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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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Preface

Purpose of This User's Manual

This user's manual contains explanatory material, examples, and background material intended to help users effectively design, construct and regulate buildings and structures that comply with ASHRAE Standard 62.2-2019, *Ventilation and Acceptable Indoor Air Quality in Residential Buildings.*

This user's manual does not reproduce the text of the standard but, rather, is intended to help users understand and implement the provisions of Standard 62.2. Anyone who plans to design, construct, and regulate buildings included in the scope of ASHRAE Standard 62.2. will find the user's manual to be a helpful source of examples, explanations, relevant data and reference materials. The manual is intended to be used in conjunction with and not as a substitute for the standard, and it is *advisory only*. In the case of unintended conflicts with this manual, the standard takes precedence.

About ASHRAE Standard 62.2

ASHRAE Standard 62.2 is a policy-level, consensus document that has been created under the auspices of the American National Standards Institute in compliance with their essential requirements and in accordance with the procedures for ASHRAE standards actions (PASA).

ASHRAE Standard 62.2 is a minimum requirement standard. Thus, if an organization or program adheres to the standard, ventilation of equal or greater airflow rates than the standard requires may be provided, but ventilation airflow rates less than the standard specifies are not permissible. Furthermore, Standard 62.2 uses mandatory language, except for one informative appendix, so that it can be incorporated into building or mechanical codes.

Standard 62.2 was originally published in 2003. This user's manual accompanies the version of the standard published in 2019. When using this manual to comply with any codes that have incorporated Standard 62.2, confirm that the codes have incorporated the 2019 version. If the codes refer to an earlier version of Standard 62.2, the information in this manual might not apply to certain provisions.

Audience

This user's manual is intended to aid many types of residential building professionals, including the following:

- Builders
- Code officials
- Weatherization assistance program staff
- Home performance contractors
- Home Energy Rating System (HERS) raters
- Heating, ventilation, and air conditioning (HVAC) technicians and contractors
- Design professionals

The manual might also be useful for the following:

- Governmental agencies
- Utility program stakeholders
- Affordable housing stakeholders
- Property owners and managers
- Real estate agents
- Home appraisal professionals
- Homeowners
- Tenants

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Addenda

Standard 62.2 is a dynamic document that is maintained and updated by ASHRAE using continuous maintenance procedures. Periodically, ASHRAE develops and publishes addenda that modify or expand the requirements of the standard. ASHRAE publishes a full, updated version of the standard—including all addenda approved since the previous edition—every three years. Between printed versions of the standard, ASHRAE publishes adopted addenda on its website. These addenda are considered part of the standard as soon as they are published. Published addenda can be downloaded for free online:

https://www.ashrae.org/technical-resources/standards-and-guidelines/standards-addenda

Official Interpretations of the Standard

In addition to addenda, ASHRAE periodically publishes official interpretations of the standard. Interpretations do not change the standard but clarify the meaning of existing provisions. Interpretations are limited to the meaning of the standard and may not be used for design reviews or requests for changes to the standard. Anyone may submit a request for an interpretation to ASHRAE at the following address:

Manager of Standards
ASHRAE
180 Technology Parkway NW
Peachtree Corners, GA 30092
standards.section@ashrae.org

Forms and procedures for submitting an interpretation request are available online: www.ashrae.org/technical-resources/standards-and-guidelines/pcs-toolkit/standards-forms-procedures.

When a copy of the standard is purchased, all interpretations that apply to the standard are included in the package. The ASHRAE website also lists all of the interpretations, and users can check there for any interpretations issued since they purchased the standard.

Errata to ASHRAE Standard 62.2 are also available on the ASHRAE website at www.ashrae.org/technical-resources/standards-and-guidelines/standards-errata.

When appropriate, published errata are incorporated, with explanations, into this user's manual.

Organization

This user's manual has the same organization scheme as the standard. Each chapter of this user's manual contains explanatory material for each of the nine sections of the standard to help users understand the standard's provisions and how to comply with them. Many chapters include examples of ways to comply with the standard. Methods used by manufacturers or testing organizations to test or certify equipment are also explained.

In addition to the nine primary chapters, the standard contains a Foreword and five appendices. The Foreword briefly discusses the content of the standard, including significant changes in the 2019 edition. Appendices A, B, and C are normative and therefore part of the standard. This means that they contain requirements that may be used for compliance with the standard.

The remaining appendices are informative and not part of the standard. They do not contain any requirements for compliance but provide information that may be useful to users.

