

ASHRAE Standing Standard Project Committee 62.1
Cognizant TC: 4.3, Ventilation Requirements and Infiltration
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Ventilation for Acceptable Indoor Air Quality

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NOTE

Approved addenda, errata, or interpretations for this standard can be downloaded free of charge from the ASHRAE website at www.ashrae.org/technology.

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FOREWORD

ANSI/ASHRAE Standard 62.1-2013 is the latest edition of Standard 62.1. The 2013 edition combines Standard 62.1-2010 and the ten approved and published addenda to the 2010 edition, thereby providing an easy-to-use, consolidated standard. Specific information on the contents of each addendum and approval dates for each addendum are included in Informative Appendix J.

First published in 1973 as Standard 62, Standard 62.1 is now updated on a regular basis using ASHRAE's continuous maintenance procedures. According to these procedures, Standard 62.1 is continuously revised by addenda that are publicly reviewed, approved by ASHRAE and ANSI, and published in a supplement approximately 18 months after each new edition of the standard, or in a new, complete edition of the standard, published every three years.

Standard 62.1 has undergone some key changes over the years, reflecting the ever-expanding body of knowledge, experience, and research related to ventilation and air quality. While the purpose of the standard has remained consistent—to specify minimum ventilation rates and other measures intended to provide indoor air quality that is acceptable to human occupants and that minimizes adverse health effects—the means of achieving this goal have evolved. In its first edition, the standard adopted a prescriptive approach to ventilation by specifying both minimum and recommended outdoor airflow rates to obtain acceptable indoor air quality for a variety of indoor spaces. In its 1981 edition, the standard reduced minimum outdoor airflow rates and introduced an alternative performance-based approach, the Indoor Air Quality Procedure (IAQP), which allowed for the calculation of the amount of outdoor air necessary to maintain the levels of indoor air contaminants below recommended limits. Today the standard includes three procedures for ventilation design, the IAQ Procedure, the Ventilation Rate Procedure (VRP), and the Natural Ventilation Procedure.

In its 1989 edition, and in response to a growing number of buildings with apparent indoor air quality problems, the standard increased minimum outdoor airflow rates significantly and introduced a requirement for finding outdoor air intake flow requirements for multiple-zone, recirculating systems.

The 1999 and 2001 editions made several minor changes and clarifications that did not impact the minimum required outdoor airflow rates. In its 2004 edition—the last time the standard was revised in its entirety—the standard modified the IAQ Procedure to improve enforceability, but more significantly, it modified the Ventilation Rate Procedure, changing both the minimum outdoor airflow rates and the procedures for calculating both zone-level and system-level outdoor air-

flow rates. The 2007 and 2010 editions of the standard provided some significant updates, but the changes primarily focused on usability and clarity.

The 2013 edition revises and improves the standard in several ways. A number of changes remove inconsistencies and improve clarity. Significant changes include the following:

- *Table 6.2.2.2, “Zone Air Distribution Effectiveness,” is modified to increase the effectiveness of underfloor air distribution systems that meet certain conditions.*
- *The requirements for the quality of water used in humidification systems is modified and clarified.*
- *Building level pressurization requirements were clarified, and a definition of “exfiltration” was added.*
- *A performance alternative to the prescriptive exhaust rates is added. This approach differs from the IAQP in that monitoring of the concentrations of contaminants of concern is required and provides the basis for control of exhaust flow rates.*
- *Some changes are made to the ventilation rates and space types in Table 6.2.2.1. These add refrigerated warehouses and, for sports-related spaces, change the ventilation rate to include a per-occupant component that allows the use of demand-controlled ventilation in these spaces.*
- *The filter requirement on air entering wetted cooling coils has been modified to change the MERV rating from 6 to 8. This change reduces potential for particulate deposition on the coils that could lead to biological or other contamination.*
- *Toilet exhaust air that is cleaned to Class 1 may be recirculated.*

For more specific information on these changes and on other revisions made to the standard by other addenda, refer to Informative Appendix J. Users of the standard are encouraged to use the continuous maintenance procedure to suggest changes for further improvements.

A form for submitting change proposals is included in the back of the standard. The project committee for Standard 62.1 will take formal action on all change proposals received.

1. PURPOSE

1.1 The purpose of this standard is to specify minimum ventilation rates and other measures intended to provide indoor air quality that is acceptable to human occupants and that minimizes adverse health effects.

1.2 This standard is intended for regulatory application to new buildings, additions to existing buildings, and those changes to existing buildings that are identified in the body of the standard.

1.3 This standard is intended to be used to guide the improvement of indoor air quality in existing buildings.

2. SCOPE

2.1 This standard applies to all spaces intended for human occupancy except those within single-family houses, multi-