



# Yakima County Public Services

Yakima County Public Services—Building & Fire Safety

128 North Second Street Fourth Floor Courthouse Yakima, Washington 98901  
(509) 574-2300 • 1-800-572-7354 • FAX (509) 574-2301 • [www.co.yakima.wa.us](http://www.co.yakima.wa.us)

## 2021 IRC Chapter 11 Duct Leakage Affidavit

Permit Number:		
Yakima County Climate Zone:	5B	
Address or Parcel Number:		
City & Zip Code:		

Conditioned Floor Area (ft<sup>2</sup>): \_\_\_\_\_ Source (check one): Plans Measured

Air Handler in Conditioned Space (circle one)? Yes No

Air Handler Present During Test (circle one)? Yes No

Circle Test Method: Leakage to Outside Total Leakage

**Duct Testing Method:**

**Rough-In Test (circle one):** Yes No

(See Page 2 for Code Requirement)

**Preconstruction Test (circle one):** Yes No

(See Page 2 for Code Requirement)

**Air Handler Installed (circle one):** Yes No

**Minimum Duct Leakage:**

**Rough-In Test:** \_\_\_\_\_ CFM@25 Pa

(See Page 2 for Code Requirement)

**Post Construction Test:** \_\_\_\_\_ CFM@25 Pa

(See Page 2 for Code Requirement)

**Ducts Within Thermal Envelope Test:** \_\_\_\_\_ CFM@25 Pa

(See Page 2 for Code Requirement)

**Result of Test Conducted at @25 Pa in CFM:** \_\_\_\_\_

Duct Testing Device Opening Setting (circle one if applicable):

Open 1/A 2/B 3/C 4/D 5/E

**Duct Tester Location:** \_\_\_\_\_ **Pressure Tap Location:** \_\_\_\_\_

<b>I certify that these duct leakage rates are accurate and determined using standard duct testing protocol.</b>			
Testing Company:			
Phone Number:			
Technician (print):			
Technician (signature):			
Date of Test		Technician ID Number:	

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

**N1103.3.4 (R403.3.4) Sealing.** Ducts, air handlers, and filter boxes shall be sealed. Joints and seams shall comply with Section M1601.4.1.

**N1103.3.4.1 (R403.3.4.1) Sealed air handler.** Air handlers shall have a manufacturer's designation for an air leakage of not greater than 2 percent of the design airflow rate when tested in accordance with ASHRAE 193.

**N1103.3.5 (R403.3.5) Duct testing.** Ducts shall be pressure tested in accordance with ANSI/RESNET/ICC 380 or ASTM E1554 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. Registers shall be taped or otherwise sealed during the test.
2. Post-construction 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. Registers shall be taped or otherwise sealed during the test.

**N1103.3.6 (R403.3.6) Duct leakage.** The total leakage of the ducts, where measured in accordance with Section N1103.3.5 shall be as follows:

1. Rough-in test: Total leakage shall be less than or equal to 4.0 cubic feet per minute (113.3 L/min) per 100 square feet 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 3.0 cubic feet per minute (85 L/min) per 100 square feet of conditioned floor area.
2. Post-construction test: Total leakage shall be less than or equal to 4.0 cubic feet per minute (113.3 L/min) per 100 square feet of conditioned floor area.
3. Tests for ducts within thermal envelope: Where all ducts and air handlers are located entirely within the building thermal envelope, total leakage shall be less than or equal to 8.0 cubic feet per minute (226.6 L/min) per 100 square feet of conditioned floor area.

**N1103.3.7 (R403.3.7) Building cavities.** *Building framing cavities shall not be used as ducts or plenums.*

**N1110.3.2 (R502.3.2) Heating and cooling systems.** HVAC ducts newly installed as part of an *addition* shall comply with Section N1103.

**Exception:** Where ducts from an existing heating and cooling system are extended into an addition.

**N1111.1.2 (R503.1.2) Heating and cooling systems.** HVAC ducts newly installed as part of an *alteration* shall comply with Section N1103.

**Exceptions:** Where ducts from an existing heating and cooling system are extended into an addition.