

ASHRAE/ASHE STANDARD

Ventilation of Health Care Facilities

Approved by the ASHRAE Standards Committee on January 29, 2011; by the ASHRAE Board of Directors on February 2, 2011; by the American Society for Healthcare Engineering of the American Hospital Association on January 28, 2011; and by the American National Standards Institute on February 3, 2011.

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. The change submittal form, instructions, and deadlines may be obtained in electronic form from the ASHRAE Web site (www.ashrae.org) or in paper form from the Manager of Standards.

The latest edition of an ASHRAE Standard may be purchased on the ASHRAE Web site (www.ashrae.org) or 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 US and Canada). For reprint permission, go to www.ashrae.org/permissions.

© 2011 American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.

ISSN 1041-2336



American Society of Heating, Refrigerating
and Air-Conditioning Engineers, Inc.
1791 Tullie Circle NE, Atlanta, GA 30329
www.ashrae.org



American Society for Healthcare Engineering
of the American Hospital Association

ASHRAE Standing Standard Project Committee 170
Cognizant TC: TC 9.6, Healthcare Facilities
SPLS Liaison: Byron W. Jones

Paul T. Ninomura, *Chair**
Michael Patrick Sheerin, *Vice-Chair**
Chris P. Rousseau, *Secretary**
Judene M. Bartley*
Theodore Cohen*
John M. Dombrowski
Douglas S. Erickson*
James (Skip) Gregory*
Jeffery M. Hardin
Richard D. Hermans*

Michael R. Keen*
Marvin L. Kloostra*
Peter Hogan Langowski*
Michael F. Mamayek*
Farhad Memarzadeh*
Richard D. Moeller
Anand K. Seth*
Rajendra N. Shah
Andrew J. Streifel*
Michael E. Woolsey*

*Denotes members of voting status when the document was approved for publication.

ASHRAE STANDARDS COMMITTEE 2010–2011

H. Michael Newman, <i>Chair</i>	Allan B. Fraser	Janice C. Peterson
Carol E. Marriott, <i>Vice-Chair</i>	Krishnan Gowri	Douglas T. Reindl
Douglass S. Abramson	Maureen Grasso	Boggarm S. Setty
Karim Amrane	Cecily M. Grzywacz	James R. Tauby
Robert G. Baker	Richard L. Hall	James K. Vallort
Hoy R. Bohanon, Jr.	Nadar R. Jayaraman	William F. Walter
Steven F. Bruning	Byron W. Jones	Michael W. Woodford
Kenneth W. Cooper	Jay A. Kohler	Craig P. Wray
Martin Dieryckx	Frank Myers	Hugh F. Crowther, <i>BOD ExO</i>
		William P. Bahnfleth, CO

Stephanie Reiniche, *Manager of Standards*

SPECIAL NOTE

This American National Standard (ANS) is a national voluntary consensus standard developed under the auspices of the American Society of Heating, Refrigerating and Air-Conditioning Engineers (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 Assistant Director of Technology for Standards and Special Projects 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.

DISCLAIMER

ASHRAE uses its best efforts to promulgate Standards and Guidelines for the benefit of the public in light of available information and accepted industry practices. However, ASHRAE does not guarantee, certify, or assure the safety or performance of any products, components, or systems tested, installed, or operated in accordance with ASHRAE's Standards or Guidelines or that any tests conducted under its Standards or Guidelines will be nonhazardous or free from risk.

ASHRAE INDUSTRIAL ADVERTISING POLICY ON STANDARDS

ASHRAE Standards and Guidelines are established to assist industry and the public by offering a uniform method of testing for rating purposes, by suggesting safe practices in designing and installing equipment, by providing proper definitions of this equipment, and by providing other information that may serve to guide the industry. The creation of ASHRAE Standards and Guidelines is determined by the need for them, and conformance to them is completely voluntary.

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 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

This addendum deletes references to MERV 17 to be consistent with previously published Addendum b, clarifies the meaning of “occupied space” regarding the requirements of certain exhaust ductwork systems, and adds an additional reference to Section 9, Normative References.

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

Addendum e to Standard 170-2008

Delete the MERV 17 reference from Section 7.2.1b as shown.

7.2.1 Airborne Infection Isolation (AII) Rooms. Ventilation for AII rooms shall meet the following requirements whenever an infectious patient occupies the room:

....

- b. All air from the AII room shall be exhausted directly to the outdoors.

Exception: All rooms that are retrofitted from standard patient rooms from which it is impractical to exhaust directly outdoors may be ~~ventilated provided~~ with recirculated air from the room's exhaust, on the condition provided that the air first passes through a HEPA (MERV 17) filter.

....

Revise Section 6.3.2a as shown.

6.3.2 Exhaust Discharges. Exhaust discharge outlets that discharge air from AII rooms, bronchoscopy rooms, emergency department waiting rooms, nuclear medicine laboratories, radiology waiting rooms, and laboratory chemical fume hoods shall

- a. be designed so that all ductwork ~~in occupied spaces within the building~~ is under negative pressure;

....

Exception: Ductwork located within mechanical equipment rooms. Positive-pressure exhaust ductwork located within mechanical equipment rooms shall be sealed in accordance with SMACNA duct leakage Seal Class A.¹⁰

....

Add the following reference to Section 9, Normative References.

10. SMACNA, *HVAC Duct Construction Standards, Metal and Flexible* (Third Edition: 2005). Chantilly, VA 20151.

**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.

