

## ADDENDA

ANSI/ASHRAE Addendum a to ANSI/ASHRAE Standard 15-2022

# Safety Standard for Refrigeration Systems

Approved by ASHRAE and the American National Standards Institute on February 29, 2024.

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<sup>®</sup> website (www.ashrae.org/continuous-maintenance).

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#### Cognizant TCs: 10.1, Custom Engineered Refrigeration Systems, and 9.1, Large Building Air-Conditioning Systems

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#### FOREWORD

In 2019, ASME introduced Section XIII as part of its longstanding Boiler and Pressure Vessel Code. The newly created Section XIII relocates requirements for pressure relief devices that existed in other divisions within the code. Section VIII, Division 1, retained requirements for overpressure protection for ASME-rated vessels and equipment.

This addendum revises related portions of ANSI/ASHRAE Standard 15 for overpressure protection to appropriately reference to the changes in overpressure protection in the ASME Boiler and Pressure Vessel Code.

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

#### Addendum a to Standard 15-2022

Modify Section 9 as follows. The remainder of Section 9 remains unchanged.

#### 9. DESIGN AND CONSTRUCTION OF EQUIPMENT AND SYSTEMS

[...]

#### 9.3 Refrigerant-Containing Pressure Vessels

[...]

**9.3.1.1** Pressure vessels having inside dimensions of 6 in. (152 mm) or less shall be protected by a pressure relief device or a fusible plug and shall comply with one of the following:

- a. listed either individually or as part of an assembly by a nationally recognized testing laboratory;
- b. marked directly on the vessel or on a nameplate attached to the vessel with a "U" or "UM" symbol signifying compliance with *ASME Boiler and Pressure Vessel Code*<sup>15</sup>, Section VIII; or
- c. when requested by the authority having jurisdiction (AHJ), the *manufacturer shall* provide documentation to confirm that the vessel meets the design, fabrication, and testing requirements of *ASME Boiler and Pressure Vessel Code*, Section VIII.

*Pressure vessels* having *inside dimensions* of 6 in. (152 mm) or less *shall* be protected by either a *pressure relief device* or a *fusible plug*.

Exception to 9.3.1.1: Vessels having an internal or external *design pressure* of 15 psig (103.4 kPa gage) or less.

[...]

#### 9.4 Pressure Relief Protection

[...]

**9.4.2**<u>\*</u> *Pressure vessels shall* be protected in accordance with Section 9.7. *Pressure relief devices* are acceptable if they either bear a nameplate or are directly marked with a <u>"UD,"</u> "UV", or "VR" symbol signifying compliance with *ASME Boiler and Pressure Vessel Code*<sup>15</sup>, <u>Section XIII.Section VIII.</u>

[...]

**9.4.7** When relief valves are connected to discharge to a common discharge *header*, as described in Section 9.7.9.3, a full area *stop valve* is not prohibited from being installed in the discharge pipe between the relief valve and the common *header*. When such a *stop valve* is installed, a locking device *shall* be installed to ensure that the *stop valve* is locked in the open position. This discharge *stop valve shall not* be shut unless one of the following conditions exists:

a. A parallel relief valve is installed that protects the system or vessels.

b. The system or vessels being protected have been depressurized and are vented open to the atmosphere.

[...]

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**9.5 Setting of Pressure Relief Devices.** Overpressure pressure protection of *pressure vessels* required by this standard *shall* conform to the requirements of *ASME Boiler and Pressure Vessel Code*<sup>15</sup>, Section VIII or XIII, Division 1, paragraphs UG-154 and UG-155.

[...]

**9.5.2 Rupture Member Setting.** *Rupture members* used in lieu of, or in series with, a relief valve *shall* have a nominal rated rupture pressure not to exceed the *design pressure* of the parts of the system protected. The conditions of application *shall* conform to the requirements of *ASME Boiler and Pressure Vessel* Code<sup>15</sup>, Section VIII, Division 1, paragraph UG-127. The size of *rupture members* installed ahead of relief valves *shall not* be less than the relief valve inlet.

#### 9.6 Marking of Relief Devices and Fusible Plugs

**9.6.1** Pressure relief valves for refrigerant-containing components shall be set and sealed by the manufacturer or an assembler as defined in ASME Boiler and Pressure Vessel Code<sup>15</sup>, Section XIII. Section VIII, Division 1. Each pressure relief valve shall be marked by the manufacturer or assembler with the data required in ASME Boiler and Pressure Vessel Code, Section XIII. Section VIII, Division 1.

**Exception to 9.6.1:** Relief values for systems with *design pressures* of 15 psig (103.4 kPa gage) or less *shall* be marked by the *manufacturer* with the pressure setting capacity.

**9.6.2** Each *rupture member* for *refrigerant pressure vessels shall* be marked with the data required in ASME Boiler and Pressure Vessel Code<sup>15</sup>, Section XIII. Section VIII, Division 1, paragraph UG 129(e).

[...]

#### 9.7 Pressure Vessel Protection

[...]

**9.7.6** The rated discharge capacity of a *pressure relief* expressed in lb of air/min (kg of air/s) *shall* be determined in accordance with *ASME Boiler and Pressure Vessel Code*<sup>15</sup>, <u>Section XIII.Section VIII, Division 1, paragraph UG-131.</u> All pipe and fittings between the *pressure relief valve* and the parts of the system it protects *shall* have at least the area of the *pressure relief valve* inlet area.

[...]

#### Modify Section 13 as follows. The remainder of Section 13 remains unchanged.

#### **13. NORMATIVE REFERENCES**

[...]

15. ASME. 2021.2019. Boiler and Pressure Vessel Code. New York: American Society of Mechanical Engineers.

[...]

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

(This appendix 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.)

### INFORMATIVE APPENDIX A EXPLANATORY MATERIAL

Sections of the standard with associated explanatory information in this appendix are marked with an asterisk "\*" after the section number.

[...]

#### Section 9.4.2

The National Board of Boiler and Pressure Vessel Inspectors (Columbus, Ohio, USA) offers the Certificate of Authorization and VR Stamp for the repair of *pressure relief valves*.

[ ... ]

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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.

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