ADDENDA

ANSI/ASHRAE Addendum i to
ANSI/ASHRAE Standard 15-2019

Safety Standard for Refrigeration Systems

Approved by ASHRAE and the American National Standards Institute on July 31, 2020.

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. Instructions for how to submit a change can be found on the ASHRAE® website (https://www.ashrae.org/continuous-maintenance).

The latest edition of an ASHRAE Standard may be purchased on the ASHRAE website (www.ashrae.org) or from ASHRAE Customer Service, 1791 Tullie Circle, NE, Atlanta, GA 30329-2305. E-mail: orders@ashrae.org. Fax: 678-539-2129. 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.

 ISSN 1041-2336

Approved American National Standard
ANSI
www.ansi.org

SPECIAL NOTE

This American National Standard (ANS) is a national voluntary consensus Standard developed under the auspices of 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 Senior 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, 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

Addendum i modifies ASHRAE Standard 15 by making necessary changes to defer regulation of ammonia refrigeration to ANSI/IIAR 2 (see Section 2.3). Addenda d and h to ASHRAE Standard 15-2016 inadvertently added references to ammonia, after Addendum a to ASHRAE Standard 15-2016 had already been published to remove ammonia refrigeration from ASHRAE Standard 15. Further, in editing the 2019 edition, some of the modifications of Addendum a to ASHRAE Standard 15-2016 were missed. This addendum removes the added and erroneous references to ammonia.

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

Addendum i to Standard 15-2019

Modify Section 7 as shown. The remainder of Section 7 remains unchanged.

7. RESTRICTIONS ON REFRIGERANT USE

[. . .]

~~**Table 7-1 Special Quantity Limits for Sealed Ammonia/Water Absorption and *Self-Contained Systems***~~

~~**Type of Refrigeration System**~~	~~**Maximum lb (kg) for Various *Occupancies***~~			
	~~**Institutional**~~	~~**Public/Large Mercantile**~~	~~**Residential**~~	~~**Commercial**~~
~~**Sealed Ammonia/*Water-Absorption System***~~				
~~In public hallways or *lobbies*~~	~~0 (0)~~	~~0 (0)~~	~~3.3 (1.5)~~	~~3.3 (1.5)~~
~~In adjacent outdoor locations~~	~~0 (0)~~	~~0 (0)~~	~~22 (10)~~	~~22 (10)~~
~~In other than public hallways or *lobbies*~~	~~0 (0)~~	~~6.6 (3)~~	~~6.6 (3)~~	~~22 (10)~~
~~***Unit Systems***~~				
~~In other than public hallways or *lobbies*~~	~~0 (0)~~	~~0 (0)~~	~~6.6 (3)~~	~~22 (10)~~

[. . .]

7.4 Location in a *Machinery Room* or Outdoors. All components containing *refrigerant* shall be located either in a *machinery room* or outdoors, where the quantity of *refrigerant* needed exceeds the limits defined by Section 7.2 and Section 7.3 ~~or where direct-fired absorption equipment is used~~.

Exceptions ~~to~~ 7.4:

~~1.~~ *Self-contained systems* are permitted outside of a *machinery room*, provided that such systems are not located in public hallways or *lobbies* and are limited to the following occupancies and *refrigerant* quantities:

a. 6.6 pounds (3 kg) of *refrigerant* where located in residential *occupancies*.

b. 22 pounds (10 kg) of *refrigerant* where located in commercial *occupancies*.

~~2. Sealed absorption systems not exceeding the *refrigerant* quantity limits indicated in Table 7-1.~~

7.4.1 Direct-fired absorption equipment *shall* be located in a *machinery room* or outdoors.

[. . .]

7.4.3 Flammable *Refrigerants*. *Machinery rooms* required by Section 7.4 based on flammability *shall* be constructed and maintained in accordance with Sections 8.11 and 8.12 for Group A2, A3, B2, and B3 *refrigerants*. *Machinery rooms* required by Section 7.4 based on flammability *shall* be constructed and maintained in accordance with Sections 8.11.1 through 8.11.5 and Section 8.13 for Group A2L and B2L *refrigerants* ~~other than R-717 (ammonia)~~.

