



ASHRAE STANDARD

Addenda to

Ventilation for Acceptable Indoor Air Quality

Approved by the ASHRAE Standards Committee January 12, 2002; by the ASHRAE Board of Directors January 12, 2002; and by the American National Standards Institute April 12, 2002.

This standard is under continuous maintenance 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. The change submittal form, instructions, and deadlines are given at the back of this document and may be obtained in electronic form from ASHRAE's Internet Home Page, http://www.ashrae.org, or in paper form from the Manager of Standards. The latest edition of an ASHRAE Standard and printed copies of a public review draft may be purchased from ASHRAE Customer Service, 1791 Tullie Circle, NE, Atlanta, GA 30329-2305. E-mail: orders@ashrae.org. Fax: 404-321-5478. Telephone: 404-636-8400 (worldwide), or toll free 1-800-527-4723 (for orders in U.S. and Canada).

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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.

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- 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,
- d. permission to reprint portions of the Standard.

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In referring to this Standard or Guideline and in marking of equipment and in advertising, no claim shall be made, either stated or implied, that the product has been approved by ASHRAE.

(This foreword is provided for information only and is not part of the draft addenda.)

FOREWORD

Draft Addendum 62v. This addendum adds requirements to ensure that the air distribution system is capable of delivering outdoor air to the occupied spaces. In systems with AC units, heat pumps, or fan-coil units mounted in the ceiling or floor plenum, ventilation air is often supplied to the plenum to mix with recirculated air. Where outdoor air is poorly distributed in such systems, units that are far from the outdoor air supply to the plenum may not receive the intended levels of outdoor air. In any air distribution system, required airflow can only be assured by measuring actual airflow and adjusting dampers and orifices to account for the effect of as-installed duct pressure drops, i.e., the system must be balanced. Designers must consider and make provision for system balancing. Note that balancing is addressed in terms of designing the system so that it can be balanced; this addendum does not require balancing at any particular time, as that issue is covered in other addenda. Also, note that balancing is not a one-time event but must be reevaluated over time as indicated in other sections of the standard.

Addendum 62 v

Revise Section 5.2 as follows:

0.2 Ventilation Air Distribution. Ventilating systems shall be designed and installed so that the ventilation air is supplied throughout the occupied zone in accordance with the following:

Add new subsections to Section 5.2 as follows:

- **0.2.1** <u>Designing for Air Balancing.</u> The <u>ventilation</u> air distribution system shall be <u>designed to accommodate testing</u>, and shall be provided with means to adjust the system <u>to achieve at least the minimum ventilation airflow as required by Section 6 under any load condition</u> to meet the requirements of this standard.
- **0.2.2 Plenum Mixing Systems.** When Plenum mixing systems use-the ceiling or floor plenum is used both to recirculate return air and to distribute outdoor ventilation air to ceiling-mounted or floor-mounted terminal units. For each zone or space served by either single or multiple-units, outdoor air shall be discharged The the system shall be engineered such that each ventilating terminal unit space is provided with its required minimum outdoor ventilation air flow. Note: Direct connection of ventilation air ducts to ventilating terminal units is an alternate method of satisfying the intent of this requirement.
- **5.2.34 Documentation.** The design documents shall specify minimum requirements for air balance testing and or reference applicable national standards for measurement and balancing air flow. The design documentation shall state assumptions that were made in the design with respect to ventilation rates and air distribution.
- **5.2.3 Exhaust Duct Location.** Exhaust ducts that convey potentially harmful contaminants shall be negatively pressurized relative to spaces through which they pass, so that exhaust air cannot leak into occupied spaces; supply, return, or outdoor air ducts; or plenums. **Exception**: Exhaust ducts that are sealed in accordance with SMACNA Seal Class A.

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.