ADDENDA

ANSI/ASHRAE Addendum aj to
ANSI/ASHRAE Standard 62.1-2016

Ventilation for Acceptable Indoor Air Quality

Approved by the ASHRAE Standards Committee on June 22, 2019; by the ASHRAE Board of Directors on June 26, 2019; and by the American National Standards Institute on July 24, 2019.

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 (https://www.ashrae.org/continuous-maintenance).

The latest edition of an ASHRAE Standard may be purchased on the ASHRAE website (www.ashrae.org) or from ASHRAE Customer Service, 1791 Tullie Circle, NE, Atlanta, GA 30329-2305. E-mail: orders@ashrae.org. Fax: 678-539-2129. Telephone: 404-636-8400 (worldwide), or toll free 1-800-527-4723 (for orders in US and Canada). For reprint permission, go to www.ashrae.org/permissions.

 ISSN 1041-2336

Approved American National Standard
ANSI
www.ansi.org

SPECIAL NOTE

This American National Standard (ANS) is a national voluntary consensus Standard developed under the auspices of ASHRAE. *Consensus* is defined by the American National Standards Institute (ANSI), of which ASHRAE is a member and which has approved this Standard as an ANS, as "substantial agreement reached by directly and materially affected interest categories. This signifies the concurrence of more than a simple majority, but not necessarily unanimity. Consensus requires that all views and objections be considered, and that an effort be made toward their resolution." Compliance with this Standard is voluntary until and unless a legal jurisdiction makes compliance mandatory through legislation.

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

ASHRAE Standards are prepared by a Project Committee appointed specifically for the purpose of writing the Standard. The Project Committee Chair and Vice-Chair must be members of ASHRAE; while other committee members may or may not be ASHRAE members, all must be technically qualified in the subject area of the Standard. Every effort is made to balance the concerned interests on all Project Committees.

The Senior Manager of Standards of ASHRAE should be contacted for

a. interpretation of the contents of this Standard,
b. participation in the next review of the Standard,
c. offering constructive criticism for improving the Standard, or
d. permission to reprint portions of the Standard.

(This foreword is not part of this standard. It is merely informative and does not contain requirements necessary for conformance to the standard. It has not been processed according to the ANSI requirements for a standard and may contain material that has not been subject to public review or a consensus process. Unresolved objectors on informative material are not offered the right to appeal at ASHRAE or ANSI.)

FOREWORD

The current standard is silent on producing ozone within HVAC equipment. In some countries, ozone generators are accepted as air cleaners. In a recent poll of members of SSPC62.1, only 2% thought that having ozone producing components in a ventilation system is consistent with acceptable indoor air quality.

Ozone is harmful for health, and exposure to ozone creates risk for a variety of symptoms and diseases associated with the respiratory tract. Many products of ozone homogeneous and heterogeneous reaction processes also create risks for health, including formaldehyde, unsaturated aldehydes (produced during the reaction of ozone with ketones and alcohols), and ultrafine particles (secondary organic aerosols).

Ozone emission is thus undesirable. However, there is no consensus on the safe level of ozone. For example, ASHRAE's Environmental Health Committee issued an emerging issue brief suggesting "safe ozone levels would be lower than 10 ppb" and that "the introduction of ozone to indoor spaces should be reduced to as low as reasonably achievable (ALARA) levels." Still, even widely used guidelines are not entirely consistent with all available epidemiological literature on the effects of ozone, and there is relatively little known about the long-term effects of exposure to low concentrations of ozone.

The current state of the science regarding the health effects of ozone strongly suggests that the use of air cleaners that emit ozone by design should not be permitted; the same information and advice is given by the USEPA, among others. There is more uncertainty about recommendations for air cleaners that do not use ozone by design for air cleaning but produce ozone unintentionally, as a by-product of their operation. There are devices that emit ozone but at the same time reduce concentrations of other harmful contaminants. The state of the science does not allow making highly certain trade-offs between increased exposure to ozone and the ozone reaction byproducts and reduced exposure to other contaminants.

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

Addendum aj to Standard 62.1-2016

Add new Section 5.7 as shown. Renumber following sections as appropriate.

5.7 Ozone Generating Devices. The use of ozone generating devices shall comply with the following sections.

Exception to 5.7: Electronic devices used exclusively for the operation of HVAC equipment and controls.

Informative Note: Ozone generation is expected from ozone generators, corona discharge technology, some ultraviolet lights, electronic devices that create chemical reactions within the system, and some devices using a high voltage (>480 V). Motors and relays are examples of electronic devices that would be exempt.

5.7.1 Air Cleaning Devices. Air cleaning devices shall be listed and labeled in accordance with UL 2998.

Informative Note: The use of devices not intended for air cleaning with the potential to generate ozone should be avoided.

5.7.2 Ultraviolet Devices. Ultraviolet generating devices in supply air or spaces shall not transmit 185 nm wavelengths.

Informative Note: UV devices used in treatment of closed water systems may produce 185 nm wavelengths, which may generate ozone.

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.

ASHRAE · 1791 Tullie Circle NE · Atlanta, GA 30329 · www.ashrae.org

About ASHRAE

ASHRAE, founded in 1894, is a global society advancing human well-being through sustainable technology for the built environment. The Society and its members focus on building systems, energy efficiency, indoor air quality, refrigeration, and sustainability. Through research, Standards writing, publishing, certification and continuing education, ASHRAE shapes tomorrow's built environment today.

For more information or to become a member of ASHRAE, visit www.ashrae.org.

To stay current with this and other ASHRAE Standards and Guidelines, visit www.ashrae.org/standards.

Visit the ASHRAE Bookstore

ASHRAE offers its Standards and Guidelines in print, as immediately downloadable PDFs, and via ASHRAE Digital Collections, which provides online access with automatic updates as well as historical versions of publications. Selected Standards and Guidelines are also offered in redline versions that indicate the changes made between the active Standard or Guideline and its previous version. For more information, visit the Standards and Guidelines section of the ASHRAE Bookstore at www.ashrae.org/bookstore.

IMPORTANT NOTICES ABOUT THIS STANDARD

To ensure that you have all of the approved addenda, errata, and interpretations for this Standard, visit www.ashrae.org/standards to download them free of charge.

Addenda, errata, and interpretations for ASHRAE Standards and Guidelines are no longer distributed with copies of the Standards and Guidelines. ASHRAE provides these addenda, errata, and interpretations only in electronic form to promote more sustainable use of resources.

7/19