



## ASHRAE Standard 62-1989R Expands Responsibility For IAQ

ASHRAE Standard 62-1989R, "Ventilation for Acceptable Indoor Air Quality," presently defines the "standard of care" to be exercised by ventilation system designers. As such, it's been the model for codes issued by the International Conference of Building Officials (ICBO), the Building Officials and Code Administrators (BOCA), the Southern Building Code Congress (SBCC) and other organizations of building professionals.

The revised version of this standard promises to exert even greater influence on the building and HVAC communities. It not only addresses ventilation system design, but building construction, operation and maintenance as well.

Standard 62-1989R was released for public review on August 15, 1988. To assure that the final version reflects the best possible consensus, it's important that all affected parties acquaint themselves with the draft standard's contents and provide constructive criticism where warranted within the 120 days allotted for that purpose. We hope to aid that process with this issue of the Engineers Newsletter. In it, we'll summarize (without commentary) the requirements proposed in Standard 62-1989R and tell you how to obtain a copy of the public review draft from the American Society of Heating, Refrigerating, and Air-Conditioning Engineers, Inc. (ASHRAE).

### An Overview

As mentioned above, Standard 62-1989R is divided into 10 sections accompanied by several **normative** and **informative** appendices. (A "normative" appendix is considered part of the standard and is required for its use; an "informative" appendix, as its name implies, is provided to educate rather than dictate.)

The "meat" of the draft standard, and the focus of this article, lies in:

- Section 4, "Application and Compliance"
- Section 5, "General Requirements"
- Section 6, "Design Ventilation Rates"
- Section 7, "Constructions and System Start-Up"
- Section 8, "Operating and Maintenance Procedures"
- Section 9, "Requirements for Residential Buildings"
- Normative Appendix F2, "Carbon-Dioxide-Based, Demand-Controlled Ventilation"
- Normative Appendix G2, "Multiple-Space System Efficiency"

Before itemizing the prerequisites for compliance set in these sections, let's briefly review the intent of Standard 62-1989R.

**Purpose and Scope.** ASHRAE Standard 62-1989R applies to commercial, institutional and residential

spaces. It considers chemical, physical and biological contaminants, as well as temperature and humidity.

The intentions stated at the outset of the standard predicate its requirements:

"To define the roles of and requirements for ventilation, source management, and air cleaning in providing acceptable indoor air quality.

"To specify methods for determining minimum ventilation rates.

"To specify ventilation system design, operational, and maintenance requirements for various types of occupied indoor spaces."

**"Standard 62-1989R will exert a greater impact on the industry ... affecting building construction, operation and maintenance as well as ventilation system design."**

The level of indoor air quality obtained in an occupied space results from the decisions and actions of a wide variety of individuals over an extended period of time. Ventilation airflow, contaminant source strengths and air-cleaning efficiency all play a role. Together, these

# Ashrae Standard 62 1989r Expands Responsibility For Iaq

**American Society of Heating,  
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## **Ashrae Standard 62 1989r Expands Responsibility For Iaq:**

