

**INSTALLER and INSPECTOR QUICK-REFERENCE:
2022-NRCA-MCH-21-A
Multifamily Dwelling Unit Envelope Leakage
Acceptance Testing**

Purpose and Scope of the Test

This acceptance test is used to verify that the envelope leakage rate for multifamily dwelling units conforms to the requirements of the Energy Code. Submit one certificate of acceptance for each dwelling unit.

NOTE: In some instances, per NA1.9 the AHJ may require HERS Verification in addition to this acceptance test.

Test trigger

Newly constructed multifamily dwelling units with supply-only or exhaust-only ventilation. Dwelling units using balanced ventilation do not require this test.

Relevant Energy Code References and Required Compliance Documents

Title 24, Part 6 of the California Building Code, Building Energy Efficiency Standards (Energy Code) sections 160.2(b)2, 160.3(d)2B; NA2.3 and NA7.18.2.
See also: ANSI/RESNET/ICC 380-216 and ASTM E779-10 (2015).

Who Can Perform the Test

This test must be performed by an acceptance test technician certified by a CEC-approved Acceptance Test Technician Certification Provider, using compliance document NRCA-MCH-21-A.

Required Tools

The equipment listed must have their calibrations checked at the manufacturer's recommended interval, and at least annually if no time is specified.

- Air-Moving Fan. Capable of moving air into or out of the unit to achieve target pressure differences with the exterior.
- Manometer. Capable of measuring pressure differences within a maximum error of 1 percent of reading or 25Pa (0.001 in. H₂O).
- Airflow Meter. Capable of measuring volumetric airflow with a maximum error of 5 percent of measured flow.
- Thermometer. Capable a measuring air temperature within an accuracy of ± 1°C (2°F).
- Blower Door. A device that combines the Air-Moving Fan, Airflow Meter, and a cover to integrate into a fenestration.

NOTE: It is highly recommended that the assemblage of the blower door system also integrates the Manometer and include manufacturer software that will correct CFM measurements for altitude and air temperature (i.e., air viscosity and density). Otherwise, these corrections must be made manually.

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Estimated Time to Complete Test

Construction Inspection: 0.25 hours
Preparation for functional testing: 0.5 to 1 hours
Installation of functional testing equipment: 0.25 hours
Functional Testing: 0.5 to 1 hours

Potential Issues and Cautions

- This acceptance test requires that the model number and serial number of the testing equipment be recorded.
- Automated calibration of the blower door is highly recommended. Otherwise, the technician will be required to follow the procedures in ASTM E779-10 (2015), section 9, Equation 4 (RESNET 380 §3.4.1.5) to make the manual calibration changes.
- This test must be performed prior to NRCA-MCH-20-H acceptance tests.
- The complexity of the dwelling unit and the ability of the technician to establish the boundary of the dwelling unit can greatly affect the test results. Using an experienced test technician is highly recommended.

Inspection Enforcement

This acceptance test must be performed by a certified mechanical ATT. The technician is required to complete the certificate of acceptance.
NOTE: If required by the AHJ, a HERS Rater will perform a verification of the acceptance test. The HERS Rater will submit the verification to the inspector. The HERS Rater verification will be watermarked and produced from a HERS Provider data registry.

Optional Check:

If HERS rater verification is required, ask to see the technician acceptance tests that were given to the HERS Rater and compare the results to the HERS verification.

Acceptance Criteria

The dwelling envelope passes if the calculated leakage rate (CFM50/ft²) is equal to or less than 0.3 CFM/ft² (Title 24, Part 6, section 160.2(b)2Aivb2).
Follow the **Construction Inspection** and **Functional Testing** instruction on either NRCA-MCH-21-H.