ADDENDA

ANSI/ASHRAE Addendum b to
ANSI/ASHRAE Standard 15-2024

Safety Standard for Refrigeration Systems

Approved by ASHRAE and the American National Standards Institute on March 31, 2026.

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 (www.ashrae.org/continuous-maintenance).

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b. participation in the next review of the Standard,
c. offering constructive criticism for improving the Standard, or
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FOREWORD

The model building codes were revised in the 1980s to remove the mandatory requirement for a pipe shaft. A pipe shaft was still permitted as an option; however, the building codes focused on the piping penetrations. At that time, Standard 15 chose to not revise similar language and has been out of harmony ever since. This was partially corrected by Addendum a to Standard 15-2024, but the committee felt this was insufficient and a more holistic approach was required.

Addendum b updates ASHRAE Standard 15-2024 to be consistent with the model building codes, where the primary requirement will be protection for all refrigerant pipe penetrations. The addendum moves language from Section 9.12.3 to Section 9.12.1.5 and lists it first as the primary protection means. Use of pipe shafts remains a design option. The proposed language further clarifies shaft ventilation requirements to mitigate flammability hazards.

Informative 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 b to Standard 15-2024

Modify Section 9 as shown. The remainder of Section 9 remains unchanged. (Note: This addendum supersedes changes made by previously published Addendum a, which can be found online at www.ashrae.org/addenda.)

9. DESIGN AND CONSTRUCTION OF REFRIGERATION EQUIPMENT AND SYSTEMS

[. . .]

9.12 Refrigerant Pipe Installation

9.12.1 Piping Location.

[. . .]

~~9.12.3~~ 9.12.1.5 Refrigerant Pipe Penetrations. ~~In other than *industrial occupancies*, the~~ The annular space between the outside of a *refrigerant* pipe and the inside of a pipe sleeve or opening in a building envelope, wall, floor, or ceiling assembly penetrated by a *refrigerant* pipe *shall* be sealed in an *approved* manner with caulking material, foam sealant, or closed with a gasketing system. The caulking material, foam sealant, or gasketing system *shall* be designed for the conditions at the penetration location and *shall* be compatible with the pipe, sleeve, and building materials in contact with the sealing materials. *Refrigerant* pipes penetrating required *fire-resistance-rated* assemblies or membranes of *fire-resistance-rated* assemblies *shall* be sealed or closed in accordance with the *building code*.

~~9.12.1.5~~ 9.12.1.5.1 Refrigerant Pipe Shafts. *Refrigerant piping* that penetrates ~~two or more~~ multiple floor/ceiling assemblies *shall* be permitted to be enclosed in a *fire-resistance-rated* shaft enclosure. The *fire-resistance-rated* shaft enclosure *shall* comply with the requirements of the *building code*. Other building utilities or *piping* systems *shall* be allowed in the *refrigerant piping* shaft.

~~**9.12.1.5.1 Shaft Alternative.** A shaft enclosure *shall not* be required for the *refrigerant piping* for any of the following *refrigeration systems*:~~

~~a. Systems using R-718 (water) *refrigerant*~~

~~b. *Piping* in a *high-probability system* where the *refrigerant* concentration does not exceed the amounts shown in ASHRAE Standard 34,[3] Table 4-1 or 4-2, for the smallest *occupied space* through which the *piping* passes~~

~~c. *Piping* located on the exterior of the building where vented to the outdoors~~

~~d. Continuous *refrigerant* pipe or tube, including joints and connections, that have been tested in accordance with Section 9.13.~~

[. . .]

9.12.2 Installation Requirements for Flammable Refrigerants.

[. . .]

9.12.2.2 Shaft Ventilation. *Refrigerant* pipe installed within a *fire-resistance-rated* ~~shafts~~ enclosure with *refrigeration systems* using only Group A2L or B2L *refrigerants shall* be naturally or mechanically ventilated. *Refrigerant* pipe installed within a *fire-resistance-rated* ~~shafts~~ enclosure with one or more *refrigeration systems* using any Group A2, A3, B2, or B3 *refrigerant shall* be continuously mechanically ventilated and *shall* include a *refrigerant detector*. The shaft ventilation exhaust outlet *shall* comply with the discharge location requirement *specified* in Section 9.7.8.2.

a. Naturally ventilated shafts *shall* have a minimum of a 4.0 in. (102 mm) diameter pipe, *duct*, or conduit that connects at the lowest point of the shaft and connects to the outdoors. The pipe, *duct*, or conduit *shall* be level or pitched down to the outdoors. A *makeup air* opening *shall* be provided at the top of the shaft.
b. When active, mechanically ventilated shafts *shall* have a minimum air velocity in accordance with Table 9-12. *Makeup air shall* be provided at the inlet to the shaft for mechanically ventilated shafts. The mechanical ventilation *shall* either be continuously operated or, for pipe shafts containing only *refrigeration systems* using Group A2L or B2L *refrigerants*, activated by a *refrigerant detector*. *Refrigerant* pipe shafts utilizing a *refrigerant detector shall* have a set point not exceeding the *occupational exposure limit* (*OEL*) of the *refrigerant*. The detector, or a sampling tube that draws air to the detector, *shall* be located in an area where *refrigerant* from a leak will concentrate.
c. The shaft *shall not* be required to be ventilated for double-wall *refrigerant* pipe where the interstitial space of the double-wall pipe is vented to the outdoors in accordance with the discharge location requirements *specified* in Section 9.7.8.2.
d. The shaft *shall not* be required to be ventilated where all the *refrigerant* pipe or tube is continuous and has been tested in accordance with Section 9.13.
e. The shaft *shall not* be required to be ventilated for systems using only Group A2L or B2L *refrigerants* where there are no hot surfaces exceeding 1290°F (700°C) in the shaft and the pipes, tubes, joints, or connections have been tested in accordance with Section 9.13.

~~9.12.4~~ 9.12.3 Stress and Strain. […]

[. . .]

~~9.12.5~~ 9.12.4 Stop Valves.

[. . .]

~~9.12.5.1~~ 9.12.4.1 Refrigeration Systems Containing More than 6.6 lb (3.0 kg) of Refrigerant.

[. . .]

~~9.12.5.2~~ 9.12.4.2 Refrigeration Systems Containing More than 110 lb (50 kg) of Refrigerant.

[. . .]

~~9.12.5.3~~ 9.12.4.3 Identification.

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.

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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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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.

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