

# ANSI/ASHRAE/ICC/USGBC/IES Addendum a to ANSI/ASHRAE/ICC/USGBC/IES Standard 189.1-2023

# 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 ASHRAE Standards Committee on October 11, 2024; by the International Code Council and the Illuminating Engineering Society on September 18, 2024; by the U.S. Green Building Council on October 21, 2024; and by the American National Standards Institute on November 5, 2024.

This addendum was 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](http://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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The Senior Manager of Standards of ASHRAE should be contacted for

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## FOREWORD

*Addendum a to Standard 189.1-2023 changes the particulate matter removal requirement to reference MERV-13-A instead of MERV-13 to acknowledge the limitations of electrostatic charged filters and to ensure that the minimum intended filtration performance is maintained over the installed life of the filter. This change also better aligns Standard 189.1 with ASHRAE Standard 52.2 and ISO 16890 compliance pathways. Note that ASHRAE Standard 241 requires MERV-A ratings for air filters starting on January 1, 2025 in order to take credit for the use of air filters for the control of infectious aerosols.*

*Particulate filtration efficiency for air filters in nonresidential HVAC systems are widely rated in the U.S. based on the minimum efficiency reporting value (MERV) as defined by ASHRAE Standard 52.2. Many particulate air filters utilize electrostatic charges to achieve high filtration efficiencies for small particle sizes in order to meet high MERV levels. Electrostatic charges can provide higher filtration efficiency in pleated filters with lower pressure drop and lower cost compared to filters that only utilize mechanical filtration. However, the MERV rating is based on initial filter performance, and numerous studies have documented the significant reduction in filtration efficiency (potentially a drop of several MERV levels) in filters with electrostatic charges within several weeks of installation. Informative Appendix J was added to Standard 52.2 in 2008 to address this issue by providing a preconditioning step that partially neutralizes the electrostatic charges prior to testing. Filters tested with the optional preconditioning are given a MERV-A rating.*

*ISO 16890 is the most widely used standard for rating particulate air filters in Europe and is referenced in the alternative compliance path for particulate matter removal in Standard 189.1. ISO 16890 addresses the issue of diminishing performance of charged filter media by testing two filters, one charged and one completely discharged by an isopropyl alcohol treatment, and averaging the two results, where the overall net performance is comparable to that achieved by the Standard 52.2 Appendix J methodology.*

*This addendum is expected to increase operating costs for a building, but the magnitude is not known. However, this addendum ensures long-term performance of filters.*

**Informative 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 a to Standard 189.1-2023

**Modify Section 8.3.3(a) as shown.**

### 8.3.3 Filtration and Air Cleaner Requirements

- a. **Particulate Matter.** The following requirements shall apply in all buildings.
  1. **Wetted Surfaces.** Particulate matter filters or air cleaners having a minimum efficiency reporting value (MERV) of not less than 8 where rated in accordance with ANSI/ASHRAE Standard 52.2, or not less than Coarse 90% where rated in accordance with ISO 16890, shall be provided upstream of all cooling coils or other devices with wetted surfaces through which air is supplied to an *occupiable space*. These requirements supersede the requirements in ASHRAE Standard 62.1, Section 5.9.
  2. **Particulate Matter Removal.** Particulate matter filters or air cleaners shall be provided in accordance with Standard 62.1, Sections 6.1.4.1 and 6.1.4.2, with the following modification. Such filters or air cleaners shall have a MERV-A rating of not less than 13-A as rated in accordance with ASHRAE Standard 52.2, including Informative Appendix J, or not less than ePM1-50% as rated in accordance with ISO 16890.

**Exception to (a):** In health care facilities, the particulate filter requirements of ASHRAE/ASHRAE Standard 170 shall apply.

***Modify Section 11 as shown.***

Reference	Title	Section
[ ... ]		
<b>ASHRAE</b> <b>180 Technology Parkway NW</b> <b>Peachtree Corners, GA 30092, United</b> <b>States 1-404-636-8400; www.ashrae.org</b>		
ANSI/ASHRAE Standard 52.2-2017	Method of Testing General Ventilation Air-Cleaning Devices for Removal Efficiency by Particle Size	<del>8.3.1.3</del> <u>8.3.3(a)</u>
[ ... ]		

**POLICY STATEMENT DEFINING ASHRAE'S CONCERN  
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.

### **Standard 189.1 and the International Green Construction Code**

Standard 189.1 serves as the complete technical content of the International Green Construction Code<sup>®</sup> (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](http://www.iccsafe.org).

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Founded in 1894, ASHRAE is a global professional society committed to serve humanity by advancing the arts and sciences of heating, ventilation, air conditioning, refrigeration, and their allied fields.

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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