

CHANGE TYPE: Clarification

CHANGE SUMMARY: A local exhaust system is an acceptable substitute for natural ventilation in kitchens.

2021 CODE: R303.1 Habitable rooms. Habitable rooms shall have an aggregate glazing area of not less than 8 percent of the floor area of such rooms. Natural ventilation shall be through windows, skylights, doors, louvers or other approved openings to the outdoor air. Such openings shall be provided with ready access or shall otherwise be readily controllable by the building occupants. The openable area to the outdoors shall be not less than 4 percent of the floor area being ventilated.

Exceptions:

1. The For habitable rooms other than kitchens, the glazed areas need not be openable where the opening is not required by Section R310 and a whole-house mechanical ventilation system or a mechanical ventilation system capable of producing 0.35 air changes per hour in the habitable rooms is installed in accordance with Section M1505.
2. For kitchens, the glazed areas need not be openable where the opening is not required by Section R310 and a local exhaust system is installed in accordance with Section M1505.
- 2.3. The glazed areas need not be installed in rooms where Exception 1 is satisfied and artificial light is provided that is capable of producing an average illumination of 6 footcandles (65 lux) over the area of the room at a height of 30 inches (762 mm) above the floor level.

R303.1

Mechanical Ventilation



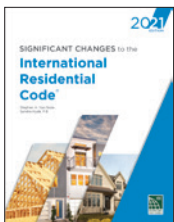
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Local exhaust mechanical ventilation for a kitchen substitutes for an openable window.

- 3.4.** Use of sunroom and patio covers, as defined in Section R202, shall be permitted for natural ventilation if in excess of 40 percent of the exterior sunroom walls are open, or are enclosed only by insect screening.

R303.4 Mechanical ventilation. ~~Where the air infiltration rate of a dwelling unit is 5 air changes per hour or less where tested with a blower door at a pressure of 0.2 inch w.c. (50 Pa) in accordance with Section N1102.4.1.2, the dwelling unit~~ Buildings and dwelling units complying with Section N1102.4.1 shall be provided with whole-house mechanical ventilation in accordance with Section M1505.4, or with other approved means of ventilation.

CHANGE SIGNIFICANCE: To provide flexibility in satisfying the ventilation air requirements, the code adds some options for mechanical ventilation. Prior to the 2012 edition, the IRC provided an option for mechanical ventilation systems capable of producing 0.35 air changes per hour (ACH) or whole-house mechanical ventilation systems where the prescribed natural ventilation was not provided. In the 2012 IRC, the first option was deleted in favor of the whole house mechanical ventilation system covered in the mechanical provisions of Chapter 15. The 2021 code reintroduces the option for 0.35 ACH for room-based mechanical ventilation systems, which are especially useful for additions or remodels. The code also now specifically recognizes that a local exhaust system (e.g., a kitchen exhaust hood) is an acceptable substitute for natural ventilation in kitchens. This is consistent with provisions in Chapter 15 that recognize kitchens have different ventilation requirements than other habitable rooms. The intent is to clarify that local exhaust, not whole-house mechanical ventilation that could be located in a far corner of the house, is needed for kitchens to ensure that cooking pollutants generated in the kitchen are captured and exhausted at their source. The IRC sets installation requirements for kitchen exhaust but has not previously required a range hood. The intent of the change to the exceptions in Section R303.1 is to require local mechanical exhaust in the kitchen if natural ventilation through openable windows and doors is not provided.



This excerpt is taken from *Significant Changes to the International Residential Code, 2021 Edition*. The Significant Changes series takes you directly to the most important changes that impact projects. Key changes are identified then followed by in-depth discussion of how the change affects real-world application. Photos, tables and illustrations are included to further clarify application. Available for the IBC, IRC, IFC, IECC and IPC/IMC/IFGC, the Significant Changes publications are very useful training and review tools for transitioning to a new code edition.