

ROBERT G. CASSILLY
Harford County Executive

ROBERT S. McCORD
Director of Administration



RICHARD C. TRUITT
Director of Inspections,
Licenses and Permits

2021 IECC Residential Mechanical Ventilation Testing Certification Form

Section R403.6.3 of the 2021 International Energy Conservation Code as adopted by Chapter 82 of the Harford County Code requires that verification testing be performed for mechanical ventilation system to include but not be limited to exhaust fans, kitchen hood fans and whole house ventilation systems. This form shall be completed by an approved third party conducting the testing to certify the testing results along with verification of compliance with system cfm design.

Building Permit Number: _____

Address: _____

Bedrooms: _____

Total Square Feet: _____

Whole-Dwelling Ventilation System Design

Step 1 - Select design type.

Option 1-1 Exhaust Only Option 1-2 Supply Only Option 1-3 Combination System

Step 2 – Select CFM Design Rate Calculation Method

Step 2 Option -1: Airflow based upon 2021 IRC Table M1505.4.3(1): _____ CFM

or

Step 2 Option -2: Airflow based upon 2021 IRC Section M1505 Equation 15-1:

CFM = (0.01 x total square footage) + [7.5 x (number of Bedrooms +1)] _____ CFM

Step 3 – Optional Adjustments

Exemption 1 - 30% Reduction credit¹ _____ CFM

Exemption 2 - System Controls for intermittent operation².

Adjusted by Table M1505.4.3(2) Duration % _____ Adjustment Factor _____ CFM

=

Final Design CFM _____

Footnotes:

1. System balancing must be certified by a Licensed HVAC Contractor installing the system. The certification shall verify that each bedroom and one or more living room, dining room or kitchen are supplied with ventilation air per Exception 1 within Section M1505.4.3 of the 2021 IRC.
2. The intermittent control system certification by Licensed HVAC Contractor that system is operating in accordance with Exception 2 within Section M1505.4.3 of the 2021 IRC.

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THIS DOCUMENT IS AVAILABLE IN ALTERNATIVE FORMAT UPON REQUEST

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Ventilation Fan Listing and Testing Table

Fan Number	Fan Location	Type: Local Exhaust (LE) or Whole-House Mechanical Ventilation (WHMV)	Fan Manufacturer ³	Fan Model ³	Listed Airflow (CFM) ^{1,3}	Field-Verified Airflow (CFM) ^{2,3}
1	Kitchen <input type="checkbox"/> ⁴	<input type="checkbox"/> LE <input type="checkbox"/> WHMV				
2		<input type="checkbox"/> LE <input type="checkbox"/> WHMV				
3		<input type="checkbox"/> LE <input type="checkbox"/> WHMV				
4		<input type="checkbox"/> LE <input type="checkbox"/> WHMV				
5		<input type="checkbox"/> LE <input type="checkbox"/> WHMV				
6		<input type="checkbox"/> LE <input type="checkbox"/> WHMV				
7		<input type="checkbox"/> LE <input type="checkbox"/> WHMV				
8		<input type="checkbox"/> LE <input type="checkbox"/> WHMV				

Table Footnotes:

1. IRC Section M1505.3 requires that "Exhaust fans and whole-house mechanical ventilation fans shall be listed and labeled as providing the minimum required airflow in accordance with ANSI/AMCA 210-ANSI/ASHRAE 51." IRC Section N1103.6.2 (R403.6.2) requires that, "Fans shall be tested in accordance with HVI 916 and listed." The HVI Certified Products Directory is an approved directory for confirming listed airflows.
2. IRC Section N1103.6.3 (R403.6.3) requires airflow to be field-tested and verified. Testing shall be in accordance with ANSI/RESNET/ICC 380.
3. Verification pictures shall be provided of the testing equipment display screen showing CFM testing results for each fan that is tested along with pictures of each fan data plate. When multiple fans require testing to satisfy certification requirement, each picture shall clearly identify the fan location and shall be geo-coded with location, date and time. This verification form and all required pictures shall be uploaded through the Harford County ePermit Center by completing the Third-Party Certification Submittal option.
4. By checking the box for Kitchen Range Hood in line 1, certification is being made that the range hood is ducted to the outside with 6-inch or larger duct and not more than one 90-degree elbow or equivalent is present in the duct return. See Exception to Section R403.6.3 of the 2021 IECC.

By signing this form, I hereby certify that the information provided on this form is accurate and all results have been validated through appropriate testing methods. A person who knowingly makes a false statement or misrepresentation when submitting this form may cause the Department to take such as deemed appropriate as to the status of being accepted as an approved third-party inspector.

Questions regarding the form may be directed to Department staff by calling (410) 638-3122.

Certification and testing conducted by:

Name: _____ Certification number: _____ Issued By: _____

Date: _____ Signature: _____