

ANSI/ASHRAE/ICC/USGBC/IES Addendum aj to ANSI/ASHRAE/ICC/USGBC/IES Standard 189.1-2017

Standard for the Design of High-Performance Green Buildings

Except Low-Rise Residential Buildings

The Complete Technical Content of the International Green Construction Code®

Approved by the ASHRAE Standards Committee on February 1, 2020; by the ASHRAE Board of Directors on February 5, 2020; by the International Code Council on January 7, 2020; by the U.S. Green Building Council on January 9, 2020; by the Illuminating Engineering Society on January 24, 2020; and by the American National Standards Institute on February 6, 2020.

These addenda were approved by a Standing Standard Project Committee (SSPC) for which the Standards Committee has established a documented program for regular publication of addenda or revisions, including procedures for timely, documented, consensus action on requests for change to any part of the standard. Instructions for how to submit a change can be found on the ASHRAE® website (www.ashrae.org/continuous-maintenance).

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ASHRAE obtains consensus through participation of its national and international members, associated societies, and public review.

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- b. participation in the next review of the Standard,
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FOREWORD

This addendum modifies the requirements for low-capacity exhaust fans, including bathroom and utility room exhaust fans greater than 90 cfm and fan systems with exhaust air energy recovery. While these fans are typically designed and sold for use in single-family residences, midrise residential occupancies and small commercial buildings often use the same small ventilation fans. These fans are frequently use as part of a ventilation strategy in multifamily buildings for point-of-source contaminant exhaust. They are a common load, and potentially sum to a significant load in those multifamily buildings regulated by Standard 189.1.

Currently in Standard 189.1, the exhaust fans covered by this addendum must meet an EnergyStar requirement of 3.5 cfm/W for 90 to 200 cfm fans, or 4.0 cfm/W for fans up to 500 cfm. These efficiencies are substantially lower than efficiency levels of many fans now available on the market. For example, according to the HVI database of fans, the average efficiency of bath fans greater than 90 cfm is approximately 8 cfm/W, with the top quartile averaging 11.5 cfm/W. These substantially exceed the 3.5 or 4.0 cfm/W required by EnergyStar.

There is currently no requirement in Standard 189.1 for the efficiency of HRV systems. This addendum adds the efficiency value currently included in the IECC into Standard 189.1.

Note: In this addendum, changes to the current standard are indicated in the text by underlining (for additions) and ~~strike through~~ (for deletions) unless the instructions specifically mention some other means of indicating the changes.

Addendum aj to Standard 189.1-2017

Add new definition to Section 3.

nameplate rating: the design load operating conditions of a device as shown by the *manufacturer* on the nameplate or otherwise marked on the device.

Add new section as follows.

7.4.3.6.3 Low-Power Ventilation Systems. Ventilation systems shall meet the fan efficacy requirements of Table 7.4.3.6.3.

Exceptions to 7.4.3.6.3:

1. Fans in fan coils and terminal units that operate only when providing heating to the space served.
2. Fans in space conditioning equipment certified under ASHRAE/IES Standard 90.1, Section 6.4.1.
3. Intermittently operating dryer exhaust duct power ventilators, domestic range hoods, or domestic range booster fans.
4. Ventilation systems with fan motor nameplate power $\geq 1/12$ hp (62.1 W).
5. Ventilation fans with fan nameplate electrical input power ≥ 180 W.

Table 7.4.3.6.3 Minimum Ventilation Fan Efficacy Requirements

Fan Type	Minimum Efficacy Nameplate Rating	Test Method and Rating Conditions
Fan system with exhaust air energy recovery	1.2 cfm/W (0.6 L/s/W)	CAN/CSA 439-18 • Efficacy for a fan system providing exhaust air energy recovery is that associated with the average of the system's supply and exhaust flow rate
Bathroom, utility room ≥ 90 cfm (40 L/s)	6.0 cfm/W (2.8 L/s/W)	ENERGY STAR Specification for Residential Ventilating Fans • Eligibility Criteria Version 4.1

Modify Section 11 as shown.

Reference	Title	Section
Canadian Standards Association (CSA) 5060 Spectrum Way, Suite 100 Mississauga, Ontario, L4W 5N6, Canada 1-800-463-6727 and 1-416-747-4000; www.csa.ca		
<u>CAN/CSA 439-18</u>	<u>Standard Laboratory Methods of Test for Rating the Performance of Heat/Energy-Recovery Ventilators</u>	<u>7.4.3.6.3</u>
United States Environmental Protection Agency (USEPA) Ariel Rios Building 1200 Pennsylvania Avenue, NW Washington, DC 20460, United States 1-919-541-0800; www.epa.gov ENERGY STAR® 1-888-782-7937 WaterSense 1-866-987-7367 and 1-202-564-2660		
[...]		
<u>Version 4.1, February 21, 2018</u>	<u>ENERGY STAR Specification for Residential Ventilating Fans Eligibility Criteria</u>	<u>7.4.3.6.3</u>
[...]		

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FOR THE ENVIRONMENTAL IMPACT OF ITS ACTIVITIES**

ASHRAE is concerned with the impact of its members' activities on both the indoor and outdoor environment. ASHRAE's members will strive to minimize any possible deleterious effect on the indoor and outdoor environment of the systems and components in their responsibility while maximizing the beneficial effects these systems provide, consistent with accepted Standards and the practical state of the art.

ASHRAE's short-range goal is to ensure that the systems and components within its scope do not impact the indoor and outdoor environment to a greater extent than specified by the Standards and Guidelines as established by itself and other responsible bodies.

As an ongoing goal, ASHRAE will, through its Standards Committee and extensive Technical Committee structure, continue to generate up-to-date Standards and Guidelines where appropriate and adopt, recommend, and promote those new and revised Standards developed by other responsible organizations.

Through its *Handbook*, appropriate chapters will contain up-to-date Standards and design considerations as the material is systematically revised.

ASHRAE will take the lead with respect to dissemination of environmental information of its primary interest and will seek out and disseminate information from other responsible organizations that is pertinent, as guides to updating Standards and Guidelines.

The effects of the design and selection of equipment and systems will be considered within the scope of the system's intended use and expected misuse. The disposal of hazardous materials, if any, will also be considered.

ASHRAE's primary concern for environmental impact will be at the site where equipment within ASHRAE's scope operates. However, energy source selection and the possible environmental impact due to the energy source and energy transportation will be considered where possible. Recommendations concerning energy source selection should be made by its members.

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Standard 189.1 and the International Green Construction Code

Standard 189.1 serves as the complete technical content of the International Green Construction Code® (IgCC). The IgCC creates a regulatory framework for new and existing buildings, establishing minimum green requirements for buildings and complementing voluntary rating systems. For more information, visit www.iccsafe.org.

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As an industry leader in research, standards writing, publishing, certification, and continuing education, ASHRAE and its members are dedicated to promoting a healthy and sustainable built environment for all, through strategic partnerships with organizations in the HVAC&R community and across related industries.

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