Users are encouraged to make comments about the user's manual to the manager of standards at the address above. Through input from users, future editions of the manual can be improved.

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Acknowledgments

The 2019 edition of the Standard 62.2 User's Manual was written under a contract with Schoen Engineering, Inc. Larry Schoen, P.E. was the project manager. Amy Musser, P.E., Ph.D., principal of Vandemusser Design, PLLC, developed much of the new material based on content originally developed for previous editions.

Technical editors Deborah Berlyne, Ph.D., and Hannah Bachman contributed to readability and consistency of "voice" of both historical and newly developed content. Lilas Pratt, Manager of Special Projects for ASHRAE, was indispensable in coordinating the work of the author team, review by the Project Management Subcommittee (PMS), and contract administration.

The authors are indebted to the members of PMS for their valuable reviews and input: Steve Saunders, Tempo, Inc., chair; Hoy Bohanon, P.E., Hoy Bohanon Engineering, PLLC; Christian Taber, Principal Engineer, Big Ass Fans; Josephine Lau, Ph.D., University of Nebraska-Lincoln; Karl Peterman, P.E., Swegon North America; Mark Jackson, Ph.D. Daikin North America; and Matt Mason. Iain Walker, Ph.D., Lawrence Berkeley National Laboratory, chair of the Standard 62.2 committee also provided valuable review comments.

Roger Hedrick of NORESCO was the author of the 2010 edition. Rick Karg of R.J. Karg Associates, Dr. Charlie Holly of Residential Energy Dynamics, Paul Raymer of Heyoka Solutions, and Paul Francisco of the University of Illinois wrote the 2016 edition. Many illustrations were created by Joe Medosch of Energy and Environmental Consulting. Substantial contributions were also made by members of the prior PMS chaired by Mike Blanford, U.S. Department of Housing and Urban Development; Michael Lubliner, Washington State University Energy Program; Darren Meyers, P.E., International Energy Conservation Consultants; Dr. Iain Walker, Ph.D., Lawrence Berkeley National Laboratory; and John Dunlap, Dunlap & Partners Engineers.

Current and past members of standing standard project committee (SSPC) 62.2 deserve thanks and credit for the wealth of knowledge, experience, and insight they have brought to the standard. This user's manual is based on the solid foundation built by that committee.

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1 Purpose

This section of ASHRAE Standard 62.2 describes the rationale for the standard and what compliance with Standard 62.2 is expected to achieve.

The purpose of Standard 62.2 is to define the roles of and minimum requirements for mechanical and natural ventilation systems and the building envelope that affect indoor air quality (IAQ) in residential buildings. The intention of the standard is to provide "acceptable indoor air quality," which refers to air that is deemed by a substantial majority of occupants to have satisfactory odor, does not cause sensory irritation, and is unlikely to contain contaminants at concentrations known to pose a health risk.

The standard was created to provide enforceable language that can be adopted by building codes or other programs to define minimum standards likely to result in acceptable IAQ. The standard specifies minimum rates for whole-house ventilation, which dilutes contaminants generated indoors. Another key strategy for ensuring acceptable IAQ is to require local exhaust ventilation in kitchens and bathrooms, which are known sources of contaminants. The standard also includes requirements that make these local exhaust ventilation systems more likely to function properly and to be used by occupants. Some of these requirements include sound ratings for fans, field verified system flow rates, and labels for ventilation systems. Some requirements also address the role of the building envelope by limiting the transfer of contaminants from adjacent spaces, such as other dwelling units or garages.

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2 Scope

Changes to Section 2, Scope

No substantive changes have been made to Section 2 in Standard 62.2-2019.

Section 2 of Standard 62.2-2019 defines the scope of the standard. The section first describes the dwellings to which Standard 62.2 applies. The section then provides an overview of the content of Standard 62.2, which consists of the issues in dwelling units that affect IAQ. The section also identifies issues that are not covered in Standard 62.2, such as those that affect thermal comfort. Finally, the section lists some reasons acceptable IAQ might not be achieved, even if the dwelling unit meets all relevant provisions of Standard 62.2.

According to Section 2, Standard 62.2 applies to dwellings in which occupants are nontransient (i.e., they occupy the dwelling unit for more than 30 consecutive days). These dwellings include one- and two-family dwellings, townhouses, and dwelling-unit portions of multifamily buildings of any height. See Figures 2-A, 2-B, 2-C, and 2-D for examples of the types of dwellings covered by Standard 62.2.



Figure 2-A Single-family dwelling.



Figure 2-B Duplex (attached-single family) dwelling.



Figure 2-C Row houses.