



COUNTY OF LOUISA
COMMUNITY DEVELOPMENT
www.louisacounty.com

(540) 967-3430

Fax (540) 967-3486

Date: _____ Permit #: _____

Address: _____

City: _____ Zip: _____

Conditioned Floor Area (ft²): _____ Building Volume (V): _____

Source: Retrieved From Plans Code Software Calculated Field Measured and Calculated

Duct tightness testing not required. All ducts and equipment are located entirely within the building thermal envelope.

Duct Leakage Testing @25Pa Pass Fail

Rough-In with Air Handler (≤ 4) Rough-In without Air Handler (≤ 3) Post Construction (≤ 4)

System 1. Area Served: _____

_____ Total CFM25 X 100 ÷ _____ Conditioned Area (ft²) = _____ CFM25/100ft²

System 2. Area Served: _____

_____ Total CFM25 X 100 ÷ _____ Conditioned Area (ft²) = _____ CFM25/100ft²

System 3. Area Served: _____

_____ Total CFM25 X 100 ÷ _____ Conditioned Area (ft²) = _____ CFM25/100ft²

Blower Door Test @50Pa (≤ 5 ACH50) Pass Fail

_____ CFM50 X 60 ÷ _____ Building Volume = _____ ACH50

I certify that these results are accurate and determined using standard testing protocol.

Company Name: _____ Technician: _____

Phone #: _____ Email: _____

Technician Signature: _____

Blower Door Test Applicable Codes:

N1102.4 (R402.4) Air leakage.

The building thermal envelope shall be constructed to limit air leakage in accordance with the requirements of Sections N1102.4.1 through N1102.4.4.

N1102.4.1 (R402.4.1) Building thermal envelope.

The *building thermal envelope* shall comply with Sections N1102.4.1.1 and N1102.4.1.2. The sealing methods between dissimilar materials shall allow for differential expansion and contraction.

N1102.4.1.1 (R402.4.1.1) Installation (Mandatory).

The components of the building thermal envelope as listed in Table N1102.4.1.1 shall be installed in accordance with the manufacturer's instructions and the criteria listed in Table N1102.4.1.1, as applicable to the method of *construction*. Where required by the code official, an approved third party shall inspect all components and verify compliance.

N1102.4.1.2 (R402.4.1.2) Air sealing.

Building envelope air tightness shall be demonstrated to comply with either Section N1102.4.1.2.1 or N1102.4.1.2.2.

N1102.4.1.2.1 (R402.4.1.2.1) Testing option.

The building or dwelling unit shall be tested for air leakage. Testing shall be conducted with a blower door at a pressure of 0.2 inches w.g. (50 Pa). Where required by the building official, testing shall be conducted by an approved third party. A written report of the results of the test shall be signed by the party conducting the test and provided to the building official. Testing shall be performed at any time after creation of all penetrations of the building thermal envelope.

During testing:

1. Exterior windows and doors and fireplace and stove doors shall be closed, but not sealed beyond the intended weatherstripping or other infiltration control measures;
2. Dampers, including exhaust, intake, makeup air, backdraft, and flue dampers, shall be closed, but not sealed beyond intended infiltration control measures;
3. Interior doors, if installed at the time of the test, shall be open;
4. Exterior doors for continuous ventilation systems and heat recovery ventilators shall be closed and sealed;
5. Heating and cooling systems, if installed at the time of the test, shall be turned off; and
6. Supply and return registers, if installed at the time of the test, shall be fully open.

N1102.4.1.3 (R402.4.1.3) Leakage rate (Prescriptive).

The building or dwelling unit shall have an air leakage rate less than 5 changes per hour as verified in accordance with Section N1102.4.1.2.

Duct Leakage Test Applicable Codes

N1103.3.2 (R403.3.2) Sealing (Mandatory).

Ducts, air handlers and filter boxes shall be sealed. Joints and seams shall comply with either the *International Mechanical Code* or Section M1601.4.1 of this code, as applicable.

Exceptions:

1. Air-impermeable spray foam products shall be permitted to be applied without additional joint seals.
2. For ducts having a static pressure classification of less than 2 inches of water column (500 Pa), additional closure systems shall not be required for continuously welded joints and seams, and locking-type joints and seams of other than the snap-lock and button-lock types.

N1103.3.2.1 (R403.3.2.1) Sealed air handler.

Air handlers shall have a manufacturer's designation for an air leakage of no more than 2 percent of the design air flow rate when tested in accordance with ASHRAE 193.

N1103.3.3 (R403.3.3) Duct testing (Mandatory).

Ducts shall be pressure tested to determine air leakage by one of the following methods:

1. Rough-in test: Total leakage shall be measured with a pressure differential of 0.1 inch w.g. (25 Pa) across the system, including the manufacturer's air handler enclosure if installed at the time of the test. All registers shall be taped or otherwise sealed during the test.

2. Postconstruction test: Total leakage shall be measured with a pressure differential of 0.1 inch w.g. (25 Pa) across the entire system, including the manufacturer's air handler enclosure. Registers shall be taped or otherwise sealed during the test.

Exception: A duct air leakage test shall not be required where the ducts and air handlers are located entirely within the building thermal envelope.

A written report of the results of the test shall be signed by the party conducting the test and provided to the code official. The licensed mechanical contractor installing the mechanical system shall be permitted to perform the duct testing. The contractor shall have been trained on the equipment used to perform the test.

N1103.3.4 (R403.3.4) Duct leakage (Prescriptive).

The total leakage of the ducts, where measured in accordance with Section R403.3.3, shall be as follows:

1. Rough-in test: The total leakage shall be less than or equal to 4 cubic feet per minute (113.3 L/min) per 100 square feet (9.29 m²) of conditioned floor area where the air handler is installed at the time of the test. Where the air handler is not installed at the time of the test, the total leakage shall be less than or equal to 3 cubic feet per minute (85 L/min) per 100 square feet (9.29 m²) of conditioned floor area.

2. Postconstruction test: Total leakage shall be less than or equal to 4 cubic feet per minute (113.3 L/min) per 100 square feet (9.29 m²) of conditioned floor area.