



ASHRAE ADDENDA

2006 SUPPLEMENT

Safety Standard for Refrigeration Systems

Approved by the ASHRAE Standards Committee on January 21, 2006; by the ASHRAE Board of Directors on January 26, 2006; and by the American National Standards Institute on January 27, 2006.

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 may be obtained in electronic form from the ASHRAE Web site, <http://www.ashrae.org>, or in paper form from the Manager of Standards. The latest edition of an ASHRAE Standard 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 US and Canada).

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

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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.

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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

The current version of ANSI/ASHRAE Standard 15 allows relief valves to discharge back into other parts of the system (see 9.4.3, 9.7.3, 9.7.8.1, and 9.8). The changes in this addendum are intended to clarify the requirements for internal relief to improve safety in situations where the changes apply. Part "a" of 9.7.8.1 is revised to make it clear that, under no circumstances, should an internal relief device be applied that would result in the vessel it is protecting exceeding its maximum allowable working pressure during an overpressure situation. Part "b" is revised to show that the relief device protecting the portion of the system potentially receiving mass from a higher pressure part of the system must have sufficient capacity to accommodate the vessel it is connected to as well as the mass flow rate of the higher pressure upstream vessel. Part "c" is added to require that the relief device have suitable pressure design characteristics on both the upstream and downstream sides of the valve body.

Note: In this addendum, changes to the current standard are indicated in the text by underlining (for additions) and strikethroughs (for deletions).

Addendum b to 15-2004

Revise Section 9.7.8.1 as follows:

9.7.8.1 The application of pressure-relief valves that discharge from a higher pressure vessel into a lower pressure vessel of the system shall comply with (a) ~~and (b)~~ through (c) below:

- a. ~~The sum of the set pressure of the pressure relief valve discharging into a lower pressure vessel within the system and the set pressure of the system relief valve, required by 9.7.8.1(b), shall not exceed the design pressure of the system protected with a relief valve in accordance with 9.7.1.~~
- a. The pressure-relief valve that protects the higher pressure vessel shall be selected to deliver capacity in accordance with 9.7.5 without exceeding the maximum allowable working pressure of the higher pressure vessel accounting for the change in mass flow capacity due to the elevated backpressure.
- b. The capacity of the pressure-relief valve protecting the part of the system receiving a discharge from a pressure-relief valve protecting a higher pressure vessel shall be at least the sum of the capacity required in 9.7.5 plus the mass flow capacity of the pressure-relief valve discharging into that part of the system.
- c. The design pressure of the body of the relief valve used on the higher pressure vessel shall be rated for operation at the design pressure of the higher pressure vessel in both pressure-containing areas of the valve.

Exception: ~~Hydrostatic relief valves.~~

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.