Modify Section 8 as shown. The remainder of Section 8 remains unchanged.

8. INSTALLATION RESTRICTIONS

[. . .]

Exceptions to 8.11.5:

1. Detectors are not required when only systems using R-718 (water) are located in the refrigerating *machinery room*.
2. For Group A2L and B2L ~~other than ammonia~~, refer to Section 8.13.

[. . .]

8.11.8 Ventilation Airflow. For Group A1, A2, A3, B1, B2, and B3, the airflow *shall* comply with Section 8.11.8.1. For Group A2L and B2L ~~other than R-717 (ammonia)~~, the airflow *shall* comply with Section 8.13.

[. . .]

8.13 *Machinery Room*, A2L and B2L ~~Other than R-717 (Ammonia)~~. When required by Section 7.4.2, *machinery rooms shall* comply with Sections 8.13.1 through 8.13.6.

[. . .]

8.13.6 When any *refrigerant* of Groups A2, A3, B2, or B3 are used, the *machinery room shall* be designated as Class I, Division 2 hazardous (classified) electrical location in accordance with the National Electric Code[3]. When the only flammable *refrigerants* used are from Group A2L or B2L ~~other than R-717 (ammonia)~~, the *machinery room shall* comply with both Section 8.13.6.1 for ventilation and Section 8.13.6.2 for *refrigerant* detection, or *shall* be designated as Class I, Division 2 hazardous (classified) electrical location in accordance with the National Electrical Code[3].

[. . .]

8.13.11.4 Safety Group A2L, B2L ~~Other than Ammonia~~. When required by Section 8.13.11.3, the total airflow for Level 2 ventilation *shall* be not less than the airflow rate determined by Figure 8-1 (I-P) or Figure 8-2 (SI).

Modify Informative Appendix A as shown. The remainder of Informative Appendix A remains unchanged.

INFORMATIVE APPENDIX A
INFORMATIVE REFERENCES

This appendix contains a full list of informative references only. A full list of normative references is included in Normative Appendix B. References in this standard are numbered in the order in which they appear in the document, so the numbers for the normative references are shown for the convenience of the user.

1. IIAR. 2014. ANSI/IIAR 2, including Addendum A, *American National Standard for Safe Design of Closed-Circuit Ammonia Refrigeration Systems*. Arlington, VA: International Institute of Ammonia Refrigeration.

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.

ASHRAE · 1791 Tullie Circle NE · Atlanta, GA 30329 · www.ashrae.org

About ASHRAE

Founded in 1894, ASHRAE is a global professional society committed to serve humanity by advancing the arts and sciences of heating, ventilation, air conditioning, refrigeration, and their allied fields.

As an industry leader in research, standards writing, publishing, certification, and continuing education, ASHRAE and its members are dedicated to promoting a healthy and sustainable built environment for all, through strategic partnerships with organizations in the HVAC&R community and across related industries.

To stay current with this and other ASHRAE Standards and Guidelines, visit www.ashrae.org/standards, and connect on LinkedIn, Facebook, Twitter, and YouTube.

Visit the ASHRAE Bookstore

ASHRAE offers its Standards and Guidelines in print, as immediately downloadable PDFs, and via ASHRAE Digital Collections, which provides online access with automatic updates as well as historical versions of publications. Selected Standards and Guidelines are also offered in redline versions that indicate the changes made between the active Standard or Guideline and its previous version. For more information, visit the Standards and Guidelines section of the ASHRAE Bookstore at www.ashrae.org/bookstore.

IMPORTANT NOTICES ABOUT THIS STANDARD

To ensure that you have all of the approved addenda, errata, and interpretations for this Standard, visit www.ashrae.org/standards to download them free of charge.

Addenda, errata, and interpretations for ASHRAE Standards and Guidelines are no longer distributed with copies of the Standards and Guidelines. ASHRAE provides these addenda, errata, and interpretations only in electronic form to promote more sustainable use of resources.

7/20