



Yakima County Public Services

Yakima County Public Services—Building & Fire Safety

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2021 IRC Chapter 11 Building Air Leakage (Blower Door) Test Results

Permit Number:			
Yakima County Climate Zone:	5B		
Address or Parcel Number:			
City & Zip Code:			
Conditioned Floor Area (SF):	Calculated Volume:		
Dwelling Unit Enclosure Area:			
Type of Air Barrier Test (circle):	New Home	Addition	Remodel
Source (circle):	Plans	Estimated	Measured

N1102.4.1.2 Testing (Group R-3 Single-Family, Two-Family Dwellings and Townhouses). The maximum air leakage rate for any building or dwelling unit under any compliance path shall not exceed 5.0 air changes per hour. Testing shall be conducted in accordance with ANSI/RESNET/ICC 380, ASTM E779 or ASTM E1827 and reported at a pressure of 0.2 inch w.g. (50 Pascals).

Where: CFM50 = Blower door fan flow at 50 Pascal pressure difference.

Volume = Conditioned floor area of the housing unit x ceiling height.

SF Blower Door Test Result: _____ ACH50

_____ CFM@50Pa

N1102.4.1.2 Testing, Exception (Group R-2 Multifamily). When testing individual dwelling units, an air leakage rate not exceeding 0.30 cubic feet per minute per square foot [0.0008 m³/(s x m²)] of the dwelling unit enclosure area, tested in accordance with ANSI/RESNET/ICC 380, ASTM E779 or ASTM E1827 and reported at a pressure of 0.2 inch water gauge (50 Pa), shall be permitted in all climate zones for:

MF Blower Door Test Result: _____ CFM@50Pa

_____ CFM/EA (enclosure area) SF

Ring (circle one if applicable):	Open	A	B	C	D
Blower Door Fan Location:					
Weather Conditions:					

I certify that these blower door results are accurate and determined using standard industry protocol:

Company Name:	
Technician:	
Technician Signature:	
Date:	
Phone Number:	

N1102.4.1.2 Testing. The building or dwelling unit shall be tested for air leakage. Testing shall be conducted in accordance with ANSI/RESNET/ICC 380, ASTM E779 or ASTM E1827.

2021 International Residential Code (IRC), Chapter 11**2021 International Energy Conservation Code (IECC), Chapter 4**

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 N1102.4.5.

N1102.4.1 (R402.4.1) Building thermal envelope. The building thermal envelope shall comply with Sections N1102.4.1.1 through N1102.4.1.3. The sealing methods between dissimilar materials shall allow for differential expansion and contraction.

N1102.4.1.1 (R402.4.1.1) Installation.

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

N1102.4.1.2 (R402.4.1.2) Testing. The building or dwelling unit shall be tested for air leakage. The maximum air leakage rate for any building or dwelling unit under any compliance path shall not exceed 5.0 air changes per hour or 0.28 cubic feet per minute (CFM) per square foot [$0.0079 \text{ m}^3/(\text{s} \times \text{m}^2)$] of dwelling unit enclosure area. Testing shall be conducted in accordance with ANSI/RESNET/ICC 380, ASTM E779 or ASTM E1827 and reported at a pressure of 0.2 inch w.g. (50 Pascals). Where required by the code 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 code official. Testing shall be performed at any time after creation of all penetrations of the building thermal envelope have been sealed.

Exception: For heated, attached private garages and heated, detached private garages accessory to one and two family dwellings and townhouses not more than three stories above grade plane in height, building envelope tightness and insulation installation shall be considered acceptable where the items in Table N1102.4.1.1, applicable to the method of construction are field verified. Where required by the code official, an approved third party independent from the installer shall inspect both air barrier and insulation criteria. Heated attached private garage space and heated, detached private garage space shall be thermally isolated from all other conditioned spaces in accordance with Section N1102.2.12 and N1102.3.5 as applicable.

During testing:

1. Exterior windows and doors, 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, where installed at the time of the test, shall be open.
4. Exterior or interior terminations for continuous ventilation systems shall be sealed.
5. Heating and cooling systems, where installed at the time of the test, shall be turned off.
6. Supply and return registers, where installed at the time of the test, shall be fully open.

Exception: When testing individual dwelling units, an air leakage rate not exceeding 0.30 cubic feet per minute per square foot [$0.0008 \text{ m}^3/(\text{s} \times \text{m}^2)$] of the dwelling unit enclosure area, tested in accordance with ANSI/RESNET/ICC 380, ASTM E779 or ASTM E1827 and reported at a pressure of 0.2 inch water gauge (50 Pa), shall be permitted in all climate zones for:

1. Attached single and multiple family building dwelling units.
2. Building or dwelling units that are 1,500 square feet or smaller.

Mechanical ventilation shall be provided in accordance with Section M1505 of this code or Section 403.3.2 of the International Mechanical Code, as applicable, or with other approved means of ventilation.

N1102.4.1.3 (R402.4.1.3) Leakage rate. Where complying with Section N1101.13.1, the building or dwelling unit shall have an air leakage rate not exceeding 5.0 air changes per hour in Climate Zones 0, 1 and 2, and 3.0 air changes per hour in Climate Zones 3 through 8, when tested in accordance with Section N1102.4.1.2 (See Section N1108.2.5).