CFM25/100 ft² under the stated exception. Unit sampling is permitted only as provided by N1103.3.9 (R403.3.9). Verify the locally adopted code, amendments, system configuration, and applicable table column with the authority having jurisdiction. Virginia's statewide enforceable construction codes are currently based on the 2021 code cycle; the 2024 model provisions apply only after adoption or when otherwise required by the jurisdiction.

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