The Virginia Engineer ,1997     **IAQ and Energy 98** ASHRAE,1999     *Interpretations for ASHRAE Standard 62-1989, Ventilation for Acceptable Indoor Air Quality* ,1991     The Role of Communication in the Policy Dilution of ASHRAE Standard 62-89, "Ventilation for Acceptable Indoor Air Quality" Robert A. Cleveland,1995     Indoor Air Quality Act of 1987 United States. Congress. Senate. Committee on Environment and Public Works. Subcommittee on Environmental Protection,1988     **Standard 62.1 User's Manual** American Society of Heating, Refrigerating and Air-Conditioning Engineers,2016 THE DEFINITIVE COMPANION TO STANDARD 62 1 This companion guide provides detailed information on the requirements of ANSI ASHRAE Standard 62 1 2016 and includes tables illustrations and examples to aid users in designing installing and operating systems for ventilation in buildings Standard 62 1 User s Manual does not reproduce the requirements of the standard but rather paraphrases and elaborates upon them Intended to be used in conjunction with the standard this manual provides Information on the intent and application of Standard 62 1 Sample calculations and examples Best practices for applying the principles of good indoor air quality IAQ and effective ventilation when designing buildings and building systems Useful reference material Guidance for building operation and maintenance personnel Instructions for the user in the application of tools used for compliance with ANSI ASHRAE Standard 62 1 2016 Also included is an exclusive link to the newly revised web based spreadsheets that aid in ventilation rate procedure calculations This manual is intended for architects engineers manufacturers plan examiners field inspectors general and specialty contractors and operation and maintenance personnel Standard 62 1 User s Manual is a crucial supplement for professionals concerned with ventilation and indoor air quality Use it alongside your copy of ANSI ASHRAE Standard 62 1 2016 In addition to offering immediate access to the content the PDF download of this standard presents selected graphics in color for enhanced readability     **62.1 User's Manual** American Society of Heating, Refrigerating and Air-Conditioning Engineers,2010     Interpretation ... of ASHRAE Standard 62-1999, Ventilation for Acceptable Indoor Air Quality American Society of Heating, Refrigerating and Air-Conditioning Engineers,1999     **ANSI/ASHRAE Standard 62. 1-2004** ,2004-01-01     **Interpretations for ASHRAE Standard 62-1999, Ventilation for Acceptable Indoor Air Quality** American Society of Heating, Refrigerating and Air-Conditioning Engineers,1991     *Ashrae 62.1-2013* Ashrae,2013-01-01     *Interpretations for ASHRAE Standard 62-2001, Ventilation for Acceptable Indoor Air Quality* American Society of Heating, Refrigerating and Air-Conditioning Engineers,American National Standards Institute,2003     **Interpretations for ASHRAE Standard 62-1999, Ventilation for Acceptable Indoor Air Quality** American Society of Heating, Refrigerating and Air-Conditioning Engineers,2000     **62.1 User's Manual** American Society of Heating, Refrigerating and Air-Conditioning Engineers,2011     ASHRAE Indoor Air Quality Standard 62R Larry Siegelman,1997-03-01     Ventilation and Acceptable Indoor Air Quality ,2022 Standard 62 1 specifies minimum ventilation rates and other measures intended to provide indoor air quality IAQ that s

acceptable to human occupants and that minimizes adverse health effects The standard provides procedures and methods for meeting minimum ventilation and IAQ requirements to engineers design professionals owners and jurisdictional authorities where model codes have been adopted Since its original publication Standard 62.1 has been revised and enhanced in ways that make it more than an air treatment and ventilation standard To signify that indoor air quality goes beyond minimum ventilation requirements and in recognition of those aspects of building systems equipment filtration controls and more that contribute to acceptable IAQ the title of the standard has been updated to Ventilation and Acceptable Indoor Air Quality New in the 2022 edition of the standard are changes that represent years of research statistical evidence and improved building systems and technologies reorganized Section 5 Systems and Equipment to better reflect the path of airflow and illustrate how buildings systems and equipment are related continued focus on IAQ including improvements to the IAQ Procedure setting maximum dew point temperatures in mechanically cooled buildings and required exhaust air separation distances relocated health care related spaces in the scope of ASHRAE ASHRAE Standard 170 to a new normative appendix Updated definitions clarified air density adjustments and removal of items related to transient occupancies that now fall under Standard 62.2 new title that reflects how indoor air quality IAQ goes beyond minimum ventilation requirements

**Managing Indoor Air for Health and Energy Conservation**, 1986 IAQ 86 was organized to review the latest research in indoor air pollution and provide any missing current data for Standard 62.1 1986 Introduction **ASHRAE Indoor Air Quality Standard 62.1**, 1989 *ASHRAE Standard 62-1989*, 1990 ASHRAE Standard 62.1-1989 Ventilation for Acceptable Indoor Air Quality is the new heating ventilating and air conditioning HVAC industry consensus for ventilation air in commercial buildings Bonneville Power Administration Bonneville references ASHRAE Standard 62.1 the predecessor to Standard 62.1-1989 in their current environmental documents for required ventilation rates Through its use it had become evident to Bonneville that Standard 62.1 needed interpretation Now that the revised Standard Standard 62.1-1989 is available its usefulness needs to be evaluated Based on current information and public comment the American Society of Heating Refrigeration and Air Conditioning Engineers ASHRAE revised Standard 62.1-1981 to Standard 62.1-1989 Bonneville's study estimated the energy and cost implications of ASHRAE Standard 62.1-1989 using simulations based on DOE 2.1D a computer simulation program which estimates building use hourly as a function of building characteristics and climatic location Ten types of prototypical commercial buildings used by Bonneville for load forecasting purposes were examined Large and Small Office Large and Small Retail Restaurant Warehouse Hospital Hotel School and Grocery These building characterizations are based on survey and energy metering data and represent average or typical construction and operation practices and mechanical system types Prototypical building ventilation rates were varied in five steps to estimate the impacts of outside air on building energy use 11 refs 14 tabs **ANSI/ASHRAE standard 62.1-2010**, 2010

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